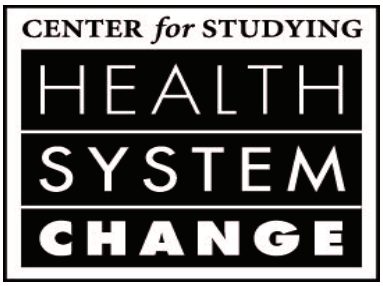
2008 Health Tracking Physician Survey Restricted Use File: User's Guide

(Release 1)



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2008 HSC Health Tracking Physician Survey
Fact Sheet

Survey Details	
Sample	4,720 physicians in the U.S. providing direct patient care for at least 20 hours per week, excluding federal employees, specialists in fields where the primary focus is not direct patient care, and foreign medical school graduates who are only temporarily licensed to practice in the U.S. Also excludes residents and fellows.
Time Period	February 2008-October 2008
Content	Basic information on practice, specialty, and board certification Career satisfaction Practice arrangements and ownership Physician time allocation, productivity Charity care provision Patient case mix: race, ethnicity, chronic conditions, language Availability of health IT in practice Hospital safety Quality and coordination of patient care Inability to obtain needed services for patients Importance of factors that may limit quality care Acceptance of New Patients Practice revenue Malpractice concerns Medical Equipment and Hospital Ownership Compensation Physician race/ethnicity
Types of Estimates	
Geographic areas represented	These data are designed to allow the user to calculate nationally representative estimates. Respondents are located in all 50 states and the District of Columbia.
Estimates for 2008	These data can be used for calculating cross-sectional estimates representing the year 2008.
Using the Data Files	
Obtaining the data files and documentation	The data files and documentation are available through the Inter-University Consortium for Political and Social Research (ICPSR). The Web site is www.icpsr.umich.edu. The Public Use File can be downloaded at no cost directly from the ICPSR Web site. The Restricted Use File is available to approved users only and is available at no or nominal fee. ICPSR provides the restricted data file on CD. To obtain permission to use the Restricted Use File, users must comply with conditions listed in the *Health Tracking Physician Survey, 2008 Restricted Data Use Agreement*, such as limiting data access to people specified in the agreement and destroying the data upon completion of the specified research project. Copies of the agreement and a description of the application process are available from

	the ICPSR Web site.
Differences between the Public Use File and the Restricted Use File.	The Public Use File contains less detailed information than the Restricted Use File in order to preserve the confidentiality of the survey respondents. The two files contain the same number of observations, but the Public Use File has fewer variables, some of which have undergone more extensive editing than those on the Restricted Use File. The Public Use File does not contain information on the geographic location of the physician's practice. It also does not contain the information necessary for using statistical software programs that account for the complex survey design, which means that it cannot be used for calculating corrected standard errors. However, due to the straightforward sample design, design effects are close to one. This means that use of statistical software that does not account for complex survey design will produce estimates of statistical precision that are only slightly biased.
Contacting the CTS/HSC-HT help desk	HSCdataHelp@hschange.org

PREFACE

Data collection for the 2008 HSC Health Tracking Physician Survey began on Feb. 5, 2008, and was completed on Oct. 31, 2008. Earlier versions of the survey, previously known as the Community Tracking Study (CTS) Physician Survey, were conducted in 1996-97, 1998-99, 2000-01, and 2004-2005. Each survey was designed to allow separate cross-sectional estimates. Researchers can use the four rounds of the CTS Physician Survey for separate cross-sectional analyses at the national or local market level or combine the years to study changes in the health care system over time. The 2008 survey employed a different mode of administration and sample structure and consequently cannot be combined with data from prior CTS physician surveys (see box on page 3 explaining the reasons for these changes and plans for future surveys).

This user's guide presents background information about the 2008 HSC Health Tracking Physician Survey, explains how to calculate nationally representative estimates from the data, and illustrates the correct method for estimating variances. This discussion is followed by a description of variable construction, editing and other information about the data file. The appendices contain the survey instrument, a list of the variables included in the public- and restricted-use data files, and sample statements for statistical programming analyses. The *2008 Health Tracking Physician Survey Public Use File: Codebook* provides more detail on the data file, including frequencies and variable definitions.

ACKNOWLEDGMENTS

The Center for Studying Health System Change (HSC) would like to express its great appreciation to three contractors who performed vital roles in the implementation of the survey: Mathematica Policy Research, Inc. (MPR) for the sample design and weighting; Westat for data collection, coding, and initial editing; and Social and Scientific Systems, Inc. (SSS) for final

editing and imputation of the data and construction of accompanying codebooks and datafile. MPR also assisted in developing measures to assure data confidentiality.

OBTAINING AND USING THE RESTRICTED USE FILE

In order to obtain and use this Restricted Use File, researchers must apply for access to the data and agree to the strict terms and conditions contained in the *Community Tracking Study Physician Survey Restricted Use Data Agreement.* Information about the application process and the data use agreement are available from the ICPSR Web site (www.icpsr.umich.edu).

Before applying to use the 2008 HSC Health Tracking Physician Survey Restricted Use File, researchers should consider whether the Public Use File would serve their analytic needs. The public use and restricted use versions differ in the amount of geographic detail provided and the confidentiality masking applied to some variables. The Restricted Use File contains state and county-level identifiers for each observation, while the Public Use File does not. The Restricted Use File also provides more detailed information on physician specialty/subspecialty, physician ownership status, practice ownership interests, and race/ethnicity than is provided on the Public Use File. Moreover, information necessary for using statistical software programs that account for the survey design is not included on the Public Use File.

Information on the Public Use File is available in *2008 HSC Health Tracking Physician Survey Public Use File: User's Guide* and *2008 HSC Health Tracking Physician Survey Public Use File: Codebook,* available from the ICPSR Web site (www.icpsr.umich.edu).

OBTAINING TECHNICAL ASSISTANCE

Information on the 2008 HSC Health Tracking Physician Survey, and previous CTS surveys, can be obtained through the HSC Internet home page at http://www.hschange.org. The public use and restricted use files, as well as the documentation, are available through the Inter-university Consortium for Political and Social Research at http://www.icpsr.umich.edu.

Technical assistance on issues related to the data file can be obtained by contacting the CTS/HSC-HT Help Desk by e-mail at HSCdataHelp@hschange.org.

VISIT THE HSC WEB SITE

www.hschange.org

For users of the HSC Health Tracking and CTS data files, the HSC Web site can be a valuable resource. In addition to HSC technical publications and descriptions of the different data collection activities, it has these useful features.

HSCdataOnline user-specified tables. HSCdataOnline is an interactive, Web-based system that allows users to request a wide variety of tables with estimates from the CTS

Physician and Household Surveys, as well as from the HSC Health Tracking Physician and Household Surveys.

Lists of papers published from the public use and restricted use data files. In the section of the Web site that discusses the public and restricted use data, you can view a list of journal articles that have been published by users of the Health Tracking and CTS public use and restricted use data files. If you have a paper based on the CTS or HSC Health Tracking data that is not included on the list, please let us know by sending an e-mail to HSCdataOnline@hschange.org.

E-mail list for updates on the data. If you would like to receive e-mail announcements when new versions of the data files are released, go to the Web site and click on "Sign up for e-mail alerts." Then fill out the sign-up form and check the box specific to HSCdataOnline@hschange.org.

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CHAPTER 1
OVERVIEW OF THE 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY

This guide is intended to assist researchers in using the 2008 HSC Health Tracking Physician Survey Restricted Use File. This is a nationally representative survey of U.S. physicians providing at least 20 hours per week of direct patient care. The study covers a wide variety of topics, from practice arrangements and compensation methods to physicians' ability to provide needed services to their patients and the impact of care management strategies on their practices. Funded by the Robert Wood Johnson Foundation (RWJF), the study was conducted by the Center for Studying Health System Change (HSC). Additional documentation and detailed information on the file layout and content are available in *2008 HSC Health Tracking Physician Survey Restricted Use File: Codebook.* A methodology report providing details on the sample design and data collection is available at www.hschange.org/CONTENT/1085/. Information about other aspects of the study is available from HSC at www.hschange.org. Technical assistance on issues related to the data file may be obtained by contacting the CTS Help Desk by e-mail at HSCdataHelp@hschange.org.

1.1. THE 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY

The 2008 HSC Health Tracking Physician Survey, funded by the Robert Wood Johnson Foundation, was conducted under the direction of HSC. Westat conducted the mail survey and tracing of physicians who could not be located. Mathematica Policy Research, Inc. (MPR) was responsible for sample design and weighting. New survey items developed by HSC underwent cognitive testing, conducted by HSC consultant, Carolyn Miller. Social and Scientific Systems, Inc. (SSS) was instrumental in converting the raw survey data into a data file suitable for analysis. MPR, SSS, and HSC collaborated to prepare the documentation for the public and restricted use files.

The 2008 survey instrument collected information on physician characteristics and specialty distribution; practice arrangements and physician ownership; physician time allocation, including time spent communicating with patients via e-mail and telephone; use of interpreter services; sources of practice revenue; level and determinants of physician compensation; provision of charity care; use of health information technology physicians' perception of their ability to deliver care and of career satisfaction; effects of care management strategies; extent of care coordination; malpractice concerns; financial interest in medical equipment and hospitals; and various other aspects of physicians' practice of medicine. Appendix A provides a copy of the questionnaire.

The survey was administered by mail. The sample frame was derived from a list of physicians from the American Medical Association (AMA) and consisted of active, non-federal, office- and

hospital-based physicians providing at least 20 hours per week of direct patient care. Surveys of 4,720 physicians were completed between February and October 2008.[1]

1.2. RELATIONSHIP TO THE COMMUNITY TRACKING STUDY

The 2008 HSC Health Tracking Physician Survey was preceded by the Community Tracking Study (CTS) Physician Surveys. The CTS is a longitudinal study of changes in the health care market and the effects of those changes on people and providers nationwide and in select communities across the U.S.. Its objective is to provide sound empirical evidence to inform the debate surrounding health system change. Conducted between 1996 and 2005, the CTS is based upon a series of periodic site visits and surveys of household and physicians.[2]

Respondents in the four rounds of CTS surveys were sampled predominantly from 60 nationally representative communities stratified by region, community size, and whether metropolitan or nonmetropolitan. In addition, the CTS examined 12 of the 60 communities in depth by conducting site visits and, for rounds one through three, using survey samples large enough to draw conclusions about health system change in each of the 12 site visit communities. Supplemental national samples were also added to the first three rounds of CTS surveys.

For budgetary reasons, the community-based design was replaced by a national sample design for the 2008 Physician Survey and 2007 Household Survey, although site visits continue to be focused on the 12 communities (6 rounds of site visits have been completed, with the latest occurring in 2007). Because the latest samples are no longer clustered in communities, the surveys have been renamed the HSC Health Tracking Household and Physician surveys.[3]

In addition to the change in sample design, the 2008 HSC Health Tracking Physician Survey departs from the earlier CTS in several other respects. Most notably, the survey mode was changed from telephone to self-administered mail questionnaire. This prompted some dropping, re-wording and reorganization of questions and skip patterns from earlier rounds to facilitate the new method. The sample for the 2008 survey was drawn from a list provided by the American Medical Association (AMA) only, whereas prior rounds used lists from both the AMA and the American Osteopathic Association (AOA). Finally, the strata in the 2008 survey have been simplified, reflecting the 10 geographic regions (now including Alaska and Hawaii) and specialty designation (PCP or specialist), producing 20 in all.[4]

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[1] Refer to the HSC Health Tracking Physician Study Methodology Report for more information on the survey sample (HSC Technical Publication No. 77).

[2] Surveys of employers and insurance plans have also been conducted.

[3] The name change occurred after the field period commenced, so the survey documents contained in the Appendices still refer to the 2008 physician survey as the CTS physician survey.

[4] Past CTS surveys stratified physicians additionally by interview status of the preceding round (reinterviews, non-interviews, and new sample), as some physicians were resampled for panel study.

Why Were Changes Made That Do Not Allow Tracking From Prior CTS Physician Surveys And What Are The Plans For Future Surveys?

The changes made to the 2008 physician survey relative to prior rounds of the CTS physician survey were primarily motivated by three factors:

- Resources available for the survey were inadequate to support a larger, clustered sample, necessitating a simpler national sample design that was more efficient. Moreover, self-administered mail surveys are much less expensive to conduct than Computer Assisted Telephone Interviewing (CATI) surveys.
- Response rates from CATI surveys of physicians have been consistently declining over time, reflecting movement of physicians into larger practices with more "gatekeepers" and greater use of automated telephone answer systems that made it more difficult to talk directly to a physician, among other factors. These trends escalated the cost of CATI surveys and were likely to result in a 2008 survey whose response rate would be so low that its validity would be questioned and results difficult to publish.
- The CTS surveys began in the mid-1990s when the primary policy concern was the effects of managed care on providers and people. Although incremental changes were made over the years, survey questions remained largely unchanged to allow for tracking. However, the nature and range of policy issues related to physician care in 2008 are very different than they were in 1996, prompting substantial changes to the survey instrument.

We anticipate that future physician surveys will allow tracking from the 2008 survey.

Because of these changes, results from the 2008 Health Tracking Physician Survey cannot be compared to findings from earlier CTS Physician Surveys. Yet as the health system continues to evolve, the 2008 survey is intended to establish a new baseline for future tracking of how physicians organize and practice medicine.

1.3. 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY PUBLIC USE FILE AND RESTRICTED USE FILE

Two versions of the 2008 HSC Health Tracking Physician Survey physician-level data files are available to researchers: the Restricted Use File and the Public Use File. The ***Restricted Use File*** may be used only under the conditions listed in the *2008 Health Tracking Physician Survey Restricted Data Use Agreement.* This agreement provides details on ownership of the data, when the data may be obtained and by whom, how the data may be used, the data security procedures that must be implemented, and the sanctions that will be imposed in the case of data misuse. Researchers must specifically apply for use of the Restricted Use File. Copies of the agreement and a description of the application process are available from the Inter-University Consortium for Political and Social Research (ICPSR) Web site at www.icpsr.umich.edu.

The Restricted Use File is provided to researchers for use only on a specific research project (new applications would be required for subsequent analyses using the data) and for a limited time period, after which all copies of the data must be destroyed. Moreover, researchers using the Restricted Use File may be required to undertake costly or inconvenient security measures.

The ***Public Use File*** is available from ICPSR and can be downloaded directly from the ICPSR Web site. Researchers need not specifically apply for use of the Public Use File. Although it contains all of the same observations as the Restricted Use File, several variables have been deleted or modified slightly for data confidentiality reasons (see below). Moreover, information necessary for using statistical software programs that account for the survey design is not included in the Public Use File. This means that **the Public Use File does not allow researchers to calculate correct standard errors and perform significance tests based on the stratified survey design**. For most researchers, the public use file should be adequate to meet their needs as the sample design has minimal effects on standard errors and it can be used to determine whether it is worthwhile to apply for the restricted use file to pursue additional analysis.

As stated above, the Public Use File does not contain certain data that are available on the Restricted Use File. Other variables on the Public Use File were modified to ensure the confidentiality of survey respondents. These modifications are described in Chapter 5. Appendix B lists the variables available on the public and restricted use versions of the 2008 data files. In that list, a different name for the same variable on the public and restricted use files indicates that the data for this variable underwent additional editing for confidentiality in the public use version.

