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# Characteristics of Office-Based Physicians and Their Practices: United States, 2005–2006

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

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# Characteristics of Office-Based Physicians and Their Practices: United States, 2005–2006

## Data From the National Health Care Survey

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

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April 2008
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## Abstract

### Objectives

This report describes average annual estimates of nonfederal, office-based physicians who saw patients in the United States during 2005–2006. The report also uses a multiplicity estimator from the physician sample to estimate the number and characteristics of medical practices with which physicians are associated. Selected physician estimates of characteristics obtained only in 2006 are also presented, as well as selected trends in physician practice characteristics between 2001–2002 and 2005–2006.

### Methods

Data presented in this report were collected during the induction interview of physicians during the 2005 and 2006 National Ambulatory Medical Care Surveys (NAMCS). NAMCS is a national probability sample survey of nonfederal physicians who see patients in an office setting in the United States. Radiologists, anesthesiologists, and pathologists—as well as physicians who treat patients solely in hospital, institutional, and occupational settings—are excluded. Sample weights for physician data use information on the number of physicians in the sampled physician's practice to produce national estimates of medical practices.

### Results

During 2005–2006, an average of 308,900 office-based physicians practiced in an estimated 163,800 medical practices in the United States. In 2005–2006, nearly 1 in 10 medical practices were multi-specialty groups (8.9 percent) and accounted for 20.3 percent of all physicians. In 2006, 11.5 percent of medical practices employed at least one mid-level provider and about one-third of medical practices performed electrocardiogram (EKG/ECG) tests (33.5 percent) and lab tests (30.2 percent) onsite. Between 2001–2002 and 2005–2006, the percentage of physicians not accepting new Medicaid patients increased by 16 percent and the percentage not accepting new charity cases increased by 23 percent.



**Keywords**: ambulatory care • physician • office care • medical practice


# Characteristics of Office-Based Physicians and Their Medical Practices: United States, 2005–2006


*by Esther Hing, M.P.H., and Catharine W. Burt, Ed.D., Division of Health Care Statistics*


## Introduction

Physician offices are the settings most frequently used for health care, including the delivery of primary and specialty care (1). Describing the characteristics of physicians providing this care and factors influencing the care provided is integral for monitoring the health of the U.S. population and planning for future health care delivery needs. NAMCS, which began in 1973, collects data on the utilization of ambulatory medical care services provided by nonfederal office-based physicians. The survey was conducted annually until 1981, conducted again in 1985, and resumed an annual schedule in 1989.

This report presents average annual estimates of office-based physicians who see patients and of the medical practices with which these physicians are associated. Estimates are based on data collected during the Physician Induction Interviews (PII) in the 2005 and 2006 NAMCS. Characteristics presented include practice characteristics (such as the physician's employment status, ownership of the practice, revenue sources, use of information technology, weekly workload, and willingness to accept new patients) and physician information from the sample frame (age, sex, race and ethnicity, whether the physician graduated from a foreign medical school, and specialty). The information complements data on the utilization of ambulatory medical care services provided by office-based physicians (2) by describing characteristics of the practices and the physicians within practices providing care.

Although the 2006 NAMCS sample included a dual-frame sample of physicians from office-based practices and community health centers (CHCs), only the traditional sample of physicians that is consistent with the 2005 sample was included in this report. A separate report on CHCs will present estimates of patient visits to CHCs and their providers.

This report updates previously published estimates of office-based physicians (3–5) and estimates of medical practices, first published using 2003–2004 data (6), with 2005–2006 estimates. The current report differs from the previous reports by including in-scope physicians who participated by completing the PII but were unavailable during their sample week, and therefore they did not provide data on sampled visits. This subset of physicians could not be included in the 2003–2004 estimates because they did not provide sufficient useable data during the induction interview. Inclusion of these physicians in 2005–2006 estimates provides a more complete description of office-based physicians providing patient care. For the most part, comparisons with earlier estimates in 2001–2004 were not affected by inclusion of this subset of physicians who were unavailable during their sample week in the 2005–2006 estimates. This is because their characteristics were statistically similar to those who

were available and did provide data on sampled visits. There were only two exceptions to this trend: compared with physicians unavailable during their sample week, physicians who reported visit data were more likely to be in primary specialties and less likely to be in medical specialties and were more likely to have been trained in a U.S. medical school.

# Methods

NAMCS is an annual national probability sample survey of visits to the offices of physicians classified by the American Medical Association (AMA) and American Osteopathic Association (AOA) as ''office-based, patient care.'' Federally employed physicians; specialists in anesthesiology, radiology, or pathology; and physicians who do not see patients in an office—such as the majority of emergency medicine physicians—are excluded.

NAMCS utilizes a multistage probability sample design involving samples of 112 geographic primary sampling units (PSUs), physicians stratified by specialty 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). In 2005–2006, 4,054 (63.8 percent) of 6,350 sampled physicians were found to be eligible for the survey; of these, 2,592 physicians participated in the PII for an unweighted response rate of 63.9 percent.

The induction interview, conducted at the start of data collection, included questions to determine physician eligibility for the survey and to gather information about the practice, such as size, ownership, and revenue sources (see Appendix II for excerpts of the PII questionnaires). Some characteristics of physicians are taken from the master files of the AMA and AOA, including age, sex, race and ethnicity, foreign medical school graduate, specialty, geographic region, and metropolitan statistical area status. Many of the tables present estimates by physician specialty, and two methods of categorizing physician specialty are used in this report. The first method reflects the NAMCS sample strata of 13 major specialty groupings, and the second uses three broad types of specialty (primary care, surgical, and medical specialties). See Appendix I for definitions. Both methods are based on the specific self-designated subspecialty codes provided by the AMA and AOA on the sampling frame and updated by the physician during the NAMCS induction interview.

Sampling weights reflecting the multistage sample of physicians and nonresponse adjustments were used to make annual national estimates of physicians. Because estimates presented in this report are based on sample surveys rather than the universe of office-based physicians, they are subject to sampling variability. Appendix I includes an explanation of the sampling errors with guidelines for judging the precision of the estimates and information on physician and item nonresponse. Standard errors are calculated using Taylor series approximations in SUDAAN, which take into account the complex sample design of the NAMCS (7). In this report, estimates are not presented if they are based on fewer than 20 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 20–29 cases are also presented with asterisks (*) regardless of the RSE level. Estimates based on 30 or more cases include an asterisk (*) if the RSE of the estimate exceeds 30 percent.

In this report, percentages based on categorical responses were computed with missing data (''unknown'' or blank) in the denominator so that responses represent all physicians. This method may understate percentages if the distribution among unknowns is similar to the distribution among responses. (See Appendix I for information on missing data for characteristics presented in the report.)

Chi-square tests using SUDAAN were performed to detect significant associations between provider characteristics. All other tests of statistical significance between two estimates are based on the two-tailed *t*-test at the 0.05 level of significance, unless otherwise noted. Terms relating to differences, such as ''greater than'' or ''less than,'' indicate that the difference is statistically significant. A lack of comment regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

The data collection agent for NAMCS is the U.S. Census Bureau, and the data are centrally processed by Constella Group, Inc. There is 100 percent independent keying of the induction forms with a quality control error rate of 0.1 percent. More information about the data collection procedures and survey background may be found elsewhere (8,9).

# Results

## Physician Characteristics

Table 1 provides national estimates of office-based physicians by characteristics available from the sampling frame. During 2005–2006, 308,900 office-based physicians on average were in practice on any given week in the United States. The overall rate of 105.5 physicians per 100,000 persons in 2005–2006 has remained stable since 2001–2002 (105.4 physicians per 100,000 persons) and 2003–2004 (108.4 physicians per 100,000 persons) (5). One-third of physicians (34.3 percent) were aged 45–54 years at the time of the survey. Since 2001–2002, mean physician age has increased from 49.7 years to 50.4 years (data not shown).

About one in four office-based physicians (24.1 percent) were female (Table 1). Since 2001–2002, the percentage of office-based physicians who were female increased by 24 percent, from 19.4 percent to 24.1 percent in 2005–2006 (3,4). The distribution of physicians by race and

ethnicity is presented in Table 1. These data should be viewed with caution, however, because item nonresponse from the sample frame for physician race or ethnicity was 25 percent (see Appendix I). During 2005–2006, 23.0 percent of office-based physicians were graduates of medical schools outside of the United States (Table 1). The percentage of office-based physicians who graduated from foreign medical schools has been stable since 2001–2002 (5).

About one-half of all physicians practiced in primary care specialties (50.0 percent). About 28.6 percent of physicians were in medical specialties, whereas 21.5 percent were in surgical specialties. Since 2001–2002, the proportion of physicians in medical specialties increased by 22 percent, whereas the proportion in surgical specialties decreased by 18 percent (Figure 1). Specialties with the most physicians included general and family practice (18.5 percent), internal medicine (14.3 percent), pediatrics (10.1 percent), and obstetrics and gynecology (7.7 percent).

In 2005–2006, more physicians practiced in the South (35.7 percent), the region with the largest percentage of the population, than in other regions (20.8 percent to 22.8 percent). Nearly 9 out of 10 physicians practiced in urban metropolitan areas (89.2 percent).

On the basis of the office location where physicians saw the most patients, about one-third of the physicians were in solo practices (36.8 percent), whereas 9.1 percent were in practices with 11 or more physicians (Table 2). About four-fifths of physicians (78.8 percent) were in solo or single-specialty group practices, whereas 20.3 percent were in multispecialty group practices. The majority of physicians were the owners or part owners of their practices (70.0 percent). Primary care specialists were employees more frequently (29.8 percent) than surgical specialists (19.0 percent); surgical specialists were more likely to own their practice (78.2 percent) than primary care specialists (65.2 percent) (Table 2).

## Medical Practice Estimates

Examining characteristics of medical practices provides another perspective on the organization and delivery of office-based ambulatory care. Although 36.8 percent of office-based physicians were in solo practice, 69.4 percent of medical practices consisted of solo practitioners (Tables 2 and 3). On the other hand, practices with three or more physicians, which account for one-fifth of medical practices, contained about one-half of all office-based physicians. In 2005–2006, nearly 1 in 10 medical practices were multispecialty groups (8.9 percent), and these practices accounted for 20.3 percent of all physicians. Multispecialty group practices were larger, averaging 8.6 physicians, than solo and single specialty practices (3.4 physicians, on average). The distribution of medical practices has not changed between 2003–2004 and 2005–2006 for these characteristics.

Decisions affecting patient care services, such as staffing, availability of onsite tests, provision of after-hours care, and adoption of clinical information technology, may be made at the organization level of the medical practice rather than by individual physicians. In 2006, new information was collected on availability of mid-level providers (physician assistants, nurse practitioners, and certified nurse midwives) and presence of onsite imaging, treatments, and tests. In 2006, 11.5 percent of medical practices employed at least one mid-level provider. Availability of mid-level providers was greater among multi-specialty groups than among solo practitioners or single-specialty groups and increased with size of practice through practices with 3–5 physicians (Figure 2). Among medical practices, EKG/ECG tests (33.5 percent) and lab testing (30.2 percent) were the diagnostic and therapeutic services most often available at practice locations (Figure 3). Imaging studies were less frequently available onsite (Figure 3), ranging from MRI (i.e., magnetic resonance imaging) (2.1 percent) to ultrasound (13.8 percent) and x-ray images (16.1 percent). With the exception of PET (i.e., positron emission tomography) scans, all of the onsite diagnostic and therapeutic services were available more frequently among multispecialty groups than among solo practitioners or single-specialty groups (data not shown).

Between 2003–2004 and 2005–2006, use of fully or partially

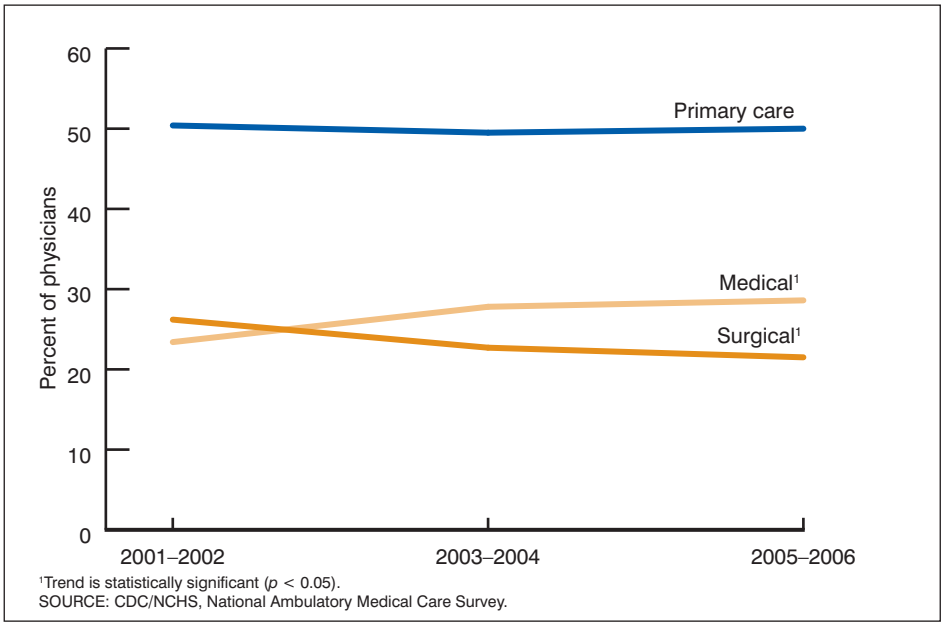
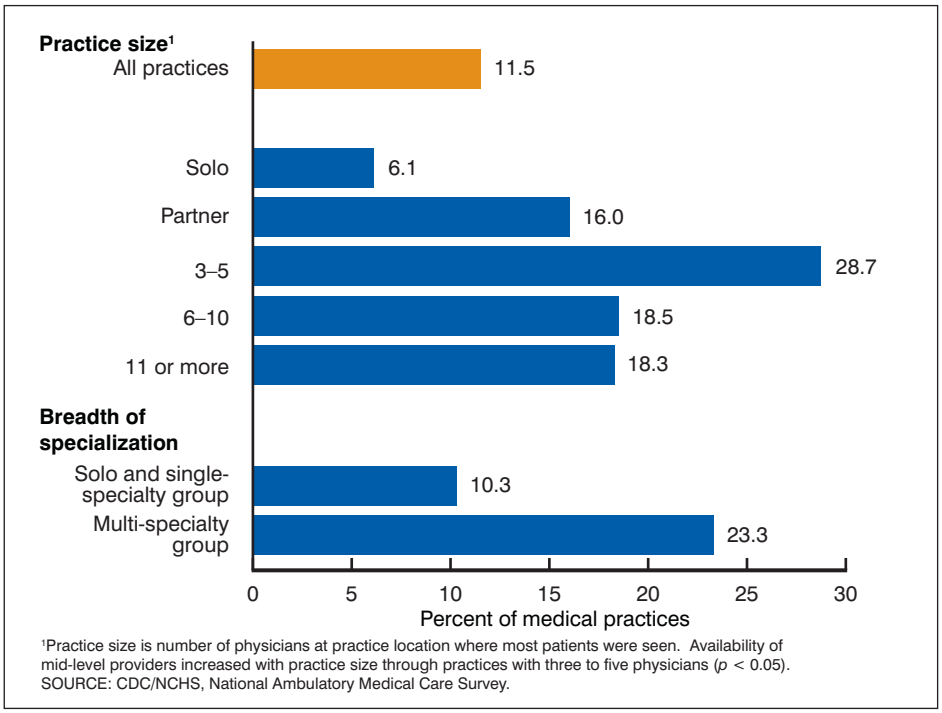



**Figure 1. Percent distribution of office-based physicians, by specialty type, according to survey year: United States, 2001–2006**




[1]Practice size is number of physicians at practice location where most patients were seen. Availability of mid-level providers increased with practice size through practices with three to five physicians ($p < 0.05$).
SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey.

