Community Tracking Study

Physician Survey Public Use File: User's Guide

(Round One, Release 1)

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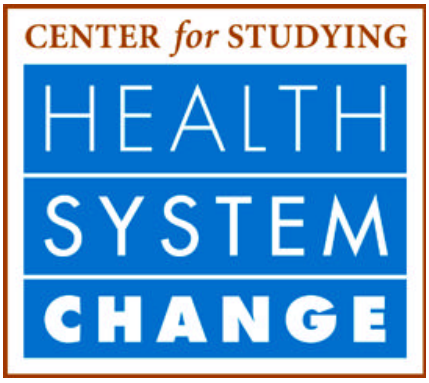

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PREFACE

This User's Guide gives researchers the information necessary to use the Community Tracking Study (CTS) Physician Survey Public Use File developed by the Center for Studying Health System Change (HSC). The Guide presents background information about the CTS and the Physician Survey, explains the various samples and weight variables, and provides standard error look-up tables. This discussion is followed by a description of variable construction and editing, and other information about the data file. A copy of the survey questionnaire appears in Appendix A. The publication, "Community Tracking Study Physician Survey Public Use File: Codebook," provides more detail on the file, including frequencies and definitions of variables. The Public Use File and the latest documentation are available through the Inter-university Consortium for Political and Social Research (ICPSR) at www.icpsr.umich.edu. Additional technical assistance may be obtained by contacting the CTS Public Use File Help Desk by e-mail (ctshelp@hschange.com) or fax (202-863-1763).

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Chapter 1

Overview of the Community Tracking Study and the Physician Survey

This User's Guide is intended to assist researchers in using the Community Tracking Study (CTS) Physician Survey Public Use File. Programmer documentation and detailed information on the file layout and content are available in the CTS Physician Survey Public Use File Codebook. Information about other aspects of the CTS is available from the Center for Studying Health System Change (www.hschange.com) or via e-mail (center@hschange.com).

1.1. CTS Objectives

The CTS is a national study of the rapidly changing health care market and the effects of these changes on people.[1] Funded by the Robert Wood Johnson Foundation, the study is being conducted by the Center for Studying Health System Change (HSC). The overall goal of the study—to develop an information base designed to track and analyze change in the nation's health care market and to inform public and private decision makers about these changes—has three component objectives:

Tracking Changes in Health Systems. The study's first objective is to document changes in the health system through intensive study of selected communities. The major changes that have been reported in the health system include consolidation of the market at all levels (medical groups, hospitals, insurers, and health plans); vertical integration of providers (for example, hospitals and physicians) and of insurers and providers; increased risk sharing by providers; growth of large, national, for-profit health care enterprises; and the adoption of new techniques for managing clinical care (clinical information systems, quality improvement techniques, utilization management, and so forth).

Tracking Changes in Access, Service Delivery, Cost, and Perceived Quality. The second objective of the study is to monitor the effects of health system change on people by tracking indicators of these effects. The effects could be favorable or unfavorable, and they involve service use and delivery, changes in access to care, and quality and cost of care.

Understanding the Effect of Health System Change on People. The third objective of the study is to understand how differences in health systems are related to differences in access, service delivery, cost, and perceived quality. This objective will be achieved by

[1]An overview of the Community Tracking Study is contained in Kemper et al. "The Design of the Community Tracking Study: A Longitudinal Study of Health System Change and Its Effects on People." *Inquiry*, vol. 33, Summer 1996, pp. 195-206.

analyzing—qualitatively and quantitatively—the relationship between health systems and access, service delivery, cost, and perceived quality.

Central to the design of the study is its community focus. This focus was established because health care delivery is primarily local and differs from one community to the next as a result of history, culture, and state and local policy. Therefore, to analyze and understand institutional changes in the delivery system and their effects on people, we need information at the local level. To this end, 60 communities, listed in Table 1.1, were randomly selected to form the core of the CTS and to be representative of the nation as a whole.[2] Of these communities, 12 were randomly chosen for more intensive study. These are referred to as the high-intensity sites.

1.2. Analytic Components of the Community Tracking Study

The CTS has qualitative and quantitative components. For instance, case studies are being conducted in the 12 high-intensity sites. The first round of comprehensive case studies of the health system were begun in 1996 and continued through 1997. The findings are available from HSC.[3] This qualitative information is accompanied by survey data from these 12 communities and from an additional 48 sites. In all 60 sites, HSC simultaneously conducted independent surveys of households, physicians, and employers, enabling researchers to explore relationships among purchasers, providers, and consumers of health care.[4] The Followback Survey of Health Plan Organizations is another component of the CTS. Respondents to the CTS Household Survey covered by privately financed health insurance plans (employer, union, and privately purchased) will be "followed back" to the organization that administers the plan. The administering plan will provide information on available health plans and will identify the particular plan in which each linked respondent policyholder is enrolled. Measured health plan attributes include whether the plan is a managed care plan (and if so, the type of managed care plan it is), health plan network size, and provider payment methods.

Data is being collected on a two-year cycle, allowing researchers to track changes in the health care system over time. The round one surveys and case studies, completed during 1996 and 1997, are the baseline. Data collection for round two began in the summer of 1998.

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[2]The CTS focuses on the contiguous 48 states. Alaska and Hawaii were not part of the study.

[3]Center for Studying Health System Change. *Health System Change in Twelve Communities.* Washington, DC: HSC, September 1997. Available at *www.hschange.com*.

[4]The household survey was conducted by HSC and is available as a Public Use File. The employer survey was conducted by RAND, in collaboration with HSC. While these surveys were conducted in the same communities, they were independent of one another and do not allow linking of persons or employers to specific physicians.

TABLE 1.1

SITES SELECTED FOR THE COMMUNITY TRACKING STUDY

High-Intensity Sites	Low-Intensity Sites	
Metro areas >200,000 population*	Metro areas >200,000 population*	Metro areas <200,000 population*
01-Boston (MA)	13-Atlanta (GA)	49-Dothan (AL)
02-Cleveland (OH)	14-Augusta (GA/SC)	50-Terre Haute (IN)
03-Greenville (SC)	15-Baltimore (MD)	51-Wilmington (NC)
04-Indianapolis (IN)	16-Bridgeport (CT)	
05-Lansing (MI)	17-Chicago (IL)	Nonmetropolitan Areas
06-Little Rock (AR)	18-Columbus (OH)	
07-Miami (FL)	19-Denver (CO)	52-West Central Alabama
08-Newark (NJ)	20-Detroit (MI)	53-Central Arkansas
09-Orange County (CA)	21-Greensboro (NC)	54-Northern Georgia
10-Phoenix (AZ)	22-Houston (TX)	55-Northeastern Illinois
11-Seattle (WA)	23-Huntington (WV/KY/OH)	56-Northeastern Indiana
12-Syracuse (NY)	24-Killeen (TX)	57-Eastern Maine
	25-Knoxville (TN)	58-Eastern North Carolina
	26-Las Vegas (NV/AZ)	59-Northern Utah
	27-Los Angeles (CA)	60-Northwestern Washington
	28-Middlesex (NJ)	
	29-Milwaukee (WI)	
	30-Minneapolis (MN/WI)	
	31-Modesto (CA)	
	32-Nassau (NY)	
	33-New York City (NY)	
	34-Philadelphia (PA/NJ)	
	35-Pittsburgh (PA)	
	36-Portland (OR/WA)	
	37-Riverside (CA)	
	38-Rochester (NY)	
	39-San Antonio (TX)	
	40-San Francisco (CA)	
	41-Santa Rosa (CA)	
	42-Shreveport (LA)	
	43-St. Louis (MO/IL)	
	44-Tampa (FL)	
	45-Tulsa (OK)	
	46-Washington (DC/MD/VA)	
	47-West Palm Beach (FL)	
	48-Worcester (MA)	

*Based on 1995 Census estimates.

1.3. The Physician Survey

The Physician Survey, funded by the Robert Wood Johnson Foundation, was conducted under the direction of HSC. The Gallup Organization was the primary contractor for survey implementation, including sampling, interviewing, and weighting. Mathematica Policy Research, Inc. (MPR) was responsible for sample design and variance estimation. Project Hope and CODA, Inc. assisted in developing the instrument, including cognitive testing. Social and Scientific Systems, Inc. (SSS) was instrumental in converting the raw survey data into a data file suitable for analysis. MPR and SSS collaborated to prepare the documentation for the Public Use File.

The Physician Survey instrument collected information on physician supply and specialty distribution; practice arrangements and physician ownership; physician time allocation; sources of practice revenue; level and determinants of physician compensation; provision of charity care; physicians' perception of their ability to deliver care and of career satisfaction; effects of care management strategies; and various aspects of physicians' practice of medicine. For primary care physicians (PCPs), the instrument also contained vignettes including various clinical presentations for which there is no prescribed method of treatment. Physicians were asked to state the percentage of patients for whom they would recommend the course of action specified in each particular vignette.

The survey was administered completely by telephone, using computer-assisted telephone interviewing technology. The sample frame was developed by combining lists of physicians from the American Medical Association (AMA) and the American Osteopathic Association (AOA). Bilingual interviewers were used in the few cases where needed. Interviews with 12,385 physicians[5] were completed between August 1996 and August 1997.

1.4. Physician Survey Public Use File and Restricted Use File

Two versions of the CTS Physician Survey data are available to researchers: the Restricted Use File and the Public Use File. The ***Restricted Use File*** may be accessed only under the conditions listed in the *Community Tracking Study Physician Survey Restricted Data Use Agreement.* This agreement provides details on ownership of the data, when the data may be accessed 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 ICPSR web site at www.icpsr.umich.edu.

The Restricted Use File is provided to researchers for use on only 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

[5]There are 12,528 physician records on the file; 143 physicians were sampled twice and therefore appear on the file twice, even though they completed only one interview each. Sampling weights were constructed so that duplicate records do not bias results. Consequently, researchers should not delete the duplicate records.

Restricted Use File may be required to undertake costly or inconvenient security measures. Researchers who are interested only in producing site-level means from the physician data, whether to perform analysis using a site-level file or to merge onto one of the other CTS component surveys, may choose instead to wait for the forthcoming site-level mean file. Researchers are encouraged to review documentation for both the Public Use and Restricted Use files, available from ICPSR at www.icpsr.umich.edu, as well as the requirements of the *Community Tracking Study Physician Survey Restricted Data Use Agreement*, before deciding which file will meet their needs.

The ***Public Use File*** is available from ICPSR to all researchers with minimal restrictions. Researchers need not specifically apply for use of the Public Use File. It is suitable for most researchers who wish to perform analysis at the national level and do not anticipate using the site-level information in their analysis. The Public Use File does not support analysis at the site level or analysis that uses site-level information. 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, necessitating the use of standard error look-up tables or formulas contained in Chapter 3 to derive approximate standard errors. Separate documentation on the Public Use File is available from ICPSR at www.icpsr.umich.edu.

