ABSTRACT

This material provides documentation for users of the first public use physician trend file from the National Ambulatory Medical Care Survey (NAMCS). Physician data were collected during induction interviews and were previously released in each of the 2005 through 2010 NAMCS public use files. The physician data are consolidated in this file to provide a more convenient format for researchers who wish to analyze physician-level data. Following this release, the file will be updated annually as data become available. NAMCS is a national probability sample survey of office-based physicians and their visits conducted by the National Center for Health Statistics, Centers for Disease Control and Prevention. It is a component of the National Health Care Surveys which measure health care utilization across a variety of health care providers. Section I, "Description of the National Ambulatory Medical Care Survey," includes information on the scope of the survey, the sample, field activities, data collection procedures and sampling errors as it relates to sample physicians. Section II provides technical information, including a detailed description of the contents of each data record by location. Section III contains marginal data and estimates for selected items on the data record for physicians. The appendix contains information on sampling errors and definitions of terms used in the survey.

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SUMMARY OF ITEM DIFFERENCES FROM 2005 THROUGH 2010

The NAMCS Physician Trend File includes Physician Induction Interview (PII) data previously released in the 2005 through 2010 NAMCS Public Use Files. Previous years of data used slightly different coding conventions to denote items which were left blank or were not applicable and responses of "unknown". On this file, the following codes have been used throughout:

-9 = Blank
-8 = Unknown
-7 = Not applicable
-6 = Not collected

In addition, not all items were collected in each year and, for some items, language and formats used for asking the questions changed over time. Below is a list of differences by item in the data collection between 2005 and 2010. For more information, images of the 2005-2010 Physician Induction Interview forms can be found at http://www.cdc.gov/nchs/ahcd/ahcd_survey_instruments.htm#namcs.

1. Electronic medical records/electronic health records

A series of questions related to the adoption of electronic medical records/electronic health records was first added to the NAMCS in 2005. In that year, the initial question was, **"Does your practice use electronic MEDICAL RECORDS (not including billing records)?"** If the answer was yes, then 8 additional questions about the features of the practice's medical record system were asked. Each question started with: "**Does your practice's electronic medical record system include**" for these features: patient demographic information, computerized orders for prescriptions, computerized orders for tests, test results, nurses' notes, physicians' notes, reminders for guideline-based interventions and/or screening tests, and public health reporting.

For 2006, the initial question remained the same, but the follow-up questions were revised into 7 areas (patient demographic information, computerized orders for prescriptions, computerized orders for tests, lab results, imaging results, clinical notes, and public health reporting), each with its own follow-up question(s) for a total of 15 items.

For 2007, the initial question was the same as previous years, but the additional questions were no longer tied to it via a skip pattern. In other words, regardless of the answer to the first question, everyone was to be asked the subsequent questions, which now began with, "**Does your practice have a computerized system for**" and addressed 8 areas, most of them with their own follow-up question(s) for a total of 16 items.

The 2008 questions were identical to those used in 2007. A specific instruction was added for the Census field representative administering the induction interview to be sure to ask the series of questions about features of a computerized system, regardless of whether the answer to the initial question (see first paragraph) was yes or no.

In 2009, the initial question wording was changed to: "**Does your practice use electronic MEDICAL or HEALTH (EMR/EHR RECORDS (not including billing records)?** The subsequent questions about system features remained the same as in 2008.

Specific differences are listed below:

a. "Does your practice's electronic medical record system include nurses' notes?" [ENNOTES] was collected only in 2005.
b. "If practice has a computerized system for clinical notes, do they include medical history and follow-up notes" [EHXFU] was collected from 2006 through 2009.

c. "If your practice has a computerized system for viewing imaging results, are electronic images returned?" [EIMAGE] was collected from 2006 through 2009.
d. "Does your practice have a computerized system for public health reporting?" [EPUBHLTH] was collected from 2005 through 2009.
e. "If practice has a computerized public health reporting, are modifiable diseases sent electronically?" [ENOTDIS] was collected from 2006 though 2009.
f. "Are there plans for installing a new EMR system or replacing the current system within the next 3 years?" [EMRNEW] was collected from 2006 through 2009.

The following items were collected starting in 2007:

g. "If your practice has a computerized system for patient demographic information, does it include patient problem lists?" [EPROLST]
h. "If your practice has a computerized system for orders for prescriptions, are there warnings of drug interactions or contraindications provided? [EWARN]
i. If your practice has a computerized system for orders for prescriptions, are prescriptions sent electronically to the pharmacy?" [ESCRIP]
j. "If your practice has a computerized system for orders for tests, are orders sent electronically?" [EORDER]
k. "If your practice has a computerized system for viewing lab results, are out of range levels highlighted?" [ERANGE]
l. "Does your practice have a computerized system for viewing imaging results?" [EIMGRES]

The following items were collected starting in 2010:

m. "If your practice has a computerized system for clinical notes, do they include a list of medications that the patient is taking?" [EMEDS]
n. "If your practice has a computerized system for clinical notes, do they include a comprehensive list of the patient is allergies?" [EALLERG]
o. "If your practice has a computerized system for viewing lab results, are results incorporated in EMR/EHR?" [ERESEHR]
p. "Does your practice have a computerized system for electronic reporting to immunization registries?" [EIMMREG]
q. "At your practice, if orders for prescriptions or lab tests are submitted electronically, who submits them?" [EMRWHO1-EMRWHO7] (unedited) and [EMRWHO1R-EMRWHO7R] (edited)
r. "Does your practice have plans to apply for Medicare or Medicaid incentive payments for Meaningful Use of Health IT?" [PAYHIT]
s. "What year does your practice expect to apply for Meaningful Use payments?" [PAYYR]
t. "What incentive payment does your practice plan to apply for?" [PAYINC]
u. "At your practice, are there plans for installing a new EMR/EHR system within the next 18 months?" [EMRINS]

2. Physician performance compensation

The following items were collected only in 2006, 2007, and 2008.

a. "Which of the following factors are taken into account for your patient care compensation, e.g., base pay, bonuses, or withholds)? - your productivity (e.g., number of cases seen per time period)?" [PCCPRD]
b. "Which of the following factors are taken into account for your patient care compensation, e.g., base pay, bonuses, or withoholds)? - patient satisfaction (e.g., results of patient surveys)?" [PCCSAT]
c. "Which of the following factors are taken into account for your patient care compensation, e.g., base pay, bonuses, or withoholds)? - quality of care?" [PCCQOC]

d. "Which of the following factors are taken into account for your patient care compensation, e.g., base pay, bonuses, or withoholds)? – practice profiling (patterns of using certain services, e.g., laboratory test, imaging, referrals, etc.)?" [PCCPROF]
e. "Are performance measures on your practice available to the public?" [MEASPUB]
f. "What percent of your patient care revenue is based on bonuses, returned withholds, or other performance-based payments?" [PRP4P]

3. Patient care revenue

The following items were collected starting in 2006.

a. "Roughly, what percent of your patient care revenue comes from patient payments?" [PRPATR] was collected starting in 2006.
b. "Roughly, what percent of your patient care revenue comes from each of the following methods of payment – usual, customary and reasonable fee-for-service?" [REVFFS]
c. "Roughly, what percent of your patient care revenue comes from each of the following methods of payment – discounted fee for service?" [REVDIS]
d. "Roughly, what percent of your patient care revenue comes from each of the following methods of payment – capitation?" [REVCAP]
e. "Roughly, what percent of your patient care revenue comes from each of the following methods of payment – case rates (e.g., package pricing/episode of care)?" [REVCASE]
f. "Roughly, what percent of your patient care revenue comes from each of the following methods of payment – other?" [REVOTHER]

4. Difficulty referring patients for specialty care

The following items were collected only in 2005 and 2006.

a. "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 your patients with the following types of health insurance for specialty consultation – Medicaid?" [REFMDCAD]
b. "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 your patients with the following types of health insurance for specialty consultation – Medicare?" [REFMDCARE]
c. "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 your patients with the following types of health insurance for specialty consultation – private insurance?" [REFPRVT]
d. "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 your patients with the following types of health insurance for specialty consultation – uninsured?" [REFUNINS]

5. Other items

a. "Does your practice have the ability to perform any of the following (CT scan, chemotherapy, colonoscopy, EKG/ECG, mammography, MRI, PET scan, radiation therapy, sigmoidoscopy, spirometry, ultrasound, x-ray) on-site?" Collected only from 2005 through 2008.
b. "During last normal week of practice, did physician make nursing home visits?" [NHVISR] was collected starting in 2008.
c. "Do you see patients in the office during the evening or on weekends?" [PATEVEN] was collected starting in 2006.
d. "Do you offer any type of cervical cancer screening?" [CCS] was collected from 2006 through 2010.

The following items were collected starting in 2009.

e. “Roughly, what percent of your daily visits are same day appointments?” [SDAPPT]
f. “Does your practice set aside time for same day appointments?” [SASDAPPT]
g. “On average, about how long does it take to get an appointment for a routine medical exam?” [APPTTIME]

6. Oncology

The sampling stratum of oncologists, which had been included in 2006 and 2007, was added back for the 2010 NAMCS.

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I. DESCRIPTION OF THE NATIONAL AMBULATORY MEDICAL CARE SURVEY

A. INTRODUCTION

This public use file contains physician data collected in the National Ambulatory Medical Care Survey (NAMCS) from 2005 through 2010. NAMCS is an annual national probability sample survey of office-based physicians and their visits conducted by the Division of Health Care Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). Sample data were weighted to produce national estimates of physicians in the United States.

Over the five years of data covered in this file, a total of 7,449 physicians participated in NAMCS by providing visit data. For a brief description of the survey design and data collection procedures, see below. A more detailed description of the general NAMCS survey design, data collection procedures, and estimation process has been published (1-4).