**Figure 2. Percentage of office-based medical practices with mid-level providers, by size of practice and breadth of specialization: United States, 2006**

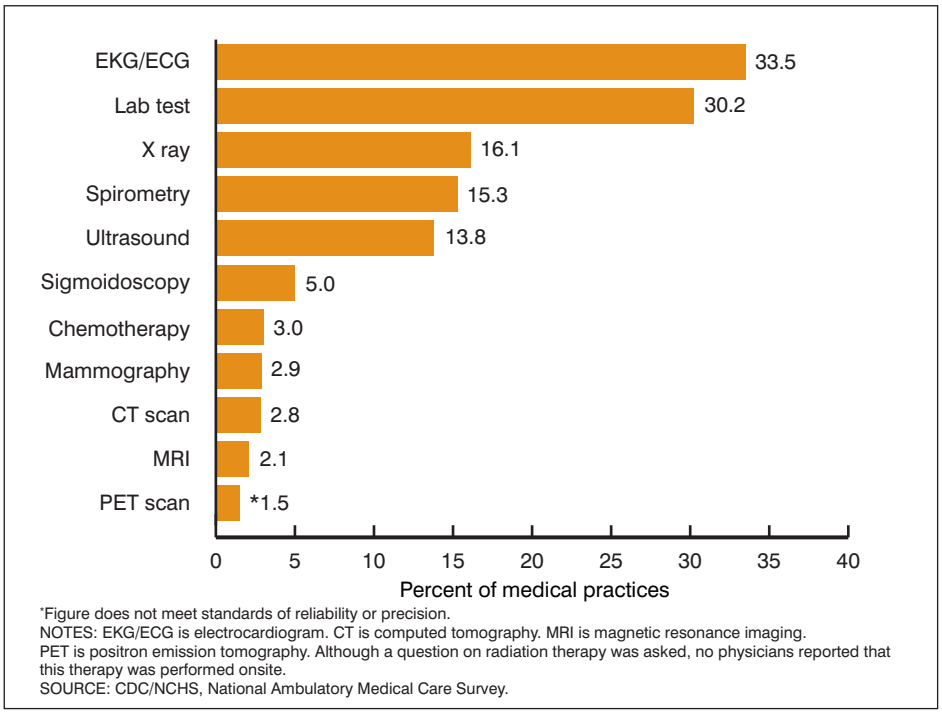



*Figure does not meet standards of reliability or precision.
NOTES: EKG/ECG is electrocardiogram. CT is computed tomography. MRI is magnetic resonance imaging. PET is positron emission tomography. Although a question on radiation therapy was asked, no physicians reported that this therapy was performed onsite.
SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey.

**Figure 3. Percentage of office-based medical practices, by selected diagnostic and therapeutic services available onsite: United States, 2006**

electronic medical records (also known as EMRs) by medical practices increased by 46 percent from 15.0 percent in 2003–2004 to 21.9 percent in 2005–2006 (6). In 2005–2006, nearly two-thirds (63.3 percent) of HMO (i.e., health maintenance organization) medical practices were using full or partial electronic medical records (Table 4). Use of computerized prescription order entry among all medical practices nearly doubled between 2003–2004 (6.5 percent) and 2005–2006 (12.5 percent) (Table 5) (6).

## Revenues and Access

During 2005–2006, 83.2 percent of physicians reported having at least one managed care contract and 11.0 percent had none, whereas this information was missing for 5.8 percent (Table 2). About 34.7 percent of physicians reported having between 3 and 10 managed care contracts, whereas 39.4 percent reported 10 or more contracts. Of practices reporting at least one managed care contract, the mean percentage of revenue from these contracts was 47.2 percent. The mean percentage of revenue from managed care contracts was higher among primary care specialists (51.2 percent) than among surgical (42.4 percent) or medical specialists (43.3 percent).

The NAMCS PII included questions about the percentage of practice revenue from various payment sources (Table 2). Private insurance accounted for about one-half of office revenue (on average, 45.2 percent) and Medicare accounted for an average of 29.7 percent of revenue among physicians reporting this information. Primary care specialists reported a higher mean percentage of revenue from private insurance (49.2 percent) and Medicaid (17.4 percent) than surgical or medical specialists (Table 2). The mean percentage of Medicare revenues, however, was higher among surgical (36.8 percent) and medical (34.6 percent) specialists than among primary care specialists (23.8 percent).

When physicians were asked if they were currently accepting new patients into their practice, 91.9 percent responded positively (Table 6), a 3 percent decrease since 2001 (94.8 percent) (3). In 2005–2006, responses varied by the payment sources physicians accepted from new patients (40.5 percent to 85.6 percent). Figure 4 presents trends in the percentage of physicians who reported payment sources that they did not accept from

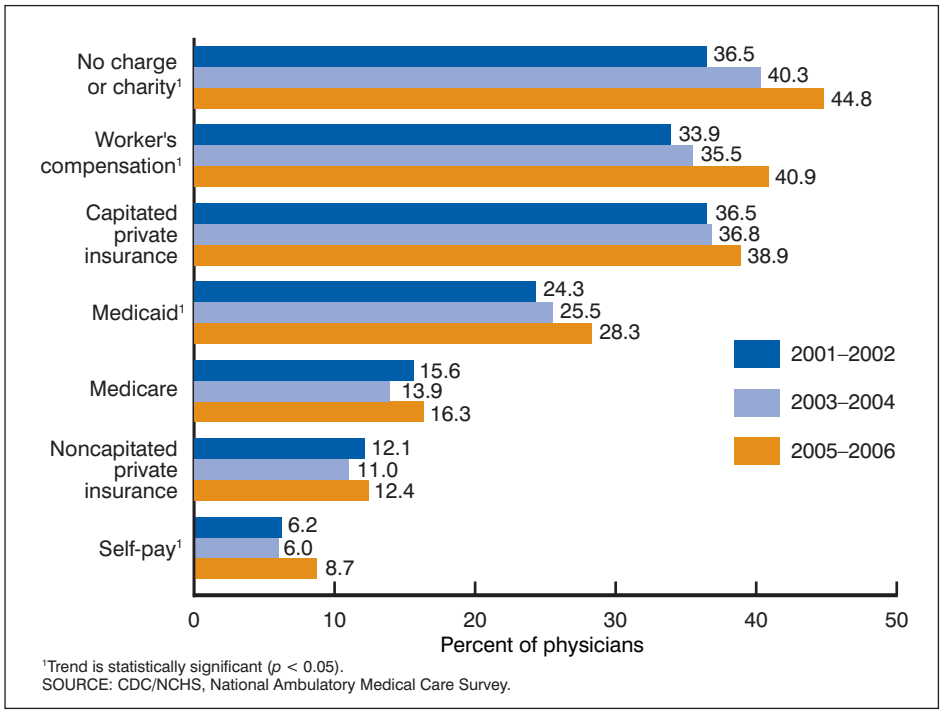



**Figure 4. Percentage of office-based physicians not accepting new patients, by source of payment and survey year: United States, 2001–2006**

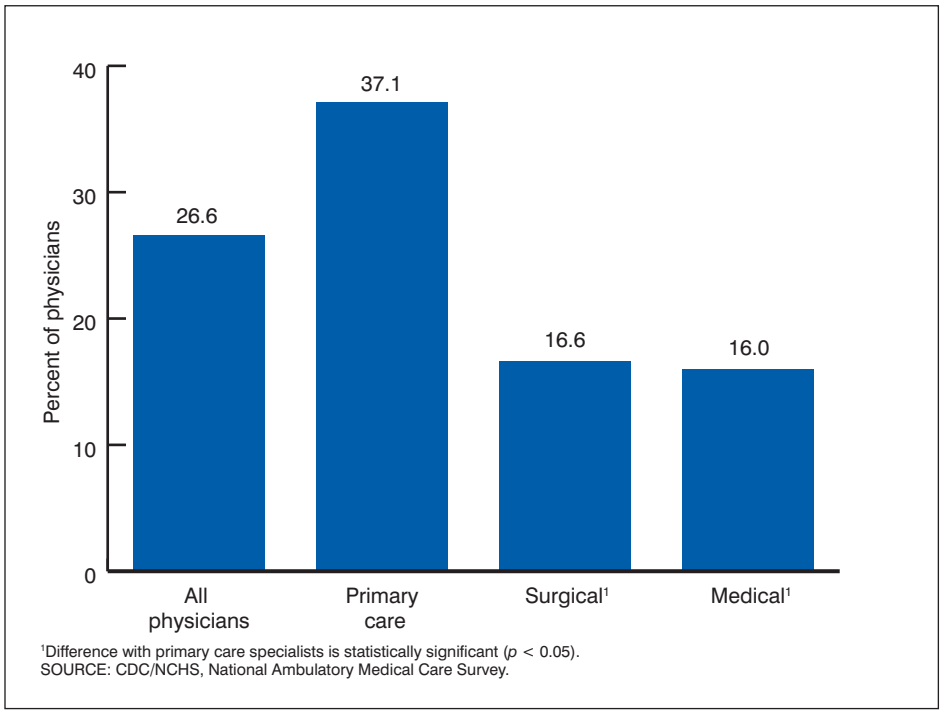



**Figure 5. Percentage of office-based physicians who saw patients during the evening or on weekends, by specialty type: United States, 2006**

new patients. The percentage of physicians not accepting new Medicaid patients (28.3 percent) in 2005–2006 represents a 16 percent increase since 2001–2002. In 2005–2006, 44.8 percent of office-based physicians did not accept new charity cases (as defined by the ''no charge/charity'' check box), a 23 percent increase since 2001–2002. A similar pattern was observed for primary care specialists; primary care specialists not accepting new charity patients increased by 23 percent, from 39.8 percent in 2001–2002 to 49.0 percent in 2005–2006 (data not shown). For this analysis, when physicians reported not accepting any new patients, their responses were edited to ''no'' for each of the specific payment sources. ''No'' responses may be understated if the amount of missing data is large because each percentage includes unknowns in the denominator. The percentage with missing data for these items ranged from 5.7 percent for self-pay to 14.7 percent for no charge or charity (see Appendix I for further information).

Physicians may not accept new patients because they are operating at capacity. In 2006, new information was collected in NAMCS on whether the physician saw patients in the office during the evening or on weekends. Figure 5 shows that 26.6 percent of physicians saw patients after office hours in 2006. Primary care specialists were more likely to see patients during nonoffice hours (37.1 percent) than were surgical (16.6 percent) or medical specialists (16.0 percent).

Physicians also reported on any difficulty they had referring certain types of patients for specialty care (Table 6). Physicians had the least difficulty referring Medicare and privately insured patients. About one-third had difficulty referring Medicaid and uninsured patients.

## Patient Encounters

Another practice characteristic collected in the PII is the number of encounters the physician had during his or her last full week of practice prior to the interview (Table 7). During 2005–2006, the average number of office visits reported for physicians having any visits that week was 73.4 visits per week, representing an 8 percent decline since 2001 (3).

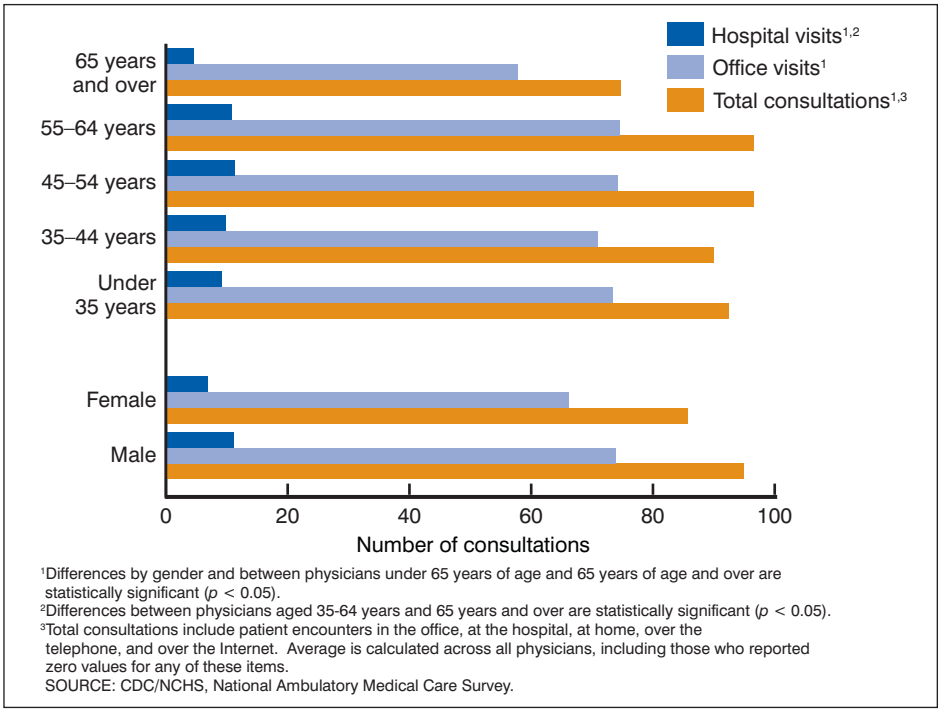
Other types of physician-patient encounters reported during the last full week of practice included hospital visits, telephone consultations, home visits, and Internet or e-mail consultations. During 2005–2006, 56.8 percent of physicians reported making at least one hospital visit, 50.7 percent had at least one

telephone consultation, 8.8 percent made one or more house visits (including visits to nursing homes), and 6.0 percent reported having an email or Internet consultation during the week. During 2005–2006, surgical specialists were more likely to make a hospital visit in their last full week of work (66.6 percent) compared with the other types of specialties. The 2005–2006 estimates indicate the following declines since 2001: the percentage of physicians reporting hospital visits declined by 26 percent, telephone consultations declined by 31 percent, and home visits declined by 51 percent (3).

Some physicians may have provided care in the emergency department (ED) during their hospital visits. The Emergency Medical Treatment and Labor Act (EMTALA) of 1986 requires all hospitals accepting Medicare funding to screen all patients presenting to the ED for care and to stabilize emergency medical conditions before transferring or discharging patients from the ED (10). In 2005–2006, such care was provided by 9.2 percent of physicians during their last full week of practice; at that time, they provided, on average, 11.0 hours of care (Table 7). Surgical specialists were more likely to have provided EMTALA care during the week (12.5 percent) than were primary care specialists (7.9 percent).