As stated above, this Public Use File does not contain certain data that are available on the Restricted Use File version of the Physician Survey. Other variables in the Public Use File were modified somewhat to ensure the confidentiality of survey respondents. These modifications are described in Chapter 4. Table 1.2 lists the variables available on the Public and Restricted Use versions of the data file. In this table, a different name for the same variable on the Public Use and Restricted Use files (the Public Use name ends in "X") indicates that the data for this variable underwent additional editing for confidentiality.[6]

[6]INCOMEX (on both files) has also been edited for confidentiality. SPECX (on both files) was provided on the Restricted Use File as a way to categorize specialty; however, its component variables are found only on the Restricted Use File.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Survey Administration Variables		
PHYSIDX	PHYSIDX	PH1:Physician identification number
MSACAT	n/a	PH1:Large metro/small metro/non-metro
FIPS	n/a	PH1:State and county code when surveyed
SITEID	n/a	PH1:Updated master file SITE variable
SUBGRP	n/a	PH1:Subgroup in sample - A/B/C/D
DOCTYP	n/a	PH1:S1: Doctor type (MD, DO)
IMGSTAT	n/a	PH1:Country of medical school
IMGUSPR	IMGUSPR	PH1:Foreign medical school graduate
GENDER	GENDER	PH1:AMA/AOA: Sex, 1-Male, 2-Female
BIRTH	BIRTHX	PH1:AMA/AOA: Year of birth (Corrected)
GRAD_YR	GRADYRX	PH1:AMA/AOA: Year of graduation
AMAPRIM	n/a	AMA/AOA: Primary care physician flag
Section A - Introduction		
MULTPR	MULTPR	PH1:A4: Multiple practices
_MULTPR	_MULTPR	PH1:Imputation flag for MULTPR
NUMPR	NUMPRX	PH1:A4A: Number of practices
YRBGN	YRBGNX	PH1:A6: Year began practicing medicine
NWSPEC	n/a	PH1:A8: Primary specialty/subspecialty
GENSUB	n/a	PH1:A9: General practice vs. subspecialty
SIPNPED	n/a	PH1:A9a: Subspc, internal, or pediatric (adult specialty)
SIPPED	n/a	PH1:A9b: Subspc, internal, or pediatric (ped specialty)
SUBSPC	n/a	PH1:A10: Subspecialty
SPECX	SPECX	PH1:CV:Combined specialty/subspecialty
PCPFLAG	PCPFLAG	PH1:Questionnaire definition of PCP
BDCERT	BDCERT	PH1:Board certification status
BDCTPS	BDCTPS	PH1:Board certified in primary subspecialty/specialty
BDELPS	BDELPS	PH1:Board eligible in primary subspecialty/specialty
CARSAT	CARSAT	PH1:A19: Overall career satisfaction
Section B - Utilization of Time		
WKSWRK	WKSWRKX	PH1:B1: Weeks practicing medicine in 1995
WKSWRKC	n/a	PH1:Weeks worked in 1995, w/o new phys
_WKSWRKC	n/a	PH1:Imputation flag for WKSWRKC
HRSMED	HRSMEDX	PH1:Hours previous week spent medically-related activities
_HRSMED	n/a	PH1:Imputation flag for HRSMED
HRSPAT	HRSPATX	PH1:Hours previous week spent direct patient care activities
_HRSPAT	n/a	PH1:Imputation flag for HRSPAT
HRFREE	HRFREEX	PH1:B6: Hours previous month charity care
_HRFREE	n/a	PH1:Imputation flag for HRFREE
PPATMN	PPATMN	PH1:Percent patient care time spent in main practice

See notes at end of table.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES
(Continued)

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Section C - Type and Size of Practice		
OWNPR	OWNPR	PH1:C1: Ownership status (Full/Part/No Own)
_OWNPR	_OWNPR	PH1:Imputation flag for OWNPR
TOPOWN	n/a	PH1:C2: Type of practice (owners)
TOPOWNC	TOPOWNX	PH1:Practice type (owners), w/C9 recodes
TOPEMP	n/a	PH1:C3: Type of employer (non-owner)
TOPEMPC	n/a	PH1:Employer type, w/C9 recodes
TOPEMPA	TOPEMPX	PH1:Employer type (all employees)
PRCTYPE	PRCTYPE	PH1:Practice type (categorical)
OTHSET	n/a	PH1:C3a: Government hospital or clinic
EMPTYP	n/a	PH1:C3b: Empl type verbatims, coded
OTHPAR	OTHPAR	PH1:C4: Owner: Other phys in practice
OTHGRP	n/a	PH1:C5A: Owner: Other phys group
HSPPAR	n/a	PH1:C5B: Owner: Hospital
INSPAR	n/a	PH1:C5C: Owner: Insurance Co, HMO
ORGPAR	n/a	PH1:C5D: Owner: Other
C5OWNER	C5OWNX	PH1:C5: Outside ownership
ORGC_1-ORGC_12	n/a	PH1:What kinds of organizations are these?
NPHYS	NPHYSX	PH1:C7: Number of physicians at practice
_NPHYS	n/a	PH1:Imputation flag for NPHYS
NASSIST	NASSISX	PH1:C8: Number of assistants in practice
_NASSIST	n/a	PH1:Imputation flag for NASSIST
ACQUIRD	ACQUIRD	PH1:C10: Practice acquired in last 2 yrs
_ACQUIRD	_ACQUIRD	PH1:Imputation flag for ACQUIRD
OWNPUR	OWNPURX	PH1:C11: Resp ownership when practice purchased
Section D - Medical Care Management		
EFDATA	EFDATA	PH1:D1A: Effect of computer get pt data
EFTREAT	EFTREAT	PH1:D1B: Effect of computer get tx/guidelines
EFRMNDR	EFRMNDR	PH1:D1C: Effect of preventive tx reminders
EFGUIDE	EFGUIDE	PH1:D1D: Effect of formal written guidelines
EFPROFL	EFPROFL	PH1:D1E: Effect of practice profile results
EFSURV	EFSURV	PH1:D1F: Effect of patient satisfaction surveys
CMPPROV	CMPPROV	PH1:D7: Change-complexity w/o ref, PCP
CMPEXPC	CMPEXPC	PH1:D8: Appropriateness w/o ref, PCP
SPECUSE	SPECUSE	PH1:D9: Change-number of referrals to specialists
PCTGATE	PCTGATE	PH1:D10: Percent of patients for whom gatekeeper
_PCTGATE	_PCTGATE	PH1:Imputation flag for PCTGATE
CMPCHG	CMPCHG	PH1:D11: Change-complexity at ref, NPCP
CMPLVL	CMPLVL	PH1:D12: Appropriateness at ref, NPCP
CHGREF	CHGREF	PH1:D13: Change-# referrals by PCPs

See notes at end of table.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES
(Continued)

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Section E - Vignettes		
WHOCARE	WHOCARE	PH1:EA: Care to adults and/or kids
FORM	FORM	PH1:E_FORM: Rotation of vignette questions
VCHOL	VCHOL	PH1:E1: Percent oral agents elevated cholesterol
VCHOLF	VCHOLF	PH1:E1a: Freq oral agents elevated cholesterol
VHYPER	VHYPER	PH1:E3: Percent urology referrals w/ prostatic hyperplasia
VHYPERF	VHYPERF	PH1:E3a: Freq urology referrals prostatic hyperplasia
VCHEST	VCHEST	PH1:E4: Percent cardiology referrals w/ chest pains
VCHESTF	VCHESTF	PH1:E4a: Freq cardiology referrals w/ chest pains
VBACK	VBACK	PH1:E5: Percent MRI for low back pain
VBACKF	VBACKF	PH1:E5a: Freq MRI for low back pain
V60MAN	V60MAN	PH1:E9: Percent PSA test 60 year old male
V60MANF	V60MANF	PH1:E9a: Freq PSA test 60 year old male
VVITCH	VVITCH	PH1:E10: Percent office visit for vaginal itching
VVITCHF	VVITCHF	PH1:E10a: Freq office visit for vaginal itching
VENUR	VENUR	PH1:E11: Percent DDAVP 10 year child enuresis
VENURF	VENURF	PH1:E11a: Freq DDAVP 10 year child enuresis
VTHRT	VTHRT	PH1:E16: Percent office visit fever sore throat child
VTHRTF	VTHRTF	PH1:E16a: Freq office visit fever sore throat child
VCOUGH	VCOUGH	PH1:E17: Percent x-ray fever tachypnea child
VCOUGHF	VCOUGHF	PH1:E17a: Freq x-ray fever tachypnea child
VSUPOT	VSUPOT	PH1:E18: Percent ENT referrl suppurative otitis med child
VSUPOTF	VSUPOTF	PH1:E18a: Frq ENT referral suppurative otitis med child
V6FEVR	V6FEVR	PH1:E20: Percent sepsis workup fever 6 week child
V6FEVRF	V6FEVRF	PH1:E20a: Freq sepsis workup fever 6 week child
VECZEM	VECZEM	PH1:E21: Percent allergist eczema asthma
VECZEMF	VECZEMF	PH1:E21a: Freq allergist eczema asthma child

See notes at end of table.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES
(Continued)

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Section F - Physician - Patient Interactions		
ADQTIME	ADQTIME	PH1: Adequacy of time, all physicians
CLNFREE	CLNFREE	PH1:F1C: Freedom for clinical decisions
HIGHCAR	HIGHCAR	PH1:F1D: Possibility of high quality care
NEGINCN	NEGINCN	PH1:F1E: Decision w/o neg financial incentive
USESPCS	USESPCS	PH1:F1F: Highlevel communication w/ specialists
COMPRM	COMPRM	PH1:F1G: Communication w/ primary care physician
COMMALL	COMMALL	PH1: Level of communication, all
PATREL	PATREL	PH1:F1H: Continuing patient relationships
OBREFS	OBREFS	PH1:F8A: Referrals to quality specialists
OBANCL	OBANCL	PH1:F8B: High quality ancillary services
OBHOSP	OBHOSP	PH1:F8C: Non-emergency hospital admission
OBINPAT	OBINPAT	PH1:F8D: Adequate number inpatient days
OBIMAG	OBIMAG	PH1:F8E: High quality diagnostic imaging
OBMENTL	OBMENTL	PH1:F8F: High quality inpatient mental health care
OBOUTPT	OBOUTPT	PH1:F8G: High quality outpatient mental health care
NWMCARE	NWMCARE	PH1:F9A: Accept new Medicare patients
_NWMCARE	_NWMCARE	PH1:Imputation flag for NWMCARE
NWMCAID	NWMCAID	PH1:F9B: Accept new Medicaid patients
_NWMCAID	_NWMCAID	PH1:Imputation flag for NWMCAID
NWPRIV	NWPRIV	PH1:F9C: Accept new privately insured
_NWPRIV	_NWPRIV	PH1:Imputation flag for NWPRIV

See notes at end of table.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES
(Continued)