Please note the following important points concerning analysis of NAMCS physician data on this file:

►PHYSICIAN WEIGHT

Data file users should be fully aware of the importance of the "physician weight" and how it must be used. Information about the physician weight is presented on page 14. If more information is needed, the staff of the Ambulatory and Hospital Care Statistics Branch can be consulted by calling (301) 458-4600 during regular working hours.

►RELIABILITY OF ESTIMATES

Users should also be aware of the reliability or unreliability of certain estimates, particularly the smaller estimates. The National Center for Health Statistics considers an estimate to be reliable if it has a relative standard error of 30 percent or less (i.e., the standard error is no more than 30 percent of the estimate). Therefore, it is important to know the value of the lowest possible estimate in this survey that is considered reliable, so as not to present data in a journal article or paper that may be unreliable. Most data file users can obtain an adequate working knowledge of relative standard errors from the information presented in Appendix I. It should be noted that estimates based on fewer than 30 records are also considered unreliable, regardless of the magnitude of the relative standard error. If you would like more information, do not hesitate to consult the staff of the Ambulatory and Hospital Care Statistics Branch.

B. SCOPE OF THE SURVEY

The basic sampling unit for NAMCS is the physician-patient encounter or visit. Traditionally, only visits to the offices of nonfederally employed physicians classified by the American Medical Association (AMA) or the American Osteopathic Association (AOA) as "office-based, patient care" are included in NAMCS. Physicians in the specialties of anesthesiology, pathology, and radiology are excluded from the physician universe. However, starting in 2006, in addition to the traditional sample, NAMCS included a sample of community health centers (CHCs), using information from the Health Resources and Services Administration and the Indian Health Service to construct a sampling frame. From each sampled CHC, an additional sample of health care providers was selected, which could include physicians as well as non-physician practitioners -- physician assistants, nurse practitioners, and nurse midwives. Only visits to physicians are included on the 2006-2010 NAMCS public use files. Non-physician practitioner data from 2006 through 2010 are available in the NCHS Research Data Center but are not being released as public use data files at this time due to confidentiality concerns.

Types of contacts not included in NAMCS were those made by telephone, those made outside the physician's office (for example, house calls), visits made in hospital settings (unless the physician has a private office in a hospital and that office meets the NAMCS definition of "office"), visits made in institutional settings by patients for whom the institution has primary responsibility over time (for example, nursing homes), and visits to doctors' offices that are made for administrative purposes only (for example, to leave a specimen, pay a bill, or pick up insurance forms).

C. SAMPLING FRAME AND SIZE OF SAMPLE

The sampling frame for the NAMCS was composed of all physicians contained in the master files maintained by the AMA and AOA, at a point roughly 6 months prior to the start of the survey year, who met the following criteria:

-- Office-based, as defined by the AMA and AOA;

-- Principally engaged in patient care activities;

-- Nonfederally employed;

-- Not in specialties of anesthesiology, pathology, and radiology.

In addition, a sample of CHCs was selected from the sampling frame of CHCs was developed using data from the Health Resources and Services Administration's Bureau of Primary Health Care and the Indian Health Service. Each participating CHC provided a list of physicians and non-physician practitioners who would be available during the reporting period. This list became the frame for selection of a sample of physicians and non-physician practitioners in each CHC (see below for more details).

During 2005-2010, the NAMCS samples for each year included a total of 120,203 physicians (Table I). Sample physicians were screened at the time of the survey to assure that they met the above-mentioned criteria. A total of 6,675 physicians did not meet all of the criteria and were ruled out of scope (ineligible) for the study. The most frequent reasons for being out of scope were that the physician was retired, or employed in a hospital emergency department, outpatient department or institutional setting. Of the 13,528 in-scope (eligible) physicians, 8,666 participated in the study. Of these, 7,456 completed 180,086 Patient Record forms (PRFs), while 1,210 saw no patients during their assigned reporting period because of vacations, illness, or other reasons for being temporarily not in practice and hence did not submit PRFs. Of the 7,456 physicians who completed PRFs, 6,989 participated fully or adequately (i.e. at least half of the PRFs expected, based on the total number of visits during the reporting week, were submitted), and 467 participated minimally (i.e. fewer than half of the expected number of PRFs were submitted). The unweighted response rate averaged over 2005-2010 was 60.6 percent, based on the number of full participants only. For corresponding statistics by year, see "Section C. Sampling Frame and Size of Sample" in the annual public use file documentation:
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc05.pdf
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc06.pdf
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc07.pdf
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc08.pdf
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc09.pdf
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc2010.pdf

D. SAMPLE DESIGN

The NAMCS utilized a multistage probability design that involved probability samples of primary sampling units (PSUs), physicians within PSUs, and patient visits within practices. The first-stage sample included 112 PSUs. A PSU consists of a county, a group of counties, county equivalents (such as parishes and

Table I. Average number of physicians in the universe, cumulative total sample, cumulative sample response categories, and average annual response rate by physician stratum: National Ambulatory Medical Care Survey, 2005-2010

Physician stratum	Universe (1)	Cumulative sample					
		Total	Out of Scope	In Scope	Nonres-pondents	Respon-dents	Unweighted response rate (2)
Total	504,899	20,203	6,675	13,528	5,328	8,200	60.6
General and family practice	72,074	2,101	726	1,375	536	839	61.0
Osteopathy	30,337	1,364	484	880	350	530	60.2
Internal medicine	75,8001	1,265	521	744	310	434	58.3
Pediatrics	51,229	1,367	525	842	263	579	68.8
General surgery	19,078	1,193	461	732	275	457	62.4
Obstetrics and gynecology	33,249	1,181	314	867	364	503	58.0
Orthopedic surgery	18,852	821	181	640	260	380	59.4
Cardiovascular diseases	17,025	1,248	311	937	421	516	55.1
Dermatology	8,848	701	133	568	246	322	56.7
Urology	8,578	916	225	691	268	423	61.2
Psychiatry	31,079	1,677	746	931	428	503	54.0
Neurology	10,259	1,511	560	951	434	517	54.4
Ophthalmology	15,595	755	147	608	244	364	59.9
Otolaryngology	7,950	882	218	664	285	379	57.1
Oncology (2006,2007,2010)	8,531	600	231	369	181	188	50.9
All other specialties	100,681	1,846	892	954	391	563	59.0
Community Health Center physicians(3) (2006-2010)	817	775	0	775	72	703	90.7

(1) Data are averages derived from the 2005-2010 American Medical Association and the American Osteopathic Association and represent the average total number of physicians who were eligible for NAMCS 2005-2010.
(2) Individual year response rate is the number of respondents divided by the number of in-scope physicians for traditional physicians. Responding physicians include physicians who did not see patients during their sample week, due to vacation, conferences, etc. For Community Health Center (CHC) physicians, the rate is adjusted for response by the CHC facility. Total response rate shown is average of unweighted 2005-2010 response rates. See references 5-10 for individual year response rates. CHC physician response rate is averaged 2006-2010 response rates. Oncology response rate is averaged over 2006, 2007 and 2010.
(3) A sample of CHCs was selected (see text for details), and lists of physicians and non-physician practitioners who would be available during the reporting period were obtained from sampled facilities. A selection of physicians was taken from these lists; therefore it does not reflect the universe of all CHC physicians. Non-physician practitioners were also sampled, but these data are not included on the 2005-2010 NAMCS Physician Trend File.

independent cities), towns, townships, minor civil divisions (for some PSUs in New England), or a metropolitan statistical area (MSA). MSAs were defined by the U.S. Office of Management and Budget on the basis of the 1980 Census. The first-stage sample consisted of 112 PSUs that comprised a probability subsample of the PSUs used in the 1985-94 National Health Interview Survey (NHIS). The NAMCS PSU sample included with certainty the 26 NHIS PSUs with the largest populations. In addition, the NAMCS sample included one-half of the next 26 largest PSUs, and one PSU from each of the 73 PSU strata formed from the remaining PSUs for the NHIS sample.

The NHIS PSU sample was selected from approximately 1,900 geographically defined PSUs that covered the 50 States and the District of Columbia. The 1,900 PSUs were stratified by socioeconomic and demographic variables and then selected with a probability proportional to their size. Stratification was done within four geographical regions by MSA or non-MSA status. A detailed description of the 1985-94 NHIS PSU sample design is available (3).

Typically, the second stage consists of a probability sample of practicing physicians selected from the master files maintained by the American Medical Association (AMA) and American Osteopathic Association (AOA). Within each PSU, all eligible physicians are stratified into fifteen specialty groups: general and family practice, osteopathy, internal medicine, pediatrics, general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular diseases, dermatology, urology, psychiatry, neurology, ophthalmology, otolaryngology, and "all other" specialties. In 2006 through 2010, the NAMCS sample was slightly larger than previous years, as the CDC's National Center for Chronic Disease and Prevention and Health Promotion sponsored the inclusion of an additional 200 primary care physicians (general/family practice, internal medicine, obstetrics/gynecology, and pediatricians) each year. In addition, the National Cancer Institute sponsored an additional sample of 200 oncologists in 2006, 2007, and 2010.

Also, the typical sample design includes too few community health center physicians for the estimates to be reliably presented. In order to improve the precision of CHC physician estimates, starting in 2006, a dual-sampling procedure was used to select CHC physicians and other providers. First, the "traditional" NAMCS sample of physicians was selected using established methods and sources. Second, a sample of 104 CHCs was selected, and within each center, up to three physicians, physician assistants, nurse midwives, or nurse practitioners were selected for survey participation. After selection, CHC providers followed the sampling procedure used by "traditional" NAMCS physicians in selecting patient visits. The list of CHCs is from the Health Resources and Services Administration and the Indian Health Service. To ensure that CHC physicians are included only once, all CHC physicians selected in the "traditional" NAMCS sample were omitted from the survey response and subsequent weighting. Only sample CHC physicians were included. Sampled non-physician practitioners were excluded from this file, but 2006-2010 data for these providers are available as restricted data at NCHS's Research Data Center.