Table 8 shows the average weekly number of consultations for all physicians during their last full week of practice, as well as those that occurred during office visits, hospital visits, and telephone consultations across practice characteristics. To approximate total volume of patient consultations made by office-based physicians during their last full week of practice, all types of consultations conducted by telephone, email, or Internet, or consultations conducted during any patient visit occurring inside or outside of the office (house or hospital visit) were summed, including those for physicians with zero encounters in Table 8 (in contrast to Table 7, which excludes physicians reporting zero encounters). In 2005–2006, office-based physicians had an average of 92.7 patient encounters during their last full week of work. This includes an average of 71.9 office visits, 10.0 hospital visits, 8.8 telephone consults, 1.3 home visits, and 0.6 email consultations (last two estimates not shown). Although the total volume of consultations was greater for primary care specialists (105.6 encounters compared with 78.4 encounters for medical specialties and 81.6 encounters for surgical specialties), hospital visits were more frequent among medical specialties (13.4 visits compared with 7.7 visits for primary care specialists and 11.0 visits for surgical specialties). Office volume and total volume increased with the number of managed care contracts that physicians reported (Table 8), driven by the positive associations between office visit volume and the number of contracts among primary care and medical specialists (data not shown).

Table 9 presents the average weekly volume of consultations by physician specialty. Although dermatologists had the highest average volume of office visits, they were among specialties with the lowest average volume of hospital visits. The average weekly volume of consultations also varied by physician age and sex (Figure 6). Female physicians had fewer weekly encounters overall compared with male physicians, including office visits and hospital visits. Physicians aged 65 years and over had fewer weekly encounters overall, as well as fewer office visits compared with physicians under 65 years of age. Physicians aged 65 years and over had fewer hospital visits than physicians aged 35–64 years.




[1]Differences by gender and between physicians under 65 years of age and 65 years of age and over are statistically significant ($p < 0.05$).
[2]Differences between physicians aged 35-64 years and 65 years and over are statistically significant ($p < 0.05$).
[3]Total consultations include patient encounters in the office, at the hospital, at home, over the telephone, and over the Internet. Average is calculated across all physicians, including those who reported zero values for any of these items.
SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey.

**Figure 6. Average number of consultations during last full week of practice, by type of encounter and physician age and sex: United States, 2005–2006**

# Discussion

This report presents nationally representative estimates of office-based medical practices and physicians within these practices who saw patients during 2005–2006 and selected physician and medical practice characteristics available only for the 2006 survey. The report updates previously published estimates of medical practices (first published with 2003–2004 data) (6) and office-based physicians (3–5,11–14) since 2001–2002.

As measured by the ratio of office-based physicians to the U.S. civilian, noninstituional population, the report found no change in the per capita supply of office-based physicians between 2001–2002 and 2005–2006. The stability in the supply of practicing

physicians may have been affected by the availability of mid-level providers in physician practices as potential caregivers. In 2006, 11.5 percent of medical practices reported using mid-level providers, and 16.5 percent of all physicians reported mid-level providers at their practices. A previous study found that the proportion of physicians in noninstitutional practice settings employing mid-level providers increased from 40 percent to 48 percent between 1997 and 2001 (15).

Although the supply of practicing physicians remained stable between 2001–2002 and 2005–2006, the finding that fewer physicians accepted new patients in 2005–2006 may indicate access problems for certain patients. The study found that the percentage of physicians not accepting new charity patients or new Medicaid patients increased between 2001–2002 and 2005–2006. These findings may indicate access problems among physicians providing care for Medicaid patients.

Despite decreasing access for some new patients, some physicians provided flexible office hours for patient care. In 2006, 26.6 percent of physicians saw patients in the office during evenings or on weekends. Primary care specialists were more likely to see patients during the evening or on weekends than were surgical or medical specialists.

The report found a trend of physicians' having fewer patient encounters during their last complete week of practice. Between 2001 and 2005–2006, the average number of office visits declined by 8 percent, whereas the percentage of physicians reporting hospital visits declined by 26 percent, the percentage reporting telephone consultations declined by 31 percent, and the percentage making home visits declined by 51 percent (3). These estimates support previous studies that found physicians have reduced the number of hours they work (16,17).

Two factors may be related to physicians' working fewer hours. First, the pool of physicians is aging. In 2005–2006, the median age of office-based physicians was 50 years of age. With one-half of office-based physicians being 50 years of age and over, some physicians may work fewer hours because they are nearing retirement age. This study found that most physicians dramatically reduced their volume of patient encounters after they reach 65 years of age. Second, the proportion of office-based female physicians is increasing (24.1 percent in 2005–2006, compared with 19.4 percent in 2001–2002). According to the Association of American Medical Colleges, the percentage of female medical school graduates increased 77 percent between 1980–1981 and 2002–2003, from 26.5 percent to 46.8 percent (18). The setting that saw the largest increase in female physicians during this period was the office-based practice (567 percent increase) (19). This study found that female physicians had fewer patient encounters during their last full week of practice than male physicians, primarily because of fewer office and hospital visits. These findings in part explain the decrease in total hours worked by physicians. Previous research also found that female physicians generally work fewer hours than male physicians even when part-time status is taken into account (16,17).

The practice pattern of working fewer hours reduces the relative supply of physicians available to provide patient care (20). As the baby boom population ages, demand for physician services is expected to increase (20).

In addition to updating physician characteristics, this study describes characteristics of medical practices in 2005–2006. The study found that multispecialty group practices not only averaged more physicians in the practice than solo practices or single-specialty groups, but they also had more mid-level providers and provided chemo therapy and other tests and imaging onsite more often than solo practices or single-specialty group practices. Use of clinical health information technology by all medical practices increased by 46 percent since 2003–2004, and use of computerized prescription order entry features of these systems increased by 92 percent. Although these trends show progress, a previous report found that use of comprehensive electronic medical record systems (which, at a minimum, included prescription and test order entry features, as well as the ability to see test results and clinical notes electronically) by medical practices remained stable between 2003–2004 and 2005–2006 (14).

The previous discussion illustrates how physician data may be used to track multiple issues affecting the supply and practice characteristics of office-based physicians. Further research is warranted to examine these issues in more depth.

Additional information about office-based physicians is available from the National Center for Health Statistics (NCHS) Ambulatory Health Care website at http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm. Data from the 2005–2006 NAMCS PII are available through the NCHS Research Data Center. Queries regarding NAMCS data may be sent to NCHS via nchsquery@cdc.gov.

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**Table 1. Number and percent distribution of office-based physicians, with corresponding standard errors, by selected physician characteristics: United States, 2005–2006**

| Selected physician characteristics[1] | Number of physicians[2] | Standard error | Percent distribution | Standard error of percent |
|---|---|---|---|---|
| Total | 308,900 | 8,100 | 100.0 | . . . |
| Age | | | | |
| Under 35 years | 15,800 | 1,700 | 5.1 | 0.5 |
| 35–44 years | 85,600 | 4,100 | 27.7 | 1.1 |
| 45–54 years | 106,000 | 4,900 | 34.3 | 1.1 |
| 55–64 years | 75,300 | 3,500 | 24.4 | 1.1 |
| 65 years and over | 26,200 | 2,000 | 8.5 | 0.6 |
| Sex | | | | |
| Male | 234,500 | 6,700 | 75.9 | 1.1 |
| Female | 74,400 | 4,000 | 24.1 | 1.1 |
| Race and ethnicity | | | | |
| Non-Hispanic white | 173,000 | 6,900 | 56.0 | 1.4 |
| Non-Hispanic black | 6,900 | 1,000 | 2.2 | 0.3 |
| Asian or Pacific Islander | 33,100 | 2,800 | 10.7 | 0.9 |
| Hispanic | 8,200 | 1,200 | 2.6 | 0.4 |
| Other or unknown | 87,700 | 4,200 | 28.4 | 1.2 |
| Graduate of foreign medical school | | | | |
| No | 218,800 | 8,200 | 70.8 | 1.3 |
| Yes | 71,100 | 3,800 | 23.0 | 1.2 |
| Unknown | 19,000 | 1,700 | 6.2 | 0.6 |
| Specialty type[3] | | | | |
| Primary care | 154,400 | 5,100 | 50.0 | 0.9 |
| Medical | 88,200 | 3,600 | 28.6 | 0.9 |
| Surgical | 66,300 | 2,900 | 21.5 | 0.8 |
| Physician specialty[4] | | | | |
| General and family practice | 57,300 | 2,600 | 18.5 | 0.7 |
| Internal medicine | 44,000 | 2,600 | 14.3 | 0.7 |
| Pediatrics | 31,100 | 1,500 | 10.1 | 0.4 |
| Obstetrics and gynecology | 23,700 | 1,100 | 7.7 | 0.3 |
| Psychiatry | 17,800 | 900 | 5.8 | 0.3 |
| Orthopedic surgery | 15,100 | 1,100 | 4.9 | 0.3 |
| Cardiovascular diseases | 13,200 | 800 | 4.3 | 0.2 |
| Opthalmology | 12,800 | 900 | 4.1 | 0.3 |
| General surgery | 11,300 | 800 | 3.6 | 0.3 |
| Dermatology | 7,200 | 600 | 2.3 | 0.2 |
| Urology | 6,600 | 400 | 2.1 | 0.1 |
| Neurology | 6,300 | 300 | 2.0 | 0.1 |
| Otolaryngology | 5,900 | 400 | 1.9 | 0.1 |
| All other specialties | 56,500 | 3,000 | 18.3 | 0.8 |
| Geographic region | | | | |
| Northeast | 64,200 | 3,800 | 20.8 | 1.1 |
| Midwest | 64,000 | 3,000 | 20.7 | 0.9 |
| South | 110,200 | 5,500 | 35.7 | 1.4 |
| West | 70,400 | 3,600 | 22.8 | 1.0 |
| Metropolitan status | | | | |
| MSA[5] | 275,600 | 8,400 | 89.2 | 1.5 |
| Non-MSA | 33,300 | 4,700 | 10.8 | 1.5 |

. . . Category not applicable.

[1]Characteristic information is from the master files of the American Medical Association and the American Osteopathic Association.

[2]Number of nonfederal office-based physicians during 2005–2006, excluding the specialties of radiology, pathology, and anesthesiology. Estimates are rounded to the nearest hundred.

[3]Specialty type is defined in Appendix I, Table V.

[4]Physician specialty is defined in Appendix I, Table IV.

[5]MSA is metropolitan statistical area.

**Table 2. Number and percent distribution of office-based physicians by practice characteristcs, and mean percentage of selected practice characteristics, with corresponding standard errors, according to specialty type: United States, 2005–2006**

| Practice characteristics | Specialty type[1] | | | | Specialty type[1] | | | |
|---|---|---|---|---|---|---|---|---|
| | All specialties | Primary care | Surgical | Medical | All specialties | Primary care | Surgical | Medical |
| | Annual number of physicians | | | | Standard error | | | |
| All office-based physicians | 308,900 | 154,400 | 66,300 | 88,200 | 8,100 | 5,100 | 2,900 | 3,600 |
| | Percent distribution | | | | | | | |
| All physicians | 100.0 | 100.0 | 100.0 | 100.0 | ... | ... | ... | ... |
| Number of in-scope office locations | | | | | | | | |
| One | 86.1 | 90.3 | 78.9 | 84.2 | 0.8 | 1.0 | 1.9 | 1.5 |
| More than one | 13.2 | 8.8 | 20.5 | 15.5 | 0.8 | 0.9 | 1.9 | 1.5 |
| Unknown | *0.7 | *0.9 | *0.6 | *0.4 | 0.2 | 0.3 | 0.4 | 0.2 |
| Practice size[2] | | | | | | | | |
| Solo | 36.8 | 35.2 | 34.7 | 41.0 | 1.2 | 1.9 | 2.3 | 2.1 |
| Partner | 12.1 | 13.7 | 10.7 | 10.3 | 0.8 | 1.3 | 1.6 | 1.2 |
| 3–5 | 27.8 | 28.8 | 30.5 | 23.9 | 1.0 | 1.6 | 2.1 | 1.7 |
| 6–10 | 14.3 | 14.2 | 14.1 | 14.6 | 0.8 | 1.4 | 1.6 | 1.4 |
| 11 or more | 9.1 | 8.1 | 10.0 | 10.1 | 0.8 | 1.1 | 1.4 | 1.2 |
| Breadth of specialization | | | | | | | | |
| Solo or single-specialty group | 78.8 | 75.0 | 82.5 | 82.6 | 1.1 | 1.7 | 1.8 | 1.7 |
| Multispecialty group | 20.3 | 23.9 | 16.2 | 17.0 | 1.1 | 1.7 | 1.8 | 1.7 |
| Unknown | 1.0 | *1.1 | *1.3 | *0.4 | 0.2 | 0.4 | 0.5 | 0.2 |
| Employment status | | | | | | | | |
| Owner | 70.0 | 65.2 | 78.2 | 72.3 | 1.4 | 1.9 | 2.2 | 2.0 |
| Employee | 25.7 | 29.8 | 19.0 | 23.4 | 1.3 | 1.8 | 2.0 | 1.9 |
| Contractor | 4.3 | 5.0 | 2.7 | 4.3 | 0.5 | 0.8 | 0.7 | 0.9 |
| Ownership[3] | | | | | | | | |
| Solo or partner practice | 44.0 | 42.8 | 43.8 | 46.2 | 1.3 | 2.1 | 2.4 | 2.1 |
| Group practice | 38.8 | 36.1 | 46.4 | 37.9 | 1.2 | 1.9 | 2.2 | 2.1 |
| HMO[4] | 2.8 | 2.8 | 1.8* | 3.4 | 0.5 | 0.6 | 0.6 | 0.8 |
| Other office setting[5] | 14.4 | 18.2 | 7.9 | 12.5 | 1.2 | 1.7 | 1.2 | 1.4 |
| Participates in practice-based research network | | | | | | | | |
| Yes | 4.5 | 2.7 | 5.0 | 7.1 | 0.6 | 0.5 | 1.2 | 1.2 |
| No | 81.8 | 83.6 | 82.8 | 78.0 | 1.1 | 1.3 | 1.8 | 1.9 |
| Unknown | 13.7 | 13.7 | 12.2 | 14.9 | 1.0 | 1.4 | 1.5 | 1.7 |
| Number of managed care contracts | | | | | | | | |
| None | 11.0 | 9.0 | 9.5 | 15.7 | 0.8 | 1.2 | 1.5 | 1.4 |
| 1–2 | 9.1 | 8.5 | 9.8 | 9.5 | 0.8 | 1.1 | 1.5 | 1.3 |
| 3–10 | 34.7 | 36.9 | 33.2 | 31.8 | 1.4 | 1.9 | 2.4 | 2.0 |
| More than 10 | 39.4 | 39.8 | 41.7 | 37.0 | 1.8 | 2.1 | 2.7 | 2.4 |
| Unknown | 5.8 | 5.8 | 5.8 | 6.0 | 0.6 | 0.9 | 1.0 | 1.1 |
| | Mean percent[6] | | | | | | | |
| Percentage of revenue from managed care contracts | 47.2 | 51.2 | 42.4 | 43.3 | 1.4 | 1.6 | 1.7 | 2.0 |
| | Mean percent[7] | | | | | | | |
| Percent of revenue from selected sources[8] | | | | | | | | |
| Private insurance | 45.2 | 49.2 | 40.2 | 41.8 | 0.7 | 1.0 | 1.0 | 1.2 |
| Medicare | 29.7 | 23.8 | 36.8 | 34.6 | 0.6 | 0.7 | 1.0 | 1.1 |
| Medicaid | 14.0 | 17.4 | 10.2 | 11.0 | 0.5 | 0.7 | 0.6 | 0.7 |
| Other sources | 12.3 | 11.0 | 12.1 | 14.5 | 0.6 | 0.9 | 1.1 | 1.2 |

... Category not applicable.