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Section G - Practice Revenue		
PMCARE	PMCARE	PH1:G1A: Percent payments from Medicare
_PMCARE	_PMCARE	PH1:Imputation flag for PMCARE
PMCAID	PMCAID	PH1:G1B: Percent payments from Medicaid
_PMCAID	_PMCAID	PH1:Imputation flag for PMCAID
PCAPREV	PCAPREV	PH1: % practice rev prepaid, capitated
_PCAPREV	_PCAPREV	PH1:Imputation flag for PCAPREV
NMCCON	NMCCONX	PH1: Number of managed care contracts
_NMCCON	n/a	PH1:Imputation flag for NMCCON
PMC	PMC	PH1: % practice rev from managed care
_PMC	_PMC	PH1: Imputation flag for PMC
CAPAMTC	CAPAMTC	PH1: Capitated rev from largest MC contr
_CAPAMTC	_CAPAMTC	PH1: Imputation flag for CAPAMTC
PBIGCON	PBIGCON	PH1: Percent revenue largest managed care contract
_PBIGCON	_PBIGCON	PH1:Imputation flag for PBIGCON
Section H - Physician Compensation Methods & Income Level		
SALPAID	SALPAID	PH1:H1: Salaried physician flag
SALTIME	SALTIME	PH1:H2: Compensate per work time period
SALADJ	SALADJ	PH1:H3: Salary adjustments
BONUS	BONUS	PH1:H4: Eligible for bonuses now flag
SPROD	SPROD	PH1:H5A: Own productivity affects compensation
SSAT	SSAT	PH1:H5B: Patient satisfaction affects compensation
SQUAL	SQUAL	PH1:H5C: Quality measures affects compensation
SPROF	SPROF	PH1:H5D: Profiling results affects compensation
RADJ	RADJ	PH1:H6: Profiles are risk adjusted
_RADJ	_RADJ	PH1:Imputation flag for RADJ_A
PCTINCN	PCTINCX	PH1:H9: Percent income from bonuses
PCTINCC	n/a	PH1:CV:Percent income from bonuses, corrected
_PCTINCC	n/a	PH1:Imputation flag for PCTINCC
EBONUS	EBONUS	PH1:H9a: Eligible for bonuses in 1995
INCOMEX	INCOMEX	PH1:H10: Net income in 1995
_INCOMEX	n/a	PH1:Imputation flag for INCOMEX

See notes at end of table.

TABLE 1.2

VARIABLES ON THE PHYSICIAN RESTRICTED USE AND PUBLIC USE FILES
(Continued)

Restricted Use Name	Public Use Name	Variable Label (on Restricted Use File)
Weights and Sampling Variables		
NSTRATA	n/a	Nest variable national estimates from supplemental sample
PSTRATA	n/a	Nest variable, pseudo strata
PPSU	n/a	Nest variable, pseudo ppsu
PSTRTOT3	n/a	Totcnt for pstrata
SITEPCP	n/a	Nest variable for site estimates
FRAME	n/a	Frame counts for site estimates
NFRAME	n/a	Sample frame counts for natl estimates
FSU	n/a	Final sample unit for site estimates
NFSU	n/a	Final sample unit for natl estimates
SECSTRA	n/a	Secondary stratification
P1X - P7X	n/a	Joint inclusion probability #1 thru #7
WTPHY1	n/a	PH1: Augmented site estimates
WTPHY2	n/a	PH1: National estimates, site sample
WTPHY3	n/a	PH1: National estimates, supplemental sample
WTPHY4	WTPHY4	PH1: National weight, combined sample
WTSITE	n/a	PH1: Relative weight for sites 1-60

Notes: "n/a" identifies variables that are not available on the CTS Physician Survey Public Use File. Variable label contains a brief description of the variable. In some cases, the label also provides information on the source of the variable (e.g., PH1 for the Physician Survey) and the question number (e.g., "A6" for Section A, Question 6).

Chapter 2

The Structure and Content of the Community Tracking Study Physician Survey

The Physician Survey was administered to a sample of physicians in the 60 CTS sites and to an independent national sample of physicians. The survey's three-tiered sample design makes it possible to develop estimates at the national and community (site) levels.

- The first tier is a sample of 12 communities from which a large number of physicians in each community were surveyed. The sample in each of these "high-intensity" sites is large enough to support estimates in each site.

- The second tier is a sample of 48 communities from which a smaller sample of physicians in each community was surveyed. This sample of "low-intensity" sites allows us to validate results from the high-intensity sites and permits findings to be generalized to the nation. The first and second tiers together are known as the *site sample*.

- The third tier is a smaller, independent national sample. Known as the *supplemental sample*, this sample augments the site sample and substantially increases the precision of national estimates with a relatively modest increase in the total sample size.

Because identifying a physician's practice location would greatly enhance the ability to identify specific respondents, locational identifiers are not provided in the Public Use File. This file therefore supports only national estimates, while the Restricted Use File supports site-level estimates.

This chapter describes the sample design, the process of conducting the survey, the survey content, survey administration and processing, and the sample and weighting variable to be used for analyses using the Public Use File. The background information on sample design (Sections 2.1 and 2.2) is provided for those who are interested; however, it is not necessary to read these sections in order to use the Public Use File.

2.1. CTS Sample Sites

The primary goal of the CTS is to track health system change and its effects on people at the local level. Determining which communities, or sites, to study was therefore the first step in designing the CTS sample. Three issues were central to this sample design: how sites were defined, how many were studied, and how they were selected.

2.1.1. Definition of Sites

The sites were intended to encompass local health care markets. Although there are no set boundaries for these local markets, the intent was to define areas such that residents predominately used health care providers located in the same area, and providers mostly served area residents. To this end, we generally defined sites to be MSAs (metropolitan statistical areas) as defined by the Office of Management and Budget or, in the case of nonmetropolitan sites, BEAEAs (Bureau of Economic Analysis economic areas).[1]

2.1.2. Number of Sites

The next step in creating the site sample was to determine the number of high-intensity sites. In making this decision, we considered the tradeoffs between data collection costs (case studies plus survey costs) and the research benefits of a large sample of sites. The research benefits of a larger number of sites include a greater ability to empirically examine the relationship between system change and its effect on care delivery and consumers, and a greater ability to make the study findings more "generalizable" to the nation.

Despite the cost advantages of conducting intensive case studies in fewer sites, focusing on a smaller number of communities makes it more difficult to distinguish between changes of general importance and changes or characteristics unique to a community. Solving this problem by increasing the number of case study sites would make the cost of data collection and analysis prohibitively high. We therefore chose 12 sites for intensive study and added to this sample 48 sites that would be studied less intensively. These 60 high-intensity and low-intensity sites form the *site sample*.

Although there was no formal scientific basis for choosing 12 high-intensity sites, this number reflects a balance between the benefits of studying a range of different communities and the costs of doing so. The addition of 48 low-intensity sites solves the problem of limited generalizability associated with only 12 sites and provides a benchmark for interpreting the representativeness of the high-intensity sites.

2.1.3. Site Selection

Once the number of sites for the site sample was determined, the next step was to select the actual sites. Shown previously in Table 1.1, the 60 sites, or "primary sampling units," were chosen for the first stage of sampling. Sites were sampled by stratifying them geographically by region and selecting them randomly, with probability in proportion to their 1995 population. There were

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[1]For more details on the definition of CTS sites, refer to C. Metcalf, P. Kemper, L. Kohn, and J. Pickreign. *Site Definition and Sample Design for the Community Tracking Study*. Technical Publication No. 1. Washington, DC: Center for Studying Health System Change, October 1996). Note in particular the discussions of New England, where MSAs do not conform with county lines; note also the discussions of the large Consolidated Metropolitan Statistical Areas.

separate strata for small MSAs (population of less than 200,000) and for nonmetropolitan areas. This sampling approach provided maximum geographic diversity, judged critical for the 12 high-intensity sites in particular, and acceptable natural variation in city size and degree of market consolidation.[2]

The 12 high-intensity sites were selected randomly from MSAs with a 1995 population of 200,000 or greater. Of the 48 low-intensity sites, 36 are large metropolitan areas (also having a 1995 population of 200,000 or greater), 3 are small metropolitan areas (population of less than 200,000), and 9 are nonmetropolitan sites.

Together, the high-intensity and low-intensity sites account for about 90 percent of all survey respondents. This site sample can be used to make national estimates. The sample may also be used to make site-specific estimates for the high-intensity sites (which is possible only with the Restricted Use File of the Physician Survey).

2.2. Additional Samples and Better National Estimates

While the site sample alone will yield national estimates, they will not be as precise as they would have been had even more communities been sampled or had the sample been a simple random sample of the entire U.S. population. The *supplemental sample*, the third tier in the design of the CTS Physician Survey sample, was added to increase the precision of national estimates at a relatively small incremental increase in survey cost.

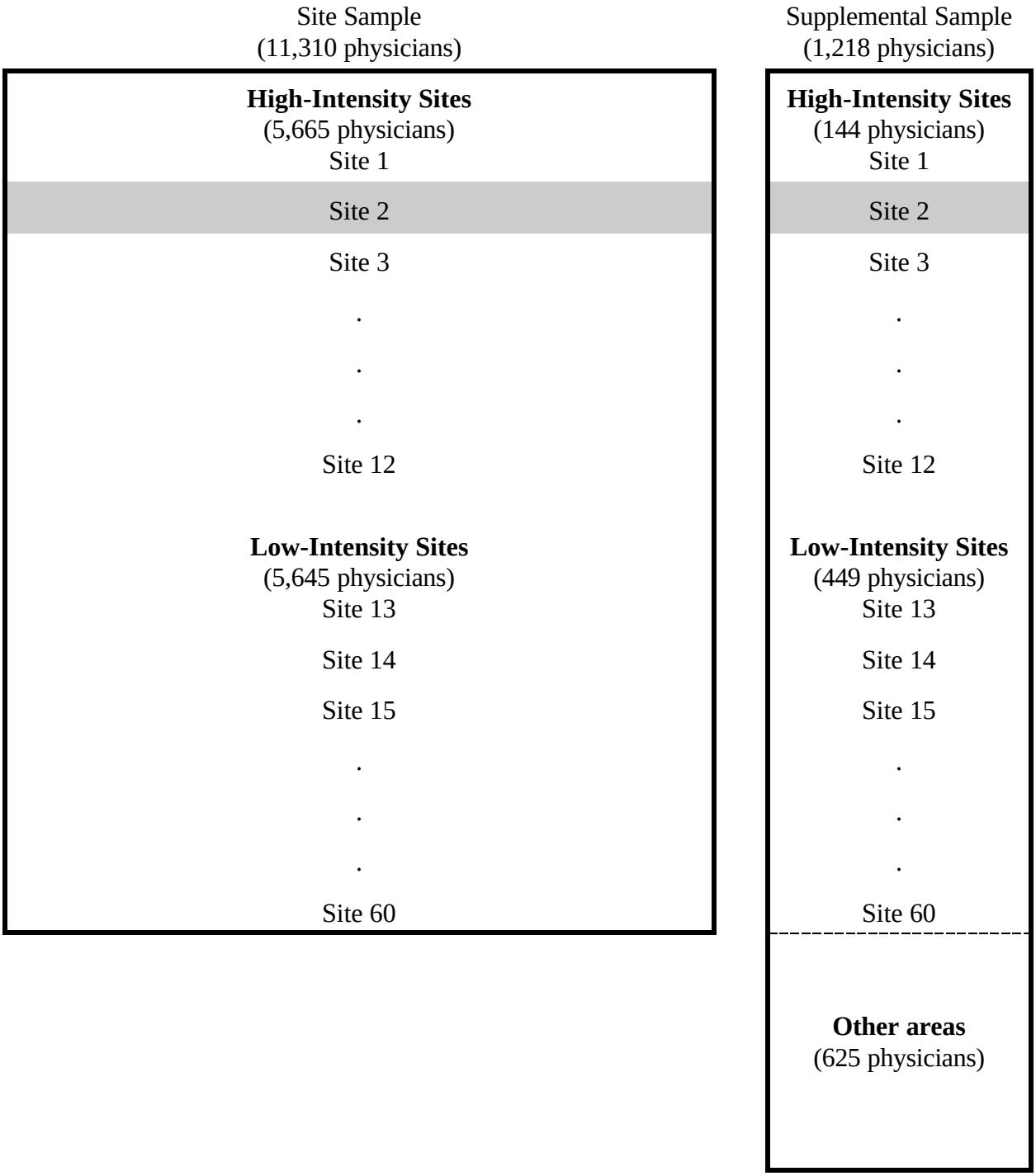
The supplemental sample is a relatively small, nationally representative sample made up of physicians randomly selected from the 48 states in the continental United States and the District of Columbia. It is stratified by 10 geographic regions (based on the groupings used in the AMA system) crossed with the two physician types (primary care versus specialist), but essentially uses simple random sampling techniques within strata. The supplemental sample and the site sample together are called the *combined sample*. Because component samples are not identified, all analyses using the Public Use File are based on the combined sample.