E. DATA COLLECTION

The first contact with the sample physician is through a letter from the Director, NCHS. After the physician receives the introductory letter (along with letters from professional medical societies which endorse NAMCS), the Field Representative (FR) telephones the physician to establish basic eligibility and to schedule an appointment. At the appointment, the FR explains the survey to the physician and to any staff who may be involved in completing the forms. The FR also obtains the practice characteristics of up to four office locations where the physician sees patients during the reporting week. Typically, the FR will contact the physician's office just before, during and after the reporting week to remind him or her about the survey and to answer any questions that may arise. After the reporting period, the FR makes another visit to the practice to collect the forms and reviews them briefly to ensure that there are no large errors or information gaps. During this last visit, the physician is given a certificate of appreciation for her or his participation.

F. CONFIDENTIALITY

In April 2003, the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA) was implemented to establish minimum Federal standards for safeguarding the privacy of individually identifiable health information. No personally identifying information, such as patient's name or address or Social Security number, is collected in NAMCS. Data collection is authorized by Section 306 of the Public Health Service Act (Title 42, U.S. Code, 242k). All information collected is held in the strictest confidence according to law [Section 308(d) of the Public Health Service Act (42, U.S. Code, 242m(d))] and the Confidential Information Protection and Statistical Efficiency Act (Title 5 of PL 107-347). The NAMCS protocol has been approved by the NCHS Research Ethics Review Board annually starting in February 2003. Waivers of the requirements to obtain informed consent of patients and patient authorization for release of patient medical record data by health care providers were granted.

In the Spring of 2003, NAMCS implemented additional data collection procedures to help providers assure patient confidentiality. Census Bureau Field Representatives were trained on how the Privacy Rule allows physicians to make disclosures of protected health information without patient authorization for public health purposes and for research that has been approved by a Research Ethics Review Board. Physicians were encouraged to accept a data use agreement between themselves and CDC/NCHS, since the Privacy Rule allows physicians to disclose limited data sets (i.e., data sets with no direct patient identifiers) for research and public health purposes if such an agreement exists.

Assurance of confidentiality was provided to all physicians according to Section 308 (d) of the Public Health Service Act (42 USC 242m). Strict procedures were utilized to prevent disclosure of NAMCS data. All information which could identify the physician was confidential and was seen only by persons engaged in NAMCS, and was not disclosed or released to others for any other purpose. Names or other identifying information for individual patients were not removed from the physician's office.

G. DATA PROCESSING

1. Quality Control

In addition to the completeness checks made by the field staff, clerical edits were performed upon receipt of the data for central processing. Detailed editing instructions were provided to manually review the PII data. Computer edits for code ranges and inconsistencies were also performed. Data processing was performed at NCHS.

2. Adjustments for Item Nonresponse

Unweighted 2005-2010 average item nonresponse rates were 5.0 percent or less for all data items with the following exceptions: lab testing performed at practice (6.6 percent), whether, during last normal week of practice, physician made encounters of the following types with patients – hospital visits (5.7 percent), telephone consults (6.0 percent), if practice has computerized system for patient demographic information, does it include patient problem lists (13.1 percent); if practice has computerized system for clinical notes, do they include medical history and follow-up notes (10.6 percent); if practice has computerized system for orders for prescriptions, are there warnings of drug interactions/contraindications provided (11.5 percent) and are prescriptions sent electronically to the pharmacy (9.9 percent); if practice has computerized system for orders for tests, are orders sent electronically (11.9 percent); if practice has computerized system for viewing lab results, are out of range values highlighted (15.6 percent); if practice has computerized system for viewing imaging results, are electronic images returned (28.2 percent); does practice have computerized system with reminders for interventions/tests (6.4 percent); does practice have a computerized system for reporting to immunization registries (10.8 percent); does practice have computerized system for public health reporting (9.2 percent); if practice has computerized system for public health reporting, are notifiable diseases sent electronically (25.8 percent); year practice expects to apply for Meaningful use payments (11.7 percent); incentive program practice plans to apply for (20.8 percent); are ether plans to install a new EMR/EHR system within the next 18 months (8.5 percent); are there plans for installing a new EMR system or replacing the current system within the next 3 years (10.2

percent); what percent of physician's practice revenue from patient care comes from – Medicare (6.0 percent), Medicaid (6,2 percent), private insurance (6.1 percent), patient payments (6.1), other sources (7.1 percent), managed care (18.5 percent); patient care compensation factors – productivity (15.4 percent), patient satisfaction (16.6 percent), quality of care (16.9 percent), patient profiling (19.5 percent); performance measures available to public (26.2 percent); percent of practice revenue from performance-based payments (19.9 percent); percent of patient care revenue from: usual, customary and reasonable fee-for-service (12.8 percent), discounted fee for service (12.8 percent), capitation (12.3 percent), case rates (12.5 percent), other (12.9 percent); for new patients, does physician accept the following types of payment – private insurance - capitated (10.2 percent), private insurance - non-capitated (11.2 percent), workman's compensation (6.7 percent), no charge (11.4 percent); difficulty referring patients for specialty consultations – Medicare (9.1 percent), Medicaid (9.5 percent), private insurance (7.9 percent), uninsured (12.5 percent). See references 5-10 for individual year item nonresponse rates.

Denominators for the above rates were adjusted to account for skip patterns on the data collection forms. For example, only visits to physicians who accepted new patients were included in the calculation of whether the physician accepted new patients with Medicaid, etc. If there is physician nonresponse to the initial item and this is also taken into account, nonresponse rates for the secondary item will be somewhat higher.

H. ESTIMATION PROCEDURES

Physician statistics produced from the NAMCS were derived by a multistage estimation procedure. The procedure produces essentially unbiased national estimates and has four components: 1) inflation by reciprocals of the probabilities of selection, 2) adjustment for nonresponse, 3) a ratio adjustment to fixed totals, and 4) weight smoothing. Each of these components is described below.

1. Inflation of Reciprocals by Sampling Probabilities

Since the traditional survey utilized a two-stage sample design, there were two probabilities:

a) the probability of selecting the PSU;
b) the probability of selecting a physician within the PSU.

Since the CHC provider component utilized a three-stage sample design, there were three probabilities:

a) the probability of selecting the PSU;
b) the probability of selecting a CHC within the PSU;
c) the probability of selecting a provider within the CHC.

2. Adjustment for Nonresponse

Estimates from NAMCS data were adjusted to account for in-scope physicians who did not provide PRFs (non-PRF physicians) either because they saw no patients during their sample week or failed to provide PRFs for visits by patients they did see during their sample week.

Beginning with 2004 data, changes were made to the nonresponse adjustment factor to account for the seasonality of the reporting period. Extra weights for nonresponding physicians were shifted to responding physicians in reporting periods within the same quarter of the year. The shift in nonresponse adjustment did not significantly affect any of the overall annual estimates.

Beginning with 2003 data, the adjustment for non-PRF physicians differs from the adjustment used in prior years. Previously the adjustment accounted for non-response by physician specialty, geographic region, and metropolitan statistical area status. The revised non-response adjustment also accounts for non-response from physicians by practice size, as measured by number of weekly

visits, and for variability in number of weeks that participating physicians saw patients during the year.

Previously, these characteristics were assumed to be the same for physicians providing patient encounter information and those not providing such information. However, research done for the first time with 2003 data showed that these two assumptions are not always true. In general, the weekly visit volume for non-PRF physicians was larger than for PRF physicians. Also, physicians who saw no patients during their sample week tended to see patients fewer weeks annually than did physicians who saw patients during their week. To minimize understatement (and in some cases, overstatement) of visits, the non-response adjustment factor was revised to include information on the number of weeks physicians actually practiced during a typical year and the number of visits physicians reported during a week. Both data items were collected for responding and nonresponding physicians during the induction interview starting with the 2001 survey.

3. Ratio Adjustment

A postratio adjustment was made within each of the fifteen physician specialty groups (sixteen during 2006, 2007 and 2010). The ratio adjustment is a multiplication factor which had as its numerator the number of physicians in the universe in each physician specialty group and as its denominator the estimated number of physicians in that particular specialty group. The numerator was based on figures obtained from the AMA and AOA master files, and the denominator was based on data from the sample.

A postratio adjustment was also made within each type of community health center. (For sampling purposes, CHCs were divided into federally funded facilities, “look-alike” facilities [i.e., facilities that receive cost-based reimbursement for their Medicaid services, but do not receive malpractice coverage under the Federal Tort Claims Act or a cash grant], and urban Indian Health Centers [IHCs].)

I. SAMPLING ERRORS

Procedures for calculating sampling errors as well as estimates of standard errors of statistics derived from NAMCS are described elsewhere (2) as well as in Appendix I of this document.

J. PHYSICIAN CODE

Physician identifiers are chosen randomly each year and cannot be used to identify a physician across years. In any case, a different sample of physicians is selected each year, and physicians who have reported in a given year are purposely excluded from the sample for the next two years. To uniquely identify sample physicians, both the 4-digit physician code and the 4-digit survey year must be used.

K. USE OF THE PHYSICIAN-LEVEL WEIGHT

A physician-level weight (PHYSWT) was first added to the 2005 NAMCS public use file and occurs only on the first visit record for each physician on that and subsequent annual files. The 2005-2010 NAMCS Physician Trend File includes all records from the 2005-2010 NAMCS public use data files where PHYSWT is greater than 0. That is, the trend file **contains only one record per physician.**

The 2005-2010 NAMCS Physician Trend File facilitates data users’ ability to calculate physician-level trend estimates. Both single year and multiple year estimates can be calculated with this file. Combining multiple years of data can reduce the sampling variation of estimates by increasing the number of cases for specific estimates. It is recommended that multi-year physician estimates be presented as annual averages. To do this, one could modify the PHYSWT variable as PHYSWT divided by n, where n is the

number of data years being combined. For example, to produce a 2-year estimate based on data from 2009 and 2010, simply create PHYSWT2=PHYSWT/2 for use in weighting the data.