* Figure does not meet standards of reliability or precision.

[1]Specialty type is defined in Appendix I, Table V.

[2]Practice size is number of physicians in practice associated with location where most patients were seen. Practice size was randomly assigned for 1.6 percent of physicians missing this information.

[3]Ownership of practice is based on location where most patients were seen.

[4]HMO is health maintenance organization.

[5]Other setting includes ownership by community health center, medical academic health center, other hospital, other health care corporation, other, or unknown.

[6]Mean percentage among physicians with any managed care revenue. Information on managed care revenue was missing for 26 percent of physicians with any managed care contract.

[7]Mean percentage of revenue among physicians with any revenue from source.

[8]Information on percentage of revenue from selected sources was missing for 11 percent to 15 percent of physicians depending on type of payment source.

**Table 3. Number and percent distribution of office-based medical practices, with corresponding standard errors, by selected practice characteristics: United States, 2005–2006**

| Selected practice characteristics | Number of practices[1] | Standard error | Percent distribution | Standard error |
|---|---|---|---|---|
| Total | 163,800 | 5,500 | 100.0 | . . . |
| Number of in-scope office locations | | | | |
| One | 147,700 | 5,400 | 90.1 | 0.8 |
| More than one | 15,100 | 1,200 | 9.2 | 0.8 |
| Unknown | *1,100 | 300 | 0.7 | 0.2 |
| Practice size[2] | | | | |
| Solo | 113,600 | 4,900 | 69.4 | 1.1 |
| Partner | 18,700 | 1,400 | 11.4 | 0.8 |
| 3–5 | 23,600 | 1,000 | 14.4 | 0.7 |
| 6–10 | 6,200 | 400 | 3.8 | 0.3 |
| 11 or more | 1,800 | 200 | 1.1 | 0.1 |
| Breadth of specialization | | | | |
| Solo or single-specialty group | 147,500 | 5,400 | 90.1 | 0.7 |
| Multispecialty group | 14,600 | 1,000 | 8.9 | 0.6 |
| Unknown | *1,700 | 500 | *1.0 | 0.3 |
| Ownership[3] | | | | |
| Solo or partner practice | 120,900 | 5,000 | 73.8 | 1.2 |
| Group practice | 24,300 | 1,000 | 14.9 | 0.7 |
| HMO[4] | 2,100 | 400 | 1.3 | 0.2 |
| Other office setting[5] | 16,400 | 1,900 | 10.0 | 1.1 |
| Participates in practice-based research network | | | | |
| Yes | 5,400 | 1,000 | 3.3 | 0.6 |
| No | 139,200 | 4,900 | 85.0 | 1.2 |
| Unknown | 19,200 | 1,900 | 11.7 | 1.1 |
| Geographic region | | | | |
| Northeast | 36,300 | 2,300 | 22.2 | 1.3 |
| Midwest | 30,100 | 2,000 | 18.4 | 1.2 |
| South | 60,700 | 3,500 | 37.1 | 1.7 |
| West | 36,600 | 3,000 | 22.4 | 1.6 |
| Metropolitan status | | | | |
| MSA[6] | 144,600 | 5,500 | 88.3 | 1.6 |
| Non-MSA | 19,200 | 2,800 | 11.7 | 1.6 |

. . . Category not applicable.

* Figure does not meet standards of reliability or precision.

[1]See Appendix I for details on estimating practices. Practice estimates are rounded to the nearest hundred.

[2]Practice size is number of physicians at practice location where most patients were seen. Practice size were randomly assigned for 1.6 percent of physicians missing this information.

[3]Ownership of practice based on location where most patients were seen.

[4]HMO is health maintenance organization.

[5]Other setting includes ownership by community health centers, medical academic health center, other hospital, other health care corporation, other, or unknown.

[6]MSA is metropolitan statistical area.

**Table 4. Percent distribution of office-based medical practices and percent distribution of physicians within practices, with corresponding standard errrors, by use of electronic medical records and practice ownership: United States, 2005–2006**

| Practice ownership[1] | Practices[2] | | | | Physicians within practices | | | |
|---|---|---|---|---|---|---|---|---|
| | Percent distribution of practices | Fully electronic medical record | Part paper, part electronic medical record | None[3] | Percent distribution of physicians | Fully electronic medical record | Part paper, part electronic medical record | None[3] |
| | Percent distirbution | | | | | | | |
| Total | 100.0 | 9.2 | 12.7 | 78.2 | 100.0 | 12.8 | 13.7 | 73.5 |
| Solo or partner practice | 100.0 | 7.1 | 11.4 | 81.5 | 100.0 | 7.5 | 11.4 | 81.1 |
| Group practice | 100.0 | 12.9 | 12.6 | 74.5 | 100.0 | 15.4 | 13.2 | 71.4 |
| HMO[4] | 100.0 | 45.6 | *17.7 | *36.8 | 100.0 | 50.0 | *20.9 | 29.1 |
| Other office setting[5] | 100.0 | 14.6 | *21.0 | 64.4 | 100.0 | 14.9 | 20.6 | 64.5 |
| | Standard error of percent | | | | | | | |
| Total | ... | 0.9 | 1.2 | 1.3 | ... | 0.9 | 1.0 | 1.2 |
| Private solo or partner | ... | 1.0 | 1.3 | 1.5 | ... | 1.0 | 1.2 | 1.4 |
| Private group | ... | 1.4 | 1.5 | 2.0 | ... | 1.5 | 1.4 | 2.0 |
| HMO[4] | ... | 8.9 | 5.9 | 8.7 | ... | 7.4 | 5.5 | 7.0 |
| Other office setting[5] | ... | 3.5 | 5.6 | 6.0 | ... | 2.3 | 3.3 | 4.0 |

* Figure does not meet standards of reliability or precision.

... Category not applicable.

[1]Ownership of practice based on location where most patients were seen.

[2]See Appendix I for details on estimating practices.

[3]Includes unknowns.

[4]HMO is health maintenance organization.

[5]Other office settings includes ownership by community health center, medical academic health center, other hospital, other health care corporation, other, or unknown.

**Table 5. Percentage of office-based medical practices and physicians within practices reporting selected features of their electronic medical record system, with corresponding standard errors: United States, 2005–2006**

| Electronic medical record system feature | All medical practices[1] | All physicians within practices[2] | All medical practices | All physicians within practices |
|---|---|---|---|---|
| | Percent | | Standard error of percent | |
| Patient demographics | 19.2 | 23.7 | 1.3 | 1.2 |
| Physician clinical notes | 16.3 | 20.2 | 1.2 | 1.1 |
| Test results[3] | 12.8 | 18.7 | 1.2 | 1.2 |
| Computerized orders for prescriptions | 12.5 | 16.4 | 1.1 | 1.0 |
| Computerized orders for tests | 10.4 | 14.4 | 1.1 | 1.0 |
| Public health reporting | 4.9 | 6.0 | 0.7 | 0.6 |

[1]See Appendix I for details on estimating practices.

[2]Includes nonfederal, office-based physicians who see patients in an office setting. Excludes radiologists, anesthesiologists, and pathologists.

[3]Includes lab and imaging results.

NOTE: Percentages may be underestimates because electronic medical record use is unknown for 3.2 percent of physicians.

**Table 6. Percentage of office-based physicians by specialty type and physician accessibility, with corresponding standard errors: United States, 2005–2006**

| Physician accessibility | Specialty type[1] | | | | Specialty type[1] | | | |
|---|---|---|---|---|---|---|---|---|
| | All specialties | Primary care | Surgical | Medical | All specialties | Primary care | Surgical | Medical |
| | Percent of physicians | | | | Standard error of percent | | | |
| Percentage of physicians accepting new patients by payment source[2] | | | | | | | | |
| Any new patients | 91.9 | 89.6 | 96.3 | 92.5 | 0.6 | 1.2 | 0.7 | 0.9 |
| Self-pay | 85.6 | 84.5 | 91.2 | 83.4 | 0.8 | 1.3 | 1.2 | 1.5 |
| Medicare | 77.9 | 71.1 | 90.9 | 80.2 | 0.9 | 1.5 | 1.3 | 1.6 |
| Noncapitated private insurance | 75.5 | 76.6 | 78.8 | 71.2 | 1.2 | 1.7 | 1.9 | 2.0 |
| Medicaid | 65.5 | 64.4 | 74.2 | 61.0 | 1.2 | 1.9 | 2.2 | 2.0 |
| Worker's compensation | 50.9 | 44.2 | 73.2 | 46.1 | 1.5 | 2.0 | 2.2 | 2.3 |
| Capitated private insurance | 49.3 | 55.0 | 45.8 | 41.8 | 1.8 | 2.3 | 2.6 | 2.4 |
| No charge or charity | 40.5 | 38.0 | 50.7 | 37.1 | 1.6 | 2.2 | 2.4 | 2.2 |
| Percentage of physicians having difficulty referring patients with selected payment sources for specialty consultation[3] | | | | | | | | |
| Medicaid | 32.4 | 37.6 | 25.2 | 28.8 | 1.4 | 2.0 | 2.0 | 2.1 |
| Medicare | 9.3 | 10.9 | 6.4 | 8.8 | 0.8 | 1.1 | 1.1 | 1.4 |
| Private insurance | 11.2 | 12.3 | 7.0 | 12.5 | 0.8 | 1.2 | 1.1 | 1.4 |
| Uninsured | 31.0 | 35.1 | 26.0 | 27.6 | 1.4 | 1.9 | 2.1 | 1.9 |

[1]Specialty type is defined in Appendix I, Table V.

[2]Information on accepting any new patients is missing for 2.5 percent of cases. The level of missing data for each type of new patient accepted ranged from 6 percent to 15 percent depending on type of payment source.

[3]Difficulty refers to the physician experiencing ''some'' or ''a lot'' of difficulty in referring patients with selected payment sources for specialty consultation in the last 12 months. The level of missing data ranged from 7 percent to 11 percent depending on payment source of patient.

**Table 7. Average number of weekly consultations reported during the last full week of practice, and percentage of physicians with selected types of encounters by specialty type, with corresponding standard errors: United States, 2005–2006**

| Type and volume of patient encounters | Specialty type[1] | | | | Specialty type[1] | | | |
|---|---|---|---|---|---|---|---|---|
| | All specialties | Primary care | Surgical | Medical | All specialties | Primary care | Surgical | Medical |
| | Average number of weekly visits[2] | | | | Standard error | | | |
| Volume of office visits last full week | 73.4 | 85.3 | 67.1 | 57.3 | 1.2 | 2.0 | 1.8 | 1.9 |
| Type of patient encounter[4] | Percent of physicians[3] | | | | | | | |
| Hospital visits | 56.8 | 55.6 | 66.6 | 51.4 | 1.4 | 2.0 | 2.0 | 2.1 |
| Telephone consultation | 50.7 | 57.2 | 41.5 | 46.3 | 1.6 | 2.1 | 2.6 | 2.2 |
| Home visits | 8.8 | 13.6 | 2.6 | 5.2 | 0.8 | 1.3 | 0.7 | 1.0 |
| E-mail or Internet consultation | 6.0 | 6.3 | 5.7 | 5.9 | 0.7 | 0.9 | 1.3 | 1.2 |
| EMTALA mandated care[5] | 9.2 | 7.9 | 12.5 | 9.1 | 0.7 | 1.0 | 1.4 | 1.3 |
| Volume of patient encounters[4] | Average number of weekly consultations reported[6] | | | | | | | |
| Hospital visits | 17.7 | 13.8 | 16.6 | 26.1 | 1.0 | 1.5 | 1.4 | 2.0 |
| Telephone consultation | 17.4 | 20.7 | 9.9 | 15.5 | 0.8 | 1.2 | 0.7 | 1.4 |
| Home visits | 13.8 | 12.3 | *17.0 | *19.6 | 1.9 | 1.9 | 5.9 | 7.0 |
| E-mail or Internet consultation | 10.1 | 11.2 | 9.1 | *8.6 | 1.6 | 2.2 | 2.5 | 3.2 |
| Hours of EMTALA mandated care | 11.0 | 12.3 | 10.1 | 9.9 | 1.3 | 2.8 | 1.6 | 1.8 |

* Figure does not meet standards of reliability or precision.

[1]Specialty type is defined in Appendix I, Table V.

[2]Average number of office visits during last full week of practice among physicians with any visits.

[3]Percentage of physicians reporting any consultations during last full week of practice with any of that type of consultation.

[4]Information on type of consultations was missing for 6 percent to 10 percent of physicians, depending on type of consultation.

[5]EMTALA is care mandated by the Emergency Medical Treatment and Labor Act of 1986 (EMTALA).

[6]Average number of consultations during last full week of practice for physicians reporting any of that type of consultation.