Researchers are encouraged to review documentation for both the public and restricted use files, available from ICPSR at www.icpsr.umich.edu, as well as the requirements of the *2008 Health Tracking Physician Survey Restricted Data Use Agreement,* before deciding which file will meet their needs.

CHAPTER 2
THE STRUCTURE AND CONTENT OF THE 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY

This chapter describes the 2008 HSC Health Tracking Physician Survey sample design, the process of conducting the survey, the survey content, and survey administration and processing. The Physician Survey was administered to a sample of physicians across the U.S., permitting estimates at the national level.

The HSC Health Tracking Physician Survey's predecessors, the CTS Physician Surveys, were administered using computer-assisted telephone interviewing to a stratified random sample of physicians in the 60 CTS sites and, in the first 3 CTS rounds, to an independent national sample of physicians, referred to as the "national supplement." The 2008 Health Tracking Physician Survey used a stratified random sampling design (similar to the earlier national supplement sample), and the site-base sample was dropped. The survey was administered by mail instead of telephone.

2.1. THE PHYSICIAN SURVEY SAMPLE

The target population was based on information provided by the AMA Masterfile (which includes both AMA members and nonmembers). The AMA Masterfile includes licensed allopathic physicians and osteopathic physicians who obtained graduate training in allopathic medical schools or were identified on state licensing boards. The AMA Masterfile contains the majority of osteopathic physicians listed in the American Osteopathic Association (AOA) listing of osteopathic physicians. Unlike prior CTS surveys, we did not supplement the AMA Masterfile with observations from the AOA Masterfile. This was done to lower costs and because only 0.5% of sampled physicians in the 2004-05 CTS survey were listed in the AOA Masterfile but omitted from the AMA Masterfile.

2.1.1. Eligible Physicians

To meet the initial eligibility criteria for sampling, physicians in the frame must have 1) completed their medical training (residents, interns, and fellows were considered to be still in training and were excluded from the sample), 2) practiced within the 50 states and the District of Columbia, and 3) provided direct patient care for at least 20 hours per week. The direct patient care criterion resulted in the exclusion of inactive or retired physicians and physicians who were not based in offices or hospitals (such as teachers, administrators, and researchers).

The following types of physicians were designated as ineligible for this survey and were removed from the frame:

- Specialists in fields that do not focus primarily on direct patient care[5]
- Federal employees
- Graduates of foreign medical schools who are licensed to practice in the United States only temporarily

2.1.2. Stratification of Physician Sample Frames

After constructing the list of eligible physicians, each physician was then classified as either a primary care physicians (PCP) or a specialist, based on information contained in the Masterfile. PCPs were defined as physicians with a primary specialty of family practice, general practice, general internal medicine, internal medicine/pediatrics, or general pediatrics. All others with survey-eligible specialties were classified as specialists.

The physician's location for sampling purposes was determined by the AMA preferred mailing address. The population for the sample included physicians in the 50 states and the District of Columbia. The states were divided into 10 geographic strata. The strata were defined to match those used in the four rounds of the CTS physician survey, with the addition of Alaska and Hawaii in one stratum, and were used in prior physician surveys conducted for the AMA. The geographic regions are defined as follows:

1. Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
2. New York
3. Delaware, New Jersey, Pennsylvania, West Virginia
4. District of Columbia, Georgia, Maryland, North Carolina, South Carolina, Virginia
5. Alabama, Florida, Kentucky, Mississippi, Tennessee
6. Arkansas, Louisiana, Missouri, Oklahoma, Texas
7. Indiana, Michigan, Ohio
8. Illinois, Iowa, Minnesota, Wisconsin

[5] For example: radiology (including diagnostic, nuclear, pediatric, neuro-, radiation oncology, radiological physics, vascular, and interventional); anesthesiology; pain management; pain medicine; palliative medicine; pathology (including anatomic, clinical, dermato-, forensic, neuro-, chemical, cyto-, immuno-, pediatric, radioisotophic, selective); medical toxicology; aerospace medicine and undersea medicine; allergy and immunology/diagnostic laboratory; bloodbanking/transfusion medicine; clinical and laboratory dermatological immunology; forensic psychiatry; hematology; legal medicine; medical management; public health and general preventive medicine; nuclear medicine; clinical pharmacology; sleep medicine; other specialty; unspecified specialty.

9. Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Oregon, Utah, Wyoming, Washington

10. Alaska, California, Hawaii

The 20 sampling strata were formed by crossing the ten regions by whether the physician was classified as a PCP or a specialist.

The goal of the sample allocation was to achieve the highest possible precision for national estimates. The design was based on a proportional allocation of the sample to PCPs and specialists.

2.1.3. Physicians Excluded from the Survey

Some physicians thought to be eligible based on the sample frame information were later classified as ineligible based on screening telephone interviews or survey responses. This happened if it turned out that the physician was still in training, provided direct patient care for less than 20 hours per week, practiced in an excluded specialty, was a federal employee, or was deceased. These ineligible physicians are not included on the file.

2.2. SURVEY CONTENT

Table 2.1 shows the topics covered by the survey in more detail. Detailed documentation for the survey instrument is provided in Appendix A.

TABLE 2.1

CONTENTS OF THE 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY

Topic	Description
Survey Eligibility	
Eligibility for survey	Resident or fellow Federal employee Less than 20 hours/week of direct patient care
Satisfaction with Medicine	
Career satisfaction	Current level of satisfaction with overall career in medicine
Practice Characteristics	
Physician Characteristics	Year began medical practice Primary specialty Board Certification
Practice description	Type/setting of practice Number of physicians in main practice
Ownership of practice	Respondent ownership Other entities with ownership interest
Financial incentives and competitive situation	Effect of financial incentives on quantity of services Competitive situation of practice
Hours Worked and Patient Visits	
Weeks worked	Number of weeks practiced medicine in 2006

Hours worked during last complete week of work	Hours spent in direct patient care during last complete week of work. Hours spent in administrative tasks and professional activities during last complete week of work. Total hours spent in medically-related activities during last complete week of work. Number of patient visits in office and out-patient clinics, on hospital rounds, and in nursing homes or patients' homes during last complete week of work.
Time allocation during a typical work day	Time spent on e-mail communication with patients and their families. Time spent on telephone conversations with patients and their families. Time spent on e-mail communication with physicians and other clinicians. Time spent on telephone conversations with physicians and other clinicians.
Reimbursement for communication activities	Whether reimbursed for each of the activities in preceding row.
Charity care in the last month	Hours spent in charity care in the last month Location of charity care
Patient Characteristics	
Case mix	Race/ethnicity of patients Percentage of patients with chronic conditions Percentage of patient with whom the physician has difficulty communicating due to language differences
Interpreter services	Provision of interpreter services Languages provided
Minority health education	Participation in activities addressing minority health issues
Information Technology in Medicine	
Access to clinical IT in medical practice	Access to and frequency of use of IT capabilities: Treatment guidelines Decision support for diagnoses and treatment recommendations Preventive service and follow-up reminders Patient reminders E-mail exchange with patients Patient notes Test ordering and results viewing Exchange of clinical data and images with other physicians Exchange of clinical data and images with labs, hospitals Patients' preferred language Identify drug interactions Information on formularies Write and transmit prescriptions to pharmacy Use of EMR Financial incentives tied to IT
Hospital Care	
Hospital characteristics	System for reporting medical errors Percentage of hospitalized patients treated by a hospitalist Whether hospital ICU covered by intensivists
Quality and Coordination of Patient Care	
Care management	Effect of practice guidelines on practice of medicine
Perceptions of ability to provide quality care	Adequate time to spend with patients Providing high quality care to all patients
Quality and other reporting	Whether receive reports for own patients or practice as a whole: Quality of preventive care

	Quality of care for chronic conditions Patient demographics (race, ethnicity, preferred language) Quality of care for minority patients Patient lists or registries (e.g. lists of patients with specific conditions, medications, etc.) Participation in outside quality reporting programs
Chronic Care	Treatment of select chronic conditions (asthma, diabetes, depression, congestive heart failure) Chronic care services Written guidelines (in English and other languages) Use of nurse care managers Use of non-physician staff educators Group visits
Disease management	Patient participation in disease management programs Perceptions of disease management program effectiveness
Care Coordination	Knowledge of patient visits to other physicians Frequency of communication between physicians surrounding referrals and consultations. How often patients are self-referred
Inability to obtain needed services for patients	Inability to obtain: Referrals Hospital admissions Outpatient mental health services Interpreter services
	Percentage of patients with prescription coverage governed by a formulary
Impact of patient cost sharing on clinical decisions	Impact of insured patients' out-of-pocket costs on: Prescription of generic versus brand name drug Diagnostic tests Selection of out-patient versus in-patient care
Limits to providing high quality care	Factors that pose a major/minor/no problem: Inadequate time with patients Patients' inability to pay Health insurance rejections Lack of specialists Lack of timely reports from other physicians/facilities Language/cultural barriers to communication Patient non-compliance Medical errors in hospitals
Practice Acceptance of New Patients	
Acceptance of new patients	Degree of practice acceptance: New Medicare patients New Medicaid patients New privately-insured patients Reasons practice no accepting all or most: New Medicare patients New Medicaid patients
Sources of Practice Revenue	
Public programs	Percentage of practice revenue from Medicare Percentage of practice revenue from Medicaid
Managed care	Percentage of practice revenue that is capitated/prepaid Number of managed care contracts
Medical Malpractice	
Malpractice concerns	Concerns about malpractice litigation risk

	Changes in treatment behavior due to malpractice threat Perception that reliance on clinical judgment versus technology in making diagnoses is becoming riskier
Medical Equipment and Hospital Ownership	
Medical equipment ownership/leasing Specialty hospital ownership	Practice ownership or leasing of medical equipment. Location of equipment Personal ownership or leasing of medical equipment Practice ownership stake of a hospital Personal ownership stake in hospital
Compensation	
Physician compensation	Method of compensation (e.g. salaried, performance-adjusted payment, etc.) Bonus eligibility Factors used by practice to determine compensation Importance of factors in determining compensation
Gifts and payments from drug, device, or other medically-related companies	Receipt of gifts or indirect payment Value of goods and services received
Income	Net income from practice of medicine in 2006 Percentage of net income based on productivity factors
Personal Background	
Race/ethnicity	Hispanic origin Race
Location	Location of primary practice

2.3. SURVEY ADMINISTRATION AND PROCESSING

The survey was administered completely by mail. As described earlier, all physicians were selected from a list frame obtained from the AMA. The survey was fielded between February and October 2008.

The total number of completed interviews was 4,720 with a weighted response rate among eligibles of 61.9 percent. Physicians were sent advance letters from the Robert Wood Johnson Foundation and were offered either a $50 or $75 honorarium for participating in the survey.[6] More detailed information about survey methods is available in the HSC 2008 Health Tracking Physician Survey Methodology Report (Technical Publication No. 77) available at http://hschange.org/CONTENT/1085/.

[6] The 2008 Physician Survey included an embedded experiment to test the impact of differing levels of monetary incentive and follow-up efforts on response rates and survey costs. Results from the experimental sample were used to implement the optimal incentive and follow-up protocol for the remainder of the survey sample. This was determined to be $75 accompanied by follow-up phone calls. More information about the experiment and results can be found in the 2008 Physician Survey Methodology Report (HSC Technical Publication No. 77).

CHAPTER 3
USING THE PHYSICIAN SURVEY RESTRICTED USE FILE

3.1 WEIGHTS

Because of changes in the sample design (i.e. dropping the site-based framework) from the previous CTS series, the 2008 HSC Health Tracking Physician Survey accommodates national estimates only. This simplifies sample and weight selections as compared to the CTS surveys. There is only one weight variable, WEIGHT. This weight should be used in all analyses, even those limited to physician subgroups or geographic-based subgroups. The weight adjusts for probability of selection and differential survey nonresponse.

3.2 DERIVING APPROPRIATE VARIANCE ESTIMATES

Standard statistical software routines assume that the sample of data being analyzed was collected using simple random sampling (SRS). However, earlier CTS surveys used complex sample designs, involving stratification, clustering, and oversampling that resulted in samples that were less "efficient" than those of equal size collected using SRS. Use of standard statistical routines not designed for complex samples would result in variance and standard errors estimates that were substantially too small.

Departures from a simple random sample design result in a "design effect" (*Deff*), which is defined as the ratio of the sampling variance (*Var*) given the actual survey design to the sampling variance of a hypothetical simple random sample (*SRS*) with the same number of observations. Thus:

$$Deff = \frac{Var_{actual\ design\ with\ n\ cases}}{Var_{SRS\ with\ n\ cases}}$$

A design effect equal to one indicates that the design did not increase or decrease the sampling variance relative to a simple random sample. A design effect greater than one indicates the design increased the sampling variance; that is, it caused the estimate to be less precise. A design effect of less than one means that the design decreased the sampling variance; that is, it made the estimate more precise. The standard error of an estimate can be expressed as the standard error from a simple random sample with the same number of observations, multiplied by the square root of the design effect.

The 2008 Health Tracking Physician Survey sample design is very close to a SRS. There was no oversampling of physicians and the use of 20 strata based on geography and specialty can make estimates more precise than SRS. However, variance in weights, primarily due to differential survey non-response, can result in *Deffs* greater than one.

We calculated *Deffs* for 88 means and proportions using both the total sample and specialty subgroups. In general, estimated *Deffs* were close to one, but ranged from .88 to 1.07. The mean and median were both equal to 1.02. Because other variables or subgroups might produce

different results, we recommend use of specialized software programs such as SUDAAN when using the 2008 Physician Survey, or complex survey routines that are available in more commonly used software packages such as SAS or Stata. Appendix C provides examples of how to set up such programs for the 2008 physician survey. In lieu of using software designed to accommodate complex surveys, users are recommended to increase their variance estimates by 3% when calculating significance levels. Three percent instead of 2% was chosen in order to be conservative. A three percent increase in variance is equivalent to a 1.5% increase in standard errors.

3.2.1 Design Parameters

Unlike the CTS surveys, for which only SUDAAN had the capability to fully accommodate the sample design, the 2008 Health Tracking Physician Survey's design can be accommodated in complex survey routines found in other software packages such as Stata and SAS.[7] The key information required is that the sample is selected with replacement and that it is stratified. Typically, to obtain unbiased variance estimates using complex survey routines, you will need to use the WEIGHT variable along with the variable identifying sample strata (STRATA). Appendix C provides sample setups using SUDAAN, STATA, and SAS.

[7] Schaefer, Elizabeth, et al., *Comparison of Selected Statistical Software Packages for Variance Estimation in the CTS Surveys,* Technical Publication No. 40, Center for Studying Health System Change, Washington, D.C. (May 2003).

CHAPTER 4
VARIABLE CONSTRUCTION AND EDITING

The 2008 HSC Health Tracking Physician Survey Restricted Use File contains three types of variables: unedited variables, edited variables, and constructed variables created from edited or unedited variables.[8]

This chapter provides a general description of the types of constructed and edited variables in the file, as well as additional details on selected variables. The information in this chapter supplements the information provided in the "Description" field of the file's codebook. Users are encouraged to review this information along with the questionnaire provided in Appendix A for a better understanding of the questionnaire structure, skip patterns, and other characteristics of the variables reported on the file.

4.1. EDITED VARIABLES

The 2008 HSC Health Tracking Physician Survey data were collected via mail-based questionnaire. This section describes the editing that followed the data collection, including logical editing, imputation of missing values, and editing for confidentiality. Verbatim text responses were also reviewed and coded.