It should be kept in mind, however, that estimates at the physician level generated using PHYSWT only reflect those physicians who saw patients in their sample week. Not included are physicians who participated in the 2005-2010 NAMCS but did not see any patients during their sampled week due to being on vacation or other reasons. The physician estimates produced using NAMCS public use data do not include such physicians, nor do they include data for physicians who did see patients in their sample week but who refused to participate in the survey. Therefore, estimates made with PHYSWT could be biased due to the omission of such physicians, if such physicians were to have different characteristics than those who responded. For more information, contact the Ambulatory and Hospital Care Statistics Branch at 301-458-4600.

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II. RECORD FORMAT AND PHYSICIAN SPECIALTY LIST

A. RECORD FORMAT

Number of records = 7,449

This section consists of a detailed breakdown of each data record. For each item on the record, the user is provided with a sequential item number, field length, file location, and brief description of the item, along with valid codes. Most of the data are from the Physician Induction Interview (PII) form. It should be noted that some items changed wording slightly over the years; users should consult the PII forms for each survey year for specific item formats (http://www.cdc.gov/nchs/ahcd/ahcd_survey_instruments.htm#namcs) or review the summary of item differences at the beginning of this document. Variable labels and descriptions shown below and in the SAS documentation should reflect the most recent year for which the data were collected.

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
1	4	1-4	[PHYCODE] PHYSICIAN CODE - A unique code assigned to all records from a particular physician. Some codes may have been modified as part of the disclosure avoidance process. 0011-7040
2	4	5-8	[YEAR] SURVEY YEAR 2005, 2006, 2007, 2008, 2009, 2010
3	1	9	[MDDO] TYPE OF DOCTOR 1 = M.D. - Doctor of Medicine 2 = D.O. - Doctor of Osteopathy

*** THE FOLLOWING ITEM WAS ADDED TO ENABLE USERS TO CREATE TABLES USING THE PHYSICIAN SPECIALTY GROUPS. ***

4	2	10-11	[SPECR] PHYSICIAN SPECIALTY RECODE 01 = General and family practice 03 = Internal medicine 04 = Pediatrics 05 = General surgery 06 = Obstetrics and gynecology 07 = Orthopedic surgery 08 = Cardiovascular disease 09 = Dermatology 10 = Urology 11 = Psychiatry 12 = Neurology 13 = Ophthalmology 14 = Otolaryngology 15 = All other 16 = Oncology
5	1	12	[SPECCAT] PHYSICIAN SPECIALTY GROUP (Recoded from internal data using categories on page 35.) 1 = Primary care specialty 2 = Surgical specialty 3 = Medical specialty

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
6	1	13	[REGION] GEOGRAPHIC REGION 1 = Northeast 2 = Midwest 3 = South 4 = West
7	1	14	[MSA] METROPOLITAN/NON-METROPOLITAN STATUS (Based on actual location in conjunction with the definition of the Bureau of the Census and the U.S. Office of Management and Budget.) 1 = MSA (Metropolitan Statistical Area) 2 = Non-MSA (includes micropolitan statistical areas)
8	1	15	[RETYPOFF] TYPE OF OFFICE SETTING 1 = Private solo or group practice 2 = Free standing clinic/urgicenter (not part of hospital emergency department or outpatient department) 3 = Community health center 4 = Mental health center 5 = Non-Federal government clinic 6 = Family planning clinic 7 = Health maintenance organization (HMO) or other prepaid practice 8 = Faculty Practice Plan 9 = Other
9	2	16-17	[SOLO] IS THIS A SOLO PRACTICE? -9 = Blank 1 = Yes 2 = No
10	2	18-19	[EMPSTAT] EMPLOYMENT STATUS OF PHYSICIAN -9 = Blank 1 = Owner 2 = Employee 3 = Contractor
11	2	20-21	[OWNS] WHO OWNS THE PRACTICE? -9 = Blank 1 = Physician or physician group 2 = Health Maintenance Organization (HMO) 3 = Community health center 4 = Medical/Academic health center 6 = Other health care corporation 7 = Other

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
12	2	22-23	[LAB] IS ANY LAB TESTING PERFORMED AT THE PRACTICE? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No
13	2	24-25	[PATEVEN] DOES PHYSICIAN SEE PATIENTS IN THE OFFICE DURING THE EVENING OR ON WEEKENDS? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No DURING LAST NORMAL WEEK OF PRACTICE, DID PHYSICIAN MAKE ENCOUNTERS OF THE FOLLOWING TYPES WITH PATIENTS:
14	2	26-27	[NHVISR] NURSING HOME VISITS -9 = Blank -6 = Not collected 0 = No 1 = Yes
15	2	28-29	[HOMVISR] OTHER HOME VISITS -9 = Blank 0 = No 1 = Yes
16	2	30-31	[HOSVISR] HOSPITAL VISITS -9 = Blank 0 = No 1 = Yes
17	2	32-33	[TELCONR] TELEPHONE CONSULTS -9 = Blank 0 = No 1 = Yes
18	2	34-35	[ECONR] INTERNET/EMAIL CONSULTS -9 = Blank 0 = No 1 = Yes
19	2	36-37	[EBILLREC] DOES THIS PRACTICE SUBMIT CLAIMS ELECTRONICALLY (ELECTRONIC BILLING)? -9 = Blank -8 = Don't know 1 = Yes, all electronic 2 = Yes, part paper and part electronic 3 = No

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
20	2	38-39	[EMEDREC] DOES YOUR PRACTICE USE AN ELECTRONIC MEDICAL RECORD (EMR) OR ELECTRONIC HEALTH RECORD (EHR) SYSTEM (NOT INCLUDING BILLING RECORDS SYSTEMS)? -9 = Blank -8 = Don't know 1 = Yes, all electronic 2 = Yes, part paper and part electronic 3 = No
21	2	40-41	[EDEMOG] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR PATIENT HISTORY & DEMOGRAPHIC INFORMATION? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, EDEMOG was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, EDEMOG was asked of all respondents. On the data collection instrument, category 3 was used for responses of "Unknown." Since the "Unknown" response was standardized to a value of -8 to during data processing, category 3 is not used here.)
22	2	42-43	[EPROLST] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR PATIENT HISTORY & DEMOGRAPHIC INFORMATION, DOES IT INCLUDE A PATIENT PROBLEM LIST? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
23	2	44-45	[ENNOTES] DOES YOUR PRACTICE'S ELECTRONIC MEDICAL RECORD SYSTEM INCLUDE NURSES' NOTES? -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off (Note: In 2005, this question was only asked if the physician responded affirmatively to the prior question, "Does your practice have electronic patient medical records?" (EMEDREC=1,2).)

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
24	2	46-47	[EPNOTES] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR CLINICAL NOTES? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, EPNOTES was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, EPNOTES was asked of all respondents.)
25	2	48-49	[EHXFU] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR CLINICAL NOTES, DO THEY INCLUDE MEDICAL HISTORY AND FOLLOW-UP NOTES? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4= Turned off
26	2	50-51	[EMEDS] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR CLINICAL NOTES, DO THEY INCLUDE A LIST OF MEDICATIONS THAT THE PATIENT IS TAKING? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1= Yes 2= No 4= Turned off
27	2	52-53	[EALLERG] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR CLINICAL NOTES, DO THEY INCLUDE A COMPREHENSIVE LIST OF THE PATIENT'S ALLERGIES (INCLUDING ALLERGIES TO MEDICATION)? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
28	2	54-55	[ECPOE] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR ORDERS FOR PRESCRIPTIONS? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
			(Note: In 2005-2006, ECPOE was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, ECPOE was asked of all respondents.)
29	2	56-57	[EWARN] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR ORDERS FOR PRESCRIPTIONS, ARE THERE WARNINGS OF DRUG INTERACTIONS OR CONTRAINDICATIONS PROVIDED? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
30	2	58-59	[ESCRIP] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR ORDERS FOR PRESCRIPTIONS, ARE PRESCRIPTIONS SENT ELECTRONICALLY TO THE PHARMACY? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
31	2	60-61	[ECTOE] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR ORDERS FOR TESTS? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, ECTOE was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, ECTOE was asked of all respondents.)
32	2	62-63	[EORDER] IF YOUR PRACTICE HAS A COMPUTERIZED SYSTEM FOR ORDERS FOR TESTS, ARE ORDERS SENT ELECTRONICALLY? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
33	2	64-65	[ERESULT] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR VIEWING LAB RESULTS? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, ERESULT was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, ERESULT was asked of all respondents.)
34	2	66-67	[ERESEHR] IF YOUR PRACTICE HAS A COMPUTERIZED SYSTEM FOR VIEWING LAB RESULTS, ARE RESULTS INCORPORATED IN EMR/EHR? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
35	2	68-69	[ERANGE] IF YOUR PRACTICE HAS A COMPUTERIZED SYSTEM FOR VIEWING LAB RESULTS, ARE OUT OF RANGE LEVELS HIGHLIGHTED? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
36	2	70-71	[EIMGRES] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR VIEWING IMAGING RESULTS? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, ERESULT was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, ERESULT was asked of all respondents.)

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
37	2	72-73	[EIMAGE] IF YOUR PRACTICE HAS A COMPUTERIZED SYSTEM FOR VIEWING IMAGING RESULTS, ARE ELECTRONIC IMAGES RETURNED? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
38	2	74-75	[EREMIND] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR REMINDERS FOR GUIDELINE-BASED INTERVENTIONS AND/OR SCREENING TESTS? -9 = Blank -8 = Unknown -7 = Not applicable 1 = Yes 2 = No 4 = Turned off (Note: In 2005, EREMIND was only asked if the practice used an EMR system (EMEDREC=1,2). Starting in 2007, EREMIND was asked of all respondents.)
39	2	76-77	[EIMMREG] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR ELECTRONIC REPORTING TO IMMUNIZATION REGISTRIES? -9= Blank -8= Unknown -6 = Not collected 1= Yes 2= No 4= Turned off
40	2	78-79	[EPUBHLTH] DOES YOUR PRACTICE HAVE A COMPUTERIZED SYSTEM FOR PUBLIC HEALTH REPORTING? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off (Note: In 2005-2006, EPUBHLTH was only asked if the practice used an EMR system (EMEDREC=1,2). EPUBHLTH was asked of all respondents 2007-2009.)