**Table 8. Average number of weekly consultations per physician during the last full week of practice, with corresponding standard errors, by type of encounter and practice characteristics: United States, 2005–2006**

| Practice characteristic | Total consultations[1] | Office visits | Hospital visits | Telephone consultations | Total consultations[1] | Office visits | Hospital visits | Telephone consultations |
|---|---|---|---|---|---|---|---|---|
| | Average number of weekly consultations reported[2] | | | | Standard error | | | |
| All office-based physicians | 92.7 | 71.9 | 10.0 | 8.8 | 1.5 | 1.2 | 0.6 | 0.5 |
| Specialty type[3] | | | | | | | | |
| Primary care | 105.6 | 83.7 | 7.7 | 11.8 | 2.5 | 2.0 | 0.9 | 0.8 |
| Surgical | 81.6 | 65.5 | 11.0 | 4.1 | 2.3 | 1.8 | 1.0 | 0.4 |
| Medical | 78.4 | 56.2 | 13.4 | 7.2 | 2.5 | 1.8 | 1.1 | 0.8 |
| Practice size | | | | | | | | |
| Solo | 90.1 | 70.2 | 8.9 | 9.2 | 2.7 | 2.2 | 0.8 | 0.8 |
| Partner | 90.4 | 72.0 | 8.3 | 8.6 | 4.1 | 3.7 | 1.1 | 1.2 |
| 3–5 | 95.0 | 74.1 | 11.4 | 7.9 | 2.7 | 2.1 | 1.1 | 0.8 |
| 6–10 | 96.0 | 74.5 | 11.6 | 8.3 | 4.0 | 2.6 | 2.8 | 1.1 |
| 11 or more | 93.4 | 68.0 | 10.4 | 11.3 | 4.8 | 3.2 | 1.7 | 2.0 |
| Number of managed care contracts | | | | | | | | |
| None | 68.5 | 54.8 | 6.0 | 6.7 | 3.9 | 3.2 | 1.1 | 1.1 |
| 1–2 | 82.6 | 65.9 | 6.4 | 8.5 | 3.9 | 3.4 | 1.2 | 1.4 |
| 3–10 | 95.1 | 73.1 | 11.4 | 8.8 | 2.3 | 2.0 | 0.9 | 0.8 |
| More than 10 | 104.4 | 80.5 | 11.6 | 10.3 | 2.9 | 2.2 | 1.3 | 0.8 |
| Unknown | 60.0 | 49.1 | 4.5 | 4.0 | 4.6 | 3.9 | 1.2 | 1.1 |
| Ownership | | | | | | | | |
| Physician(s) | 96.0 | 74.1 | 10.9 | 9.1 | 1.7 | 1.3 | 0.7 | 0.6 |
| Health maintenance organization | 78.0 | 61.9 | 2.6 | 11.0 | 6.6 | 5.4 | 0.7 | 2.3 |
| Other or unknown | 76.3 | 61.5 | 6.4 | 6.8 | 3.4 | 2.9 | 0.9 | 0.9 |
| Geographic region | | | | | | | | |
| Northeast | 92.6 | 68.5 | 9.0 | 13.0 | 3.5 | 2.5 | 1.1 | 1.4 |
| Midwest | 98.8 | 75.9 | 12.2 | 8.5 | 2.8 | 2.1 | 1.4 | 1.1 |
| South | 96.7 | 76.5 | 11.6 | 7.1 | 2.9 | 2.4 | 1.3 | 0.7 |
| West | 80.9 | 64.3 | 6.6 | 8.1 | 2.6 | 2.0 | 0.8 | 0.9 |
| Metropolitan status | | | | | | | | |
| MSA[4] | 92.1 | 71.4 | 10.1 | 8.8 | 1.6 | 1.3 | 0.7 | 0.5 |
| Non-MSA | 97.3 | 76.3 | 9.2 | 9.5 | 4.4 | 3.5 | 1.2 | 1.6 |

[1]Total consultations include patient encounters in the office, at the hospital, at home, over the telephone, and over the Internet.

[2]Calculated across all office-based physicians, including those who reported zero values for any of these items.

[3]Specialty type is defined in Appendix I, Table V.

[4]MSA is metropolitan statistical area.

**Table 9. Average number of weekly consultations per physician during the last full week of practice, by type of encounter and physician specialty, with corresponding standard errors: United States, 2005–2006**

| Physician specialty[1] | Total consultations[2] | Office visits | Hospital visits | Telephone consultations | Total consultations[2] | Office visits | Hospital visits | Telephone consultations |
|---|---|---|---|---|---|---|---|---|
| | Average number of weekly consultations reported[3] | | | | Standard error | | | |
| All office-based physicians | 92.7 | 71.9 | 10.0 | 8.8 | 1.5 | 1.2 | 0.6 | 0.5 |
| General or family practice | 106.5 | 86.4 | 5.0 | 12.4 | 3.6 | 2.9 | 0.6 | 1.3 |
| Internal medicine | 101.3 | 76.0 | 10.4 | 12.0 | 4.8 | 4.0 | 1.3 | 1.5 |
| Pediatrics | 112.3 | 93.9 | 4.8 | 11.8 | 5.6 | 4.5 | 0.5 | 1.5 |
| General surgery | 67.0 | 41.4 | 21.1 | 3.8 | 5.5 | 2.9 | 3.7 | 0.5 |
| Obstetrics and gynecology | 97.6 | 74.8 | *12.4 | 9.8 | 6.4 | 3.1 | 4.9 | 1.9 |
| Orthopedic surgery | 92.9 | 76.2 | 10.5 | 4.7 | 4.3 | 3.4 | 1.1 | 1.1 |
| Cardiovascular disease | 76.2 | 49.8 | 20.3 | 5.3 | 4.9 | 4.2 | 2.2 | 1.0 |
| Dermatology | 114.5 | 108.8 | *1.3 | 4.1 | 7.4 | 6.9 | 0.6 | 0.9 |
| Urology | 89.8 | 72.6 | 9.8 | 7.1 | 4.0 | 3.7 | 0.9 | 1.0 |
| Psychiatry | 52.9 | 39.8 | 4.3 | 6.8 | 3.1 | 2.4 | 0.8 | 1.1 |
| Neurology | 67.9 | 45.9 | 13.5 | 7.9 | 3.5 | 2.5 | 1.7 | 1.3 |
| Ophthalmology | 101.3 | 94.6 | 1.4 | 4.0 | 5.3 | 5.0 | 0.3 | 0.8 |
| Otolarnyngology | 92.6 | 82.1 | 4.4 | 5.3 | 4.5 | 4.3 | 0.5 | 0.7 |
| Other | 78.8 | 52.3 | 17.1 | 6.8 | 3.6 | 2.7 | 1.9 | 1.1 |

* Figure does not meet standards of reliability or precision.

[1]Physician specialty is defined in Appendix I, Table IV.

[2]Total consultations include patient encounters in the office, at the hospital, at home, over the telephone, and over the Internet.

[3]Calculated across all office-based physicians, including those who reported zero values for any of these items.

# Appendix I

## Technical Notes

### Data Source

The data presented in this report are from the 2005 and 2006 National Ambulatory Medical Care Survey (NAMCS), a national probability sample survey of nonfederal office-based physicians conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS), Division of Health Care Statistics. The surveys were conducted from December 27, 2004, through December 24, 2006. The NAMCS data collection is authorized under Section 308d of the Public Health Service Act (Title 42, U.S. Code, section 306 [242k]). Participation is voluntary. In April 2003, the Privacy Rule of the Health Insurance Portability and Accountability Act was implemented to establish minimum federal standards for safeguarding the privacy of individually identifiable health information.

The target universe of NAMCS includes nonfederally employed physicians (excluding the specialties of anesthesiology, radiology, and pathology) who were classified by the American Medical Association (AMA) and the American Osteopathic Association (AOA) as ''office-based, patient care.'' Physicians in private, nonhospital-based clinics and health maintenance organizations were within the scope of the survey, but those with practices in federally operated facilities and hospital-based outpatient departments were not.

NAMCS utilizes a multistage probability sample design involving samples of 112 geographic primary sampling units (PSUs) and physicians within PSUs. PSUs are counties, groups of counties, county equivalents (such as parishes or independent cities), or towns and townships (for some PSUs in New England). A total sample of 6,350 physicians was selected from the master files of AMA and AOA in 2005 and 2006. One should note that the 2006 NAMCS was enhanced by the inclusion of 350 additional sample physicians; 150 were included to increase the number of primary care physicians who would be administered the 15-minute Cervical Cancer Screening Supplement during the induction interview, and another 200 oncologists were included to improve the precision of NAMCS estimates in this specialty. Overall, 4,054 physicians were in scope (eligible to participate) in the 2005 and 2006 surveys. Of these, 2,592 physicians participated for an unweighted physician response rate of 63.9 percent. The physician universe, sample size, and unweighted response rates for 2005–2006 by physician specialty are shown in Table I.

Among sampled physicians, 63.8 percent were in scope at the time of the survey and 36.2 percent were out of scope. Sampled physicians were out of scope for the following reasons: their practice was hospital-based, they were federally employed, they were in the specialties of anesthesiology, pathology, and radiology, or their practice was nonoffice-based (institutional or occupational) (18.6 percent); they were retired or deceased (8.5 percent); they were nonpracticing because their job was nonclinical or they were temporarily not practicing (e.g., on sabbatical or on military detail) (4.4 percent); or they were ineligible for other reasons (4.6 percent) (data not shown). Changes in work status for sampled physicians could occur because the time between creating the AMA and AOA sample and the interview could range from 3 to 18 months. Additionally, the AMA surveys only

**Table I. Average number of physicians in the universe, total sample, and sample response categories for the Physician Induction Interview, and unweighted response rate, by physician stratum: National Ambulatory Medical Care Survey, 2005–2006**

| Physician stratum | Universe[1] | Sample | | | | | |
|---|---|---|---|---|---|---|---|
| | | Total | Out of scope | In scope | Nonrespondents | Participating physicians | Response rate (unweighted)[2] |
| Total | 500,219 | 6,350 | 2,296 | 4,054 | 1,462 | 2,592 | 63.9 |
| General and family practice | 70,683 | 684 | 231 | 453 | 161 | 292 | 64.5 |
| Osteopathy | 28,912 | 460 | 158 | 302 | 100 | 202 | 66.9 |
| Internal medicine | 75,545 | 415 | 184 | 231 | 81 | 150 | 64.9 |
| Pediatrics | 51,254 | 394 | 155 | 239 | 64 | 175 | 73.2 |
| General surgery | 19,969 | 406 | 173 | 233 | 75 | 158 | 67.8 |
| Obstetrics and gynecology | 33,516 | 364 | 114 | 250 | 81 | 169 | 67.6 |
| Orthopedic surgery | 20,808 | 274 | 72 | 202 | 79 | 123 | 60.9 |
| Cardiovascular diseases | 16,954 | 416 | 114 | 302 | 125 | 177 | 58.6 |
| Dermatology | 8,648 | 234 | 54 | 180 | 62 | 118 | 65.6 |
| Urology | 8,683 | 306 | 83 | 223 | 78 | 145 | 65.0 |
| Psychiatry | 31,658 | 562 | 259 | 303 | 110 | 193 | 63.7 |
| Neurology | 10,182 | 504 | 196 | 308 | 135 | 173 | 56.2 |
| Ophthalmology | 15,827 | 252 | 58 | 194 | 69 | 125 | 64.4 |
| Otolaryngology | 8,006 | 294 | 83 | 211 | 77 | 134 | 63.5 |
| All other specialties | 99,577 | 785 | 362 | 423 | 165 | 258 | 61.0 |

[1]Data are derived from the American Medical Association and the American Osteopathic Association and represent the average annual number of physicians who are designated as office-based patient care for the 2005–2006 NAMCS.

[2]Response rate is the number of participanting physicians divided by number of in-scope physicians.

NOTE: Participating physicians are those who took part in the 2005–2006 Physician Induction Interview.

one-fourth of the AMA masterfile each year to obtain updated information, and response to their survey is low (21). As a result, information on the masterfile tends to be outdated.

The U.S. Census Bureau, acting as the data collection agent for the survey, provided training to field representatives (FRs) throughout the United States. FRs contacted physicians for induction into the survey after an advance letter was mailed by NCHS notifying the physicians of their selection in the survey. They also oversaw data collection at physicians' offices. The induction interview was used to obtain basic information about the practice such as a physician's employment status, ownership of the practice, practice size, and office type.

## Estimation

In this report, estimates are provided from two different sampling weights; one for nonfederal office-based physicians and one for medical practices.

*Physician practice estimates*—Estimates of physicians who see patients in office settings are unbiased estimates based on a complex sampling design with multistage estimation. Physician weights were used to estimate national numbers and characteristics of office-based physicians (e.g., sex, age, specialty) and their practices (e.g., numbers of physicians in the practice, single-specialty compared with multispecialty practices, and types and numbers of patient encounters in last full week of practice). Information about encounters from the last full week of work is based on the respondent's memory rather than on records (see Appendix II).

The NAMCS physician estimation procedures have three basic components: 1) inflation by reciprocals of the sampling selection probabilities, 2) adjustment for physician nonresponse, and 3) a calibration ratio adjustment between the number of physicians in the sample frame between the time the sample was selected and the time that the NAMCS data were collected. For each physician, the sampling selection probability reflects the probability of PSU selection and selection of physicians within each PSU. The physician nonresponse adjustment factor is the sample weight for responding physicians augmented by a factor accounting for the amount of nonresponse by similar physicians. Similar physicians were judged to be physicians having the same specialty designation and practicing in the same PSU or region or metropolitan statistical area (MSA) status. The calibration ratio adjusts the number of physicians based on the sample frame within specialty stratum and region cells to reflect universe counts provided by AMA and AOA just prior to the NAMCS weights being finalized. For example, the 2005 estimated number of physicians increased from 281,600 to 317,100 physicians after calibration ratios were applied. Similarly, the 2006 estimated number of physicians increased from 292,800 to 300,700 physicians after calibration ratios were applied.

*Medical practice estimates*—In this report, the NAMCS physician sampling weight is modified to produce a medical practice estimator. Multiplicity occurs within a sampling frame when a member of the population is linked to more than one entry on the frame, so that the member has multiple chances of being selected. In the NAMCS sampling frame, multiplicity exists among partnerships and group practices because medical practices with more physicians have a higher probability of being selected than practices with fewer physicians. Group practices are defined as three or more physicians practicing together with a common billing and medical record system (22). No sampling frame currently exists for sampling all types of medical practices (i.e., solo, partnership, and group). Modifying a physician survey to make estimates of medical practices has the advantage of using a single survey and arithmetic manipulations to estimate both physicians and practices. In this report, nationally representative estimates of medical practices were derived using a ''multiplicity estimator'' to account for multiplicity in the physician frame (6).

The multiplicity measure used in this calculation was based on physician response to the question ''How many other physicians are associated with you (at this location)?'' This question was asked for a maximum of four office locations at which the sample physician saw ambulatory patients during his or her sampled week (see excerpts from the 2005 and 2006 Physician Induction Interview (PII) forms in Appendix II). Practice size was assumed to be one plus the number of other physicians recorded at the location where most patients were seen. Practice size was missing for 1.6 percent of physicians. For the purposes of this report, unknown practice size was randomly assigned according to physician specialty, geographic region, and employment information from the sampling frames. About 12.9 percent of physicians reported that they saw patients at multiple office locations. Medical practices were estimated by adjusting the physician sample weight by the inverse of the multiplicity indicator (number of physicians in the practice) to account for the increased likelihood of selection:

$$(\text{Medical practice weight})_{ij} = (\text{Physician sample weight})_{ij} / S_{ij},$$

where $S_{ij}$ equals the number of physicians within the practice $_j$ reported by the physician $_i$.

## Tests of Significance

In this report, the determination of statistical inference is based on a two-tailed *t*-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences (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.

## Sampling and Nonsampling Errors

The standard error is primarily a measure of the sampling variability that occurs by chance when only a sample,

rather than an entire universe, is surveyed. The standard error does not measure any systematic biases in the data. The standard errors presented in the tables and used in tests of significance for this report were estimated using SUDAAN software. SUDAAN computes standard errors by using a first-order Taylor approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses has been published (7).