Figure 2.1 illustrates the sample design. The shaded area shows both the cases sampled in site 2 as part of the site sample and the supplemental sample cases that happened to fall within the site 2 boundaries. National estimates may only be obtained from the combined sample when using the Physician Survey Public Use File.

[2]Additional information about the number of sites and the random selection of the site sample is available in C. Metcalf, P. Kemper, L. Kohn, and J. Pickreign. *Site Definition and Sample Design for the Community Tracking Study*. Technical Publication No. 1. Washington, DC: Center for Studying Health System Change, October 1996.

FIGURE 2.1

THE CTS PHYSICIAN SAMPLE STRUCTURE



2.3. Conducting the Survey

After selecting the sample sites, we randomly selected physicians within each site. We also randomly selected physicians for the supplemental sample. The AMA and the AOA constructed the sample frames and drew the samples based on specifications provided to them by the project team.

2.3.1. Eligible Physicians

The AMA used its Masterfile (which includes nonmembers) as the source for its sampling frame, and the AOA used its membership file. To meet the initial eligibility criteria for sampling, physicians on the frame had to have completed their medical training,[3] be practicing in the contiguous United States, and be providing direct patient care for at least 20 hours per week.[4] Among those deemed initially eligible, the following types of physicians were specifically designated as ineligible for this survey and were removed from the frame:

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

The AMA was also asked to exclude osteopathic physicians (D.O.s) from its frame because the sample of osteopaths was to be provided directly by the AOA. Furthermore, the AMA also excluded from its frame those physicians who were sampled for its 1996 Sociometric Monitoring System survey as well as those who specifically requested that their names not be released to

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[3] Residents, interns, and fellows were considered to be still in training.

[4]This criteria resulted in the exclusion of of inactive physicians and physicians who were not office- or hospital-based (teachers, administrators, researchers, etc.).

[5]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.

outsiders. Those in this "do not release name" group were later classified as nonrespondents for the purpose of weighting adjustments for nonresponse.

2.3.2. Stratification of Physician Sample Frames

Once the AMA and AOA constructed their lists of eligible physicians, they classified each physician on their lists as either a primary care physician (PCP) or a non-primary care physician (non-PCP). PCPs were defined as those 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 non-PCPs.

The AMA and AOA each developed two sampling frames: one for the site sample and one for the supplemental sample. The physician's location for sampling purposes was determined by the AMA/AOA preferred mailing address. Within each site, each organization selected a systematic sample of PCPs and a systematic sample of non-PCPs, based upon an optimal sample-allocation plan. This allocation plan was based on the relative number of M.D. and D.O. physicians in each site. The plan resulted in 240 separate site samples (2 organizations, 2 specialty types, 60 sites). PCPs were oversampled in the site sample.

For the supplemental sample, the sample frame was divided into the following 10 geographic strata:

1. New England (CT, ME, MA, NH, RI, VT)
2. New York
3. Middle-South Atlantic (DE, NJ, PA, WV)
4. South Atlantic (DC, GA, MD, NC, SC, VA)
5. East South Central (AL, FL, KY, MS, TN)
6. West South Central (AR, LA, MO, OK, TX)
7. East North Central (IN, MI, OH)
8. North Central (IL, IA, MN, WI)
9. Mountain-Pacific (AZ, CO, ID, KS, MT, NE, NV, NM, ND, SD, OR, UT, WY, WA)
10. California

Each organization selected a stratified random sample of physicians, independent of the site sample, where the 20 strata were defined by the 10 geographical strata and by specialty type (PCP vs. non-PCP). A systematic sample was drawn within each of the 20 strata.

Because the site and supplemental samples were drawn independently, it was possible for some physicians to be selected into both samples; in fact, 143 physicians were selected twice. These twice-selected physicians were only interviewed once, but they appear as two different records on the file. Each has a unique identifier and was dealt with appropriately in the weighting process. Thus, as is mentioned in Chapter 1 (footnote 5), researchers do not need to be concerned about deleting duplicate records.

2.3.3. Physicians Excluded from the Survey

Some physicians thought to be eligible based on the sample frame information were later classified as ineligible based on 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.

2.4. Survey Content

Respondents to the survey were questioned about the following:

- Physician supply and specialty distribution
- Physician time allocation
- Practice arrangements and ownership
- "Gatekeeping"/MedicalMmedical care management strategies/ScopeSscope of care
- Practice styles (PCPs only)
- Ability to provide care/AbilityAability to obtain needed services for patients/AcceptanceAacceptance of new patients with various types of insurance
- Practice revenue
- Physician compensation

No proxy respondents were allowed for the Physician Survey. All physicians responded to the interview for themselves. Table 2.1 shows the topics covered in the survey in more detail. Detailed documentation for the computer-assisted telephone interview program, the equivalent of a survey instrument, is provided as Appendix A. A set of flowcharts has also been included as Appendix B to assist researchers interested in understanding skip patterns in the survey.

2.5. Survey Administration and Processing

The survey was administered completely by telephone, using computer-assisted telephone interviewing technology. As described earlier, all physicians were selected from list frames compiled by the AMA and the AOA. The survey was fielded between August 1996 and August 1997. For PCPs, the average interview length was 22 minutes; for non-PCPs, the average length was 18 minutes.

The total number of completed interviews was 12,385,[6] with a response rate among eligibles of 65.4 percent. Physicians were sent two advance letters from the Robert Wood Johnson Foundation and were offered a $25 honorarium for participating in the survey.

2.6. Analysis Using the Physician Survey

The Physician Survey Public Use File can be used to make national estimates when the physician is the unit of measurement. The sample contains all physicians from the site and supplemental samples combined (n=12,528). The Physician Survey Public Use File is a physician-level file; that is, it includes one data record for each physician responding to the survey.

The weight variable provided on the Public Use File is WTPHY4, which allows for making national estimates with these data. This weight is based on the probability of selection within the sampled site or stratum.[7]

Using the Public Use File, you can do physician-level analyses that involve the study of physicians nationwide (including, for example, subgroups such as PCPs or non-PCPs, U.S.- or foreign-trained physicians, or physicians in large cities). You will not be able to estimate a model that contains explanatory variables that are site characteristics (e.g., site-level means from any CTS component survey) because this would require site identifiers that are not supplied on the Public Use File.

[6]There are 12,528 records on the file because 143 physicians were selected twice for the survey and appear twice on the file, even though they were only interviewed once.

[7]Refer to Keil, L. et al, *Community Tracking Study Physician Survey: Round 1 Survey Methodology Report*,(published as HSC Technical Report Number 9, October 1998) for more details on the definitions and construction of the weight variables, including probabilities of selection and adjustments for physician nonresponse. The weight variable name in the Public Use File, WTPHY4, is referred to as PHNATLWT in the methodology report.

TABLE 2.1

CONTENTS OF THE PHYSICIAN SURVEY

Topic	Description
Physician Supply and Specialty Distribution (Questionnaire Section A)	
Eligibility for survey	Federal employee Less than 20 hours/week Excluded specialty
Practice information	Number of practices Location of primary practice Year began medical practice
Specialty and certification	Primary specialty Board eligibility and certification
Satisfaction	Current level of satisfaction with overall career in medicine
Physician Time Allocation (Questionnaire Section B)	
Weeks worked	Number of weeks practiced medicine in 1995
Hours worked	Hours worked in medicine during last complete week of work Hours spent in direct patient care during last complete week of work
Charity care	Hours spent in charity care in the last month
Time in main practice	Percent of direct patient care time spent in main practice, if more than one practice
Practice Arrangements and Ownership (Questionnaire Section C)	
Ownership of practice	Respondent ownership Other owners Whether physician was part of a practice that was purchased during the past two years
Practice description	Type of practice Number of physicians employed Number of non-physician medical practitioners employed
Gatekeeping / Medical Care Management Strategies / Scope of Care (Questionnaire Section D)	
Medical care management	Effect of various techniques on practice of medicine
PCPs	Percentage of patients for whom physician acts as gatekeeper Change in severity or complexity of patients' conditions for which care is provided without referral to specialists Appropriateness Change in number of referrals made
Non-PCPs	Changes in complexity or severity of patients' conditions at time of referral Appropriateness Change in number of referrals received

TABLE 2.1

CONTENTS OF THE PHYSICIAN SURVEY
(Continued)

Topic	Description
Practice Styles of Primary Care Physicians (Questionnaire Section E)	
PCPs	Clinical descriptions of patient histories for which physician is asked to state the percentage for whom s/he would recommend the course of action specified in the vignette.
Ability to Provide Care / Ability to Obtain Needed Services for Patients / Acceptance of New Patients with Various Types of Insurance (Questionnaire Section F)	
Level of agreement with statements regarding:	Having adequate time with patients Freedom to make clinical decisions Ability to provide high-quality care Level of communications with specialists/primary care physicians Ability to maintain continuing relationships with patients Ability to obtain a variety of specified services for patients Acceptance of new patients insured by Medicare, Medicaid, private insurance
Practice Revenue (Questionnaire Section G)	
Percentage of practice revenue from:	Medicare Medicaid Managed care, paid on a capitated or other prepaid basis Largest managed care contract Largest contract that is capitated or prepaid
Managed care contracts	Number of managed care contracts
Physician Compensation (Questionnaire Section H)	
Physician compensation	Whether physician is salaried Physician eligible to earn bonus or incentive income Factors used by practice to determine compensation
1995 income	Percentage of 1995 income earned in the form of bonuses, returned withholds, or other incentive payments Amount of income in 1995

Chapter 3

Deriving Appropriate Variance Estimates

Some element of uncertainty is always associated with sample-based estimates of population characteristics because the estimates are not based on the full population. This sampling error is generally measured in terms of the standard error of estimate, or its sampling variance,[1] which is an indicator of the precision of an estimate. Estimates of the standard errors are necessary to construct confidence intervals around estimates and to conduct hypothesis tests.