4.1.1. Logical Editing

Logical editing was performed to resolve inconsistencies among related variables and to resolve skip pattern inconsistencies. For example, question 11 asks physicians to estimate the number of hours spent in various medically-related activities during their last complete week of work. This includes hours in direct patient care (HRSPAT) and hours in administrative tasks and other professional activities (HRSADM). The respondent is then instructed to record the sum of these two values as the total hours in medically-related activities (HRSMED). Whether because the directions were overlooked or the question misinterpreted, there were cases where HRSMED was not equal to the sum of HRSPAT and HRSADM. Depending upon the degree and direction of the inconsistency, HRSMED was changed to reflect the sum of the first two, or the sum of all three variables (in cases where the respondent appeared to treat the three categories as being mutually exclusive).

Logical editing also included review and resolution of inconsistencies after data imputation was performed.

[8] In general, unedited variables are those that contain the original response to a single questionnaire item.

4.1.2. Imputation of Missing Values

Missing values for selected variables were imputed using weighted sequential hot-deck imputation.[9] Variables were selected for imputation according to degree of nonresponse and analytic importance. Table 5.1 lists the variables selected for imputation and their nonresponse rates.

An imputation flag is included for variables with imputed values. A value of "1 Hotdeck imputation" for the imputation flag indicates that missing values of the corresponding variable were imputed.

TABLE 4.1.

IMPUTED VARIABLES ON THE 2008 HSC HEALTH TRACKING PHYSICIAN SURVEY RESTRICTED USE FILE

Description	**Variable Name**	**Item Nonresponse Rate**
Practice Characteristics		
Main practice type	PTYPE	< 1% (.1%)
Main practice setting	SETTING	< 1% (.4%)
Ownership status	OWNPR	< 1% (.6%)
Ownership interest, other physician	PHYSOWN	6.4%
Ownership interest, another practice	PRACOWN	6.4%
Ownership interest, hospital	HOSPOWN	6.4%
Ownership interest, insurance company	INSROWN	6.4%
Ownership interest, medical school	MSCHOWN	6.4%
Ownership interest, other	OTHROWN	< 1% (.8%)
Ownership interest, government entity	GOVENTY	6.4%
Ownership interest, non-profit organization	NPRFORG	6.4%
Ownership interest, for profit organization	PRFTORG	6.4%
Ownership interest, non-physician practice partners	NPHYPRC	6.4%
Number of physicians, fewer than 100?	NPHYCAT	1.6%
Number of physicians	NPHYS	2.8%

[9] In sequential hot-deck imputation, persons with missing values, or "recipients," are linked to persons with available values, or "donors," to fill in the missing data. The donors and recipients are first classified into strata and then sorted within each strata using classification/sort variables such as gender, PCP status, and year when physician began practicing medicine. (The number of strata is limited by a minimum donor-to-recipient ratio that must be satisfied within each stratum). Donors are then assigned to recipients with similar characteristics within their stratum. In weighted hot-decking, donor and recipient weights are used to help determine the assignment of donors to recipients so that means and proportions calculated using the imputed data will equal means and proportions obtained using only donor data. In general, weighted hot-decking was performed for data with more than 5 percent missing values.

Hours Worked and Patient Visits		
Weeks worked	WKSWRK	< 1% (.8%)
Hours worked in patient care	HRSPAT	< 1 % (.8%)
Hours worked in administrative/professional tasks	HRSADM	4.6%
Hours worked in all medical activities	HRSMED	4.8%
Office visits	OFFCOPV	1%
Hospital visits	HOSPV	< 1% (.9%)
Nursing home visits	NURSHMV	< 1% (.9%)
Hours worked in charity care	HRFREE	1.5%
Patient Characteristics		
Percent of patients who are African American or black	BLCKPT	< 1% (.8%)
Percent of patients who are Hispanic or Latino	HISPPT	< 1% (.9%)
Percent of patients who are Asian or Pacific Islander	ASIAPT	< 1% (.8%)
Percent of patients who are Native American or Alaska Native	NATVPT	< 1% (.8%)
Percent of patient who have a chronic medical condition	CHRNPT	3.2%
Quality and Coordination of Patient Care		
Percent of patient with prescription drug coverage involving a formulary	FORMLRY	3.5%
Practice Acceptance of New Patients		
Accepting new Medicare patients	NWMCARE	4.2%
Accepting new Medicaid patients	NWMCAID	3.2%
Accepting new privately-insured patients	NWPRIV	2%
Sources of Practice Revenue		
Percent revenue from Medicare	PMCARE	5.6%
Percent revenue from Medicaid	PMCAID	4.7%
Percent capitated revenue	PCAPREV	9%
Number of managed care contracts	NMCCON	3.9%
Compensation		
Net income	INCCAT	4.4%

4.1.3. Editing for Confidentiality

Data in the restricted Use File have not been manipulated or edited for confidentiality.

4.1.4. Editing Verbatim Responses

For several questionnaire items, respondents were allowed to provide "other" verbatim responses when none of the existing response categories seemed to apply. Although these verbatim responses are excluded from the Restricted Use File, many of them were reviewed and coded into an appropriate existing or new categorical value.

4.2. CONSTRUCTED VARIABLES

Constructed variables include the following:

- Weights and other sampling variables
- Other variables constructed for analytical value. These are variables that combine one or more original question item for analytic convenience.

Constructed variables are indicated in the file's codebook by a value of "N/A" (Not Applicable) in the "Question" field. Information on how they were constructed appears in the "Description" field. Table 4.2 contains additional background on some of the more complex constructions.

4.3. IDENTIFICATION, GEOGRAPHIC, AND FRAME VARIABLES

Not all variables on the Restricted Use File were obtained directly from survey respondents via the questionnaire. Additional variables include the physician identifier and other administrative variables relating to demographic information from the sample frame.

- The physician identifier variable on the Restricted Use File is called PHYSIDX.
- The following variables contain demographic information from the sample frame from the American Medical Association (AMA): MDDO (MD or osteopath), IMGSTAT (foreign medical school graduate), GRAD_YR (year of graduation from medical school), GENDER (gender), and BIRTH (year of birth).

The Restricted Use File includes the following geographic identifiers:

- STATE is the state code for the physician's practice location.
- FIPSCODE is the state and county code for the physician's practice location.
- CENREG is the Census region for the physician's practice location.
- CENDIV is the Census division for the physician's practice location.
- UICS is the type of metropolitan in which the physician practices (large metro, small metro, various types of non-metro areas). UICS is derived from the U.S. Department of Agriculture's 2003 "urban influence codes." The codes are based on population and commuting data from the 2000 Census.

4.4. ADDITIONAL DETAILS ON SELECTED SURVEY VARIABLES

Table 4.2, organized by questionnaire section, provides "helpful hints" about variables (singly or in sets), discusses a variable's relationship with other variables, and suggests when to use a specific variable. This information supplements the details contained in the file's codebook.

TABLE 4.2.

ADDITIONAL INFORMATION ON SURVEY QUESTIONS
BY QUESTIONNAIRE SECTION

Variable	Additional Information
Practice Characteristics	
YRBGN	YRBGN comes from question 2, which asks for the year that the physician began medical practice. For physicians who did not respond to this question or for whom his/her medical school graduation year occurred after the reported value for YRBGN, YRBGN was reset to graduation year + 3 for primary care physicians and graduation year + 5 for specialists. If graduation year was unknown, then YRBGN was set to be BIRTH + 30 for primary care physicians and BIRTH + 32 for specialists.
PCP	PCP is a constructed flag variable that indicates whether the physician is a primary care physician (PCP=1) or a specialist (PCP=0). The variable is constructed based on the response to question 3 and may not coincide with the sampling stratum, which is based on the specialty listed in the sample frame. PCP=1 if the physician's specialty (PRIMSPC) is one of the following: Family Practice (4) General Practice (5) Pediatrics (6) Internal Medicine (9) Adolescent Medicine (21) Geriatric Medicine (30) Internal medicine/urgent care (37) Osteopathic manipulation (45) Pediatric Internal Medicine (67)
SPEC	SPEC is a seven-level constructed variables, respectively, based on responses to question 3 (physician's primary specialty). The grouping of specialties is as follows: 1: General Internal Medicine Internal Medicine (9) Geriatric Medicine (30) Internal medicine/urgent care (37) Pediatric internal medicine (67) 2: Family/General Practice Family Practice (4) General Practice (5) Osteopathic Manipulation (45) 3: Pediatrics Pediatrics (6) Adolescent Medicine (21) Pediatric Internal medicine (67) 4: Medical Specialties

	Cardiovascular (1) Phlebology (47)Dermatology (2) Physical medicine and rehabilitation (48) Emergency medicine (3) Preventive medicine (50) Gastroenterology (7) Pulmonology critical care medicine (51) Neurology (10) Radiation oncology (52) Oncology (12) Rheumatology (54) Pulmonology (17) Sleep medicine (55) Allergy (22) Sports Medicine (56) Allergy & immunology (23) Wound Care (60) Endocrinology(27) Pediatric cardiology (61) Genetic medicine (29) Pediatric emergency medicine (62) Hematology & oncology (33) Pediatric endocrinology (63) Hospitalist (34) Pediatric gastroenterology (64) Infectious disease (35) Pediatric hematology/oncology (65) Internal medicine Specialist (36) Pediatric infectious disease (66) Neonatal/perinatal medicine (38) Pediatric medical specialist (68) Neonatology (39) Pediatric nephrology (69) Nephrology (40) Pediatric neurology (70) Medical toxicology (42) Pediatric orthopedic 72) Occupational medicine (43) Pediatric pulmonology (74) Palliative medicine (46) Pediatric rheumatology (75) <u>5: Surgical Specialties</u> General surgery (8) Hand surgery (32) Ophthalmology (13) Neurosurgery (41) Orthopedic surgery (14) Oral & maxillofacial surgery (44) Otolaryngology (15) Plastic surgery (49) Urology (18) Transplant surgery (58) Cardiothoracic surgery (24) Trauma surgery (59) Colon & rectal surgery (25) Pediatric neurosurgery (71) Cosmetic surgery (26) Pediatric surgery (76) ENT (28) Vascular surgery (77) <u>6: Psychiatry</u> <u>7: Obstetrics/Gynecology</u> Psychiatry (16) OBGyn (11) Addiction medicine (20) Gynecology (31) Pediatric psychiatry (73) Note: Pediatric Internal Medicine appears in both 1:General Internal Medicine and 3: Pediatrics. If the AMA specialty code (SPCLTY) was IM (Internal Medicine), then SPEC was coded as 1. If SPCLTY was MPD (Internal medicine/pediatrics) or PD (Pediatrics) then SPEC was coded as 3.

Hours Worked and Patient Visits	
HRSMED	HRSMED is an edited/imputed variable that defines the number of hours (during the past week) spent in all medically-related activities. It is based on responses to questions 11a (HRSPAT), 11b (HRSADM), and 11c (HRSMED). It should be used with caution as respondents did not always interpret the HRS questions consistently. The editing rules were as follows: If the reported number of hours spent in all medically-related activities (HRSMED) equals the sum of hours in administrative task and hours in direct patient care, then the edited HRSMED=HRSMED Otherwise, if HRSMED is not equal to the sum of the other two, and if both HRSPAT and HRSADM are greater than or equal to 0, then perform the following test: If the sum of HRSPAT and HRSADM exceeds the value of HRSMED by more than 10 hours, assign the edited HRSMED to be the sum of all three (HRSPAT+HRSADM+HRSMED). In this case it is assumed that the respondent interpreted HRSMED to be mutually exclusive with the other two, i.e., all other non-patient and non-administrative tasks. If the sum of HRSPAT and HRSADM exceeds the value of HRSMED by less than 10 hours, the edited HRSMED takes the value HRSPAT + HRSADM. Here, it is presumed that the respondent made an error in calculating the sum. Finally, in all other cases, edited HRSMED=HRSMED. There are 209 cases where HRSMED was missing in the raw data, which were either imputed or edited. Additionally, 716 cases were edited after imputation. Because of the high degree of editing, we recommend caution in utilizing this variable.

CHAPTER 5
FILE DETAILS

This chapter provides an overview of the file content and technical specifications for programmers. It also describes variable naming and coding conventions that were used on the file and that appear in the file's codebook.

5.1. FILE CONTENT AND TECHNICAL SPECIFICATIONS

The 2008 HSC Health Tracking Physician Survey Restricted Use File contains 4,720 person records. The unique record identifier and sort key is the variable PHYSIDX. Variables are positioned on the file in the following order:

- A unique physician identifier
- Variables obtained from the sample frame (AMA Masterfile)
- Variables from each section of the Physician Survey questionnaire. Variables are ordered within each section by related questionnaire item number
- Weight variable

The Restricted Use File is provided as an ASCII-formatted file with the following technical specifications:

File name:	HTS08PR1.TXT
Number of observations:	4,720
Number of variables:	294
Logical record length:	634 bytes

The file contains a two-byte carriage return/line feed at the end of each record. When you are converting to a PC-SAS file, use the LRECL option to specify the record length to avoid the default PC-SAS record length. If the RECFM=V option is used, the LRECL option must be specified as the logical record length (634). If RECFM=F is used, the LRECL value must be specified as the logical record length plus two (636). Note that if the RECFM option is omitted, then the default option of RECFM=V will be used, and LRECL must be specified as the logical record length (634). When you are converting to an SPSS file, use the "FIXED" option of the DATA LIST command, and read values according to column location specified by the column position after each variable name.

The record layout for this file is provided in the file's codebook.

5.2. VARIABLE NAMING CONVENTIONS

In general, a variable name reflects the content of the variable. For the following groups of variables, a naming convention was used to provide additional information on variable content:

- ***Imputation Flags.*** These flags indicate whether a record has an imputed value for the corresponding variable. The flag variable has the same name as the variable it describes, and includes an underscore prefix, "_". When reading the data into SPSS, imputation flags contain the prefix "I" because SPSS does not recognize the "_" character. For example, _PMCARE (or IPMCARE) is the imputation flag corresponding to the variable PMCARE. Refer to Chapter 5 for more information on imputation and other types of editing procedures used on the file.

- ***Masked Variables.*** With some exceptions, names of variables that were masked for confidentiality reasons end with the value "X." The variable descriptions contained in the file's codebook indicate whether the variable was masked and provide brief details as to the type of masking performed. Variables ending in "X" that are not masked for confidentiality purposes include the sixteen variables regarding personal use of information technology functions (IT_TRTX, ITDCSNX, etc.), receipt of free drug samples from drug, device, or other medically-related companies (FREERX), and receipt of gifts from such companies as a result of prescribing practices (GIFTRX).

5.3. VARIABLE CODING CONVENTIONS

The following coding conventions are used on the file:

-1 Inapplicable	Question was not asked because of skip pattern (or physician's response to the question indicated that it was not applicable).
-8 Don't Know	Question was asked and respondent did not know the answer.
-9 Not Ascertained	Value was not assigned for any other reason.

REFERENCES

Schaefer, Elizabeth, et al., *Comparison of Selected Statistical Software Packages for Variance Estimation in the CTS Surveys,* Technical Publication No. 40, Center for Studying Health System Change, Washington, D.C. (May 2003).

HSC 2008 Health Tracking Physician Survey Methodology Report. Technical Publication No. 77, Center for Studying Health System Change, Washington, D.C.