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 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 for physicians participating in the 2005–2006 NAMCS PII was 65.5 percent. Table II presents weighted characteristics of NAMCS respondents and nonrespondents, along with weighted response rates. (One should note that for the purposes of presenting physician specialty in Table II, the stratum of 200 oncologists included in the 2006 NAMCS was moved to the stratum in which they would have been sampled for 2005.) Distributions were similar, with the following exceptions: physicians who were female, physicians who worked in non-MSAs, pediatricians, and physicians working in faculty practices were more likely to cooperate. Although some response variation by physician specialty may have been increased by redistributing oncologists to their original sample stratum, the nonresponse adjustment takes MSA status and specialty into account. However, the higher response by female physicians may bias characteristics for which females vary

**Table II. Characteristics of the 2005–2006 National Ambulatory Medical Care Survey physician respondents and nonrespondents to the Physician Induction Interview**

| Physician characteristic[1] | Number of sampled in-scope physicians[2] | Total sample percent distribution[3] (weighted) | Responding physician distribution[4] (weighted) | Nonresponding physician distribution[5] (weighted) | Weighted response rate[6] |
|---|---|---|---|---|---|
| All office-based physicians | 4,054 | 100.0 | 100.0 | 100.0 | 0.655 |
| Age | | | | | |
| Under 35 years | 179 | 5.2 | 5.3 | 5.0 | 0.665 |
| 35–44 years | 1,056 | 27.6 | 27.8 | 27.3 | 0.660 |
| 45–54 years | 1,372 | 33.5 | 33.7 | 33.2 | 0.659 |
| 55–64 years | 1,037 | 24.4 | 24.7 | 23.7 | 0.665 |
| 65 years and over | 410 | 9.3 | 8.4 | 10.8 | 0.597 |
| Sex[7] | | | | | |
| Male | 3,223 | 76.5 | 75.1 | 79.2 | 0.643 |
| Female | 831 | 23.5 | 24.9 | 20.8 | 0.694 |
| Region | | | | | |
| Northeast | 901 | 20.8 | 21.1 | 20.2 | 0.664 |
| Midwest | 862 | 20.7 | 20.9 | 20.3 | 0.661 |
| South | 1,358 | 35.7 | 36.0 | 35.1 | 0.661 |
| West | 933 | 22.8 | 22.0 | 24.3 | 0.632 |
| Metropolitan status[7] | | | | | |
| MSA[8] | 3,651 | 89.3 | 87.7 | 92.2 | 0.644 |
| Non-MSA | 403 | 10.7 | 12.3 | 7.8 | 0.750 |
| Physician specialty[7,9] | | | | | |
| General or family practice | 619 | 18.6 | 18.4 | 18.9 | 0.648 |
| Internal medicine | 248 | 14.4 | 14.1 | 14.8 | 0.644 |
| Pediatrics | 249 | 10.0 | 11.3 | 7.7 | 0.735 |
| General surgery | 218 | 3.6 | 3.7 | 3.4 | 0.678 |
| Obstetrics and gynecology | 268 | 7.7 | 8.0 | 7.0 | 0.686 |
| Orthopedic surgery | 218 | 4.8 | 4.6 | 5.3 | 0.624 |
| Cardiovascular diseases | 310 | 4.3 | 3.9 | 4.9 | 0.601 |
| Dermatology | 186 | 2.3 | 2.3 | 2.3 | 0.661 |
| Urology | 225 | 2.1 | 2.1 | 2.1 | 0.664 |
| Psychiatry | 310 | 5.7 | 5.6 | 6.1 | 0.636 |
| Neurology | 306 | 2.1 | 1.8 | 2.6 | 0.560 |
| Opthalmology | 205 | 4.2 | 4.0 | 4.5 | 0.628 |
| Otolaryngology | 209 | 1.9 | 1.9 | 1.9 | 0.651 |
| All other specialties | 483 | 18.4 | 18.3 | 18.5 | 0.652 |
| Specialty type[9] | | | | | |
| Primary care | 1,361 | 50.1 | 51.1 | 48.2 | 0.668 |
| Surgical | 1,196 | 21.8 | 21.0 | 23.2 | 0.633 |
| Medical | 1,497 | 28.1 | 27.9 | 28.7 | 0.649 |
| Practice type[7] | | | | | |
| Solo | 1,099 | 26.3 | 24.8 | 29.2 | 0.617 |
| Two physicans | 247 | 6.3 | 6.2 | 6.6 | 0.642 |
| Group or HMO[10] | 1,715 | 41.0 | 42.4 | 38.4 | 0.677 |
| Medical school or government | 67 | 1.6 | 2.0 | 0.8 | 0.829 |
| Other | 63 | 1.4 | 1.6 | 1.0 | 0.746 |
| Unclassified | 863 | 23.3 | 23.0 | 24.0 | 0.645 |

[1]Characteristic information is from the master files of the American Medical Association and the American Osteopathic Association.
[2]In-scope physicians are those who verified that they were nonfederal and involved in direct patient care in an office-based setting, excluding the specialties of radiology, pathology, and anesthesiology.
[3]Total physicians are those who were selected from the master files of the American Medical Association and the American Osteopathic Association ($n$ = 6,350).
[4]Responding physicians are those who were in-scope and responded to the National Ambulatory Medical Care Survey (NAMCS) Physician Induction Interview (PII).
[5]Nonresponding physicians are those who were in scope and refused to respond to the NAMCS PII.
[6]Numerator is the number of in-scope physicians who responded to the NAMCS PII. Denominator is all in-scope sampled physicians.
[7]Chi-square test of association is significant at $p < 0.05$.
[8]MSA is metropolitan statistical area.
[9]Physician specialty and specialty type are defined in the "Physician specialty groups" section of Appendix I.
[10]HMO is health maintenance organization.

**Table III. Weighted item nonresponse rates for 2005–2006 report variables**

| Variable | Weighted item nonresponse |
|---|---|
| Race and ethnicity | 25.4 |
| Graduate of foreign medical school | 6.2 |
| Practice size | 1.6 |
| Practice-based research network | 13.7 |
| Electronic medical record | 3.2 |
| Patient demographic information | 3.2 |
| Computerized prescription order entry | 4.0 |
| Computerized test order entry | 4.3 |
| Test results | 3.5 |
| Clinical notes | 4.2 |
| Public health reporting | 20.0 |
| Number of managed care contracts | 5.8 |
| Percent revenue from managed care contracts | 25.7 |
| Percent revenue from private insurance | 10.8 |
| Percent revenue from Medicare | 11.0 |
| Percent revenue from Medicaid | 12.0 |
| Percent revenue from other sources | 15.3 |
| Any new patients | 2.5 |
| New self-pay patients accepted | 5.7 |
| New Medicare patients accepted | 5.8 |
| New noncapitated private insurance patients accepted | 12.1 |
| New Medicaid patients accepted | 6.2 |
| New worker's compensation patients accepted | 8.1 |
| New capitated private insurance patients accepted | 11.8 |
| New no charge or charity patients accepted | 14.7 |
| Difficulty referring Medicaid patients | 7.6 |
| Difficulty referring Medicare patients | 7.7 |
| Difficulty referring private insurance patients | 7.1 |
| Difficulty referring uninsured patients | 10.5 |
| Volume of office visits last full week | 1.2 |
| Weekly hospital visits | 10.0 |
| Weekly telephone consultations | 9.8 |
| Weekly home visits | 5.8 |
| Weekly e-mail or Internet consultations | 9.1 |
| Hours of EMTALA mandated care per week[1] | 7.7 |

[1]EMTALA is care mandated by the Emergency Medical Treatment and Labor Act of 1986 (EMTALA).

with male physicians, such as average number of weekly patient encounters.

Item nonresponse rates in the NAMCS PII varied considerably. Most nonresponse occurs when the needed information is unknown or unavailable to the respondent or the respondent refuses to answer the item. Nonresponse can also result when the information is available, but survey procedures are not followed and the item is left blank (i.e., interviewer did not follow the correct skip pattern). In this report, the majority of estimates presented include a combined entry of ''unknown'' and ''blank'' to display missing data. Estimates based on categorical responses will generally include the missing cases in the denominator. Table III presents information on item nonresponse for variables presented in this report. Estimates based on numeric entries, such as volume of encounters during the last full week of practice, were an exception to this rule, because computed estimates exclude cases with missing data. 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. For items with a nonresponse greater than 50 percent, data are not presented.

## Use of Tables

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

In this report, estimates are not presented if they are based on fewer than 20 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 20–29 cases are also presented with asterisks (*) regardless of the RSE level. Estimates based on 30 or more cases include an asterisk (*) only if the RSE of the estimate exceeds 30 percent.

In the tables, estimates of office-based physicians have been rounded to the nearest hundred. 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.

## Physician Specialty Groups

This report classifies specific physician specialties into two general categorical schemes: physician specialty and type of specialty. The NAMCS design groups physicians into 15 strata, or specialty groups, for sampling purposes. One stratum, doctors of osteopathy, was based on information from the AOA. 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 in the following 14 categories: general and family practice, internal medicine, pediatrics, general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular diseases, dermatology, urology, psychiatry, neurology,

ophthalmology, otolaryngology, and a residual category of other specialties. The physician specialty classification is created using updated information from AMA, as well as information provided by sampled physicians. Specific physician specialties in each of the 14 categories are defined in Table IV.

In this classification, a pediatric cardiothoracic physician, for example, is grouped with other pediatricians. On the other hand, the ''specialty type'' classification divides AMA specialties into three major categories—primary care, surgical specialties, and medical specialties—and puts more emphasis on specialization type. For example, pediatric cardiothoracic physicians are classified as a surgical specialty in this classification. The specific physician specialties included in each of the three specialty types are provided in Table V.

**Table IV. Reclassification of physician specialty based on American Medical Association subspecialty designations for use with National Ambulatory Medical Care Survey**

| Physician specialty | Subspecialty designation |
|---|---|
| General practice | FP—Family practice |
| | FPG—Geriatric medicine (family practice) |
| | FSM—Sports medicine (family practice) |
| | GP—General practice |
| Internal medicine | IM—Internal medicine |
| Pediatrics | ADL—Adolescent medicine (pediatrics) |
| | CCP—Pediatric critical care medicine |
| | DBP—Developmental-behavioral pediatrics |
| | MPDI—Internal medicine/pediatrics |
| | NDN—Neurodevelopmental disabilities (psychiatry and neurology) |
| | NDP—Neurodevelopmental disabilities (pediatrics) |
| | NPM—Neonatal-perinatal medicine |
| | PD—Pediatrics |
| | PDA—Pediatric allergy |
| | PDC—Pediatric cardiology |
| | PDE—Pediatric endocrinology |
| | PDI—Pediatric infectious diseases |
| | PDP—Pediatric pulmonology |
| | PDT—Medical toxicology (pediatrics) |
| | PEM—Pediatric emergency medicine (pediatrics) |
| | PG—Pediatric gastroenterology |
| | PHO—Pediatric hematology/oncology |
| | PN—Pediatric nephrology |
| | PPR—Pediatric rheumatology |
| | PSM—Sports medicine (pediatrics) |
| General surgery | GS—General surgery |
| Obstetrics and gynecology | GO—Gynecological oncology |
| | GYN—Gynecology |
| | MFM—Maternal and fetal medicine |
| | OBG—Obstetrics and gynecology |
| | OBS—Obstetrics |
| | OCC—Critical care medicine (obstetrics and gynecology) |
| | REN—Reproductive endocrinology |
| Orthopedic surgery | OAR—Adult reconstructive orthopedics |
| | OFA—Foot and ankle, orthopedics |
| | OMO—Musculoskeletal oncology |
| | OP—Pediatric orthopedics |
| | ORS—Orthopedic surgery |
| | OSM—Sports medicine (orthopedic surgery) |
| | OSS—Orthopedic surgery of the spine |
| | OTR—Orthopedic trauma |
| Cardiovascular diseases | CD—Cardiovascular disease |
| Dermatology | D—Dermatology |
| Urology | U—Urology |
| | UP—Pediatric urology |
| Psychiatry | ADP—Addiction psychiatry |
| | CHP—Child and adolescent psychiatry |
| | NUP—Neuropsychiatry |
| | P—Psychiatry |
| | PFP—Forensic psychiatry |
| | PYA—Psychoanalysis |
| | PYG—Geriatric psychiatry |
| | PYM—Psychosomatic medicine |
| Neurology | CHN—Child neurology |
| | CN—Clinical neurophysiology |
| | ESN—Endovascular surgical neuroradiology |
| | N—Neurology |
| | NRN—Neurology/diagnostic radiology/neuroradiology |
| | VN—Vascular neurology |
| Ophthalmology | OPH—Ophthalmology |
| | PO—Pediatric ophthalmology |
| Otolaryngology | NO—Otology/neurotology |
| | OTO—Otolaryngology |
| | PDO—Pediatric otolaryngology |
| All other | A—Allergy ADM—Addiction medicine |
| | AI—Allergy and immunology |
| | ALI—Clinical and laboratory immunology (allergy and immunology) |
| | AM—Aerospace medicine |
| | AMI—Adolescent medicine (internal medicine) |
| | AS—Abdominal surgery |
| | CBG—Clinical biochemical genetics |
| | CCG—Clinical cytogenetics |
| | CCM—Critical care medicine (internal medicine) |
| | CCS—Surgical critical care (surgery) |
| | CFS—Craniofacial surgery |
| | CG—Clinical genetics |
| | CMG—Clinical molecular genetics |

**Table IV. Reclassification of physician specialty based on American Medical Association subspecialty designations for use with National Ambulatory Medical Care Survey—Con.**

| Physician specialty | Subspecialty designation |
|---|---|
| All other . . . . . | CRS—Colon and rectal surgery<br>CS—Cosmetic surgery<br>DDL—Clinical and laboratory dermatological immunology<br>DIA—Diabetes<br>DS—Dermatologic surgery<br>EM—Emergency medicine<br>END—Endocrinology, diabetes and metabolism<br>EP—Epidemiology<br>ESM—Sports medicine (emergency medicine)<br>ETX—Medical toxicology (emergency medicine)<br>FPS—Facial plastic surgery<br>GE—Gastroenterology<br>GPM—General preventive medicine<br>HEM—Hematology (internal medicine)<br>HEP—Hepatology<br>HNS—Head and neck surgery<br>HO—Hematology/oncology<br>HS—Hand surgery<br>IC—Interventional cardiology<br>ICE—Clinical cardiac electrophysiology<br>ID—Infectious diseases<br>IG—Immunology<br>ILI—Clinical and laboratory immunology (internal medicine)<br>IMG—Geriatric medicine (internal medicine)<br>ISM—Sports medicine (internal medicine)<br>LM—Legal medicine<br>MDM—Medical management<br>MG—Medical genetics<br>NC—Nuclear cardiology<br>NEP—Nephrology<br>NS—Neurological surgery<br>NSP—Pediatric surgery (neurology)<br>NTR—Nutrition<br>OM—Occupational medicine<br>OMF—Oral and maxillofacial surgery<br>OMM—Osteopathic manipulative medicine<br>ON—Medical oncology<br>PA—Clinical pharmacology<br>PCC—Pulmonary critical care medicine<br>PCS—Pediatric cardiothoracic surgery<br>PDS—Pediatric surgery (surgery)<br>PE—Pediatric emergency medicine (emergency medicine)<br>PHL—Phlebology<br>PHM—Pharmaceutical medicine<br>PHP—Public health and general preventive medicine<br>PLI—Clinical and laboratory immunology (pediatrics)<br>PLM—Palliative medicine<br>PM—Physical medicine and rehabilitation<br>PMD—Pain medicine<br>PMM—Sports medicine (physical medicine and rehabilitation)<br>PPN—Pain medicine (psychiatry)<br>PRD—Procedural dermatology<br>PS—Plastic surgery<br>PSH—Plastic surgery within the head and neck<br>PTX—Medical toxicology (preventive medicine)<br>PUD—Pulmonary diseases<br>RHU—Rheumatology<br>RPM—Pediatric rehabilitation medicine<br>SCI—Spinal cord injury medicine<br>SME—Sleep medicine<br>SO—Surgical oncology<br>TRS—Traumatic surgery<br>TS—Thoracic surgery<br>TTS—Transplant surgery<br>UCM—Urgent care medicine<br>UM—Underseas medicine (preventive)<br>VM—Vascular medicine<br>VS—Vascular surgery<br>OS—Other specialty<br>US—Unspecified specialty |