Like many other large national surveys, the sample design for the CTS Physician Survey uses stratification, clustering, and oversampling. Specialized techniques are therefore required for estimating sampling variances when the CTS data are used. This chapter explains how to estimate standard errors that account for the sample design. We discuss why standard errors resulting from commonly used statistical software packages should not be used to make estimates from this survey. Because the Public Use File does not provide enough information to allow the use of specialized statistical software designed to estimate variances for survey data estimates, we provide standard error look-up tables and formulas to approximate standard errors (see Appendix D). These tables and formulas can be used to obtain, for some types of estimates, approximate standard errors that account for the survey design.

3.1. The Limitation of Standard Statistical Software

Standard statistical packages, such as SAS and SPSS, compute variances using formulas that are based on the assumption that the data are from a simple random sample taken from an infinite population.[2] Although the simple random sample variance may approximate the sampling variance in some surveys, it is likely to substantially underestimate the sampling variance in a survey with a design like that of the CTS. For the CTS, the sampling variance estimate is a

[1]The sampling variance, which is the square of the standard error, is a measure of the variation of an estimator attributable to having sampled a portion of the full population of interest using a specific probability-based sampling design. The classical population variance is a measure of the variation among the population, whereas a sampling variance is a measure of the variation of the *estimate* of a population parameter (for example, a population mean or proportion) over repeated samples. The population variance is different from the sampling variance in the sense that the population variance is a constant, independent of any sampling issues, whereas the sampling variance becomes smaller as the sample size increases. The sampling variance is zero when the full population is observed, as in a census.

[2]In the near future, both SAS and SPSS plan to include features that will account for survey sample designs.

function of the sampling design and the population parameter being estimated; it is called the "design-based sampling variance."

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 means that the design did not increase or decrease the sampling variance relative to a simple random sample. A design effect of greater than one means that 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 net effect of the sample design was to decrease the variance (i.e., to make 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.

Over a representative set of CTS Physician Survey variables, the average design effect for physician-level national estimates using the combined sample is about 2.2. This means that the standard error is, on average, about 50 percent higher than it would have been had the same number of cases been selected using a simple random sample. The design effect of 2.2 also means that the precision of the CTS (with 12,528 observations) is equal to that of a simple random sample with a size of about 5,695. Note that the design effect is generally lower for subclasses of the population because there is less clustering of observations.

Because most of the variables in the CTS Physician Survey have a design effect greater than one, we present standard error look-up tables and formulas giving approximate standard errors that account for the survey design. The Physician Survey Restricted Use File is required to use specialized software (such as SUDAAN) to directly estimate standard errors that take into account the survey design.

3.2. Tables of Standard Errors and Design Effects

Tables D.1 through D.21 in Appendix D give approximate standard errors for various types of estimates and sample sizes. The standard error will vary depending on which variable is used and

on the physician subgroup upon which the estimate is based (if any). Appendix C explains how these standard errors were derived and what variables were used in the modeling process.[3]

These 21 tables are for national estimates: 9 are for percentage estimates and 12 are for mean estimates of "quasi-continuous" variables (defined below). Many tables are included for specific subgroups of physicians, defined as follows:

- All primary care physicians (PCPFLAG=1)
- All non-primary care physicians (PCPFLAG=0)
- Internal medicine physicians (SPECX=1)
- Family/general practice physicians (SPECX=2)
- Pediatricians (SPECX=3)
- Medical specialists, including psychiatrists (SPECX=4,6)
- Surgical specialists, including OB-GYNs (SPECX=5,7)
- Physicians in solo or two-person practice (PRCTYPE=1)
- Physicians in group practice (three or more) (PRCTYPE=2)
- Physicians in other practice settings (PRCTYPE=3,4,5,6)
- Physicians in practice with high revenue from managed care (above median of 35 percent) (PMC>35)
- Physicians in practice with low revenue from managed care (at or below median) (PMC<36)

For some types of estimates, we did not provide tables specific to certain of these subgroups, either because the model used to develop the table was not significant for that subgroup, or because the estimates for that subgroup were not different enough to merit their own table (see Appendix C). For example, for percentage estimates, there is no table specifically for physicians in a group practice (three or more physicians). For percentage estimates limited to such physicians (or a subset of such physicians), you should use the table for all physicians (Table D.1).

[3]As explained in Appendix C, certain estimates with too small a sample size, too high a relative standard error, or too small or too large a design effect were excluded from the regression models upon which these tables are based. Before using one of the tables, check to make sure that your particular estimate has a sufficient sample size (greater than 100).

Similarly, for mean estimates of quasi-continuous variables, there is no table for pediatricians. For quasi-continuous mean estimates limited to pediatricians (or a subset of pediatricians), you should use the table for all primary care physicians (PCPs) (Table D.2).

If you are interested in a subset of physicians not listed above, you can use the table for all physicians. If you are interested in a subset of one of the subgroups defined above, use the table associated with that subgroup (see example in the next section).

These subgroups refer to the *denominator* of your estimate, not the numerator. For example, if you are estimating the percentage of physicians who are PCPs, you would use the table for all physicians (Table D.1), not the table specific to PCPs (Table D.2).

3.2.1. National Percentage Estimates

Tables D.1 through D.9 give approximate standard errors for percentage estimates at the national level. These tables are to be used for categorical or ordinal variables. To use these tables, you must have produced percentage estimates using any standard statistical package and the appropriate weight variable. You can obtain standard error estimates from each table for percentages based on the population of physicians, or any subset of the population, represented in the table. If in your estimate you are subsetting to one of the 12 subgroups defined above (or any subset within that subgroup), use the table specific to that subgroup whenever provided.

For example, if you are making a percentage estimate based on only female physicians, you would use the table for "all physicians" because there is no table specifically for females. If you are making a percentage estimate based on female internists or internists in general, you would use the table for "all PCP physicians" because there is no table specifically for percentage estimates of internists. For female pediatricians or pediatricians in general, you would use the table for "general pediatricians." Using the row associated with the unweighted sample size of the subset, you can obtain approximate standard errors for any weighted percentage estimates for that subset.[4]

Suppose you are interested in the national percentage of female PCP physicians who are board certified. We know that the unweighted number of female PCP physicians is 1,787 and that the estimated percentage (weighted) of female PCP physicians who are board certified nationally is about 83 percent. With this information in mind, you would go to the national table for PCP physicians (Table D.2) and find the row in which sample size is equal to 2,000 and the column in which the percentage is equal to 15 or 85 percent. The approximate standard error of this estimate would be 0.96 percent. Although the table is based on all PCP physicians, you can easily determine standard errors for a subset of PCP physicians (in this case, females) by using the row corresponding to the number of records for the PCP subset of interest.

[4] If estimates are expressed in terms of proportions, rather than percentages, simply move the decimal place for the estimate and the standard error in the table two digits to the left.

3.2.2. National Mean Estimates of "Quasi-Continuous" Variables

While most of the variables on the file are categorical or ordinal, many correspond to responses expressed in terms of percentages; for example, PMCAID is the percentage of practice revenue from Medicaid. Because these responses are bounded by 0 and 100, we call the corresponding variables "quasi-continuous" and have produced standard error tables for their means separately from the means of other variables. Note that we are estimating a mean of a response that was expressed by each physician as a percentage; we are not estimating a percentage. Approximate standard errors for national estimates of these variables are found in Tables D.10 through D.21.

Quasi-continuous variables on the file are PPATMN, PCTGATE, PMCARE, PMCAID, PCAPREV, PMC, PBIGCON, PCTINCX, and the 12 Section E "vignette" variables representing percentages (variables beginning with the letter "V" and *not* ending with the letter "F").

Tables D.10 through D.21 are used in the same manner as the tables for percentage estimates; that is, to use them, you must have produced mean estimates using any standard statistical package and the appropriate weight variable. From each table, you can obtain standard error estimates for means based on the population of physicians or on any subset of the population represented in the table. (Use appropriate subgroup-specific tables whenever provided.) Using the row associated with the unweighted sample size of the subset, you can obtain approximate standard errors for any weighted mean estimates for that subset.

Standard errors for means greater than 80 are not presented in the tables because the highest mean value among the variables and subgroups used for modeling was 63.4. The precision of the model-based prediction decreases for any estimates far outside the observed range.

3.2.3. National Mean Estimates of Continuous Variables

There are only six continuous variables on the Public Use File that are not identifiers, weights, sampling variables or reports of percentages (see description of "quasi-continuous" variables above).These variables are WKSWRKX, HRSMEDX, HRSPATX, HRFREEX, NPHYSX, and NASSISX.

Note that these six variables have undergone either top-coding or bottom-coding (see Chapter 4 for more details). Therefore, a mean based on these variables may be quite different from the mean that would be calculated using the unmasked version of the variable (available only on the Restricted Use File). Instead, you should consider collapsing these continuous variables into categories and then calculating distributional estimates (percentages falling within each of the categories).

3.2.4. Additional Information on Using Standard Error Tables

If you are interested in analyzing a physician subgroup that is defined by crossing the characteristics specifically represented in the subgroup tables (for example, PCPs in a practice with low revenue from managed care, or solo practice pediatricians), you should choose the table

specific to one of the defining characteristics and then use the row associated with the sample size defined by the other characteristic.

Because the models for subgroups defined by PCP/non-PCP (PCPFLAG), practice setting (PRCTYPE), and level of revenue from managed care (PMC) were roughly comparable in terms of their predictive ability, it will not matter much which of the two (or three) appropriate subgroup tables you choose. For example, for PCPs in a practice with low revenue from managed care, you can either look at the "all PCPs" table and use the row associated with the sample size of those in a practice with low revenue from managed care, or you can look at the "low revenue from managed care" table and use the row associated with the sample size of those who are PCPs.

However, the models based on specific specialty (defined by SPECX) were not as strong, so we suggest that you use tables specific to other characteristics if you are crossing specific specialty with other table-defined characteristics. For example, for solo practice pediatricians, look at the "solo or two-person practice" table and use the row associated with the sample size of those who are pediatricians, not the other way around.

Note that, because design effects vary by variable and population subgroup, these tables do not provide optimal estimates of standard errors. Furthermore, they cannot be used for other kinds of estimates, such as regression coefficients, ratios, and weighted totals. To obtain standard errors for such estimates, you would need to use the Restricted Use File and specialized software.

Chapter 4

Variable Construction and Editing

The CTS Physician Survey Public Use File contains three types of variables: unedited variables, edited variables, and constructed variables created from edited or unedited variables.[1] 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 annotated questionnaire and flowcharts provided in Appendix A and Appendix B of this manual 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 CTS Physician Survey data were collected via computer-assisted telephone interviewing (CATI). The CATI editing functions included consistency checks and editing of some skip patterns and outlier values. This section describes the editing that followed the CATI 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 A6 (YRBGNX), pertaining to the year the physician began practicing medicine, was asked of all physicians. There were cases where the reported year in which the physician began to practice was before his/her reported year of medical school graduation. In these cases, the value for YRBGNX was changed to make it three years later than the graduation year (for primary care physicians) or five years later than the graduation year (for specialists). (As described below, after the aforementioned edits, YRBGNX and GRADYRX were recoded into five-year intervals for confidentiality reasons).