2008 HSC Health Tracking Physician Survey Public Use File: User's Guide. Technical Publication No. 78, Center for Studying Health System Change, Washington, D.C. (January 2010).

HSC Technical Publications are available on the HSC Web site.
www.hschange.org

APPENDIX A

2008 HSC Health Tracking Physician Survey Instrument

Note: The following document refers to the survey as the Community Tracking Study Round Five Physician Survey rather than the HSC Health Tracking Physician Survey. Decisions regarding the name change were made after these materials were published.

Label FPO-DOES NOT PRINT

COMMUNITY TRACKING STUDY

SURVEY OF PHYSICIANS

CONDUCTED BY

CENTER *for* STUDYING HEALTH SYSTEM CHANGE

FUNDED BY

Robert Wood Johnson Foundation

About this survey

The Community Tracking Study (CTS) Survey of Physicians is sponsored by The Robert Wood Johnson Foundation (RWJF). The Center for Studying Health System Change (HSC), an independent, nonpartisan research organization, is conducting the study on behalf of RWJF.

This survey asks about your practice and your views about the challenges facing physicians today. The questionnaire takes about 20 to 30 minutes to complete. Information you provide will contribute to analyses on topics of importance to physicians and policy makers. The enclosed fact sheet includes a sample of articles published from previous rounds of this survey, on topics such as whether physicians are accepting Medicare patients, whether pay-for-performance programs could work, and the consequences of physicians' career dissatisfaction.

Your participation is voluntary and greatly appreciated. However, not responding could seriously affect the accuracy of final results, and your point of view may not be adequately represented in the survey findings.

Your identifying information will remain confidential and will not be redistributed. Your answers will be aggregated with those of thousands of other physicians and only used for statistical analyses. Access to all data is tightly restricted. Survey data are made available to researchers only under strict data confidentiality procedures consistent with Federal guidelines. Researchers may request data through the Inter-university Consortium for Political and Social Research, which maintains an archive of survey data for research and instruction. Some HSC analyses may involve linking your survey data to your practice's claims data (such as Medicare claims or other insurer claims) obtained in accordance with the Health Insurance Portability and Accountability Act of 1996 and other strict Federal privacy regulations. In accordance with procedures established during prior rounds of the CTS Physician's Survey, you, your practice, and your patients will NEVER be identifiable from publicly released reports or analyses.

If you have any questions, please call Ms. Jenné Johns at The Robert Wood Johnson Foundation at 877-843-7953 ext. 5788.

Please return your completed questionnaire in the enclosed postage-paid envelope. If another envelope is used, please send to:

Center for Studying Health System Change
c/o WESTAT
1650 Research Boulevard
Rockville, MD 20850-3195

INSTRUCTIONS

Your answers are important to us. Following the instructions below will allow your answers to be correctly recorded

- Please put an "X" to mark your answer like this ☒.
  Fill in **only one answer** unless the instructions are to **"Mark all that apply."**
- Use a blue or black ball-point pen. Please do not use a pencil, your answers will not be recorded.
- If you make a mistake and fill in the wrong box, please draw a line through the incorrect choice, like this ☒. Then, fill in the correct box.
- If you write an incorrect answer, please draw a line through the incorrect answer and write the correct answer next to it.
- When filling in numbers, print each number clearly. Please avoid touching the sides of the boxes; fill in the boxes like this: | 3 | 5 | 9 | %

SURVEY ELIGIBILITY

A. Are you currently a resident or fellow?

☐ Yes → Do not continue. Please return the questionnaire in the enclosed envelope and we will remove your name from our list.

☐ No → **GO TO B**

B. Are you currently a full-time employee of a Federal agency, such as the U.S. Public Health Service, Veterans Administration, or a military service?

☐ Yes → Do not continue. Please return the questionnaire in the enclosed envelope and we will remove your name from our list.

☐ No → **GO TO C**

C. Do you currently provide direct patient care for at least 20 hours a week? Include all practices if you work in more than one practice.

Direct patient care includes seeing patients, performing surgery, and time spent on patient record-keeping, patient-related office work and travel time connected with seeing patients. It does not include time spent in training, teaching, or research, any hours on-call when not actually working, and travel between home and work at the beginning and end of the work day.

☐ Yes → **GO TO Q1**

☐ No → Do not continue. Please return the questionnaire in the enclosed envelope and we will remove your name from our list.

SATISFACTION WITH MEDICINE

1. **Thinking very generally about your satisfaction with your overall career in medicine, would you say that you are currently . . .**

- ☐ Very satisfied
- ☐ Somewhat satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Very dissatisfied

PRACTICE CHARACTERISTICS

2. **In what year did you begin medical practice after completing your undergraduate and graduate medical training?**

A residency or fellowship is considered graduate medical training.

				Year

3. **We define your primary specialty as the one in which you spend the most hours.**

What is your primary specialty?

MARK (X) ONE ANSWER

- ☐ Cardiovascular Diseases
- ☐ Dermatology
- ☐ Emergency Medicine
- ☐ Family Practice
- ☐ General Practice
- ☐ General Pediatrics
- ☐ Gastroenterology
- ☐ General Surgery
- ☐ General Internal Medicine
- ☐ Neurology
- ☐ Obstetrics and gynecology
- ☐ Oncology
- ☐ Ophthalmology
- ☐ Orthopedic Surgery
- ☐ Otolaryngology
- ☐ Psychiatry
- ☐ Pulmonology
- ☐ Urology
- ☐ Other Specialty

(Please describe your specialty below)

4. **Are you board-certified in your primary specialty?**

- ☐ Yes
- ☐ No

5. **Please check the box that best describes where you work. If you work in more than one practice, check the one where you work the most hours.**

MARK (X) ONE ANSWER

- ☐ A solo practice → **GO TO Q6**
- ☐ A two physician practice → **GO TO Q6**
- ☐ A group practice with three or more physicians → **GO TO Q6**
- ☐ A group or staff model HMO → **GO TO Q6**
- ☐ A community health center → **GO TO Q6**
- ☐ A *hospital* run by state, county, or city government → **GO TO Q5a**
- ☐ A *hospital* run by a private for-profit or non-profit organization → **GO TO Q5a**
- ☐ A *medical school* or *university* (private or government) → **GO TO Q5a**
- ☐ Some other setting (Please describe)

5a. **If you work in a hospital, medical school, or university, in which of the following settings do you spend most of your time seeing patients?**

- ☐ Office practice owned by the hospital, medical school, or university
- ☐ On hospital staff
- ☐ In the emergency room
- ☐ In a hospital or medical school clinic
- ☐ Somewhere else (Describe)

6. **This question is about your main practice, that is, the business or organization that compensates you. In your main practice, are you a full owner, a part owner (e.g., with one or more other physicians), an employee with no ownership, or an independent contractor?**

- ☐ Full owner → **GO TO Q7**
- ☐ Part owner → **GO TO Q6A**
- ☐ Employee (Not an owner) → **GO TO Q6a**
- ☐ Independent contractor → **GO TO Q8**

6a. **If you are a part owner or employee, do any of the following have an ownership interest in your main practice? Check all that apply:**

- ☐ Other physician(s) in the practice
- ☐ Another physician practice
- ☐ A hospital or hospital group
- ☐ Insurance company, health plan or HMO
- ☐ Medical school or university
- ☐ Other (specify) _____

7. **Including yourself, how many physicians are in your main practice?**

PLEASE INCLUDE ALL LOCATIONS OF THE PRACTICE.

- ☐ 100 or fewer physicians → How many? ☐☐☐
- ☐ More than 100 physicians

8. **On balance, do the overall personal financial incentives in your practice favor reducing services to individual patients, favor expanding services to individual patients, or favor neither?**

MARK (X) ONE ANSWER

- ☐ Reducing services to individual patients
- ☐ Expanding services to individual patients
- ☐ Favor neither

9. **Thinking about your practice specifically, how would you describe the competitive situation your practice faces?**

By competition among physicians, we mean the pressure to undertake activities to attract and retain patients.

MARK (X) ONE ANSWER

- ☐ Very competitive
- ☐ Somewhat competitive
- ☐ Not at all competitive

HOURS WORKED AND PATIENT VISITS

10. **Approximately how many weeks did you practice medicine in 2006?**

Exclude time missed due to vacation, illness, family leave, military service, professional conferences, and other absences.

☐☐ Weeks practicing medicine in 2006

11. **During your LAST COMPLETE WEEK OF WORK, approximately how many hours did you spend in all medically-related activities?**

Please record all time spent in direct patient care in (a) and in other medically-related activities (e.g., administrative tasks and professional activities) in (b). Record the sum of (a) and (b) in total hours (c).

Direct patient care includes seeing patients, performing surgery, and time spent on patient record-keeping, patient-related office work and travel time.

Your best estimate is fine.

a. ☐☐ Hours in direct patient care

b. ☐☐ Hours in administrative tasks and professional activities

c. ☐☐ Total hours in medically-related activities

12. **During your LAST COMPLETE WEEK OF WORK, how many patient visits did you personally have in each of the following settings? Please count as one visit each time you saw a patient.**

Your best estimate is fine.

☐☐ Visits in the office and out-patient clinics

☐☐ Visits on hospital rounds

☐☐ Visits in nursing homes and patients' homes

13. **During a TYPICAL WORK DAY, how much time do you spend on each of the following activities?**

MARK (X) ONE ANSWER FOR EACH ITEM

	None	Less than a half hour	1/2 to 1 hour	1–2 hours	More than 2 hours
a. E-mail communications with patients and their families	☐	☐	☐	☐	☐
b. Telephone conversations with patients and their families	☐	☐	☐	☐	☐
c. E-mail communications with physicians and other clinicians	☐	☐	☐	☐	☐
d. Telephone conversations with physicians and other clinicians	☐	☐	☐	☐	☐

14. **Is your practice reimbursed by any health insurance plans for these activities?**

MARK (X) ONE ANSWER FOR EACH ITEM

	Reimbursed	Not Reimbursed	Unsure if Reimbursed
a. E-mail communications with patients and their families	☐	☐	☐
b. Telephone conversations with patients and their families	☐	☐	☐
c. E-mail communications with physicians and other clinicians	☐	☐	☐
d. Telephone conversations with physicians and other clinicians	☐	☐	☐

15. **During the LAST MONTH, how many hours, if any, did you spend providing charity care? By charity care, we mean that you charged either no fee or a reduced fee because of the financial need of the patient.**

Charity care does not include time spent providing services for which you expected, but did not receive payment, bad debts, time spent providing services under a discounted fee for service contract, or seeing Medicare or Medicaid patients.

Your best estimate is fine.

☐☐ Hours spent providing charity care

☐ None → **IF NONE, GO TO Q16**

15a. **Where do you typically provide charity care?**

MARK (X) ONE ANSWER

☐ In your main practice

☐ On-call or at a hospital emergency department

☐ In another practice or clinic

☐ Somewhere else

PATIENT CHARACTERISTICS

16. **About what percentage of your patients belong to the following groups?**

Your best estimate is fine. If you treat few or no patients in a group, check the box instead of recording a percentage.

	Record Percentage		
a. African-American or Black	☐☐☐ %	☐ Few or None	
b. Hispanic or Latino	☐☐☐ %	☐ Few or None	
c. Asian or Pacific Islander	☐☐☐ %	☐ Few or None	
d. Native American or Alaska Native	☐☐☐ %	☐ Few or None	
e. Has a chronic medical condition	☐☐☐ %	☐ Few or None	

17. **About what percentage of your patients do you have a hard time speaking with or understanding because you speak different languages?**

Your best estimate is fine.

Record Percentage ☐☐☐ %

18. **Does your practice provide interpreter services for any non-English languages?**

MARK (X) ONE ANSWER

☐ Yes → **ANSWER Q18a**

☐ No → **SKIP TO Q19**

☐ Do not have non-English speaking patients → **SKIP TO Q19**

18a. **For which languages does your practice provide interpreter services?**

MARK (X) ALL THAT APPLY

☐ Spanish

☐ Portuguese

☐ Chinese

☐ Other _____

☐ Other _____

19. **Have you ever attended any professional meetings, workshops, or Continuing Medical Education activities that discuss improving the health of minority patients (such as cultural competence training)?**

☐ Yes ☐ No

INFORMATION TECHNOLOGY IN MEDICINE

20. **The next question is about the use of computers and other forms of information technology, such as hand-held computers, in diagnosing or treating your patients. For each of the following activities, please check whether or not computers or other forms of information technology are used in YOUR PRACTICE.**

For each activity where information technology is used, indicate whether YOU PERSONALLY use the technology routinely, occasionally, or not at all.

	Is Information Technology Available in YOUR PRACTICE for Activity?		IF YES, How often do YOU PERSONALLY use the technology?		
ACTIVITY	**NO**	**YES**	**Routinely**	**Occasionally**	**Not at all**
CLINICAL PRACTICE:					
a. Obtain information about treatment alternatives or recommended guidelines	☐	☐ →	☐	☐	☐
b. Obtain up-to-date decision support for diagnostic and treatment recommendations based on data about your patients and practice guidelines	☐	☐ →	☐	☐	☐
c. Generate reminders *for clinicians* about preventive services	☐	☐ →	☐	☐	☐
d. Generate reminders *for clinicians* about other needed patient follow-up	☐	☐ →	☐	☐	☐
e. Generate reminders *to patients* about preventive services	☐	☐ →	☐	☐	☐
f. Communicate about clinical issues with patients by e-mail	☐	☐ →	☐	☐	☐
PATIENT INFORMATION:					
a. Access patient notes, medication lists, or problem lists	☐	☐ →	☐	☐	☐
b. Order laboratory, radiology, or other diagnostic tests	☐	☐ →	☐	☐	☐
c. View results of laboratory, radiology, or other diagnostic tests	☐	☐ →	☐	☐	☐
d. Exchange clinical data and images *with other physicians*	☐	☐ →	☐	☐	☐
e. Exchange clinical data and images *with hospitals and laboratories*	☐	☐ →	☐	☐	☐
f. Access information on patients' preferred language	☐	☐ →	☐	☐	☐
PRESCRIPTION DRUGS:					
a. Obtain information on potential patient drug interactions with other drugs, allergies, and/or patient conditions	☐	☐ →	☐	☐	☐
b. Obtain information on formularies	☐	☐ →	☐	☐	☐
c. Write prescriptions	☐	☐ →	☐	☐	☐
d. Transmit prescriptions to pharmacy	☐	☐ →	☐	☐	☐

21. **An electronic medical record (EMR) is a computer-based patient medical record. Does your main practice use electronic medical records?**

MARK (X) ONE ANSWER

- ☐ Yes, all electronic
- ☐ Yes, part electronic and part paper
- ☐ No, all paper
- ☐ Don't know

22. **Does your main practice receive any financial incentives from health plans and other organizations that are tied to the types of information technology systems (e.g., electronic health records or electronic prescribing systems) it adopts?**

MARK (X) ONE ANSWER

- ☐ Yes
- ☐ No
- ☐ Don't know

HOSPITAL CARE

23. **Medical errors include events such as dispensing incorrect medication doses, surgical mistakes, or errors in interpreting results of diagnostic tests. Does the hospital where most of your patients are treated have a system for reporting medical errors, in which the person reporting the error remains anonymous?**

MARK (X) ONE ANSWER

- ☐ Yes
- ☐ No
- ☐ I do not admit patients
- ☐ Don't know

24. **Hospitalists are physicians whose primary professional focus is the general medical care of hospitalized patients. What percentage of your patients who were hospitalized last year had a hospitalist involved in their inpatient care?**

IF YOU DID NOT ADMIT ANY PATIENTS TO A HOSPITAL IN THE LAST YEAR OR YOU ARE A PRACTICING HOSPITALIST, CHECK THE APPROPRIATE BOX FOR THAT RESPONSE.