**Table V. Reclassification of physician specialty into specialty type for use with National Ambulatory Medical Care Survey data**

| Physician specialty | Subspecialty designation |
|---|---|
| Primary care specialties . . . . . | AMI—Adolescent medicine (internal medicine)<br>ADL—Adolescent medicine (pediatrics)<br>FP—Family practice<br>GP—General practice<br>FPG—Geriatric medicine (family practice)<br>IMG—Geriatric medicine (internal medicine)<br>GYN—Gynecology<br>IM—Internal medicine<br>MPD—Internal medicine/pediatrics<br>MFM—Maternal and fetal medicine<br>OBS—Obstetrics<br>OBG—Obstetrics and gynecology<br>PD—Pediatrics<br>FSM—Sports medicine (family practice)<br>ISM—Sports medicine (internal medicine)<br>PSM—Sports medicine (pediatrics) |
| Surgical specialties . . . . . | AS—Abdominal surgery<br>OAR—Adult reconstructive orthopedics<br>CRS—Colon and rectal surgery<br>CS—Cosmetic surgery<br>CFS—Craniofacial surgery<br>OCC—Critical care medicine (obstetrics and gynecology)<br>DS—Dermatologic surgery<br>ESN—Endovascular surgical neuroradiology<br>FPS—Facial plastic surgery<br>OFA—Foot and ankle, orthopedics<br>GS—General surgery<br>GO—Gynecological oncology<br>HS—Hand surgery<br>HNS—Head and neck surgery<br>OMO—Musculoskeletal oncology<br>NS—Neurological surgery<br>OPH—Ophthalmology<br>OMF—Oral and maxillofacial surgery<br>ORS—Orthopedic surgery<br>OSS—Orthopedic surgery of the spine<br>OTR—Orthopedic trauma<br>OTO—Otolaryngology<br>NO—Otology/neurotology<br>PCS—Pediatric cardiothoracic surgery<br>PO—Pediatric ophthalmology<br>OP—Pediatric orthopedics<br>PDO—Pediatric otolaryngology<br>NSP—Pediatric surgery (neurology)<br>PDS—Pediatric surgery (surgery)<br>UP—Pediatric urology<br>PS—Plastic surgery<br>PSH—Plastic surgery within the head and neck<br>PRD—Procedural dermatology<br>OSM—Sports medicine (orthopedic surgery)<br>CCS—Surgical critical care (surgery)<br>SO—Surgical oncology<br>TS—Thoracic surgery<br>TTS—Transplant surgery<br>TRS—Traumatic surgery<br>U—Urology<br>VS—Vascular surgery |
| Medical specialties . . . . . | ADM—Addiction medicine<br>ADP—Addiction psychiatry<br>AM—Aerospace medicine<br>A—Allergy<br>AI— Allergy and immunology<br>CD—Cardiovascular diseases<br>CHP—Child and adolescent psychiatry<br>CHN—Child neurology<br>DDL—Clinical and laboratory dermatological immunology<br>ILI—Clinical and laboratory immunology (internal medicine)<br>PLI — Clinical and laboratory immunology (pediatrics)<br>CBG—Clinical biochemical genetics<br>ICE —Clinical cardiac electrophysiology<br>CCG—Clinical cytogenetics<br>CG—Clinical genetics<br>ALI—Clinical laboratory immunology (allergy and immunology)<br>CMG —Clinical molecular genetics<br>CN—Clinical neurophysiology<br>PA—Clinical pharmacology<br>CCM —Critical care medicine (internal medicine)<br>D—Dermatology<br>DBP—Developmental-behavioral pediatrics<br>DIA—Diabetes |

**Table V. Reclassification of physician specialty into specialty type for use with National Ambulatory Medical Care Survey data—Con.**

| Physician specialty | Subspecialty designation |
|---|---|
| Medical specialties . . . . . | EM—Emergency medicine<br>END—Endocrinology, diabetes and metabolism<br>EP—Epidemiology<br>PFP—Forensic psychiatry<br>GE—Gastroenterology<br>GPM—General preventive medicine<br>PYG—Geriatric psychiatry<br>HEM—Hematology (internal medicine)<br>HO—Hematology/oncology<br>HEP—Hepatology<br>IG—Immunology<br>ID—Infectious diseases<br>IC—Interventional cardiology<br>LM—Legal medicine<br>MG—Medical genetics<br>MDM—Medical management<br>ON—Medical oncology<br>ETX—Medical toxicology (emergency medicine)<br>PDT—Medical toxicology (pediatrics)<br>PTX—Medical toxicology (preventive medicine)<br>NPM—Neonatal-perinatal medicine<br>NEP—Nephrology<br>NDP—Neurodevelopmental disabilities (pediatrics)<br>NDN—Neurodevelopmental disabilities (psychiatry and neurology)<br>N—Neurology<br>NRN—Neurology/diagnostic radiology/neuroradiology<br>NUP—Neuropsychiatry<br>NC—Nuclear cardiology<br>NTR—Nutrition<br>OM—Occupational medicine<br>OMM—Osteopathic manipulative medicine<br>PMD—Pain medicine<br>PPN—Pain medicine (psychiatry)<br>PLM—Palliative medicine<br>PDA—Pediatric allergy<br>PDC—Pediatric cardiology<br>CCP—Pediatric critical care medicine<br>PE—Pediatric emergency medicine (emergency medicine)<br>PEM—Pediatric emergency medicine (pediatrics)<br>PDE—Pediatric endocrinology<br>PG—Pediatric gastroenterology<br>PHO—Pediatric hematology/oncology<br>PDI— Pediatric infectious diseases<br>PN—Pediatric nephrology<br>PDP—Pediatric pulmonology<br>RPM —Pediatric rehabilitation medicine<br>PPR—Pediatric rheumatology<br>PHM—Pharmaceutical medicine<br>PHL—Phlebology<br>PM—Physical medicine and rehabilitation<br>P—Psychiatry<br>PYA —Psychoanalysis<br>PYM—Psychosomatic medicine<br>PHP—Public health and general preventive medicine<br>PCC—Pulmonary critical care medicine<br>PUD—Pulmonary diseases<br>REN—Reproductive endocrinology<br>RHU—Rheumatology<br>SME—Sleep medicine<br>SCI— Spinal cord injury medicine<br>ESM—Sports medicine (emergency medicine)<br>PMM—Sports medicine (physical medicine and rehabilitation)<br>UM—Underseas medicine (preventive medicine)<br>UCM—Urgent care medicine<br>VM—Vascular medicine<br>VN—Vascular neurology<br>OS—Other specialty<br>US—Unspecified specialty |

# Appendix II

## Excerpts from the 2005 Physician Induction Interview Form

Ask item 17a ONCE to obtain total for ALL in-scope locations.

**17a.** **During the week of Monday, _____ through Sunday, _____ How many days do you expect to see any ambulatory patients?** (Only include days at in-scope locations.)

**Note:** If physician is unavailable or refuses to participate, enter number of days in a normal week.

Edit

**Estimated Number of Days** →

Enter street name or town of in-scope location(s).
**NOTE:** Keep the location numbers the same as the office numbers in item 16a.

_____ _____ _____ _____

| | | Office location No. | | | |
|---|---|---|---|---|---|
| | | #1 | #2 | #3 | #4 |
| **b.** **During your last normal week of practice, approximately how many office visit encounters did you have at each office location?** **Note:** If physician is in group practice, only include the visits to sampled physician. Edit | Number of visits | _____ | _____ | _____ | _____ |
| **c.** **During the week of Monday, _____ through Sunday _____, do you expect to see about the same number of visits as you saw during your last normal week in each office taking into account time off, holidays, and conferences?** **Note:** Mark (X) response. If answer is "Yes", SKIP item 17d for that particular office location. If answer is "No", then ASK item 17d for that office location. | Yes . . . 1 □<br>No . . . 2 □ | 1 □<br>2 □ | 1 □<br>2 □ | 1 □<br>2 □ | 1 □<br>2 □ |
| **d.** **Approximately how many ambulatory visits do you expect to have at this office location?** | Number of visits | _____ | _____ | _____ | _____ |

**e.** **Tally of estimated number of visits**

**NOTE:** To obtain the total number of estimated visits use estimate from item 17b if "Yes" was marked in item 17c. If "No" was marked in item 17c use the estimate from item 17d.

If physician is unavailable or refuses to participate, enter number of visits in normal week.

Number of visits _____

NOTES

## Section II – INDUCTION INTERVIEW – Continued

Now, I'm going to ask about your practice at *(in-scope location)*.

| | Office Location | #1 | #2 | #3 | #4 |
|---|---|---|---|---|---|
| **18a.** | **Do you have a solo practice, or are you associated with other physicians in a partnership, in a group practice, or in some other way** (at this/that in-scope location)**?** | | | | |
| | Solo . . . . . | 1 □ | 1 □ | 1 □ | 1 □ |
| | Nonsolo . . . . . | 2 □ | 2 □ | 2 □ | 2 □ |
| **b.** | **How many other physicians are associated with you** (at this/that in-scope location)**?** | | | | |
| | How many → | ____ | ____ | ____ | ____ |
| **c.** | **Is this a single- or multi-specialty group practice** (at this/that in-scope location)**?** | | | | |
| | Multi . . . . . | 1 □ | 1 □ | 1 □ | 1 □ |
| | Single . . . . . | 2 □ | 2 □ | 2 □ | 2 □ |
| **d.** | **Are you a full- or part-owner, employee, or an independent contractor** (at this/that in-scope location)**?** *If "Owner" is marked then automatically mark "Physician or physician group" in item 18e.* | | | | |
| | Owner . . . . . | 1 □ | 1 □ | 1 □ | 1 □ |
| | Employee . . . . . | 2 □ | 2 □ | 2 □ | 2 □ |
| | Contractor . . . . . | 3 □ | 3 □ | 3 □ | 3 □ |
| **e.** | **Who owns the practice** (at this/that in-scope location)**?** | | | | |
| | Physician or physician group . . . . . | 1 □ | 1 □ | 1 □ | 1 □ |
| | HMO . . . . . | 2 □ | 2 □ | 2 □ | 2 □ |
| | Medical/ Academic health center . . . . . | 3 □ | 3 □ | 3 □ | 3 □ |
| | Other hospital . . . . . | 4 □ | 4 □ | 4 □ | 4 □ |
| | Other health care corp . . . . . | 5 □ | 5 □ | 5 □ | 5 □ |
| | Other – Specify for ↙ | 6 □ | 6 □ | 6 □ | 6 □ |
| | Location #1 → | | | | |
| | Location #2 → | | | | |
| | Location #3 → | | | | |
| | Location #4 → | | | | |
| **19.** | **Is any laboratory testing performed in the office** (at this/that in-scope location)**?** | | | | |
| | Yes . . . . . | 1 □ | 1 □ | 1 □ | 1 □ |
| | No . . . . . | 2 □ | 2 □ | 2 □ | 2 □ |

***RETURN TO ITEM 18a FOR NEXT IN-SCOPE LOCATION***

| | | Number of encounters per week ↙ |
|---|---|---|
| **20a.** | **During your last normal week of practice, about how many encounters of the following type did you make with patients:** | |
| | **(1) Home visits (including nursing homes)** . . . . . | _____ |
| | **(2) Hospital visits** . . . . . | _____ |
| | **(3) Telephone consults** . . . . . | _____ |
| | **(4) Internet/e-mail consults** . . . . . | _____ |
| | *The following question is concerned with the Emergency Medical Treatment and Labor Act of 1986 (EMTALA).* | |
| **b.** | **In a typical week, how many hours do you spend providing EMTALA mandated care?** | Number of hours ↙ |
| | | _____ |

## Section II – INDUCTION INTERVIEW – Continued

**21.** **Are you a member of a practice-based research network (PBRN)?**

1 ☐ Yes
2 ☐ No
3 ☐ Don't know

**22.** **Does your practice submit claims electronically? (Electronic billing)**

1 ☐ Yes
2 ☐ No
3 ☐ Don't know

**23a.** **Does your practice use electronic MEDICAL RECORDS (not including billing records)?**

1 ☐ Yes, all electronic
2 ☐ Yes, part paper and part electronic
3 ☐ No
4 ☐ Don't know
} *SKIP to item 24a*

**b.** **Does your practice's electronic medical record system include –**

| | Yes | No | Unknown |
|---|---|---|---|
| **(1)** Patient demographic information? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(2)** Computerized orders for prescriptions? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(3)** Computerized orders for tests? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(4)** Test results? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(5)** Nurses' notes? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(6)** Physicians' notes? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(7)** Reminders for guideline-based interventions and/or screening tests? | 1 ☐ | 2 ☐ | 3 ☐ |
| **(8)** Public health reporting? | 1 ☐ | 2 ☐ | 3 ☐ |

*Ask items 24 and 25 ONCE for ALL in-scope locations.*

**I would like to ask a few questions about your practice revenue and contracts with managed care plans.**

**24a.** **Roughly, what percent of your practice revenue from patient care comes from –**

Percent of practice revenue ↙

**(1) Medicare?** . . . . . _____ %

**(2) Medicaid?** . . . . . _____ %

**(3) Private insurance?** . . . . . _____ %

**(4) Other? –** *(including charity, research, CHAMPUS, VA, etc.)* _____ %

**FR NOTE** – Categories should sum close to 100%.

NOTES

## Section II – INDUCTION INTERVIEW – Continued

**24b. Roughly, how many managed care contracts does this practice have such as HMOs, PPOs, IPAs, and point-of-service plans?**

*If necessary read:* **Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan.**

**FR NOTE –** Include Medicare managed care and Medicaid managed care, but not traditional Medicare and Medicaid. Include any private insurance managed care plans. Be sure the response is about contracts and not patients.

Include all the different plans an insurance provider may have and for which the physician has a contract. For example, the physician may have a contract for each of the plans Aetna may offer: a PPO, IPA, and point-of-service plan. This would equal 3 contracts, not 1 contract. It may be necessary to obtain information from the billing office of the practice.