Another type of logical edit occurred when a question that should have been asked according to the skip logic was not asked. For example, when a respondent said "-8:Don't Know" to physician vignette question E9 (V60MAN, For what percentage of such patients would you recommend a PSA test?), the follow-up question E9a (V60MANF, Would you recommend a PSA test rarely, sometimes, ...?) should have been asked. If for some reason question E9a was not asked in this

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

situation (that is, if it had been coded as "-1: Inapplicable"), the response was recoded to "-9:Not Ascertained." Logical editing also included review and resolution of inconsistencies after data imputation was performed.

4.1.2. Imputation of Missing Values

Missing values for selected variables were imputed using unweighted and weighted sequential hot-deck imputation.[2] Variables were selected for imputation according to their level of missing data and analytic importance. Table 4.1 lists the variables selected for imputation.

Most variables had few incidences of missing values (under 3 percent). The only exceptions are income (INCOMEX) and several variables from Section G: Practice Revenue that had nonresponse rates as high as 15 percent. The Section G variables are: percent managed care (PMC), number of managed care contracts (NMCCONX), percent of revenue from Medicare (PMCARE) and Medicaid (PMCAID), percent of revenue from largest managed care contract (PBIGCON), and percent of revenue paid on prepaid or capitated basis (PCAPREV). The continuous income variable had the highest nonresponse rate at 16 percent, but we incorporated categorical responses for income into the imputation, allowing for more precise imputation. An imputation flag is included for most variables with imputed values. A value of "1 Imputation" for the imputation flag indicates that the value of the corresponding variable was imputed. For confidentiality reasons, imputation flags were not included for variables that were masked. The imputed variables without flags are:

- Weeks practicing medicine in 1995 (WKSWRKX)
- Hours in the previous week devoted to medical activities (HRSMEDX)
- Hours in the previous week devoted to patient activities (HRSPATX)
- Hours in the previous month devoted to charity care (HRFREEX)
- Number of physicians in practice (NPHYSX)
- Number of assistants in practice (NASSISX)

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[2]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 age, gender, and education. (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.

TABLE 4.1
VARIABLES SELECTED FOR IMPUTATION

Description	Variable Name
Section A:	
Multiple practice	MULTPR
Section B:	
Weeks worked	WKSWRKX
Hours worked in medical activities, patient care, and charity	HRSMEDX, HRSPATX, HRFREEX
Section C:	
Acquired practice	ACQUIRD
Ownership status	OWNPR
Number of physicians and assistants	NPHYSX, NASSISX
Section D:	
Percent of patients for whom physician is a gatekeeper	PCTGATE
Section F:	
Accepting Medicare patients	NWMCARE
Accepting Medicaid patients	NWMCAID
Accepting privately insured patients	NWPRIV
Section G:	
Percent Medicare patients	PMCARE
Percent Medicaid patients	PMCAID
Percent captitated revenue	PCAPREV
Number of managed care contracts	NMCCONX
Largest contract paid on capitated basis	CAPAMTC
Percent of practice revenue from managed care	PMC
Percent of practice revenue from largest managed care contract	PBIGCON
Section H:	
Risk adjustment of profiles	RADJ
Percent income from bonuses	PCTINCX
Income	INCOMEX

- Number of managed care contracts (NMCCONX)
- Net income in 1995 (INCOMEX)
- Percent income from bonuses (PCTINCX)

4.1.3. Editing for Confidentiality

Some data in the Public Use File have been manipulated or edited to ensure the confidentiality of survey respondents while maximizing the scope of data released to the public. This type of editing consisted of such steps as excluding variables and constructing new variables based on original ones. All cases of editing for confidentiality are described in the file's codebook in either the "Format" field or the "Description" field. Variables subjected to confidentiality editing have been assigned names ending with "X."

4.1.3.1. Variable Exclusion

All geographic information has been removed from the Physician Public Use File. In addition, we excluded any variables that could serve to identify an individual physician. Examples include: the type of doctor--MD or Osteopath--and the country from where the physician graduated medical school. Survey questions or constructed variables that had very small cell sizes were also excluded because these variables may uniquely describe individual physicians. Finally, we excluded all sample design parameters and weights except for one weight to be used for making national estimates. This was done because the sample design parameters describe geographic information and the other weights are for site-specific purposes. Standard error tables are included in Appendix D and described in Chapter 3. These will allow researchers to approximate standard errors that take the sampling design into account.

4.1.3.2. Masking of Minimum and Maximum Values

Extreme and relatively rare cases that fell at the top or bottom of a distribution were recoded to a lower/higher value, which is referred to as "top-" or "bottom-coding" in the Format and Description fields in the codebook. For example, the variable corresponding to question B1 (WKSWRKX, number of weeks practicing medicine in 1995) reflects the use of bottom-coding. Reported values less than 40 have been combined into a single category, "40 (bottom code)." Six of the continuous analytic variables on the Public Use file have undergone either top-coding or bottom-coding. This truncation of values will affect mean estimates computed from these variables. (See Section 3.2.3).

4.1.3.3. Constructing New Variables

For confidentiality reasons, new variables were constructed by combining several original variables, by collapsing values of a categorical variable, or by collapsing values for a continuous

variable into categories. When survey questions identified relatively rare populations, a new variable was constructed by combining the rare cases into one or more broad groups. For a single categorical variable, one or more values were combined.

For example, SPECX, which describes the physician's specialty, was constructed by combining the responses to questions A8 (physician's specialty) and A10 (physician's subspecialty). Responses to A8 and A10 included over 200 possible values. These specialties were collapsed into seven categories of specialty in SPECX.

Another example of a newly constructed variable that combines survey responses into categories is YRBGNX, the year the physician began medical practice. Question A6 asks for the actual year the physician began practice. We recoded the year values into five-year intervals and recoded those who began practice after 1994 as 1994 (top-coding).

Similarly, the variable TOPEMPX (type of physician employment), which corresponds to question C3, was constructed by combining categories of solo practice and two-physician practice into category 6, "2 phys & solo practice." Group model HMO and Staff model HMO were combined into category 9, "Grp model & Staff model HMO."

4.1.4. Editing Verbatim Responses

For several questionnaire items, respondents were allowed to provide verbatim responses when none of the existing response categories seemed to apply. The verbatim responses themselves are excluded from the Public Use File. They were, however, reviewed and many were coded into an existing or a new categorical value. If the verbatim was not so coded, the physician's response was recorded as "1: Other."

4.2. Constructed Variables

Constructed variables include the following:

- Weight - WTPHY4

- Other variables constructed for analytical value. These range from relatively straightforward variables that combine one or more original question items for the convenience of analysts (e.g., BDCERT, the certification or eligibility status of a physician that was constructed from four survey questions: A11, A13, A15, and A17) to more complex variables such as PMC, percent managed care revenue (and the other practice revenue variables from Section G of the survey), that is constructed from survey questions G6 through G11 and is then edited for consistency with the other practice revenue variables in the survey.

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 Public Use File were obtained directly from survey respondents via the CATI questions. Additional variables include the physician identifier and other survey administration variables relating to demographic information from the sample frame.

The physician identifier variable on the Public Use File is called PHYSIDX.

The American Medical Association (AMA) and the American Osteopathic Association (AOA) provided some demographic information when they formed the sample frame. This information includes: IMGUSPR (foreign medical school graduate), GRADYRX (year graduated from medical school), GENDER, and BIRTHX.

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 variable-specific details contained in the file's codebook.

TABLE 4.2

ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
Section A Variables: Introduction	
YRBGNX	Question A6 asks for the year that the physician began medical practice. Examination of certain responses to this question indicates that some respondents replied with the number of years in practice rather than the actual year commencing practice. For these cases, YRBGNX was set to the Interview year minus the number of years in practice (initial response to YRBGNX). For physicians who did not respond to this question or for whom his/her medical school graduation year occurred after the reported value for YRBGNX, YRBGNX was reset to graduation year + 3 for primary care physicians and graduation year + 5 for specialists. If graduation year was also missing, then YRBGNX was set to be BIRTH + 30 for primary care physicians and BIRTH + 32 for specialists. YRBGNX was converted to a 4-digit year by adding 1900 to the value for YRBGNX.
PCPFLAG	PCPFLAG is a constructed flag variable that indicates whether the physician is a primary care physician (PCPFLAG=1) or a specialist (PCPFLAG=0). The variable is constructed based on responses to questions A8, A10, A9, A9a, and A9b. PCPFLAG=1 if the physician's specialty (A8 or A10) is one of the following: Family practice (019) Geriatric medicine (020,043) General practice (023) Adolescent medicine (085, 133) OR if the physician's specialty (A8 or A10) is one of the following: Internal Medicine (042) Pediatrics (088) Internal Med-Pediatrics (137) AND the physician spends most of his/her time in this specialty (i.e., A9=1) OR if the physician is an adult specialist and spends more time practicing general internal medicine than his/her subspecialty (A9a=2 or 3) OR if the physician is a pediatric specialist and spends more time practicing general pediatrics than his/her subspecialty (A9b=2 or 3) PCPFLAG is the survey definition for primary care physician.

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
SPECX	SPECX is a constructed variable based on responses to questions A8 (physician's specialty) and A10 (physician's subspecialty). The two survey questions are combined into one variable and then divided into categories according to the type of specialty. The grouping of specialties is as follows. The numbered codes were created for the survey based on AMA and AOA physician specialty classifications. 1: Internal Medicine 042: Internal medicine 043: Geriatric medicine 085: Adolescent medicine-Family practice 2: Family/General Practice 019: Family practice 020: Geriatrics-general/family 023: General practice 3: Pediatrics 088: Pediatrics 133: Adolescent medicine 137: Internal med-pediatrics 4: Medical Specialties 001: Allergy 002: Allergy & Immunology 004: Immunology 007: Pain Management 008: Critical care-Anesthesiology 009: Cardiovascular Disease-Cardiology 012: Dermatology 015: Emergency Medicine 016: Sports Medicine-Emergency Medicine 017: Pediatric Emergency Medicine 021: Sports Medicine-Family/General Practice 022: Gastroenterology 024: Preventive Medicine 035: Diabetes 036: Endocrinology 037: Hematology 038: Hepatology 039: Cardiac Electrophysiology 040: Infectious Diseases 041: Clinical & Laboratory Immunology 044: Sports Medicine 045: Nephrology 046: Nutrition 047: Oncology 048: Rheumatology 049: Clinical Biochemical Genetics 050: Clinical Cytogenetics 051: Clinical Genetics 052: Clinical Molecular Genetics 053: Medical Genetics 054: Child Neurology 055: Clinical Neurophysiology 056: Neurology 068: Occupational Medicine 086: Pediatric Intensive Care 087: Neonatology 089: Pediatric Allergy 090: Pediatric Endocrinology 091: Pediatric Pulmonology 092: Pediatric Gastroenterology 093: Pediatric Hematology/Oncology 094: Clinical & Laboratory Immunology 095: Pediatric Nephrology 096: Pediatric Rheumatology 097: Sports Medicine (Pediatrics) 098: Pediatric Cardiology 100: Physical Medicine & Rehab 116: Pulmonary Diseases 120: Neuroradiology 128: Critical Care-Medicine 136: Hematology & Oncology 144: Pediatric Emergency Medicine 145: Pediatric Infectious Diseases 147: Pulmonary-Critical Care 150: Spinal Cord Injury 155: Osteo Manipulative Treat +1 156: Spec Prof in Osteo Manip Med 157: Sports Medicine-OMM 158: Osteo Manipulative Medicine 159: Proctology