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
41	2	80-81	[ENOTDIS] IF PRACTICE HAS A COMPUTERIZED SYSTEM FOR PUBLIC HEALTH REPORTING, ARE NOTIFIABLE DISEASES SENT ELECTRONICALLY? -9 = Blank -8 = Unknown -7 = Not applicable -6 = Not collected 1 = Yes 2 = No 4 = Turned off
42-48			AT YOUR PRACTICE, IF ORDERS FOR PRESCRIPTIONS OR LAB TESTS ARE SUBMITTED ELECTRONICALLY, WHO SUBMITS THEM? (Unedited)

NOTE: This item (on the Physician Induction Interview form) does NOT immediately follow the two questions about whether the practice has a computerized system for orders for prescriptions or for lab tests, but was added as a separate item following that entire section. Therefore, there was no skip pattern to link responses to this question with the previous two questions. Because of the independence of these items, inconsistencies were noted during data processing between responses to the earlier items about whether the practice had a computerized system for orders for prescriptions or lab tests and responses to the later item about who submits such orders. A decision was made in consultation with branch staff to present both versions of the "who submits them?" item – the first version is as reported and will sometimes conflict with responses to the previous two questions. The second version has been recoded to take into account both previous questions. Researchers may make their own decisions about how to use these data. EHRWHO1-EHRWHO7 reflect the unedited data. EHRWHO1R-EHRWHO7R reflect the edited data.

			-6 = Not collected 0 = No 1 = Yes
42	2	82-83	[EHRWHO1] Prescribing practitioner
43	2	84-85	[EHRWHO2] Other clinician (including RN)
44	2	86-87	[EHRWHO3] Lab technician
45	2	88-89	[EHRWHO4] Administrative personnel
46	2	90-91	[EHRWHO5] Other
47	2	92-93	[EHRWHO6] Prescriptions and lab tests not submitted electronically
48	2	94-95	[EHRWHO7] Unknown
49-55			AT YOUR PRACTICE, IF ORDERS FOR PRESCRIPTIONS OR LAB TESTS ARE SUBMITTED ELECTRONICALLY, WHO SUBMITS THEM? (Edited in conjunction with ECTOE and ECPOE. See NOTE above for more information.) -7 = Not applicable (prescriptions and lab tests not submitted electronically) -6 = Not collected 0 = No 1 = Yes

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
49	2	96-97	[EHRWHO1R] Prescribing practitioner
50	2	98-99	[EHRWHO2R] Other clinician (including RN)
51	2	100-101	[EHRWHO3R] Lab technician
52	2	102-103	[EHRWHO4R] Administrative personnel
53	2	104-105	[EHRWHO5R] Other
54	2	106-107	[EHRWHO6R] Prescriptions and lab tests no submitted electronically
55	2	108-109	[EHRWHO7R] Unknown
56	2	110-111	[PAYHIT] DOES YOUR PRACTICE HAVE PLANS TO APPLY FOR MEDICARE OR MEDICAID INCENTIVE PAYMENTS FOR MEANINGFUL USE OF HEALTH IT? -9 = Blank -6 = Not collected 1 = Yes, intend to apply 2 = Uncertain whether will apply 3 = No, will not apply
57	2	112-113	[PAYYR] WHAT YEAR DOES YOUR PRACTICE EXPECT TO APPLY FOR THE MEANINGFUL USE PAYMENTS? -9 = Blank -8 = Unknown -6 = Not collected 1 = 2011 2 = 2012 3 = After 2012
58	2	114-115	[PAYINC] WHAT INCENTIVE PAYMENT DOES YOUR PRACTICE PLAN TO APPLY FOR? -9 = Blank -8 = Unknown -6 = Not collected 1 = Medicare 2 = Medicaid
59	2	116-117	[EMRINS] AT YOUR PRACTICE, ARE THERE PLANS FOR INSTALLING A NEW EMR/EHR SYSTEM WITHIN THE NEXT 18 MONTHS? -9= Blank -8= Unknown -6 = Not collected 1 = Yes 2 = No 3 = Maybe
60	2	118-119	[EMRNEW] ARE THERE PLANS FOR INSTALLING A NEW ELECTONIC MEDICAL RECORD SYSTEM OR REPLACING THE CURRENT SYSTEM WITHIN THE NEXT THREE YEARS? -9 = Blank -8 = Unknown -6 = Not collected 1 = Yes 2 = No 3 = Maybe

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
61	2	120-121	[PRMCARER] Roughly, what percent of your patient care revenue comes from Medicare? -9 = Blank 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
62	2	122-123	[PRMAIDR] Roughly, what percent of your patient care revenue comes from Medicaid? -9 = Blank 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
63	2	124-125	[PRPRVTR] Roughly, what percent of your patient care revenue comes from private insurance? -9 = Blank 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
64	2	126-127	[PRPATR] Roughly, what percent of your patient care revenue comes from patient payments? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
65	2	128-129	[PROTHR] Roughly, what percent of your patient care revenue comes from other sources? (including charity, research, Champus, VA, etc.) -9 = Blank 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
66	2	130-131	[MANCAREC] Roughly, how many managed care contracts does this practice have, such as HMOs, PPOs, IPAs, and point-of-service plans? -9 = Blank 1 = None 2 = Less than 3 3 = 3-10 4 = More than 10

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
67	2	132-133	[PRMANR] Roughly, what percentage of the patient care revenue received by this practice comes from (these) managed care contracts? -9 = Blank -7 = Not applicable 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent The following 4 items are all possible responses to this question asked of physicians: Which of the following factors are taken into account for your patient care compensation (e.g., base pay, bonuses, or withholds)?
68	2	134-135	[PCCPROD] Your productivity (e.g., number of case seen per time period)? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No
69	2	136-137	[PCCSAT] Patient satisfaction (e.g., results of patient surveys)? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No
70	2	138-139	[PCCQOC] Quality of care (e.g. rates of preventive care services)? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No
71	2	140-141	[PCCPPROF] Practice profiling (patterns of using certain services, e.g., laboratory tests, imaging, referrals, etc.)? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
72	2	142-143	[MEASPUB] Are performance measures on your practice available to the public? -9 = Blank -8 = Don't know -7 = Not applicable -6 = Not collected 1 = Yes 2 = No
73	2	144-145	[PRP4PR] What percent of your practice care revenue is based on bonuses, returned withholds or other performance-based payments? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
74	2	146-147	[REVFFSR] Roughly, what percent of your patient care revenue comes from usual, customary, and reasonable fee-for-service? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
75	2	148-149	[REVDISCR] Roughly, what percent of your patient care revenue comes from discounted fee-for-service? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
76	2	150-151	[REVCAPR] Roughly, what percent of your patient care revenue comes from capitation? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
77	2	152-153	[REVCASER] Roughly, what percent of your patient care revenue comes from case rates? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
78	2	154-155	[REVOTHR] Roughly, what percent of your patient care revenue comes from other sources? -9 = Blank -6=Not collected 1 = Less than or equal to 25 percent 2 = 26-50 percent 3 = 51-75 percent 4 = More than 75 percent
79	2	156-157	[ACEPTNEW] Are you currently accepting “new” patients into your practice? -9 = Blank -8 = Don’t know 1 = Yes 2 = No
80	2	158-159	[CAPITATE] From those “new” patients, which of the following types of payment do you accept? - Capitated private insurance -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
81	2	160-161	[NOCAP] From those “new” patients, which of the following types of payment do you accept? – Non-capitated private insurance -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
82	2	162-163	[NMEDCARE] From those “new” patients, which of the following types of payment do you accept? – Medicare -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
83	2	164-165	[NMEDCAID] From those “new” patients, which of the following types of payment do you accept? – Medicaid -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
84	2	166-167	[NWORKCMP] From those “new” patients, which of the following types of payment do you accept? – Workers compensation -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
85	2	168-169	[NSELFPAY] From those “new” patients, which of the following types of payment do you accept? – Self-pay -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
86	2	170-171	[NNOCHRGE] From those “new” patients, which of the following types of payment do you accept? – No charge -9 = Blank -8 = Don’t know -7 = Not applicable 1 = Yes 2 = No
87	2	172-173	[REFMDCAD] In the past 12 months, has your practice experienced difficulty in referring patients with the following types of health insurance for specialty consultations? – Medicaid -9 = Blank -8 = Don’t know -7 = Not applicable -6 = Not collected 1 = A lot of difficulty 2 = Some difficulty 3 = Little difficulty 4 = No difficulty
88	2	174-175	[REFMDCAR] In the past 12 months, has your practice experienced difficulty in referring patients with the following types of health insurance for specialty consultations? – Medicare -9 = Blank -8 = Don’t know -7 = Not applicable -6 = Not collected 1 = A lot of difficulty 2 = Some difficulty 3 = Little difficulty 4 = No difficulty

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
89	2	176-177	[REFPRIV] In the past 12 months, has your practice experienced difficulty in referring patients with the following types of health insurance for specialty consultations? – Private insurance -9 = Blank -8 = Don't know -7 = Not applicable -6 = Not collected 1 = A lot of difficulty 2 = Some difficulty 3 = Little difficulty 4 = No difficulty
90	2	178-179	[REFUNINS] In the past 12 months, has your practice experienced difficulty in referring patients with the following types of health insurance for specialty consultations? – Uninsured -9 = Blank -8 = Don't know -7 = Not applicable -6 = Not collected 1 = A lot of difficulty 2 = Some difficulty 3 = Little difficulty 4 = No difficulty
91	3	180-182	[SDAPPT] Roughly, what percent of your daily visits are same day appointments? -9 = Blank -6 = Not collected 0-100
92	2	183-184	[SASDAPPT] Does your practice set aside time for same day appointments? -9 = Blank -8 = Don't know -6 = Not collected 1 = Yes 2 = No
93	2	185-186	[APPTTIME] On average, about how long does it take to get an appointment for a routine medical exam? -9 = Blank -8 = Don't Know -6 = Not collected 1 = Within 1 week 2 = 1-2 weeks 3 = 3-4 weeks 4 = 1-2 months 5 = 3 or more months 6 = Do not provide routine exams

ITEM NO.	FIELD LENGTH	FILE LOCATION	[ITEM NAME], DESCRIPTION, AND CODES
94	2	187-188	[CCS] Do you offer any type or cervical cancer screening?