Record Percentage ☐☐☐ %

- ☐ I did not admit patients to a hospital in the last year
- ☐ I am a practicing hospitalist

25. **Intensivists are physicians who are board certified to care for critically ill patients in settings such as medical intensive care units. Does the hospital where you admit the greatest number of your patients have intensive care units that are always covered by intensivists?**

IF YOU DID NOT ADMIT ANY PATIENTS TO A HOSPITAL IN THE LAST YEAR OR YOU ARE A PRACTICING INTENSIVIST, CHECK THE APPROPRIATE BOX FOR THAT RESPONSE.

- ☐ Yes
- ☐ No
- ☐ I did not admit patients to a hospital in the last year
- ☐ I am a practicing intensivist

QUALITY AND COORDINATION OF PATIENT CARE

26. **How large an effect does your use of *formal, written* practice guidelines, such as those generated by physician organizations, insurance companies, HMOs, or government agencies, have on your practice of medicine?**

If you are unaware of formal, written guidelines that apply to your practice, check the last box.

MARK (X) ONE ANSWER

- ☐ Very large
- ☐ Large
- ☐ Moderate
- ☐ Small
- ☐ Very small
- ☐ No effect
- ☐ Unaware of guidelines that apply

27. **Please indicate your level of agreement or disagreement with the following statements.**

MARK (X) ONE ANSWER FOR EACH ITEM

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly	Neither Agree nor Disagree
a. I have adequate time to spend with my patients during their office visits	☐	☐	☐	☐	☐
b. It is possible to provide high quality care to all of my patients	☐	☐	☐	☐	☐

28. **Please indicate whether or not you receive the following types of reports for your own patients or for the practice as a whole. These reports could be generated by your main practice or by other organizations, such as insurance companies or hospitals.**

MARK (X) ONE ANSWER FOR OWN PATIENTS AND MARK (X) ONE ANSWER FOR THE ENTIRE PRACTICE

	OWN PATIENTS		ENTIRE PRACTICE	
TYPE OF REPORT	**Yes**	**No**	**Yes**	**No**
a. Quality of preventive care delivered to eligible patients	☐	☐	☐	☐
b. Quality of care delivered to patients with specific chronic conditions (such as asthma, diabetes, depression, or congestive heart failure)	☐	☐	☐	☐
c. Demographic information on patients' race, ethnicity, or preferred language	☐	☐	☐	☐
d. Quality of care delivered to patients of different races or ethnic backgrounds	☐	☐	☐	☐
e. Patient lists or registries (e.g., lists of patients with specific clinical conditions, medications, or laboratory results)	☐	☐	☐	☐

29. **Do you *personally* participate in quality reporting programs sponsored by organizations outside of your practice (e.g., Bridges to Excellence, or the Centers for Medicare & Medicaid Services)?**

☐ Yes

☐ No

30. **Do physicians in your main practice *routinely* treat patients with the following chronic conditions?**

MARK (X) ONE ANSWER FOR EACH ITEM

CHRONIC CONDITION	**Yes**	**No**
a. Asthma	☐	☐
b. Diabetes	☐	☐
c. Depression	☐	☐
d. Congestive heart failure	☐	☐

IF YOU ANSWERED "YES" TO ONE OR MORE CHRONIC CONDITIONS (Q30a–d), GO TO Q31

IF YOU ANSWERED "NO" TO ALL FOUR CHRONIC CONDITIONS (Q30a–d), SKIP TO Q32

31. **Does your main practice provide the following services to patients with asthma, diabetes, depression, or congestive heart failure?**

MARK (X) FOR EACH SERVICE PROVIDED FOR PATIENTS WITH THE CONDITIONS ROUTINELY TREATED BY YOUR MAIN PRACTICE

TYPES OF PATIENT SERVICES	Asthma	Diabetes	Depression	Congestive Heart Failure
a. Written materials that explain guidelines for recommended care in English	☐	☐	☐	☐
b. Written materials that explain guidelines for recommended care in languages other than English	☐	☐	☐	☐
c. Nurse care managers to monitor and coordinate the care of patients with that condition	☐	☐	☐	☐
d. Non-physician staff to educate patients in managing that condition	☐	☐	☐	☐
e. Group visits in which patients with that condition meet with staff who provide routine medical care or address educational or personal concerns	☐	☐	☐	☐

32. **Disease management programs are intended to reduce costs and improve quality of life for patients with chronic diseases by integrating delivery of care and involving the patient in self-care. Are any of your patients in disease management programs sponsored by health plans or employers?**

☐ Yes → **GO TO Q32a**

☐ No → **SKIP TO Q33**

32a. **Please indicate your level of agreement or disagreement with the following statements about disease management programs sponsored by *health plans or employers.***

MARK (X) ONE ANSWER FOR EACH ITEM

	Agree Strongly	Agree Somewhat	Neither Agree nor Disagree	Disagree Somewhat	Disagree Strongly
1. Disease management programs improve the overall quality of care for my patients with chronic conditions	☐	☐	☐	☐	☐
2. Disease management programs improve my ability to provide high quality care to my patients with chronic conditions	☐	☐	☐	☐	☐

33. **This question concerns your experiences coordinating patient care with other physicians.**

- If you are a primary care physician (general and family practitioners, and internists and pediatricians who provide general care), answer items (a-d).
- If you are a specialist, answer items (a) and (e-g).
- If you provide both primary care and specialist care, answer all items.
- Check "not applicable" if you rarely or never coordinate patient care.

MARK (X) ONE ANSWER FOR EACH ITEM

	Always or Most of the Time	Sometimes	Seldom or Never	Not Applicable
ALL PHYSICIANS				
a. How often do you know about all the visits that your patients make to other physicians?	☐	☐	☐	☐
PRIMARY CARE PHYSICIANS ONLY				
b. When you refer a patient to a specialist, how often do you send the specialist notification of the patient's history and reason for the consultation?	☐	☐	☐	☐
c. How often do you receive useful information about your referred patients from specialists?	☐	☐	☐	☐
d. After your patient has seen a specialist, how often do you talk with the patient or family members about the results of the visit(s) with the specialist?	☐	☐	☐	☐
SPECIALISTS ONLY				
e. When you see a patient referred to you by a primary care physician (PCP), how often do you receive notification about the patient's medical history and reason for consultation?	☐	☐	☐	☐
f. For the patients that were referred to you by a PCP, how often do you send the PCP notification of the results of your consultation and advice to the patient?	☐	☐	☐	☐
g. How often are new patients you see self-referred?	☐	☐	☐	☐

34. **During the last 12 months, were you *unable* to obtain the following services for your patients when you thought they were medically necessary?**

If the service does not apply to your practice, please check "Not Applicable."

MARK (X) ONE ANSWER FOR EACH ITEM

SERVICE	Yes	No	Not Applicable
a. Referrals to high quality specialists	☐	☐	☐
b. Non-emergency hospital admissions	☐	☐	☐
c. High quality outpatient mental health services	☐	☐	☐
d. Interpreter services for non-English speaking patients when they received care in your practice	☐	☐	☐

35. **What percentage of your patients have prescription coverage that includes the use of a formulary?**

Your best estimate is fine.

Record Percentage ☐☐☐ %

☐ None

36. **Please indicate how often you consider *insured* patients' out-of-pocket costs in making the following decisions.**

MARK (X) ONE ANSWER FOR EACH ITEM

	Always	Usually	Sometimes	Rarely	Never
a. If a generic option is available, how often do you prescribe a generic over a brand name drug?	☐	☐	☐	☐	☐
b. If there is uncertainty about diagnosis, how often do you consider an insured patient's out-of-pocket costs in deciding the types of tests to recommend?	☐	☐	☐	☐	☐
c. If there is a choice between outpatient and inpatient care, how often do you consider an insured patient's out-of-pocket costs?	☐	☐	☐	☐	☐

37. **The table below lists problems that may limit physicians' ability to provide high quality care. For each one, indicate whether you think it is a major problem, minor problem, or not a problem affecting *your* ability to provide high quality care.**

MARK (X) ONE ANSWER FOR EACH ITEM

PROBLEMS THAT MAY LIMIT A PHYSICIAN'S ABILITY TO PROVIDE HIGH QUALITY CARE:	Major Problem	Minor Problem	Not a Problem
a. Inadequate time with patients during office visits	☐	☐	☐
b. Patients' inability to pay for needed care	☐	☐	☐
c. Rejections of care decisions by insurance companies	☐	☐	☐
d. Lack of qualified specialists in your area	☐	☐	☐
e. Not getting timely reports from other physicians and facilities	☐	☐	☐
f. Difficulties communicating with patients due to language or cultural barriers	☐	☐	☐
g. Patient non-compliance with treatment recommendations	☐	☐	☐
h. Medical errors in hospitals	☐	☐	☐
i. Any other problems that you feel limit your ability to provide high quality care (Describe below for up to three problems)			
1.	☐	☐	☐
2.	☐	☐	☐
3.	☐	☐	☐

PRACTICE ACCEPTANCE OF NEW PATIENTS

38. **Is your practice accepting all, most, some, or no new patients who are insured through MEDICARE, including Medicare managed care patients?**

MARK (X) ONE ANSWER

- ☐ All new Medicare and Medicare Managed Care patients → **GO TO Q39**
- ☐ Most new Medicare and Medicare Managed Care patients → **GO TO Q39**
- ☐ Some new Medicare and Medicare Managed Care patients → **ANSWER Q38a**
- ☐ No new Medicare and Medicare Managed Care patients → **ANSWER Q38a**

38a. **If your practice accepts *some or no* new MEDICARE patients, please indicate the importance of each of the following reasons for your practice's decision.**

REASONS WHY PRACTICE ACCEPTS *SOME OR NO* NEW MEDICARE PATIENTS:	Very Important	Moderately Important	Not Very Important	Not at all Important
1. Billing requirements, including paperwork, and filing of claims	☐	☐	☐	☐
2. Concern about a Medicare audit	☐	☐	☐	☐
3. Inadequate reimbursement	☐	☐	☐	☐
4. Practice already has enough patients	☐	☐	☐	☐
5. Medicare patients have high clinical burden	☐	☐	☐	☐

39. **Is your practice accepting all, most, some, or no new patients who are insured through MEDICAID, including Medicaid managed care patients?**

Include patients insured through state *Medicaid* programs that have adopted program names unique to your state.

MARK (X) ONE ANSWER

- ☐ All new Medicaid and Medicaid Managed Care patients → **GO TO Q40**
- ☐ Most new Medicaid and Medicaid Managed Care patients → **GO TO Q40**
- ☐ Some new Medicaid and Medicaid Managed Care patients → **ANSWER Q39a**
- ☐ No new Medicaid and Medicaid Managed Care patients → **ANSWER Q39a**

39a. **If your practice accepts some or no new MEDICAID patients, please indicate the importance of each of the following reasons for your practice's decision.**

REASONS WHY PRACTICE ACCEPTS *SOME OR NO* NEW MEDICAID PATIENTS:	Very Important	Moderately Important	Not Very Important	Not at all Important
1. Billing requirements, including paperwork, and filing of claims	☐	☐	☐	☐
2. Delayed reimbursement	☐	☐	☐	☐
3. Inadequate reimbursement	☐	☐	☐	☐
4. Practice already has enough patients	☐	☐	☐	☐
5. Medicaid patients have high clinical burden	☐	☐	☐	☐

40. **Is your practice accepting all, most, some, or no new patients through PRIVATE OR COMMERCIAL INSURANCE PLANS, including managed care plans and HMOs with which the practice has contracts?**

MARK (X) ONE ANSWER

- ☐ All new privately insured patients
- ☐ Most new privately insured patients
- ☐ Some new privately insured patients
- ☐ No new privately insured patients

SOURCES OF PRACTICE REVENUE

41. **Approximately what percentage of the practice revenue from patient care comes from MEDICARE (including Medicare health plans) and what percentage comes from MEDICAID (including Medicaid managed care) and other public insurance for low income people?**

Your best estimate is fine.

If you work in more than one practice, answer for your main practice. If you are unsure of the percentages, your best estimate is fine.

Record Percentage of practice's patient care revenue from **MEDICARE** ☐☐☐ %

Record Percentage of practice's patient care revenue from **MEDICAID** and other public insurance ☐☐☐ %

42. **Under CAPITATION, a fixed amount is paid per patient per month regardless of the services provided. Thinking about the patient care revenue from all sources received by the practice in which you work, what percentage is paid on a capitated or other prepaid basis?**

Your best estimate is fine.

Record Percentage of patient care revenue that is CAPITATED ☐☐☐ %

43. **With how many health plans does your practice have managed care contracts?**

Managed care contracts are contracts with health plans, such as HMOs, PPOs, IPAs, and Point-Of-Service plans that use financial incentives or specific controls to encourage utilization of specific providers associated with the plan.

Your best estimate is fine.

MARK (X) ONE ANSWER

- ☐ None
- ☐ 1–4
- ☐ 5–9
- ☐ 10–19
- ☐ 20 or more

MEDICAL MALPRACTICE

44. **Considering the full range of patients that you see, indicate your level of agreement with the following statements about medical malpractice.**

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. I am concerned that I will be involved in a malpractice case sometime in the next 10 years.	☐	☐	☐	☐	☐
2. I feel pressured in my day-to-day practice by the threat of malpractice litigation.	☐	☐	☐	☐	☐
3. I order some tests or consultations simply to avoid the appearance of malpractice.	☐	☐	☐	☐	☐
4. Sometimes I ask for consultant opinions primarily to reduce my risk of being sued.	☐	☐	☐	☐	☐
5. Relying on clinical judgment rather than on technology to make a diagnosis is becoming riskier because of the threat of malpractice suits.	☐	☐	☐	☐	☐

MEDICAL EQUIPMENT & HOSPITAL OWNERSHIP

45. **Physicians are relying on more diverse business models now than in the past.**

A. Does your main practice own (fully or in part) or lease the types of medical equipment listed below? **(CHECK NO OR YES FOR EACH TYPE OF EQUIPMENT.)**

B. **FOR EACH TYPE OF MEDICAL EQUIPMENT CHECKED YES:** is the medical equipment located in your main practice, in a separate business, or in both your main practice and a separate business? By separate business, we mean a subsidiary or separate legal entity from your main practice.