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
SPECX (continued)	5: Surgical Specialties 011:Colon & Rectal Surgery 026:Abdominal Surgery 027:Critical Care Surgery 029:General Surgery 030:Head & Neck Surgery 031:Hand Surgery 032:Pediatric Surgery 033:Traumatic Surgery 034:Vascular Surgery 058:Critical Care-Neurosurgery 059:Neurological Surgery 060:Pediatric Neurosurgery 061:Gynecological Oncology 063:Maternal & Fetal Medicine 066: Critical Care-Obstetrics & Gynecology 067: Reproductive Endocrinology 069: Ophthalmology 070: Hand Surgery 071: Adult Reconstructive Orthopedics 072: Musculoskeletal Oncology 073: Pediatric Orthopedics 074: Orthopedic Surgery 075: Sports Medicine (Orthopedic Surgery) 076: Orthopedic Surgery of the Spine 077: Orthopedic Trauma 078: Facial Plastic Surgery 079: Otology 080: Otolaryngology 081: Pediatric Otolaryngology 101: Hand Surgery 102: Plastic Surgery 124: Cardiothoracic Surgery 125: Urology 126: Pediatric Urology 134: Foot & Ankle Orthopedics 146: Pediatric Ophthalmology 151: Surgical Oncology 152: Transplant Surgery 153: MOHS Micrographic Surgery 154: Hair Transplant 6: Psychiatry 010: Pediatric Psychiatry 082: Psychiatry 083: Psychoanalysis 084: Geriatric Psychiatry 127: Addictive Diseases 132: Addiction Psychiatry 7: Obstetrics/Gynecology 062: Gynecology 064: Obstetrics & Gynecology 065: Obstetrics
Section B Variables: Utilization of Time	
HRSMEDX	HRSMEDX is a constructed variable that defines the number of hours (during the past week) spent in medically related activities. This question could be asked up to three times in three different ways by the CATI system, checking for data consistency each time. HRSMEDX is constructed from responses to survey questions B2, B3c, and B4. If HRSPATX (the number of hours spent in direct patient activities) was greater than HRSMEDX, then HRSMEDX was imputed.
HRSPATX	HRSPATX is a constructed variable that defines the number of hours (during the past week) spent in direct patient care activities. This question could be asked up to three times in three different ways by the CATI system, checking for data consistency each time. HRSPATX is constructed from responses to survey questions B3, B3d, and B5. If HRSPATX was greater than HRSMEDX (after imputation of both variables) then HRSPATX was set equal to HRSMEDX.

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
Section C Variables: Type and Size of Practice	
TOPOWNX	TOPOWNX is a constructed variable that is a corrected version of survey variable C2-type of ownership. TOPOWNX is "corrected" or edited by incorporating the response to question C9. If the physician indicated (from the response to question C9) that he/she works in a practice that is a group model HMO, then TOPOWNX was set equal to "9: Group/staff model HMO."
TOPEMPX	TOPEMPX is a constructed variable that combines information from several questions about physician type of employment into one variable. TOPEMPX combines the responses to questions C3 and C3b, and C9. Questions C3 and C3b ask about the type of employer for which the physician works. Question C3b includes edits based on verbatim responses. If the physician indicated (from the response to question C9) that he/she works in a practice that is a group model HMO, then TOPEMPX was set equal to "9: Group/staff model HMO." The following values for TOPEMPX were recoded to "1: Other": 1: Other 11: Other insurance 14: City, county, state government 15: Integrated health 16: Freestanding clinic 17: Physician practice management 18: Community health center 19: Management services organization (MSO) 20: Physician hospital organization (PHO) 21: Locum tenens

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
PRCTYPE	PRCTYPE is a constructed variable that summarizes the type of practice in which the physician works. It combines information about ownership and employment and is constructed as follows: 1: Solo/two physician practice — TOPOWNX=solo or two-physician practice OR TOPEMPX=solo or two-physician practice 2: Group>=three physicians — TOPOWNX=three or more physicians OR TOPEMPX=three or more physicians 3: HMO — TOPOWNX=Group model HMO or staff Model HMO OR TOPEMPX=Group model HMO or staff Model HMO 4: Medical school — TOPEMPX=Medical school or university 5: Hospital based — TOPEMPX=Nongovernment hospital OR TOPEMPX=City, county, state govt AND C3a=hospital 6: Other — All other responses Note that all physicians who work for a state or local government hospital are classified as "Hospital Based" in PRCTYPE but as "Other" in TOPEMPX.
Section E Variables: Vignettes	
VCHOL, VCHOLF through VECZEM, VECZEMF	The vignette questions were asked of primary care physicians. A small error in the CATI skip logic resulted in some physicians (those who specified that they were primary care physicians through question SUBSPC [A10]) not being asked these questions. The first six questions (VCHOL, VHYPER, VCHEST, VBACK, V60MAN, VVITCH) are questions geared toward treating adults. The last six questions (VENUR, VTHRT, VCOUGH, VSUPOT, V6FEVR, VECZEM) are questions geared toward treating children. If a physician treats adults only, he/she was asked the first six questions. If a physician is a pediatrician or a general primary care physician who treats only children, then he/she was asked the last six questions. If the physician treats both adults and children, then he/she was asked six questions--three adult vignette questions and three child vignette questions--that were chosen randomly from each group of six questions. The expected response to each vignette question is a percentage (For what percentage of your patients would you recommend...?). If the physician responded "-8: Don't Know" to the vignette question, he/she was then asked a follow-up question that categorized the response into general categories (6: Always, 5: Almost always, 4: Frequently, 3: Sometimes, 2: Rarely, or 1: Never). All of the follow-up question variable names end in "F."

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
Section G Variables: Practice Revenue	
PCAPREV	PCAPREV is a constructed variable indicating the percent of the practice's total patient care revenue paid on a capitated or other prepaid basis. PCAPREV is constructed from responses to: G3, G8c, and G8g (questions that asked about percentage of practice revenue paid on a capitated or other prepaid basis). Post imputation edits were performed on this variable as follows: a. Capitated revenue is a subset of managed care revenue. Therefore, if PCAPREV>PMC (percent managed care revenue) and both PCAPREV and PMC were imputed, then PCAPREV was edited to be equal to PMC. b. If there is only one managed care contract and all managed care revenue is capitated revenue, then the capitated revenue must be equal to all managed care revenue. Therefore, if NMCCONX (number of managed care contracts)=1 **AND** PMC=PBIGCON (i.e., percent managed care revenue=percent revenue from largest man care contract) **AND** CAPAMTC (amount of capitated revenue)="4, All" **AND** PCAPREV was imputed then PCAPREV was edited to be equal to PMC.
PMC	PMC is a constructed variable indicating the percentage of the practice's total patient care revenue obtained from managed care. PMC is constructed from responses to: G7, G8, G8b, G8f, G9a, and G9d (questions that asked about percentage of practice's revenue that comes from managed care). Capitated revenue is a subset of managed care revenue. Therefore, this variable was edited in the following way: a. If PCAPREV (percent capitated revenue)>PMC , then PMC was edited to be equal to PCAPREV. In addition, a post-imputation edit was performed: b. If PCAPREV>PMC AND PMC was imputed, but PCAPREV was not imputed, then PMC was edited to be equal to PCAPREV.

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
PBIGCON	PBIGCON is a constructed variable that is the percentage of the practice revenue obtained from the practice's largest managed care contract. PBIGCON is constructed from responses to: G9, G9b, and G9e (questions that asked about the percentage of practice revenue coming from the largest managed care contract). PBIGCON was edited for consistency as follows: a. If NMCCONX (number of managed care contracts)=0, then PBIGCON was set equal to -1: Inapplicable. If there are no managed care contracts, then the questions asking about practice revenue from the largest contract are not applicable. b. If PMC (percent managed care revenue)=0, then PBIGCON was set equal to: -1: Inapplicable. If there is no managed care, then the questions asking about practice revenue from the largest contract are not applicable. c. If PMC>0 AND NMCCONX=1, then PBIGCON was set equal to PMC. If there is managed care revenue coming from one contract only, then the practice revenue coming from the largest contract is equal to all of the managed care revenue for the practice. d. If PMC>0 AND PBIGCON=0 then PBIGCON was imputed. If the physician indicated that there was managed care revenue, but there was no revenue coming from the largest contract, then we imputed the value for PBIGCON. e. If PMC>0 AND NMCCONX>0 AND PBIGCON=-1: Inapplicable, then PBIGCON was imputed. If there is managed care revenue, and at least one managed care contract, and the physician's responses to the PBIGCON questions were logically skipped, then we imputed the value for PBIGCON. f. If PMC=0 AND NMCCONX>0 AND PBIGCON=-1: Inapplicable, then PBIGCON was set equal to 0. If there is at least one managed care contract, but no managed care revenue, and the physician's responses to the PBIGCON questions were logically skipped, then the percentage of revenue coming from the largest managed care contract is 0 (even though there are contracts, there is no revenue associated with them). In addition, a post-imputation edit was performed: g. If PMC<PBIGCON and PBIGCON was imputed, then PBIGCON was set equal to PMC. If the percentage of practice revenue coming from the largest contract is greater than the total amount of managed care revenue from the contract (as a result of imputing PBIGCON), then the revenue from the largest contract is set equal to all of the managed care revenue.

TABLE 4.2 (continued)
ADDITIONAL INFORMATION ON SURVEY QUESTIONS
(by Questionnaire Section)

Variable	Additional Information
CAPAMTC	CAPAMTC is a constructed variable that is an edited version of question G11 (how much of practice revenue from the largest managed care contract is paid on a capitated or prepaid basis?). It was edited from the original value as follows: a. If there is no managed care revenue or if there are no managed care contracts, then CAPAMTC=-1: Inapplicable. b. If there is managed care revenue and the physician indicates that all of it is capitated (from question G8d or PMC=PCAPREV), then CAPAMTC=4: All. c. If there is managed care revenue (PMC>0), but no capitated revenue (PCAPREV=0), then CAPAMTC=1: None. d. If there is one managed care contract (NMCCONX=1) and all of the managed care revenue comes from that one contract and this revenue is all capitated revenue (PCAPREV=PBIGCON=PMC), then CAPAMTC=4: All.
Section H Variables: Physician Compensation Methods & Income Level	
PCTINCX	PCTINCX is a constructed variable that is an edited version of question H9 (percent of 1995 income coming from bonuses). It is edited as follows: Physicians who responded "0: No" to H9a (EBONUS-eligible for bonuses in 1995) are assigned a value of -1: Inapplicable.