NOTE: The CCS item was collected from 2006 through 2010 through a special supplement to the survey.

-9 = Blank
-8 = Don't know
-6 = Not collected
1 = Yes
2 = No

NAMCS DESIGN VARIABLES

95	8	189-196	[CSTRATM] CLUSTERED PSU STRATUM MARKER (masked) 20105101-40400000
96	6	197-202	[CPSUM] CLUSTERED PSU MARKER (masked) 5-106980
97	6	203-208	[PHYSWT] PHYSICIAN WEIGHT (See page 14 in Section I) A right-justified integer developed by NCHS staff for the purpose of producing national estimates from sample data.

B. PHYSICIAN SPECIALTY LIST

The 2010 NAMCS survey design grouped physicians into 16 strata, or specialty groups, for sampling purposes. These included the standard 15 groups used in previous years in addition to a separate stratum for oncologists. One stratum, doctors of osteopathy, was based on information from the American Osteopathic Association. The other groups were developed based on information from the American Medical Association (AMA). Below is a list of the AMA physician specialties that were eligible for selection within each of the sample strata. Some small specialties were masked on the public use data file for confidentiality purposes. Please see individual year documentation for details (5-10).

GENERAL AND FAMILY PRACTICE

AMF – Adolescent Medicine (Family Practice)
EFM – Emergency Medicine/Family Medicine
EMP – Family Medicine/Preventive Medicine (FMP)
FP - Family Practice
FPG - Family Practice, Geriatric Medicine
FPP - Family Practice, Psychiatry
FSM - Sports Medicine (Family Practice)
GP - General Practice
HPF – Hospice and Palliative Medicine (Family Medicine)

INTERNAL MEDICINE

IM - Internal Medicine

PEDIATRICS

ADL - Adolescent Medicine (Pediatrics)
CAP – Child Abuse Pediatrics
CCP - Critical Care Pediatrics
DBP - Developmental - Behavioral Pediatrics
EMP – Pediatrics/Emergency Medicine
MPD - Internal Medicine/Pediatrics
NDN – Neurodevelopmental Disabilities
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
PEM - Pediatric Emergency Medicine
PG - Pediatric Gastroenterology
PMG – Pediatrics/Medical Genetics
PN - Pediatric Nephrology
PPR - Pediatric Rheumatology
PSM - Sports Medicine (Pediatrics)

GENERAL SURGERY

GS - General Surgery

OBSTETRICS AND GYNECOLOGY

GYN – Gynecology
HPO – Hospice and Palliative Medicine (Obstetrics and Gynecology)
MFM - Maternal and Fetal Medicine
OBG - Obstetrics and Gynecology
OBS - Obstetrics
OCC - Critical Care Medicine (Obstetrics and Gynecology)
REN - Reproductive Endocrinology

ORTHOPEDIC SURGERY

HSO - Hand Surgery
OAR - Adult Reconstructive Orthopedics
OFA - Foot and Ankle Orthopedics
OP - Pediatric Orthopedics
ORS - Orthopedic Surgery
OSM - Sports Medicine (Orthopedic Surgery)
OSS - Orthopedic Surgery of the Spine
OTR - Orthopedic Trauma

CARDIOVASCULAR DISEASES

CD - Cardiovascular Diseases

DERMATOLOGY

D - Dermatology

UROLOGY

U - Urology
UP - Pediatric Urology

PSYCHIATRY

ADP - Addiction Psychiatry
CHP - Child Psychiatry
CPP – Child and Adolescent Psychiatry
NUP - Neuropsychiatry
P - Psychiatry
PFP - Forensic Psychiatry
PYA - Psychoanalysis
PYG - Geriatric Psychiatry

PSYCHIATRY (cont.)

PYM – Psychosomatic Medicine

NEUROLOGY

CHN - Child Neurology
CN -Clinical Neurophysiology
N - Neurology
NRN - Neurology (Diagnostic Radiology)
VN – Vascular Neurology

OPHTHALMOLOGY

OPH – Ophthalmology
OPR – Ophthalmic Plastic and Reconstructive Surgery
PO - Pediatric Ophthalmology

OTOLARYNGOLOGY

NO - Otology - Neurotology
OTO - Otolaryngology
PDO - Pediatric Otolaryngology
PSO – Plastic Surgery within the Head & Neck (ENT)
SMO – Sleep Medicine (Otolaryngology)

ALL OTHER

A - Allergy
ADM - Addiction Medicine
AI - Allergy and Immunology
ALI - Allergy & Immunology/ Diagnostic Lab. Immunology
AM - Aerospace Medicine
AMI - Adolescent Medicine (Internal Medicine)
AS - Abdominal Surgery
CBG - Clinical Biochemical Genetics
CCG - Clinical Cytogenetics
CCM - Critical Care Medicine
CCS - Critical Care Surgery
CFS - Craniofacial Surgery
CG - Clinical Genetics
CHS – Congenital Cardiac Surgery (Thoracic Surgery)
CMG - Clinical Molecular Genetics
CRS - Colon and Rectal Surgery
CS – Cosmetic Surgery
DIA - Diabetes
DS - Dermatologic Surgery
EM - Emergency Medicine
END - Endocrinology
EP - Epidemiology
ESM - Sports Medicine (Emergency Medicine)
ETX - Medical Toxicology (Emergency Medicine)
FPS - Facial Plastic Surgery

ALL OTHER (cont.)

GE - Gastroenterology
GPM - General Preventive Medicine
HEM - Hematology
HEP - Hepatology
HNS - Head and Neck Surgery
HPE – Hospice & Palliative Medicine (Emergency Medicine)
HPI – Hospice & Palliative Medicine (Internal Medicine)
HPM - Hospice & Palliative Medicine
HPR – Hospice & Palliative Med (Physical Med & Rehab)
HS - Hand Surgery
HSP - Hand Surgery (Plastic Surgery)
HSS - Hand Surgery (Surgery)
IC - Interventional Cardiology
ICE - Cardiac Electrophysiology
ID - Infectious Diseases
IEC – Internal Medicine Emergency Medicine
IFP – Internal Medicine Family Practice
IG - Immunology
ILI - Internal Medicine/Diagnostic Lab. Immunology
IMD – Internal Medicine/Dermatology
IMG - Geriatric Medicine (Internal Medicine)
IPM – Internal Medicine/Preventive Medicine
ISM - Sports Medicine (Internal Medicine)
LM - Legal Medicine
MDM - Medical Management
MEM – Internal Medicine/Emergency Medicine
MG - Medical Genetics
MN – Internal Medicine/Neurology
MP – Internal Medicine/Psychiatry
MPM – Internal Medicine/Physical Medicine and Rehabilitation
NC – Nuclear Cardiology
NEP – Nephrology
NMN – Neuromuscular medicine
NMP – Neuromuscular Medicine (Physical Medicine & Rehabilitation)
NS - Neurological Surgery
NSP - Pediatric Surgery (Neurology)
NTR - Nutrition
OM - Occupational Medicine
OMF – Oral & Maxillofacial Surgery
OMM - Osteopathic Manipulative Medicine
PA - Clinical Pharmacology
PCC - Pulmonary Critical Care Medicine
PCS - Pediatric Cardiothoracic Surgery
PDD – Pediatric Dermatology
PDM – Pediatrics/Dermatology
PDS - Pediatric Surgery
PE - Pediatric Emergency Medicine (Emergency Medicine)
PHL - Phlebology
PHM - Pharmaceutical Medicine

ALL OTHER (cont.)

PHP - Public Health/General Preventive Medicine
PLI - Pediatric/Diagnostic Lab. Immunology
PLM - Palliative Medicine
PM - Physical Medicine and Rehabilitation
PMM – Pain Medicine
PMN – Pain Management (Neurology)
PMP – Pain Medicine (Physical Medicine and Rehabilitation)
PPM - Pediatrics/Physical Medicine & Rehabilitation
PPN – Pain Medicine (Psychiatry)
PRD – Procedural Dermatology
PRO – Proctology
PRS – Sports Medicine (Physical Medicine and Rehabilitation)
PS - Plastic Surgery
PSH – Plastic Surgery within the Head & Neck
PSP – Plastic Surgery within the Head & Neck (Plastic Surgery)
PTX - Medical Toxicology (Preventive Medicine)
PUD - Pulmonary Diseases
PYN – Psychiatry (Neurology)
RHU - Rheumatology
RPM – Pediatric Rehabilitation Medicine

ALL OTHER (cont.)

SCI - Spinal Cord Injury
SME - Sleep Medicine
SMI – Sleep Medicine (Internal Medicine)
SMN – Sleep Medicine (Psychiatry & Neurology)
THP – Transplant Hepatology (Internal Medicine)
TRS - Traumatic Surgery
TS - Thoracic Surgery
TTS - Transplant Surgery
UCM – Urgent Care Medicine
UM - Undersea Medicine
UME – Underseas Medicine (Emergency Medicine)
VM - Vascular Medicine
VS - Vascular Surgery
OS - Other Specialty
US – Unspecified

ONCOLOGY (new stratum for 2010)

GO – Gynecological Oncology
HO – Hematology/Oncology
OMO – Musculoskeletal Oncology
ON – Medical Oncology
PHO – Pediatric Oncology
SO - Surgical Oncology

C. AMA SPECIALTIES REGROUPED INTO PRIMARY CARE, SURGICAL, AND MEDICAL SPECIALTIES

Below is a list of the AMA physician specialties comprising the NAMCS sample strata, regrouped into primary care, surgical, and medical specialties for analytic purposes (see SPECCAT variable on file layout).