	A. OWN OR LEASE?		B. LOCATION OF EQUIPMENT		
MEDICAL EQUIPMENT USED FOR:	**No**	**Yes**	**Main Practice**	**Separate Business**	**Both Practice and Separate Business**
a. Laboratory testing, including routine blood work	☐	☐ →	☐	☐	☐
b. X-rays	☐	☐ →	☐	☐	☐
c. Other diagnostic imaging, such as CT or MRI scans	☐	☐ →	☐	☐	☐
d. Non-invasive testing besides EKGs (e.g., Echocardiograms, treadmill, nuclear testing, sleep testing)	☐	☐ →	☐	☐	☐
e. Invasive procedures, such as endoscopy or cardiac catheterization	☐	☐ →	☐	☐	☐

46. **Excluding any medical equipment owned or leased by your main practice, do you personally own (fully or in part) or lease the following types of medical equipment?**

MARK (X) ONE ANSWER FOR EACH ITEM

	Yes	No	Unsure
MEDICAL EQUIPMENT USED FOR:			
a. Laboratory testing, including routine blood work	☐	☐	☐
b. X-rays	☐	☐	☐
c. Other diagnostic imaging, such as CT or MRI scans	☐	☐	☐
d. Non-invasive testing besides EKGs (e.g., Echocardiograms, treadmill, nuclear testing, sleep testing)	☐	☐	☐
e. Invasive procedures, such as endoscopy or cardiac catheterization	☐	☐	☐

47. **Does your main practice own (fully or in part) a hospital?**

MARK (X) ONE ANSWER

- ☐ Main practice is a hospital or is owned by a hospital
- ☐ Yes
- ☐ No
- ☐ Unsure

48. **Excluding any hospitals owned by your main practice, do you personally own (fully or in part) a hospital?**

MARK (X) ONE ANSWER

- ☐ Yes
- ☐ No
- ☐ Unsure

COMPENSATION

49. **Which of the following methods *best* describes your basic compensation?**

MARK (X) ONE ANSWER

- ☐ Fixed salary
- ☐ Salary adjusted for performance (e.g., own productivity, practice's financial performance, quality measures, practice profiling)
- ☐ Shift, hourly, or other time-based payment
- ☐ Share of practice billings or workload
- ☐ Other Method (Describe)

50. **Are you eligible to earn income through any type of bonus or incentive plan?**

Check Yes if you receive periodic adjustments, bonuses, returns on withholds, or any type of supplemental payments, either from your practice or from health plans.

MARK (X) ONE ANSWER

- ☐ Yes
- ☐ No

51. **Medical practices may take various factors into account in determining the compensation (salary, bonus, pay rate, etc.) paid to physicians in the practice. Please indicate whether each of the following factors is explicitly considered by the practice in determining your compensation.**

IF THE FACTOR IS CONSIDERED, how important is it in determining your compensation?

	Is the factor explicitly considered in determining your compensation?		IF YES, how important is the factor in determining your compensation?			
COMPENSATION FACTORS:	**No**	**Yes**	**Very important**	**Moderately important**	**Not very important**	**Not at all important**
a. Factors that reflect your own productivity.	☐	☐ →	☐	☐	☐	☐
b. Results of satisfaction surveys completed by your own patients.	☐	☐ →	☐	☐	☐	☐
c. Specific measures of quality of care, such as rates of preventive care services for your patients.	☐	☐ →	☐	☐	☐	☐
d. Results of practice profiling, i.e., comparing your pattern of using medical resources with that of other physicians.	☐	☐ →	☐	☐	☐	☐
e. The overall financial performance of the practice.	☐	☐ →	☐	☐	☐	☐

52. **During 2006, did you personally receive any of the following from drug, device, or other medically-related companies? Include honoraria and payments from marketing and research firms working for medically-related companies.**

MARK (X) ONE ANSWER FOR EACH ITEM

	Yes	No
a. Food and/or beverages in your workplace?	☐	☐
b. Free drug samples?	☐	☐
c. Honoraria for speaking?	☐	☐
d. Honoraria for participating in surveys on prescribing practices?	☐	☐
e. Payment for consulting services?	☐	☐
f. Payment in excess of costs for enrolling patients in clinical trials?	☐	☐
g. Costs for travel for attending meetings?	☐	☐
h. Gifts that you received as a result of prescribing practices?	☐	☐
i. Complimentary tickets to cultural or sporting events?	☐	☐
j. Complimentary or subsidized admission to meetings or conferences for which CME credits are awarded?	☐	☐

53. **Excluding any food, beverages, and drug samples you may have received in your workplace, please estimate the total value of all goods and services you received in 2006 from drug, device, or other medically-related companies? Include honoraria or payments from surveys on prescribing practices conducted by marketing or research firms for medically-related companies?**

Your best estimate is fine. **MARK (X) ONE ANSWER**

- ☐ None
- ☐ $1 to $ 500
- ☐ $501 to $1,000
- ☐ $1,001 to $5,000
- ☐ $5,001 to $10,000
- ☐ More than $10,000

54. **During 2006, what was your own net income from the practice of medicine, after expenses but before taxes?**

Please include earnings (salaries, fees, bonuses, retainers, etc.) from all practices, not just your main practice, as well as contributions to retirement plans made for you by your practice(s). Exclude investment income, defined as income from investments in medically-related enterprises independent of your medical practice(s), such as medical labs or imaging centers.

Your best estimate is fine. **MARK (X) ONE ANSWER**

- ☐ Less than $100,000
- ☐ $100,001 to $150,000
- ☐ $150,001 to $200,000
- ☐ $200,001 to $250,000
- ☐ $250,001 to $300,000
- ☐ More than $300,000

55. **What percent of your own net income from the practice of medicine is based on factors that reflect your own productivity?**

- ☐ None
- ☐ 1 to 10 percent
- ☐ 11 to 25 percent
- ☐ 26 to 50 percent
- ☐ 51 to 75 percent
- ☐ 76 to 100 percent

PERSONAL BACKGROUND

56. **Do you consider yourself to be of Hispanic origin, such as Mexican, Puerto Rican, Cuban, or other Spanish-speaking background? MARK (X) ONE ANSWER**

- ☐ Yes, Hispanic
- ☐ No, Not Hispanic

57. **What race do you consider yourself to be? MARK (X) FOR ALL ANSWERS THAT APPLY**

- ☐ White
- ☐ Black or African-American
- ☐ Asian or Pacific Islander
- ☐ Native American or Alaska Native
- ☐ Other

58. **Is your main medical practice located at the address to which this questionnaire was mailed?**

☐ Yes → **SKIP TO Q60**

☐ No → **GO TO Q59**

59. **What are the name and address of your main medical practice?**

Your information is confidential and individuals or practices will not be identified. Your practice information will help us categorize types of physician practices and will be helpful if we select your practice for a follow-up study in future years.

Name of Practice

Street Address

City **State** **Zip**

60. **What is the name of the hospital where you admit the largest number of patients?**

This information is confidential and will be used solely for analytic purposes, for example, to define hospital referral regions. The hospital will not be contacted.

☐ I do not admit patients

Thank you for taking the time to complete the survey.

Please return your questionnaire in the enclosed postage-paid envelope.

We appreciate your feedback and feel free to use this space to comment on the survey or health issues you would like to see addressed in future surveys.

Comments:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 0 ☐ **Bat** ☐

APPENDIX B

List of Variables in the 2008 HSC Health Tracking Physician Survey Public Use and Restricted Use Files