1 ☐ None – *SKIP to item 25a.*
2 ☐ Less than 3
3 ☐ 3 to 10
4 ☐ More than 10

**c. Roughly, what percentage of the patient care revenue received by this practice comes from (these) managed care contracts?**

Percent of revenue from managed care

_____ %

Edit

**25a. Are you currently accepting "new" patients into your practice(s)** (at in-scope locations)**?**

1 ☐ Yes
2 ☐ No – *SKIP to item 26*
3 ☐ Don't know – *SKIP to item 26*

**b. From those "new" patients, which of the following types of payment do you accept** (at in-scope locations)**?**

| | | | |
|---|---|---|---|
| **(1) Private insurance –** | | | |
| **(a) Capitated?** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(b) Non-capitated?** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(2) Medicare** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(3) Medicaid** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(4) Workers compensation?** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(5) Self-pay?** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |
| **(6) No charge?** | 1 ☐ Yes | 2 ☐ No | 3 ☐ Don't know |

**26. On a 4-point scale from a lot of difficulty, some, little, or no difficulty, in the last 12 months, has your practice experienced any difficulty in referring patients with the following types of health insurance for specialty consultations?**

| | A lot of difficulty | Some difficulty | Little difficulty | No difficulty | Don't know | Not Applicable |
|---|---|---|---|---|---|---|
| **(a) Medicaid** | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| **(b) Medicare** | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| **(c) Private insurance** | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| **(d) Uninsured** | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |

# Excerpts from the 2006 Physician Induction Interview Form

**Section II – INDUCTION INTERVIEW – Continued**

*Ask item 17a ONCE to obtain total for ALL in-scope locations.*

**17a.** **During the week of Monday, _____ through Sunday, _____ How many days do you expect to see any ambulatory patients?** *(Only include days at in-scope locations.)*

**Note:** If physician is unavailable or refuses to participate, enter number of days in a normal week.

Edit

**Estimated Number of Days** →

*Enter street name or town of in-scope location(s).*
***NOTE:*** *Keep the location numbers the same as the office numbers in item 16a.*

_____ _____ _____ _____

| | | Office location No. | | | |
|---|---|---|---|---|---|
| | | #1 | #2 | #3 | #4 |
| **b.** **During your last normal week of practice, approximately how many office visit encounters did you have at each office location?** **Note:** If physician is in group practice, only include the visits to sampled physician. Edit | Number of visits | ____ | ____ | ____ | ____ |
| **c.** **During the week of Monday, _____ through Sunday _____, do you expect to see about the same number of visits as you saw during your last normal week in each office taking into account time off, holidays, and conferences?** **Note:** Mark (X) response. If answer is "Yes", SKIP item 17d for that particular office location. If answer is "No", then ASK item 17d for that office location. | Yes . . 1 □<br>No . . . 2 □ | 1 □<br>2 □ | 1 □<br>2 □ | 1 □<br>2 □ | 1 □<br>2 □ |
| **d.** **Approximately how many ambulatory visits do you expect to have at this office location?** | Number of visits | ____ | ____ | ____ | ____ |
| **e.** **Tally of estimated number of visits** **NOTE:** To obtain the total number of estimated visits use estimate from item 17b if "Yes" was marked in item 17c. If "No" was marked in item 17c use the estimate from item 17d. *If physician is unavailable or refuses to participate, enter number of visits in normal week.* | Number of visits → ____ | | | | |

**Now, I'm going to ask about your practice at** *(in-scope location).*

| | Office Location | #1 | #2 | #3 | #4 |
|---|---|---|---|---|---|
| **18a.** **Do you have a solo practice, or are you associated with other physicians in a partnership, in a group practice, or in some other way** (at this/that in-scope location)**?** | Solo . . . . . 1 □ | 1 □ | 1 □ | 1 □ | 1 □ |
| | ***If Solo, SKIP to item 18d.*** | | | | |
| | Nonsolo . . . . . 2 □ | 2 □ | 2 □ | 2 □ | 2 □ |
| **b.** **How many physicians are associated with you** (at this/that in-scope location)**?** | How many → ____ | ____ | ____ | ____ | ____ |
| **c.** **How many mid-level providers (i.e., nurse practitioners, physician assistants, and nurse midwives) are associated with you** (at this/that in-scope location)**?** | How many → ____ | ____ | ____ | ____ | ____ |

## Section II – INDUCTION INTERVIEW – Continued

| | Office Location | | #1 | #2 | #3 | #4 |
|---|---|---|---|---|---|---|
| **18d.** **Is this a single- or multi-specialty** (group) **practice** (at this/that in-scope location)**?** | Multi . . . . . | | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | Single . . . . . | | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| **e.** **Are you a full- or part-owner, employee, or an independent contractor** (at this/that in-scope location)**?** *If "Owner" is marked then automatically mark "Physician or physician group" in item 18f.* | Owner . . . . . | | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | Employee . . . . . | | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | Contractor . . . . . | | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| **f.** Who owns the practice (at this/that in-scope location)**?** | Physician or physician group . . . | | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | HMO . . . . . | | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | Community Health Center . . . . . | | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| ***REFER TO FLASHCARD B.*** | Medical/ Academic health center . . . . | | 4 ☐ | 4 ☐ | 4 ☐ | 4 ☐ |
| | Other hospital . . . | | 5 ☐ | 5 ☐ | 5 ☐ | 5 ☐ |
| | Other health care corp | | 6 ☐ | 6 ☐ | 6 ☐ | 6 ☐ |
| | Other . . . . . | | 7 ☐ | 7 ☐ | 7 ☐ | 7 ☐ |
| **g.** ***Does your practice have the ability to perform any of the following on site*** (at this/that in-scope location)**?** | CT scan | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Chemotherapy | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| ***REFER TO FLASHCARD C.*** | Colonoscopy | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | EKG/ECG | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Lab testing | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Mammography | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | MRI | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | PET scan | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Radiation therapy | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Sigmoidoscopy | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Spirometry | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | Ultrasound | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |
| | X-Ray | Yes | 1 ☐ | 1 ☐ | 1 ☐ | 1 ☐ |
| | | No | 2 ☐ | 2 ☐ | 2 ☐ | 2 ☐ |
| | | DK | 3 ☐ | 3 ☐ | 3 ☐ | 3 ☐ |

## Section II – INDUCTION INTERVIEW – Continued

**18h.** Do you see patients in the office during the evening or on weekends?

| Office Location | #1 | #2 | #3 | #4 |
|---|---|---|---|---|
| | 1 ☐ Yes<br>2 ☐ No<br>3 ☐ DK | 1 ☐ Yes<br>2 ☐ No<br>3 ☐ DK | 1 ☐ Yes<br>2 ☐ No<br>3 ☐ DK | 1 ☐ Yes<br>2 ☐ No<br>3 ☐ DK |

**19.** During your last normal week of practice, about how many encounters of the following type did you make with patients:

Number of encounters per week

(1) Home visits (including nursing homes) _____

(2) Hospital visits . . . . . _____

(3) Telephone consults . . . . . _____

(4) Internet/e-mail consults . . . . . _____

**20.** Are you a member of a practice-based research network (PBRN)?

1 ☐ Yes
2 ☐ No
3 ☐ Don't know

**21.** Does your practice submit claims electronically (Electronic billing)?

1 ☐ Yes
2 ☐ No
3 ☐ Don't know

**22a.** Does your practice use electronic MEDICAL RECORDS (not including billing records)?

1 ☐ Yes, all electronic
2 ☐ Yes, part paper and part electronic
3 ☐ No
4 ☐ Don't know

} *SKIP to item 24*

**b.** Does your practice's electronic medical record system include –

| | Yes | No | Unknown | Turned off |
|---|---|---|---|---|
| (1) Patient demographic information? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (2) Computerized orders for prescriptions? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| *If Yes, ask –* (a) Are there warnings of drug interactions or contraindications provided? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (b) Are prescriptions sent electronically to the pharmacy? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (3) Computerized orders for tests? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| *If Yes, ask –* Are orders sent electronically? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (4) Lab results? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| *If Yes, ask –* Are out of range levels highlighted? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (5) Imaging results? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| *If Yes, ask –* Are electronic images returned? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (6) Clinical notes? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| *If Yes, ask –* (a) Do they include medical history and follow-up notes? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (b) Do they include reminders for guideline-based interventions and/or screening tests? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| (7) Public health reporting? . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| If *Yes, ask –* Are notifiable diseases sent electronically? | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |

**Section II – INDUCTION INTERVIEW – Continued**

**23.** **Are there any of the above features of your system that you do NOT use or have turned off?**

1 ☐ Yes – *Please specify* ↙

_____

**FR NOTE –** Indicate in item 22b, last column, any component(s) turned off.

2 ☐ No

3 ☐ Unknown

**24.** **Are there plans for installing a new EMR system or replacing the current system within the next 3 years?**

1 ☐ Yes

2 ☐ No

3 ☐ Maybe

4 ☐ Unknown

*Ask items 25–28 ONCE for ALL in-scope locations.*

**I would like to ask a few questions about your practice revenue and contracts with managed care plans.**

**25a.** **Roughly, what percent of your patient care revenue comes from –**

Percent of patient care revenue ↙

**(1) Medicare?** . . . . . _____ %

**(2) Medicaid?** . . . . . _____ %

**(3) Private insurance?** . . . . . _____ %

**(4) Patient payments?** . . . . . _____ %

**(5) Other? –** *(including charity, research, CHAMPUS, VA, etc.)* _____ %

***REFER TO FLASHCARD D.***

**FR NOT –** Categories should sum close to 100%.

**b.** **Roughly, how many managed care contracts does this practice have such as HMOs, PPOs, IPAs, and point-of-service plans?**

*If necessary read:* **Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan.**

1 ☐ None – *SKIP to item 26a*

2 ☐ Less than 3

3 ☐ 3 to 10

4 ☐ More than 10

**FR NOTE –** Include Medicare managed care and Medicaid managed care, but not traditional Medicare and Medicaid. Include any private insurance managed care plans. Be sure the response is about contracts and not patients.

Include all the different plans an insurance provider may have and for which the physician has a contract. For example, the physician may have a contract for each of the plans Aetna may offer: a PPO, IPA, and point-of-service plan. This would equal 3 contracts, not 1 contract. It may be necessary to obtain information from the billing office of the practice.

**c.** **Roughly, what percentage of the patient care revenue received by this practice comes from (these) managed care contracts?**

Percent of revenue from managed care ↙

_____ %

Edit

**Section II – INDUCTION INTERVIEW – Continued**

**26a.** **Which of the following factors are taken into account for your patient care compensation (e.g., base pay, bonuses, or withholds)?**

| | |
|---|---|
| **(1) Your productivity (e.g., number of cases seen per time period)?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(2) Patient satisfaction (e.g., results of patient surveys)?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(3) Quality of care (e.g., rates of preventive care services)** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(4) Practice profiling (patterns of using certain services, e.g., laboratory tests, imaging, referrals, etc.)** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |

*If yes to any item in 26a, then ask item 26b. Otherwise, SKIP to item 27.*

**b.** **Are performance measures on your practice available to the public?**

1 ☐ Yes
2 ☐ No
3 ☐ Don't know

**27.** **What percent of your patient care revenue is based on bonuses, returned witholds, or other performance-based payments?**

_____ %

**28.** **Roughly, what percent of your patient care revenue comes from each of the following methods of payment?**

| | Percent of patient care revenue ↙ |
|---|---|
| **(1) Usual, customary and reasonable fee-for-service?** | _____ % |
| **(2) Discounted fee for service?** | _____ % |
| **(3) Capitation?** | _____ % |
| **(4) Case rates (e.g., package pricing/episode of care)?** | _____ % |
| **(5) Other?** | _____ % |

***REFER TO FLASHCARD E.***

**FR NOTE** –Categories should sum close to 100%.

**29a.** **Are you currently accepting "new" patients into your practice(s)**(at in-scope locations)**?**

1 ☐ Yes
2 ☐ No – *SKIP to item 30*
3 ☐ Don't know –*SKIP to item 30*

**b.** **From those "new" patients, which of the following types of payment do you accept** (at in-scope locations)**?**

| | |
|---|---|
| **(1) Private insurance –** | |
| **(a) Capitated?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(b) Non-capitated** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(2) Medicare?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(3) Medicaid?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(4) Workers compensation?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(5) Self-pay?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |
| **(6) No charge?** | 1 ☐ Yes 2 ☐ No 3 ☐ Don't know |

## Section II – INDUCTION INTERVIEW – Continued

**30.** **On a 4-point scale from a lot of difficulty, some, little, or no difficulty, in the last 12 months, has your practice experienced any difficulty in referring patients with the following types of health insurance for specialty consultations?**

| | A lot of difficulty | Some difficulty | Little difficulty | No difficulty | Don't know | Not Applicable |
|---|---|---|---|---|---|---|
| (a) Medicaid | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| (b) Medicare | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| (c) Private insurance | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |
| (d) Uninsured | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ | 6 ☐ |

**31.** **Do you offer any type of cervical cancer screening?**

1 ☐ *Yes – Leave a NAMCS-CCS if physician's specialty is GFP, IM, OB/GYN, or provider works at a Community Health Center. Please specify e-mail address.* ↙ _____

2 ☐ No

3 ☐ Don't know

Is provider part of the community health center sample?

1 ☐ Yes – *Ask item 32*

2 ☐ No – *SKIP to FR INSTRUCTION on page 15*

**32.** **Provider demographics –**

**a.** **What is your year of birth?** 1 9 ☐☐

**b.** **What is your sex?**

1 ☐ Male
2 ☐ Female

**c.** **What is your ethnicity?**

1 ☐ Hispanic or Latino
2 ☐ Not Hispanic or Latino

**d.** **What is your race?**
*Mark (X) one or more.*

1 ☐ White
2 ☐ Black/African-American
3 ☐ Asian
4 ☐ Native Hawaiian/Other Pacific Islander
5 ☐ American Indian/Alaska Native

**e.** **What is your highest medical degree?**

***REFER TO FLASHCARD F.***

1 ☐ MD
2 ☐ DO
} *Ask items 32f*

3 ☐ Nurse practitioner
4 ☐ Physician assistant
5 ☐ Nurse midwife
6 ☐ Other
} *SKIP to FR INSTRUCTION on page 15.*

**f.** **What is your primary specialty?**

_____ Name of specialty ☐☐ Code

**g.** **What is your secondary specialty?**

_____ Name of specialty ☐☐ Code

**h.** **What is your primary board certification?**

_____ Board certification ☐☐ Code

**Section II – INDUCTION INTERVIEW – Continued**

**32i.** **What is your secondary board certification?**

_____ Board certification  Code

**j.** **What year did you graduate medical school?**

_____ Year

**k.** **Did you graduate from a foreign medical school?**

1 ☐ Yes
2 ☐ No

FR INSTRUCTION — *If physician unavailable during reporting period, SKIP to item 34b on page 18.*

**33a.** **During the period Monday, _____ through Sunday, _____ will ANYONE be available to help you fill out the patient record forms for this study** (at in-scope locations) **?**

1 ☐ Yes
2 ☐ No – Go to page 16

**FR NOTE –** Explain to the physician that you would like to review some of the questions found on the patient record form.

**b.** **Who will be helping you at each location?** *(Below enter the location and person's name and position.)*

***NOTE:*** Keep the location numbers the same as the office numbers in item 16a.

| Office No. | Location (Enter street name) | Name | Position |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

**FR NOTE –** Explain to the physician and to anyone helping the physician that you would like to review some of the questions found on the Patient Record form. *Go to page 17.*

NOTES

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