PRIMARY CARE SPECIALTIES

ADL - Adolescent medicine (pediatrics)
AMF - Adolescent medicine (family practice)
AMI - Adolescent medicine (internal medicine)
EFM - Emergency medicine (family medicine)
FMP – Family Medicine/Preventive Medicine (FMP)
FP - Family practice
FPG - Geriatric medicine (family practice)
FPP - Psychiatry/family medicine
FSM - Sports medicine (family practice)
GP - General practice
GYN - Gynecology
HPF – Hospice & palliative Care (internal medicine)
IFP - Internal medicine/family practice
IM - Internal medicine
IMG - Geriatric medicine (internal medicine)
IPM – Internal medicine/preventive medicine
ISM - Sports medicine (internal medicine)
MFM - Maternal & fetal medicine
MP - Internal medicine/psychiatry
MPD - Internal medicine/pediatrics
OBG - Obstetrics & gynecology
OBS - Obstetrics
PD - Pediatrics
PSM - Sports medicine (pediatrics)

SURGICAL SPECIALTIES

AS - Abdominal Surgery
CSS – Surgical critical care (surgery)
CFS - Craniofacial surgery
CHS – Congenital Cardiac Surgery (Thoracic Surgery)
CRS - Colon & Rectal Surgery
CS - Cosmetic Surgery
DS - Dermatologic surgery
FPS - Facial plastic surgery
GO - Gynecological oncology
GS - General surgery
HNS - Head & neck surgery
HPO – Hospice & Palliative Med (Obstetrics & Gynecology)
HS - Hand surgery
HSP - Hand surgery (plastic surgery)
HSO - Hand surgery (orthopedics)

SURGICAL SPECIALTIES (cont.)

HSS - Hand surgery (surgery)
NO - Otology/neurotology
NS - Neurological surgery
NSP - Pediatric surgery (neurology)
OMF - Oral & maxillofacial surgery
OMO - Musculoskeletal oncology
OP - Pediatric orthopedics
OPH - Ophthalmology
OPR – Ophthalmic Plastic and Reconstructive Surgery
ORS - Orthopedic surgery
OSM - Sports medicine (orthopedic surgery)
OSS - Orthopedic surgery of the spine
OTO - Otolaryngology
OTR - Orthopedic trauma
PCS - Pediatric cardiothoracic surgery
PDO - Pediatric otolaryngology
PDS - Pediatric surgery (surgery)
PO - Pediatric ophthalmology
PRD - Procedural dermatology
PS - Plastic surgery
PSH - Plastic surgery within the head & neck
SO - Surgical oncology
TRS - Trauma surgery
TS - Thoracic surgery
TTS - Transplant surgery
U - Urology
UP - Pediatric urology
VS - Vascular surgery

MEDICAL SPECIALTIES

A - Allergy
ADM - Addiction medicine
ADP - Addiction psychiatry
AI - Allergy & immunology
ALI - Clinical laboratory immunology (allergy & immunology)
AM - Aerospace medicine
CBG - Clinical biochemical genetics
CCG - Clinical cytogenetics
CCM - Critical Care Medicine (internal medicine)
CCP - Pediatric critical care medicine
CD - Cardiovascular disease
CG - Clinical genetics
CHN - Child neurology
CHP - Child and adolescent psychiatry
CMG - Clinical molecular genetics
CN - Clinical neurophysiology
CPP - Pediatrics/psychiatry/child & adolescent psychiatry

MEDICAL SPECIALTIES (cont.)

D - Dermatology
DBP - Developmental-behavioral pediatrics
DIA - Diabetes
EM - Emergency medicine
EMP - Pediatrics/emergency medicine
END - Endocrinology, diabetes and metabolism
EP - Epidemiology
ESM - Sports medicine (emergency medicine)
ETX - Medical toxicology (emergency medicine)
GE - Gastroenterology
GPM - General preventive medicine
HEM - Hematology (internal medicine)
HEP - Hepatology
HO - Hematology/oncology
HPE - Hospice & palliative medicine (emergency medicine)
HPI - Hospice & palliative medicine (internal medicine)
HPM - Hospice & palliative medicine
IC - Interventional cardiology
ICE - Clinical cardiac electrophysiology
ID - Infectious disease
IEC - Internal medicine / emergency medicine / critical care medicine
IG - Immunology
ILI - Clinical and laboratory immunology (internal medicine)
IMD - Internal medicine/dermatology
LM - Legal medicine
MDM - Medical management
MEM- Internal medicine/emergency medicine
MG - Medical genetics
MN - Internal medicine/neurology
MPM - Internal medicine/physical medicine and rehabilitation
N - Neurology
NC - Nuclear cardiology
NDN - Neurodevelopmental disabilities (psychiatry & neurology)
NDP - Neurodevelopmental disabilities (pediatrics)
NEP - Nephrology
NMN – Neuromuscular medicine
NPM - Neonatal-perinatal medicine
NRN - Neurology/diagnostic radiology/neuroradiology
NTR - Nutrition
NUP - Neuropsychiatry
OAR - Adult Reconstructive Orthopedics
OCC - Critical care medicine (obstetrics & Gynecology)

MEDICAL SPECIALTIES (cont.)

OFA - Foot and ankle, orthopedics
OM - Occupational medicine
OMM -Osteopathic manipulative medicine
ON - Medical oncology
P - Psychiatry
PA - Clinical pharmacology
PCC - Pulmonary critical care medicine
PDA - Pediatric allergy
PDC - Pediatric cardiology
PDD - Pediatric dermatology
PDE - Pediatric endocrinology
PDI - Pediatric infectious disease
PDM -Pediatrics/dermatology
PDP - Pediatric pulmonology
PDT - Medical toxicology (pediatrics)
PE - Pediatric emergency medicine (emergency medicine)
PEM - Pediatric emergency medicine (pediatrics)
PFP - Forensic psychiatry
PG - Pediatric gastroenterology
PHL - Phlebology
PHM -Pharmaceutical medicine
PHO - Pediatric hematology/oncology
PHP - Public health and general preventive medicine
PLI - Clinical and laboratory immunology (pediatrics)
PLM - Palliative medicine
PM - Physical medicine & rehabilitation
PMM -Pain medicine
PMN -Pain medicine (neurology)

MEDICAL SPECIALTIES (cont.)

PMP - Pain medicine (physical medicine & rehabilitation)
PN - Pediatric nephrology
PPM - Pediatrics/physical medicine & rehabilitation
PPN - pain medicine (psychiatry)
PPR - Pediatric rheumatology
PRO - Proctology
PRS - Sports medicine (physical medicine & rehabilitation)
PTX - Medical toxicology (preventive medicine)
PYA - Psychoanalysis
PYG - Geriatric psychiatry
PYM - Psychosomatic medicine
PYN - Psychiatry/neurology
PUD - Pulmonary disease
REN - Reproductive endocrinology
RPM -Pediatric rehabilitation medicine
RHU - Rheumatology
SCI - Spinal cord injury medicine
SME - Sleep medicine
SMI - Sleep medicine (internal medicine)
SMN -Sleep medicine (psychiatry & neurology)
THP – Transplant hepatology (internal medicine)
UME -Underseas medicine (emergency medicine)
UCM -Urgent care medicine
UM - Underseas medicine (preventive medicine)
VM - Vascular medicine
VN - Vascular neurology
OS - Other specialty
US - Unspecified specialty

III. MARGINAL DATA

PHYSICIAN ESTIMATES

PHYSICIAN SPECIALTY — 2005-2010

CATEGORY	RECORDS TOTAL	WEIGHTED PHYSICIANS (6-YEAR AVERAGE)	PERCENT
Total	7,449	321,795	100.000
1 - General/family practice	1,459	60,206	18.709
3 - Internal medicine	564	44,861	13.941
4 - Pediatrics	675	33,033	10.265
5 - General surgery	377	11,596	3.604
6 - Obstetrics and gynecology	514	25,365	7.882
7 - Orthopedic surgery	353	15,900	4.941
8 - Cardiovascular diseases	459	13,531	4.205
9 - Dermatology	297	7,432	2.310
10 - Urology	384	6,636	2.062
11 - Psychiatry	466	17,798	5.531
12 - Neurology	458	6,836	2.124
13 - Ophthalmology	329	13,083	4.066
14 - Otolaryngology	334	6,015	1.869
15 - Other specialties	602	56,316	17.501
16 - Oncology	178	3,186	0.990

PHYSICIAN SPECIALTY — 2005

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,058	317,083	100.000
General/family practice	167	59,225	18.678
Internal medicine	65	48,446	15.279
Pediatrics	89	32,699	10.312
General surgery	67	11,807	3.724
Obstetrics and gynecology	59	22,406	7.066
Orthopedic surgery	53	14,787	4.663
Cardiovascular diseases	68	12,776	4.029
Dermatology	50	7,011	2.211
Urology	64	6,517	2.055
Psychiatry	86	18,071	5.699
Neurology	73	6,404	2.020
Ophthalmology	60	13,448	4.241
Otolaryngology	57	6,245	1.970
Other specialties	100	57,241	18.052

PHYSICIAN SPECIALTY **2006**

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,268	301,245	100.000
General/family practice	249	56,642	18.803
Internal medicine	117	39,487	13.108
Pediatrics	109	30,698	10.190
General surgery	57	10,658	3.538
Obstetrics and gynecology	98	24,065	7.989
Orthopedic surgery	56	14,984	4.974
Cardiovascular diseases	79	13,154	4.367
Dermatology	48	7,245	2.405
Urology	55	6,666	2.213
Psychiatry	82	17,059	5.663
Neurology	73	6,231	2.068
Ophthalmology	49	12,340	4.096
Otolaryngology	54	5,664	1.880
Other specialties	94	50,880	16.890
Oncology	48	5,472	1.816