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	**Variable Type**	**Description**	**PUF Status**	**RUF Status**
ROUND	NUM	PH5:Round of survey		
FORMID	CHAR	PH5:Form ID		
PHYSID	CHAR	PH5:Physician identifier		
PHYSIDX	CHAR	PH5:Physician identifier	yes	yes
ID	CHAR	AMA:AMA ID		
BIRTH	NUM	AMA:Birth year		yes
BIRTHX	NUM	AMA:Birth year	yes	
AGE	NUM	PH5:CV:age		
GENDER	NUM	PH5:AMA:Sex,1-Male,2-Female	yes	yes
GRAD_YR	NUM	AMA:Med School Graduation year		yes
GRADYRX	NUM	AMA:Med School Graduation year		
MDDO	NUM	AMA:Physician type		
SCHOOL	CHAR	AMA:Medical school		
IMGSTAT	NUM	PH5:CV:Country of Medical School		yes
IMGUSPR	NUM	PH5:CV:Foreign Medical School Graduate		yes
STATE	CHAR	AMA:State code		yes
FIPSCODE	CHAR	AMA:FIPS state+county code, chr		yes
ZIPCODE	CHAR	AMA:Mailing zip code		
CENREG	NUM	AMA:Census region		yes
CENDIV	NUM	AMA:Census division		yes
UICS	NUM	PH5:CV:Urban Influence Codes, 2003		yes
RESFEL	NUM	PH5:A.Are you a resident or fellow?		
FEDEMP	NUM	PH5:B.Are you a FT of federal agency?		
FULLTIM	NUM	PH5:C.Provide 20+ hrs/wk patient care?		
RCARSAT	NUM	PH5:1.Overall Career satisfaction	yes	yes
YRBGN	NUM	PH5:2.Year began practicing medicine		yes
YRBGNX	NUM	PH5:2.Year began practicing medicine	yes	
YRPRAC	NUM	PH5:CV:Number of Years in practice		yes
PRIMSPC	NUM	PH5:3.Primary Specialty		yes
SPCLTY	CHAR	AMA:Specialty code		yes
PCP	NUM	HP5:CV:Primary care physician	yes	yes
SPECCAT	NUM	PH5:CV:Primary specialty category		
SPEC	NUM	PH5:CV:7-cat speciality	yes	yes
BDCTPSP	NUM	PH5:4.Board-certified in prim specialty?	yes	yes
PTYPE	NUM	PH5:5.Practice type where spend most tme		yes
_PTYPE	NUM	PH5:Imputation flag for PTYPE		yes
PRCTYPE	NUM	PH5:CV: Practice type, edited	yes	yes
SETTING	NUM	PH5:5a.Setting where spend most time		yes
_SETTING	NUM	PH5:Imputation flag for SETTING		yes
OWNPR	NUM	PH5:6.Ownershp status in main practice	yes	yes
_OWNPR	NUM	PH5:Imputation flag for OWNPR		yes
PHYSOWN	NUM	PH5:6a.Ownership interest, Oth physician	yes	yes
_PHYSOWN	NUM	PH5:Imputation flag for PHYSOWN		yes
PRACOWN	NUM	PH5:6a.Ownership interest, Anthr practce		yes
_PRACOWN	NUM	PH5:Imputation flag for PRACOWN		yes
HOSPOWN	NUM	PH5:6a.Ownership interest, A hospital		yes
_HOSPOWN	NUM	PH5:Imputation flag for HOSPOWN		yes
INSROWN	NUM	PH5:6a.Ownership interest, Insur company		yes
_INSROWN	NUM	PH5:Imputation flag for INSROWN		yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
MSCHOWN	NUM	PH5:6a.Ownership interest, Medcal school		yes
_MSCHOWN	NUM	PH5:Imputation flag for MSCHOWN		yes
OTHROWN	NUM	PH5:6a.Ownership interest, Other		yes
_OTHROWN	NUM	PH5:Imputation flag for OTHROWN		yes
GOVENTY	NUM	HP5:CV:Government entity		yes
_GOVENTY	NUM	PH5:Imputation flag for GOVENTY		yes
NPRFORG	NUM	HP5:CV:Nonprofit organization		yes
_NPRFORG	NUM	PH5:Imputation flag for NPRFORG		yes
PRFTORG	NUM	HP5:CV:For profit organization		yes
_PRFTORG	NUM	PH5:Imputation flag for PRFTORG		yes
NPHYPRC	NUM	HP5:CV:Nonphysician practice partners		yes
_NPHYPRC	NUM	PH5:Imputation flag for NPHYPRC		yes
OTHOWNX	NUM	HP5:CV: Other ownership interest	yes	
HMSOWNX	NUM	HP5:CV: Other ownership is solely hospital or med school	yes	
NPHYCAT	NUM	PH5:7.Number of phys at practice, catg.		
_NPHYCAT	NUM	PH5:Imputation flag for NPHYCAT		
NPHYS	NUM	PH5:7a.Number of physicians at practice		yes
NPHYSX	NUM	PH5:7a.Number of physicians at practice	yes	
_NPHYS	NUM	PH5:Imputation flag for NPHYS		yes
INCENT	NUM	PH5:8.Overall financial incentives	yes	yes
COMPETE	NUM	PH5:9.Competitive situation of practice	yes	yes
WKSWRK	NUM	PH5:10.Weeks practicing medicine in 2006		yes
WKSWRKX	NUM	PH5:10.Weeks practicing medicine in 2006	yes	
_WKSWRK	NUM	PH5:Imputation flag for WJKSWRK		yes
HRSPAT	NUM	PH5:11a.Hours last week in direct patient care		yes
_HRSPAT	NUM	PH5:Imputation flag for HRSPAT		yes
HRSADM	NUM	PH5:11b.Hours last week in administrative tasks		yes
_HRSADM	NUM	PH5:Imputation flag for HRSADM		yes
HRSMED	NUM	PH5:CV: edited Hours last week, med-related actvty		yes
HRSMEDX	NUM	PH5:CV: edited Hours last week, med-related actvty	yes	
_HRSMED	NUM	PH5:Imputation flag for HRSMED		yes
OFFCOPV	NUM	PH5:12a. Number visits office and outpatient clinic		yes
OFFCOPVX	NUM	PH5:12a. Number visits office and outpatient clinic	yes	
_OFFCOPV	NUM	PH5:Imputation flag for OFFCOPV		yes
HOSPV	NUM	PH5:12b. Number visits on hospital rounds		yes
HOSPVX	NUM	PH5:12b. Number visits on hospital rounds	yes	
_HOSPV	NUM	PH5:Imputation flag for HOSPV		yes
NURSHMV	NUM	PH5:12c. Number visits in nursing homes		yes
NURSHMVX	NUM	PH5:12c. Number visits in nursing homes	yes	
_NURSHMV	NUM	PH5:Imputation flag for NRUSHMV		yes
TMEMLPT	NUM	PH5:13a.Time spend e-mail patients	yes	yes
TMPHNPT	NUM	PH5:13b.Time spend phone patients	yes	yes
TMEMLDR	NUM	PH5:13c.Time spend e-mail physicians	yes	yes
TMPHNDR	NUM	PH5:13d.Time spend phone physicians	yes	yes
RBEMLPT	NUM	PH5:14a.Reimbursed: E-mail patients	yes	yes
RBPHNPT	NUM	PH5:14b.Reimbursed: Phone patients	yes	yes
RBEMLDR	NUM	PH5:14c.Reimbursed: E-mail physicians	yes	yes
RBPHNDR	NUM	PH5:14d.Reimbursed: Phone physicians	yes	yes
HRFREE	NUM	PH5:15.Hours last month provide charity care		yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
HRFREEX	NUM	PH5:15.Hours last month provide charity care	yes	
_HRFREE	NUM	PH5:Imputation flag for HRFREE		yes
LOCFREE	NUM	PH5:15a.Location provide charity care		yes
LOCFREEX	NUM	PH5:15a.Location provide charity care	yes	
BLCKPT	NUM	PH5:16a.Pct patient-African American or Black		yes
BLCKPTX	NUM	PH5:16a.Pct patient-African American or Black	yes	
_BLCKPT	NUM	PH5:Imputation flag for BLCKPT		yes
HISPPT	NUM	PH5:16b.Pct patient-Hispanic or Latino		yes
HISPPTX	NUM	PH5:16b.Pct patient-Hispanic or Latino	yes	
_HISPPT	NUM	PH5:Imputation flag for HISPPT		yes
ASIAPT	NUM	PH5:16c.Pct patient-Asian or Pacific Islander		yes
ASIAPTX	NUM	PH5:16c.Pct patient-Asian or Pacific Islander	yes	
_ASIAPT	NUM	PH5:Imputation flag for ASIAPT		yes
NATVPT	NUM	PH5:16d.Pct patient-Native Amer or Alaska Native		yes
_NATVPT	NUM	PH5:Imputation flag for NATVPT		yes
CHRNPT	NUM	PH5:16e.Pct patient-Has chronic condition	yes	yes
_CHRNPT	NUM	PH5:Imputation flag for CHRNPT		yes
LANGPT	NUM	PH5:17.Pct patient-speak differnt languages		yes
LANGPTX	NUM	PH5:17.Pct patient-speak differnt languages	yes	
INTPRTR	NUM	PH5:18.Practice provd interpreter servce?	yes	yes
I_SPAN	NUM	PH5:18a.Provide interpreter -Spanish		
I_PORT	NUM	PH5:18a.Provide interpreter -Portuguese		
I_CHIN	NUM	PH5:18a.Provide interpreter -Chinese		
I_SRVC	NUM	PH5:CV:Provide Multiple thru translator service		
I_SIGN	NUM	PH5:CV:Provide interpreter -Sign language		
I_FRENCH	NUM	PH5:CV:Provide interpreter -French		
I_ITALN	NUM	PH5:CV:Provide interpreter -Italian		
I_RUSAN	NUM	PH5:CV:Provide interpreter -Russian		
I_POLISH	NUM	PH5:CV:Provide interpreter -Polish		
I_SOMALI	NUM	PH5:CV:Provide interpreter -Somalie		
I_ARABIC	NUM	PH5:CV:Provide interpreter -Arabic		
I_CREOLE	NUM	PH5:CV:Provide interpreter -Creolee		
I_VIET	NUM	PH5:CV:Provide interpreter -Vietnamese		
I_JAPAN	NUM	PH5:CV:Provide interpreter -Japanese		
I_KOREAN	NUM	PH5:CV:Provide interpreter -Koreane		
I_HINDI	NUM	PH5:CV:Provide interpreter -Hindi		
I_HMONG	NUM	PH5:CV:Provide interpreter -Hmong		
I_OTHER	NUM	PH5:CV:Provide interpreter -Other		
I_LANG	NUM	PH5:CV:Summary variable -number of languages	yes	yes
EDUMNPT	NUM	PH5:19.Attend educ improve minority patient hlth?	yes	yes
IT_TRT	NUM	PH5:20aCP.IT avail get info on recmmnded guideline	yes	yes
IT_TRTX	NUM	PH5:20a_1CP.IT used get info on recmmnded guidelne	yes	yes
IT_TRTU	NUM	PH5:CV:IT aval/use get info on recmmnded guideline	yes	yes
ITDCSN	NUM	PH5:20bCP.IT avail get decision support	yes	yes
ITDCSNX	NUM	PH5:20b_1CP.IT used get decision support	yes	yes
ITDCSNU	NUM	PH5:CV:IT avail/use get decision support	yes	yes
ITRMNDR	NUM	PH5:20cCP.IT avail remind clincian on prev service	yes	yes
ITRMNDRX	NUM	PH5:20c_1CP.IT use remind clincian on prev service	yes	yes
ITRMNDRU	NUM	PH5:CV:IT aval/use remind clincian on prev service	yes	yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
ITDRFUP	NUM	PH5:20dCP.IT avail remind clincian on follow-up	yes	yes
ITDRFUPX	NUM	PH5:20d_1CP.IT used remind clnician on follow-up	yes	yes
ITDRFUPU	NUM	PH5:CV:IT avail/use remind clincian on follow-up	yes	yes
ITRMNPT	NUM	PH5:20eCP.IT avail remind patents on prev service	yes	yes
ITRMNPTX	NUM	PH5:20e_1CP.IT used remind patents on prev service	yes	yes
ITRMNPTU	NUM	PH5:CV:IT avail/use remind patents on prev service	yes	yes
ITCOMM	NUM	PH5:20fCP.IT avail communication w/ pat by e-mail	yes	yes
ITCOMMX	NUM	PH5:20f_1CP.IT used communication w/ pat by e-mail	yes	yes
ITCOMMU	NUM	PH5:CV:IT avail/use communication w/ pat by e-mail	yes	yes
ITNOTES	NUM	PH5:20aPI.IT avail to access patient notes	yes	yes
ITNOTESX	NUM	PH5:20a_1PI.IT used to access patient notes	yes	yes
ITNOTESU	NUM	PH5:CV:IT avail/use to access patient notes	yes	yes
ITTEST	NUM	PH5:20bPI.IT avial to order lab, other diag tests	yes	yes
ITTESTX	NUM	PH5:20b_1PI.IT used to order labe, oth diag tests	yes	yes
ITTESTU	NUM	PH5:CV:IT avial/use to order lab, other diag tests	yes	yes
ITRSLT	NUM	PH5:20cPI.IT avail view lab, diag test result	yes	yes
ITRSLTX	NUM	PH5:20c_1PI.IT used view lab, diag test result	yes	yes
ITRSLTU	NUM	PH5:CV:IT avail/use view lab, diag test result	yes	yes
ITCLIN	NUM	PH5:20dPI.IT avail exchng clin data w/ other phys	yes	yes
ITCLINX	NUM	PH5:20d_1PI.IT used exchng clin data w/ other phys	yes	yes
ITCLINU	NUM	PH5:CV:IT avail/use exchng clin data w/ other phys	yes	yes
ITHOSP	NUM	PH5:20ePI.IT avail exchg clin data w/ hosp and lab	yes	yes
ITHOSPX	NUM	PH5:20e_1PI.IT use exchg clin data w/ hosp and lab	yes	yes
ITHOSPU	NUM	PH5:CV:IT aval/use exchg clin data w/ hosp and lab	yes	yes
ITLANG	NUM	PH5:20fPI.IT avail access info on pat prefer lang	yes	yes
ITLANGX	NUM	PH5:20f_1PI.IT used access info on pat prefer lang	yes	yes
ITLANGU	NUM	PH5:CV:IT avail/use access info on pat prefer lang	yes	yes
ITDRUG	NUM	PH5:20aPD.IT avail get info on pat RX interaction	yes	yes
ITDRUGX	NUM	PH5:20a_1PD.IT used get info on pat RX interaction	yes	yes
ITDRUGU	NUM	PH5:CV:IT avail/use get info on pat RX interaction	yes	yes
IT_FORM	NUM	PH5:20bPD.IT avail get info on formularies	yes	yes
IT_FORMX	NUM	PH5:20b_1PD.IT used get info on formularies	yes	yes
IT_FORMU	NUM	PH5:CV:IT avail/use get info on formularies	yes	yes
ITPRESC	NUM	PH5:20cPD.IT avail to write prescriptions	yes	yes
ITPRESCX	NUM	PH5:20c_1PD.IT used to write prescriptions	yes	yes
ITPRESCU	NUM	PH5:CV:IT avail/use to write prescriptions	yes	yes
ITPHRM	NUM	PH5:20dPD.IT avail transmit RX to pharmacy	yes	yes
ITPHRMX	NUM	PH5:20d_1PD.IT used transmit RX to pharmacy	yes	yes
ITPHRMU	NUM	PH5:CV:IT avail/use transmit RX to pharmacy	yes	yes
EMRUSE	NUM	PH5:21.Main Practce use Electronic Medical Record?	yes	yes
ITINCNT	NUM	PH5:22.Any financial incentives tied to IT used?	yes	yes
ERRREPT	NUM	PH5:23.Hosp have system to report medical errors?	yes	yes
HSPLST	NUM	PH5:24.Pct of hosplzd pat had hospitalst invloved?	yes	yes
HSPLSTA	NUM	PH5:24.Did not admit patients to hospital last yr	yes	yes
HSPLSTB	NUM	PH5:24.respondent is practicing hospitalst	yes	yes
INTSVST	NUM	PH5:25.Hosp ICU you used covered by intensivists?	yes	yes
EFGUIDE	NUM	PH5:26.Effect of formal writtn guideline	yes	yes
RADQTIME	NUM	PH5:27a.Adequate time spend w/ patients on visit	yes	yes
RHIGHCAR	NUM	PH5:27b.Provide high quality care to all patients	yes	yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
RPTPCO	NUM	PH5:28a_1.Own pat rpt, qual preventive care delry	yes	yes
RPTPCP	NUM	PH5:28a_2.Practce rpt, qual preventive care delry	yes	yes
RPTCHRO	NUM	PH5:28b_1.Own pat rpt, qual care delry to chrn pat	yes	yes
RPTCHRP	NUM	PH5:28b_2.Practce rpt, qual care delry to chrn pat	yes	yes
RPTDMO	NUM	PH5:28c_1.Own pat rpt, pat demographic information	yes	yes
RPTDMP	NUM	PH5:28c_2.Practce rpt, pat demographic information	yes	yes
RPTETHO	NUM	PH5:28d_1.Own pat rpt, qual care delry to dif race	yes	yes
RPTETHP	NUM	PH5:28d_2.Practce rpt, qual care delry to dif race	yes	yes
RPTLSTO	NUM	PH5:28e_1.Own pat rpt, patient lists or registries	yes	yes
RPTLSTP	NUM	PH5:28e_2.Practce rpt, patient lists or registries	yes	yes
QRPTPGM	NUM	PH5:29.Qual reporting prog sponsored by outsde org	yes	yes
TRASTHM	NUM	PH5:30a.Practice routinely treat patents w/ Asthma	yes	yes
TRDIAB	NUM	PH5:30b.Practice routinely treat pats w/ Diabetes	yes	yes
TRDPRSN	NUM	PH5:30c.Practice routinely treat pat w/ Depression	yes	yes
TRCHF	NUM	PH5:30d.Practice routinely treat patients w/ CHF	yes	yes
GENGAST	NUM	PH5:31a_1.Asthma:written guidelines in English	yes	yes
GENGDIA	NUM	PH5:31a_2.Diabetes:written guidelines in English	yes	yes
GENGDEP	NUM	PH5:31a_3.Depression:written guidelines in English	yes	yes
GENGCHF	NUM	PH5:31a_4.CHF:written guidelines in English	yes	yes
GOTHAST	NUM	PH5:31b_1.Asthma:written guidelines in other lang	yes	yes
GOTHDIA	NUM	PH5:31b_2.Diabetes:written guidelnes in other lang	yes	yes
GOTHDEP	NUM	PH5:31b_3.Depression:written guidelines other lang	yes	yes
GOTHCHF	NUM	PH5:31b_4.CHF:written guidelines in other lang	yes	yes
MNTRAST	NUM	PH5:31c_1.Asthma:care manager monitor/coord care	yes	yes
MNTRDIA	NUM	PH5:31c_2.Diabetes:care manager monitor/coord care	yes	yes
MNTRDEP	NUM	PH5:31c_3.Depression:care manager monitor/coord cr	yes	yes
MNTRCHF	NUM	PH5:31c_4.CHF:care manager monitor/coordinate care	yes	yes
EPATAST	NUM	PH5:31d_1.Asthma:Non-phys staff to educate patient	yes	yes
EPATDIA	NUM	PH5:31d_2.Diabetes:Non-phys staff to educate pata	yes	yes
EPATDEP	NUM	PH5:31d_3.Depression:Non-phys staff to educate pat	yes	yes
EPATCHF	NUM	PH5:31d_4.CHF:Non-phys staff to educate patients	yes	yes
GVSTAST	NUM	PH5:31e_1.Asthma:Group visits w/ staff provid care	yes	yes
GVSTDIA	NUM	PH5:31e_2.Diabetes:Group visits w/ staff prvd care	yes	yes
GVSTDEP	NUM	PH5:31e_3.Depression:Group visits w/ staff prvd cr	yes	yes
GVSTCHF	NUM	PH5:31e_4.CHF:Group visits w/ staff provide care	yes	yes
DM_PGM	NUM	PH5:32.Pats in disease managemnt prog by hlth plan	yes	yes
DMPOVQC	NUM	PH5:32a_1.DMP improve quality of care for chrn pat	yes	yes
DMPDRQC	NUM	PH5:32a_2.DMP improve ability provd high qual care	yes	yes
KNOWALL	NUM	PH5:33a:How often know your pat vsts to other phys	yes	yes
PCPSEND	NUM	PH5:33b.PCP-how often send spec patient history	yes	yes
PCPGET	NUM	PH5:33c.PCP-how often get useful infor from spec?	yes	yes
PCPTALK	NUM	PH5:33d.PCP-talk w/ pat about results of spec vsit	yes	yes
SPCGET	NUM	PH5:33e.Spec-how often receive pat medical history	yes	yes
SPCSEND	NUM	PH5:33f.Spec-how often send results of consultaton	yes	yes
SELFREF	NUM	PH5:33g.How oftn are new pat you see self-referred?	yes	yes
NOTREFS	NUM	PH5:34a.Unable obatined:Referrals high qualty spec	yes	yes
NOTHOSP	NUM	PH5:34b.Unable obtained:Non-emergency hosp admsson	yes	yes
NOTOUTP	NUM	PH5:34c.Unable obtained:Hi qual outpat mental srvc	yes	yes
NOTINTRP	NUM	PH5:34d.Unable obtained:Interpreter services	yes	yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
FORMLRY	NUM	PH5:35.Pct of pats have RX covrge incl formulary?	yes	yes
_FORMLRY	NUM	PH5:Imputation flag for FORMLRY		yes
GENERIC	NUM	PH5:36a.How often do you prescribe a generic RX	yes	yes
DIAGCST	NUM	PH5:36b.If not sure, cnsdr OOP cst in decide test?	yes	yes
IOPTCST	NUM	PH5:36c.Cnsdr OOP cst in decide outpt/inpat care?	yes	yes
QNOTIME	NUM	PH5:37a.Problem:Inadq time with pats during visit	yes	yes
QPRBPAY	NUM	PH5:37b.Problem:Patient unable to pay needed care	yes	yes
QINSREJ	NUM	PH5:37c.Problem:Insurance rejects care decision	yes	yes
QNOSPEC	NUM	PH5:37d.Problem:Lack of qualified spec in area	yes	yes
QNOREPT	NUM	PH5:37e.Problem:Not getting timely rpt from oth dr	yes	yes
QPRBCOM	NUM	PH5:37f.Problem:Comm difficulties due to language	yes	yes
QNONCMP	NUM	PH5:37g.Problm:Pat non-compliance w/ trtmnt recomd	yes	yes
QERRHSP	NUM	PH5:37h.Problem:Medical errors in hospitals	yes	yes
QPRBOTH1	NUM	PH5:37i_1.Problem:oth problm for prvd hi qual care		
QPRBOTH2	NUM	PH5:37i_2.Problem:oth problm for prvd hi qual care		
QPRBOTH3	NUM	PH5:37i_3.Problem:oth problm for prvd hi qual care		
NWMCARE	NUM	PH5:38.Accept new Medicare patients	yes	yes
_NWMCARE	NUM	PH5:Imputation flag for NEMCARE		yes
MRBILL	NUM	PH5:38a.No accept Mcare:billing requirement	yes	yes
MRAUDIT	NUM	PH5:38a.No accept Mcare:concern about audit	yes	yes
MRREIMB	NUM	PH5:38a.No accept Mcare:inadequate reimb	yes	yes
MRNUFPT	NUM	PH5:38a.No accept Mcare:have enough pats	yes	yes
MRPTBUR	NUM	PH5:38a.No accept Mcare:Mcare pat high clin burdn	yes	yes
NWMCAID	NUM	PH5:39. Accept new Medicaid patients	yes	yes
_NWMCAID	NUM	PH5:Imputation flag for NWMCAID		yes
MDBILL	NUM	PH5:39a.No accept Mcaid:billing requirement	yes	yes
MDDELAY	NUM	PH5:39a.No accept Mcaid:delayed reimbursement	yes	yes
MDREIMB	NUM	PH5:39a.No accept Mcaid:inadequate reimb	yes	yes
MDNUFPT	NUM	PH5:39a.No accept Mcaid:have enough pats	yes	yes
MDPTBUR	NUM	PH5:39a.No accept Mcaid:Mcidd pat high clin burdn	yes	yes
NWPRIV	NUM	PH5:40.Accept new privately insured	yes	yes
_NWPRIV	NUM	PH5:Imputation flag for NWPRIV		yes
PMCARE	NUM	PH5:41_A.Pct revenue from Medicare	yes	yes
_PMCARE	NUM	PH5:Imputation flag for PMCARE		yes
PMCAID	NUM	PH5:41_B.Pct revenue from Medicaid	yes	yes
_PMCAID	NUM	PH5:Imputation flag for PMCAID		yes
PCAPREV	NUM	PH5:42.Pct revenue from capitated basis?	yes	yes
_PCAPREV	NUM	PH5:Imputation flag for PCAPREV		yes
NMCCON	NUM	PH5:43. Number of managed care contacts	yes	yes
_NMCCON	NUM	PH5:Imputation flag for NWCCON		yes
MALWORRY	NUM	PH5:44.Concerned be involved malpractice in 10 yrs	yes	yes
MALDAILY	NUM	PH5:44.Pressured by threat of malpractice suits	yes	yes
MALTESTS	NUM	PH5:44.Order tests to avoid malpractice suits	yes	yes
MALCNSLT	NUM	PH5:44.Ask consultant to reduce risk of being sued	yes	yes
MALCRISK	NUM	PH5:44.Rely technology to avoid malpractice suits	yes	yes
LABOWN	NUM	PH5:45a_1.Practice own/lease equipmnt: Lab testing	yes	yes
LABLOC	NUM	PH5:45a_2.Equipment location: Laboratory testing		yes
XRAYOWN	NUM	PH5:45b_1.Practice own or lease equipment: X-rays	yes	yes
XRAYLOC	NUM	PH5:45b_2.Equipment location: X-rays		yes

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	Variable Type	Description	PUF Status	RUF Status
IMAGOWN	NUM	PH5:45c_1.Practice own/lease equipment:Oth imaging	yes	yes
IMAGLOC	NUM	PH5:45c_2.Equipment location:Oth diagnstic imaging		yes
NIVOWN	NUM	PH5:45d_1.Practice own/lease: Non-invasive testing	yes	yes
NIVLOC	NUM	PH5:45d_2.Equipment location: Non-invasive testing		yes
IVPROWN	NUM	PH5:45e_1.Practice own/lease: Invasive procedures	yes	yes
IVPRLOC	NUM	PH5:45e_2.Equipment location: Invasive procedures		yes
LABSOWN	NUM	PH5:46a.Self own/lease equipment: Lab testing		yes
XRAYSOWN	NUM	PH5:46b.Self own/lease equipment: X-rays		yes
IMAGSOWN	NUM	PH5:46c.Self own/lease equipment:Oth diag imaging		yes
NIVSOWN	NUM	PH5:46d.Self own/lease equipment:Non-invasive test		yes
IVPRSOWN	NUM	PH5:46e.Self own/lease equipment:Invasive prcdures		yes
OWNHSP	NUM	PH5:47.Main practice own(fully/in part) a hosptal?	yes	yes
SOWNHSP	NUM	PH5:48.Personally own (fully/in part) a hospital?		yes
COMPTYP	NUM	PH5:49.Methods describes your basic compensation?	yes	yes
BONUSR	NUM	PH5:50.Eligible of bonus or incentive plan?	yes	yes
SPROD	NUM	PH5:51a_1.Own productivity affects compensation	yes	yes
IMPPROD	NUM	PH5:51a_2.Imprtant for your comp: own productivity	yes	yes
SSAT	NUM	PH5:51b_1.Satisfaction surveys affcts compensation	yes	yes
IMPSAT	NUM	PH5:51b_2.Imprtant for your comp:Satisfaction srvy	yes	yes
SQUAL	NUM	PH5:51c_1.Quality measures affects compensation	yes	yes
IMPQUAL	NUM	PH5:51c_2.Important for your comp:Quality measures	yes	yes
SPROF	NUM	PH5:51d_1.Profiling results affects compensation	yes	yes
IMPPROF	NUM	PH5:51d_2.Imprtant for your comp:Profiling results	yes	yes
SPERF	NUM	PH5:51e_1.Practice performance affect compensation	yes	yes
IMPPERF	NUM	PH5:51e_2.Important for comp: Practice performance	yes	yes
FREEFD	NUM	PH5:52a.From drug companies:Free food/beverages?	yes	yes
FREERX	NUM	PH5:52b.From drug companies:Free drug samples?	yes	yes
HNSPEAK	NUM	PH5:52c.From drug companies:Honoraria for speakng?	yes	yes
HNSVRVY	NUM	PH5:52d.From drug companies:Honoraria in surveys?	yes	yes
PYCNSLT	NUM	PH5:52e.From drug companies:Paymnt consulting svc?	yes	yes
PYTRIAL	NUM	PH5:52f.From drug companies:Paymnt clnical trials?		yes
CSTTRVL	NUM	PH5:52g.From drug companies:travel to meeting cst?	yes	yes
GIFTRX	NUM	PH5:52h.From drug companies:Gifts as rsult RX prc?		yes
GFTTCKT	NUM	PH5:52i.From drug companies:Complementary tickets?		yes
CMECRDT	NUM	PH5:52j.Frm drug companies:Adm to conf CME credits	yes	yes
GFTOTHX	NUM	PH5:52.Frm drug companies:Other gift	yes	
MRELCOMP	NUM	PH5:53.Total value received from drug companies		yes
MRELCMPX	NUM	PH5:53.Total value received from drug companies	yes	
INCCAT	NUM	PH5:54.Net income from practice of medicine, catg	yes	yes
_INCCAT	NUM	PH5:Imputation flag for INCCAT		yes
INCPROD	NUM	PH5:55.Pct net income based on your productivity?	yes	yes
HISP	NUM	PH5:56.Consider yourself to be of Hispanic origin?		yes
RACE_WHT	NUM	PH5:57.Race: White		yes
RACE_BLK	NUM	PH5:57.Race: Black or African-American		yes
RACE_ASN	NUM	PH5:57.Race: Asian or Pacific Islander		yes
RACE_NTV	NUM	PH5:57.Race: Native American or Alaska Native		yes
RACE_OTH	NUM	PH5:57.Race: Other		yes
RACETHN	NUM	PH5:CV.Race/ethnicity		yes
RACETHX	NUM	PH5:CV.Race/ethnicity	yes	

Specifications for 2008 Health Tracking Physician Survey Public and Restricted Use Files				
Variable Name	**Variable Type**	**Description**	**PUF Status**	**RUF Status**
LOCCHK	NUM	PH5:58.Main practice address correct?		
SSTATE	CHAR	PH5:59.state of main medical practice		
SZIP	CHAR	PH5:59.zipcode of main medical practice		
ADM_PAT	NUM	PH5:60.Flag of not admitting patients	yes	yes
STRATA	NUM	PH5:CV:Sampling strata		yes
NFSU	NUM	PH5:Sampling unit		yes
WEIGHT	NUM	PH5:CV:Analysis Weight	yes	yes

APPENDIX C

Sample SUDAAN, SAS, and STATA Procedure Statements

APPENDIX C
SAMPLE SUDAAN, STATA, AND SAS PROCEDURE STATEMENTS

Although the 2008 HSC Health Tracking Physician Survey sample design is similar to one based on simple random sampling, the stratification and unequal weighting will result in somewhat biased variance estimates if specialized software for complex samples is not used. Use of such software routines is recommended.

This appendix provides sample code to analyze data from the 2008 HSC Health Tracking Physician Survey data for three common statistical packages: SUDAAN, SAS, and STATA. (As a default, all three use the Taylor series linearization method for estimating population characteristics from complex sample survey data). The procedures have the capacity to handle stratification and probability sampling weights (among other complex sample design features). In addition, each package has more extensive features for managing and processing data and for performing statistical procedures not explored here.

The sample procedures represent relatively simple, straightforward applications. Depending on the statistical package you use, complex survey options may not be available for all statistical procedures you may wish to use. Our intention is not to suggest analytical approaches but to provide the key commands and parameters that capture the relevant characteristics of the sample design.

One important caution to exercise when analyzing data from complex surveys is to avoid subsetting to just those records that will be used in the analysis. Rather, the full population should be processed even when analyses are for subgroups or subpopulations. This is required to ensure the correct computation of the sampling variance. Below we discuss the options in each package for analyzing subpopulations (or, domains) within a sample population.

There are a number of releases of each software package running on several different platforms. As a result, enhancements or subtle differences can exist from one release to the next, particularly in terms of reading and writing external data files. The statements displayed in the examples in this appendix are tailored for SUDAAN Release 10.0.0, SAS-callable for Windows, Stata Release 10.1 and SAS Release 9.2. The user should take this into consideration when using these examples or parts of these examples verbatim.

The 2008 HSC Health Tracking Physician Survey consists of a national stratified random sample. The data files contain a single sample weight (WEIGHT) and a single analysis parameter that defines the stratification (STRATA) necessary for estimating the sampling variance for a statistic.

Examples are provided for full sample, national estimates. The examples assume that the analysis is being performed for all records with WEIGHT>0 All 4,720 records meet this criterion.

C.1 SAMPLE SUDAAN STATEMENTS

Before performing analysis, the data file must be sorted by the design parameters (in this case, STRATA).

Preprocessing or recoding may be required for some variables because of missing data. Missing data in the file were assigned appropriate values (see Chapter 5 for variable coding conventions). Classification (SUBGROUP) variables with zero values will be treated by SUDAAN as missing and dropped from the procedure. This does not hold true for continuous analysis variables (VAR) where zero or negative values are valid.

The design statement tells SUDAAN the nature of the sampling method, i.e. whether the sample was selected with or without replacement, and whether the selection probabilities were equal across all sampling units (in this case, physicians). Design=WR specifies that the sampling units were selected with replacement and equal probabilities of selection within stratum. (If the prefix UN- is added before WR, this would indicate unequal probabilities).

The nest statement tells SUDAAN which variables contain the sampling structure, in this case, the stratification information (STRATA).

The weight statement indicates the variable containing sampling weights (WEIGHT).

The var statement lists the analysis variables.

The subgroup statement lists categorical variables for subgroup analysis. The levels statement tells SUDAAN the number of levels of the corresponding categorical variable.

Formats (the RFORMAT statement) need to be consistent with SUDAAN rules. Therefore, the preexisting formats provided with the Restricted Use File may need to be modified for use in SUDAAN. It is a SUDAAN convention to include a total count for each subgroup variable, with a value of "0" representing the total. Therefore, if the subgroup variable can take on the value of "0" in the data, then the value should be changed to a positive integer.

The SUDAAN statement SUBPOPN should be used to identify the specific analytic subpopulation of interest. If the file is reduced to a specific subpopulation, the sampling variance estimates SUDAAN computes may be wrong.

Common SUDAAN statements that can be used for complex survey analysis include DESCRIPT, CROSSTAB, DESCRIPT, REGRESS, LOGISTIC, SURVIVAL, RATIO, and MULTILOG.

C.1.1 Complex survey parameters when using SUDAAN

This example estimates the mean percentage of patients suffering from a chronic condition, as reported by physician respondents, broken down by seven specialty categories (General Internal

Medicine, Family/General Practice, General Pediatrics, Medical Specialties, Surgical Specialties, Psychiatry, ObGyn). Standard errors and population counts are also included in the output.

```
proc descript data=phys filetype=sas design=wr ;
  nest strata;
  weight weight;
  setenv topmgn=0;
  subgroup spec ;
  levels      5   ;
  rformat spec spec.;
  var chrnpt ;
  print nsum wsum mean semean / style=nchs
       nsumfmt=f6.0 wsumfmt=f10.0 meanfmt=f8.4 semeanfmt=f10.4;
run;
```

The second example estimates the percentage of physicians who report their practice having and personally using information technology for communicating with patients via email (ITCOMMU) by gender (GENDER). Standard errors and population counts are also included in the output.

```
proc crosstab data=phys filetype=sas design=wr ;
  nest strata;
  weight weight;
  setenv topmgn=0;
  subgroup gender itcommu ;
  levels     2     3   ;
  rformat gender gender.;
  rformat itcommu itcommu.;
  tables gender * itcommu ;
  print nsum wsum rowper serow  / style=nchs
       nsumfmt=f6.0 wsumfmt=f10.0 rowperfmt=f8.4 serowfmt=f10.4;
run;
```

C.2 SAMPLE SAS STATEMENTS

When working with complex survey data, SAS offers four procedures which can incorporate the sample design into the analyses: SURVEYMEANS, SURVEYFREQ, SURVEYREG, and SURVEYLOGISTIC.

The domain statement requests subpopulation analysis, in addition to analysis for the entire population. The domain statement in this example will generate estimates for all categories of the variable spec (constructed variable consisting of seven specialty categories). There is no option within the surveymeans procedure to select only a specific population subgroup (e.g., spec=3,

pediatricians).

The stratum statement names the variable that forms the strata in the stratified sampling design (STRATA). The weight statement identifies the variable containing the sampling weights (WEIGHT). Finally, the var statement names the variables to be analyzed (CHRNPT, HRSMED).

C.2.2 Complex survey parameters when using SAS

This example uses the SURVEYMEANS procedure to estimate the mean percentage of physicians' patients with a chronic condition (CHRNPT) and the mean hours last week spent in all medically-related activities (HRSMED), broken down by seven specialty categories (SPEC). Standard errors of the means, unweighted and weight population counts are also included in the output.

```
proc surveymeans data=phys,  nobs sumwgt mean stderr;
  domain  spec;
  stratum strata;
  weight  weight;
  var chrnpt hrsmed;
run;
```

C.3 SAMPLE STATA STATEMENTS

Unlike the single-step procedures used by SUDAAN and SAS, Stata separates the tasks of setting the design and performing the actual analysis. The code begins with a one-time declaration of the design characteristics using the command *svyset.* The *[pweight=]* statement specifies the variable used for sample weighting and *strata()* indicates the variable delineating strata.

Analysis is performed identically to that using independent, identically distributed data, with the simple addition of the *svy:* prefix before the command. In order to limit the analysis to a subgroup of interest, e.g. females, use the prefix, *svy, subpop(females),:* in the last line, where females is a constructed variable set equal to one when GENDER="2, Female" and zero otherwise. The subpop option requires a true/false argument, as a zero value of the input variables indicates cases to be excluded.

Common procedures that are compatible with the *svy:* prefix include mean, tabulate, regress, and logit, among others.

C.3.1 Complex survey parameters when using Stata

This example estimates the mean percentage of physicians' patients with a chronic condition (CHRNPT) and the mean hours spent in all medically-related activities in the previous week (HRSMED) for physicians by seven-category specialty designation (SPEC). Standard errors of the means, unweighted and weight population counts are also included in the output.

```
use "$directory\ph5b005.dta", clear;
svyset [pweight=weight], strata(strata);
svy: mean chrnpt hrsmed, over(spec);
```