PHYSICIAN SPECIALTY **2007**

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,357	320,196	100.000
1 - General/family practice	272	58,556	18.288
3 - Internal medicine	102	44,168	13.794
4 - Pediatrics	118	31,322	9.782
5 - General surgery	68	12,068	3.769
6 - Obstetrics and gynecology	90	25,752	8.043
7 - Orthopedic surgery	59	15,999	4.997
8 - Cardiovascular diseases	77	13,196	4.121
9 - Dermatology	52	8,223	2.568
10 - Urology	70	6,187	1.932
11 - Psychiatry	81	18,813	5.875
12 - Neurology	86	7,209	2.251
13 - Ophthalmology	56	13,103	4.092
14 - Otolaryngology	55	5,966	1.863
15 - Other specialties	105	53,766	16.792
16 - Oncology	66	5,868	1.833

PHYSICIAN SPECIALTY **2008**

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,187	321,746	100.000
1 - General/family practice	259	63,158	19.630
3 - Internal medicine	100	44,648	13.877
4 - Pediatrics	115	33,755	10.491
5 - General surgery	55	11,508	3.577
6 - Obstetrics and gynecology	76	27,362	8.504
7 - Orthopedic surgery	66	15,767	4.900
8 - Cardiovascular diseases	67	15,049	4.677
9 - Dermatology	54	7,910	2.458
10 - Urology	59	6,726	2.090
11 - Psychiatry	69	18,104	5.627
12 - Neurology	82	6,963	2.164
13 - Ophthalmology	48	13,336	4.145
14 - Otolaryngology	52	5,897	1.833
15 - Other specialties	85	51,563	16.026

PHYSICIAN SPECIALTY **2009**

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,291	340,591	100.000
1 - General/family practice	280	65,849	19.334
3 - Internal medicine	95	47,537	13.957
4 - Pediatrics	116	34,081	10.006
5 - General surgery	64	11,341	3.330
6 - Obstetrics and gynecology	88	26,245	7.706
7 - Orthopedic surgery	64	17,049	5.006
8 - Cardiovascular diseases	85	13,891	4.078
9 - Dermatology	43	7,173	2.106
10 - Urology	73	7,009	2.058
11 - Psychiatry	70	16,971	4.983
12 - Neurology	71	6,910	2.029
13 - Ophthalmology	64	13,253	3.891
14 - Otolaryngology	56	5,926	1.740
15 - Other specialties	122	67,356	19.776

PHYSICIAN SPECIALTY **2010**

CATEGORY	RECORDS	WEIGHTED PHYSICIANS	PERCENT
Total	1,288	329,907	100.000
General/family practice	232	57,803	17.521
Internal medicine	85	44,882	13.604
Pediatrics	128	35,642	10.804
General surgery	66	12,197	3.697
Obstetrics and gynecology	103	26,361	7.990
Orthopedic surgery	55	16,816	5.097
Cardiovascular diseases	83	13,123	3.978
Dermatology	50	7,032	2.132
Urology	63	6,709	2.034
Psychiatry	78	17,772	5.387
Neurology	73	7,300	2.213
Ophthalmology	52	13,020	3.947
Otolaryngology	60	6,395	1.938
Other specialties	96	57,081	17.302
Oncology	64	7,774	2.356

APPENDIX

A. RELATIVE STANDARD ERRORS

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample is surveyed, rather than the entire universe. The relative standard error (RSE) of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate. Standard errors and other measures of sampling variability are best determined by using a statistical software package that takes into account the sample designs of surveys to produce such measures.

Using computer software like SUDAAN to produce standard errors will, in general, yield results that are more accurate than those produced using the generalized variance curve described below. This is especially true for clustered variables like metropolitan statistical area, physician specialty, and practice ownership. The standard errors produced with such software using masked design variables, while improving substantially over the generalized variance curve results, will not always be as accurate as those produced using unmasked data. However, data files containing unmasked variables are confidential and are only available through the NCHS Research Data Center.

The NAMCS Physician Trend file includes masked multi-stage design variables (CSTRATM and CPSUM) for use with software utilizing a “between PSU” variance estimator or “ultimate cluster” sampling design. Ultimate cluster variance estimates depend only on the first stage of the sample design, so that only first-stage cluster and first-stage stratum identification are required. Starting with 2003 data, the NAMCS public use files include only these first-stage design variables, CSTRATM and CPSUM.

Examples using CSTRATM and CPSUM in Stata, SUDAAN’s 1-stage WR (with replacement) design option, and SAS’s PROC surveymeans applications are presented below:

Stata

The pweight (PHYSWT), strata (CSTRATM), and PSU (CPSUM) are set with the svyset command as follows:

Stata 8:
```
svyset [pweight=physwt], psu(cpsum) strata(cstratm)
```

Stata 9 and Stata 10:
```
svyset cpsum [pweight=physwt], strata(cstratm)
```

SUDAAN 1-stage WR Option

The program below provides a with replacement ultimate cluster (1-stage) estimate of standard errors for a cross-tabulation.

```
PROC CROSSTAB DATA=COMB1 DESIGN=WR FILETYPE=SAS;
NEST CSTRATM CPSUM/MISSUNIT;
```

SAS - PROC SURVEYMEANS

```
PROC SURVEYMEANS DATA=COMB1;
CLUSTER CPSUM;
STRATA CSTRATM;
```

SPSS

This code pertains to SPSS Inc.'s Complex Samples 12.0 module. It would be used with the "Analysis Preparation Wizard" component of that module. The PLAN FILE statement would be invoked in statistical runs, as in the example for CSTABULATE shown below.

```
CSPLAN ANALYSIS
   /PLAN FILE='DIRECTORY\PLANNAME.CSAPLAN'
   /PLAN VARS ANALYSISWEIGHT=PHYSWT
   /PRINT PLAN
   /DESIGN STAGELABEL= 'ANY LABEL'   STRATA=CSTRATM   CLUSTER=CPSUM
   /ESTIMATOR TYPE=WR.

CSTABULATE
   /PLAN FILE='DIRECTORY\PLANNAME.CSAPLAN'
   /TABLES VARIABLES = var1 var2
   /CELLS POPSIZE
   /STATISTICS SE
   /MISSING SCOPE = TABLE CLASSMISSING = EXCLUDE.
```

A technical paper, *Using Ultimate Cluster Models with NAMCS and NHAMCS Public Use Files*, is available for downloading at the Ambulatory Health Care Data website: http://www.cdc.gov/nchs/namcs.htm.

For data users who do not wish to use SUDAAN or similar programs to produce measures of sampling variability, we may make available upon request tables which contain relative standard errors based on generalized variance curves for a wide range of physician estimates. (Estimates with a relative standard error greater than 30 percent are considered unreliable by the standards of the National Center for Health Statistics. It should also be noted here that estimates based on fewer than 30 sample records are considered unreliable, regardless of the magnitude of the relative standard error.) The following formulas may be used to calculate approximate relative standard errors for combined year physician estimates (Table II) and year-specific physician estimates (Tables III-VIII).

For aggregate estimates, approximate relative standard errors can be calculated using the following general formula, where "x" is the aggregate of physicians, and coefficients "A" and "B" are obtained from Table II-VII:

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

For estimates of percents, approximate relative standard errors can be calculated using the following general formula, where "p" is the percent of physicians, "x" is the denominator of the percent, and coefficient "B" is obtained from Tables III-VI:

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

For estimates of physician rates in which the numerator is the number of physicians for a particular characteristic and the denominator is the total U.S. population, the relative standard error is equivalent to the relative standard error of the numerator, as shown above in the paragraph on aggregate estimates. For additional information, contact the Ambulatory and Hospital Care Statistics Branch at (301) 458-4600.

NOTE: Table II will be uploaded to this document in the near future.

NOTE: Table III will be uploaded to this document in the near future.

NOTE: Table IV will be uploaded to this document in the near future.

NOTE: Table V will be uploaded to this document in the near future.

NOTE: Table VI will be uploaded to this document in the near future.

NOTE: Table VII will be uploaded to this document in the near future.

NOTE: Table VIII will be uploaded to this document in the near future.

B. DEFINITIONS OF CERTAIN TERMS USED IN THE NAMCS

Office(s) --Premises that the physician identifies as locations for his or her ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than with any institution.

PHYSICIANS

In-Scope -- All duly licensed doctors of medicine and doctors of osteopathy currently in practice who have regularly scheduled time for seeing ambulatory patients at an office location.

Out-of-Scope -- Those physicians who treat patients only indirectly, including specialists in anesthesiology, pathology, forensic pathology, radiology, therapeutic radiology, and diagnostic radiology, and the following physicians:

- physicians who are federally employed or who are in military service;
- physicians who treat patients only in an institutional setting (e.g., patients in nursing homes and hospitals);
- physicians employed full time by an industry or institution and having no private practice (e.g., physicians who work for the VA, the Ford Motor Company, etc.);
- physicians who spend no time seeing ambulatory patients.

Physician specialty -- Principal specialty (including general practice) as designated by the physician at the time of the survey. Those physicians for whom a specialty was not obtained were assigned the principal specialty recorded in the Master Physician files maintained by the AMA or AOA.

Metropolitan status — Physicians are classified by their location in metropolitan statistical area as follows:

Metropolitan statistical area (MSA)—As defined by the U.S. Office of Management and Budget, the definition of an individual MSA involves two considerations: first, a city or cities of specified population, that constitute the central city and identify the county in which it is located as the central county; second, economic and social relationships with “contiguous”’ counties that are metropolitan in character so that the periphery of the specific metropolitan area may be determined. MSAs may cross state lines. In New England, MSAs consist of cities and towns rather than counties.

Non-MSA—Non-MSA areas are those not defined as MSAs, including rural and micropolitan areas.

Region of practice location -- The four geographic regions which correspond to those used by the U.S. Bureau of the Census, are as follows:

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

South.....Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

West.....Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, Alaska, Hawaii