Chapter 5

File Details

This chapter provides an overview of the file content and technical specifications for programmers. It also describes the 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 CTS Public Use File contains 12,528 person records. The unique record identifier and sort key is the variable PHYSIDX. Variables are positioned on the file in the following order:

- Survey administration variables: this group includes identifiers and other variables associated with conducting the survey
- Variables from Sections A-H of the Physician Survey questionnaire: Variables are ordered within each section by related questionnaire item number
- Weight variable

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

File name:	CTSR1PP1.TXT
Number of observations:	12,528
Number of variables:	120
Logical record length:	272 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 (272). If RECFM=F is used, the LRECL value must be specified as the logical record length plus two (274). 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 (272). 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. Names were limited to seven characters so that additional indicators could be used in subsequent Public Use File releases. 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 the prefix "_". When reading the data into SPSS, imputation flags contain the prefix "I" because SPSS does not recognize the "_" character. For example, _PMC (or IPMC) is the imputation flag corresponding to the variable PMC. Refer to Chapter 4 for more information on imputation and other types of editing procedures used on the file.

- ***Weight.*** The prefix "WT" is used for the weight variable name.

- ***Masked Variables***. 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.

A copy of the data collection instrument annotated with the names of those variables that directly correspond to a single question is provided in Appendix A.

5.3. Variable Coding Conventions

The following coding conventions are used on the file:

-1 Inapplicable	Question was not asked because of skip pattern.
-7 Refused	Question was asked and respondent refused to answer.
-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.

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Community Tracking Study

Physician Survey Public Use File: Appendices to the User's Guide

(Round One, Release 1)

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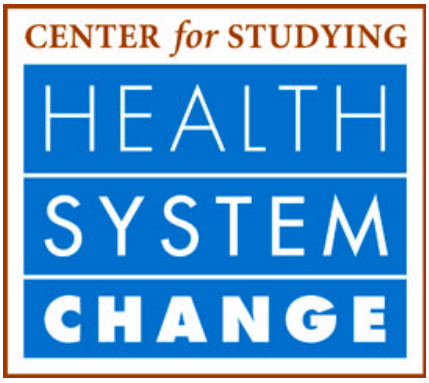

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Appendix A

The CTS Physician Survey Instrument

Round One

HARD COPY REQUIRED

CRT

FINANCE,PHY30865
F865

FIELD FINAL - AUGUST 12, 1996

I.D.#: 0 (1-6)

**AREA CODE AND TELEPHONE NUMBER: ( )_____ _____ _____ (32 - 41)

**INTERVIEW TIME: ---------- _____ _____ (42) (43)

SPECIALTY: **(Code from fone file)

_____ _____ _____ _____ (570) (571) (572)

STATE: **(Code from fone file)

01	Alabama - SC	30	Montana - W
02	Alaska - W	31	Nebraska - NC
04	Arizona - W	32	Nevada - W
05	Arkansas - SC	33	New Hampshire - NE
06	California - W	34	New Jersey - NE
08	Colorado - W	35	New Mexico - W
09	Connecticut - NE	36	New York - NE
10	Delaware - SC	37	North Carolina - SC
11	Washington D.C. - SC	38	North Dakota - NC
12	Florida - SC	39	Ohio - NC
13	Georgia - SC	40	Oklahoma - SC
15	Hawaii - W	41	Oregon - W
16	Idaho - W	42	Pennsylvania - NE
17	Illinois - NC	44	Rhode Island - NE
18	Indiana - NC	45	South Carolina - SC
19	Iowa - NC	46	South Dakota - NC
20	Kansas - NC	47	Tennessee - SC
21	Kentucky - SC	48	Texas - SC
22	Louisiana - SC	49	Utah - W
23	Maine - NE	50	Vermont - NE
24	Maryland - SC	51	Virginia - SC
25	Massachusetts - NE	53	Washington - W
26	Michigan - NC	54	West Virginia - SC
27	Minnesota - NC	55	Wisconsin - NC
28	Mississippi - SC	56	Wyoming - W
29	Missouri - NC		

_____ _____ (16) (17)

SECTION A
INTRODUCTION AND SCREENING

(FONE MANAGEMENT NOTE: Any T&T's should send the case to a special "HOLD" category that could be reactivated by refusal converters if necessary)

S1. DOCTOR TYPE: **(Code from fone file)**

1 DO
2 MD

_____(780)

S1b. REPLICATE NUMBER: **(Code from fone file)**

S2. DOCTOR NAME: **(Code from fone file)**

S3. PRIMARY SPECIALTY: **(Code from fone file)**

S4. SITE NUMBER: **(Code from fone file)**

S5. SITE TYPE: **(Code from fone file)**

High intensity
01-
12
Low intensity
13-
60
National Sample
00

_____ _____
(626) (627)

S6. ZIP CODE: **(Code from fone file)**

_____ _____ _____ _____ _____ _____
(21) (22) (23) (24) (25)

Hello, Dr. **(name from fone file)** my name is _____from The Gallup Organization. A short time ago, you should have received a letter from the Robert Wood Johnson Foundation indicating that Gallup is conducting a national survey of physicians for the Foundation. The survey is part of a study of changes in the health care system in communities across the nation. It concerns how such changes are affecting physicians, their practices and the health care they provide to their patients.

The interview will take about 20-25 minutes and we are providing an honorarium of $25 as a small token of our appreciation to each physician who completes an interview. All the information you provide will be kept strictly confidential. It will be used in statistical analysis and reported only as group totals. I can conduct the interview now or at any time that*s convenient for you.

1 Available - **(Skip to #A1)**

2 Not available - **(Set time to call back)**

3 No longer works/lives here - **(Skip to S8)**

4 Never heard of respondent - **(Continue)**

5 Non-respondent hard refusal - **(Skip to S13)**

6 Physician soft refusal - **(Skip to S13)**

7 Physician hard refusal - **(Skip to S13)**

8 Answering service/
Can't ever reach physician at this number - **(Skip to S11)**

9 Other - **(Skip to S13)** _____(512)

S7. **(If code "4" in "INTRO", ask:)** I would like to verify that I have reached **(phone number from fone file)**.

1 Yes - **(Thank and Terminate; Skip to S11)**

2 No -
(READ:) I am sorry to have bothered you. - **(Reset to "INTRO")**

3 (DK) **(Thank and Terminate; Skip to S11)**
4 (Refused) **(Thank and Terminate; Skip to S11)** _____(918)

S8. **(If code "3" in "INTRO", ask:)** Dr. **(response in S2)** is a very important part of a medical study for the Robert Wood Johnson Foundation. Do you have the address or telephone number where I can reach (him/her)?

1 Yes - **(Skip to S10)**

2 No/Unknown **(Continue)**
3 (DK) **(Continue)**
4 (Refused) **(Continue)**
5 (Retired) _____(919)

S9. **(If code "2-4" in S8, ask:)** Do you happen to know if the doctor is still in this area, or is (he/she) in another city?

1 Same area - **(Thank and Terminate; Skip to S11)**

2 Different city - **(Continue)**

3 (DK) **(Thank and Terminate; Skip to S11)**
4 (Refused) **(Thank and Terminate; Skip to S11)** _____(920)

S10. **(If code "2" in S9 OR If code "1" in S8:)** ENTER PHONE NUMBER AND ADDRESS OR AS MUCH OF IT AS POSSIBLE.

WORK PHONE NUMBER: _____ _____ (921 - 930)

HOME PHONE NUMBER: _____ _____ (941 - 950)

STREET ADDRESS: _____ _____ (1512-1551)

CITY: _____ _____ (1131-1160)

STATE: _____ _____ (931) (932)

ZIP CODE: _____ _____ (933 - 937)

**(All in S10, Thank and Terminate;
Call new number and reset to "INTRO";
If "blank" in "WORK PHONE NUMBER" and
"HOME PHONE NUMBER" in S10, Continue)**

S11. **(If code "1", "3" or "4" in S7 OR If code "8" in "INTRO" OR If code "1", "3" or "4" in S9 OR If "blank" in "WORK PHONE NUMBER" and "HOME PHONE NUMBER" in S10:) (Call directory assistance for most recent city or area code. Ask for directory assistance using full name from fone file.]**

(Original phone number from fone file)

(Original city from fone file) or **("CITY" from S10)**

(New city; New street address)

(Name from fone file)

1 New number - **(Enter on next screen)**

2 No number/match - **(Thank and Terminate; Save Case ID)**_____(1161)

S12 NEW PHONE NUMBER: **(FORCE 10 DIGITS)**

_____ (1162-1171)

(All in S12, call new number and reset to "INTRO")

S13. VERBATIM SCREEN: Describe what happened on this call in as much detail as possible.

_____ (1172)(1173

CLOCK: (2812-2815)

A1. 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? **(Probe:)** Do you receive your paychecks from a federal agency?

1 Yes - **(Continue)**

2 No - **(Skip to #A2)**

8 (DK) **(Thank and Terminate)**
9 (Refused) **(Thank and Terminate)** _____(513)

(If code "1" in #A1, read:) In this survey, we will not be interviewing physicians who are Federal employees. So it appears that we do not need any further information from you at this time, but we thank you for your cooperation. - **(Thank and Terminate)**

A2. Are you currently a resident or fellow?

1 Yes - **(Continue)**

2 No - **(Skip to #A3)**

8 (DK) **(Thank and Terminate)**
9 (Refused) **(Thank and Terminate)** _____(514)

(If code "1" in #A2, read:) In this survey, we will not be interviewing physicians who are residents or fellows. So it appears that we do not need any further information from you at this time, but we thank you for your cooperation. - **(Thank and Terminate)**

A3. During a TYPICAL week, do you provide direct patient care for at least 20 hours a week? **(If necessary, read:)** Direct patient care includes seeing patients and performing surgery. **(If necessary, read:)** INCLUDE time spent on patient record-keeping, patient-related office work, and travel time connected with seeing patients. EXCLUDE 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.

1 Yes - **(Skip to #A4)**

2 No - **(Continue)**

8 (DK) **(Thank and Terminate)**
9 (Refused) **(Thank and Terminate)** _____(515)

(If code "2" in #A3, read:) In this survey, we will not be interviewing physicians who typically provide patient care for less than 20 hours a week. So it appears that we do not need any further information from you at this time, but we thank you for your cooperation. - **(Thank and Terminate)**

A4. Do you currently provide patient care in one practice, or more than one practice? **(If necessary, read:)** We consider multiple sites or offices associated with the same organization to be only one practice. **(INTERVIEWER NOTE #1: Examples are: a private MD with a downtown and suburban office is one practice; a regional organization with member doctors practicing in numerous satellite clinics or offices is one practice; and multiple sites with DIFFERENT organizations are different practices.)** **(INTERVIEWER NOTE #2: Do not count non-patient-care activity, such as teaching or administrative jobs, as practices.)**

MULTPR

1 One - **(Skip to "Note" before #A5)**

2 More than one - **(Continue)**

8 (DK) **(Skip to "Note" before #A5)**
9 (Refused) **(Skip to "Note" before #A5)** _____(516)

A4a. **(If code "2" in #A4, ask:)** In how many different practices do you provide patient care? (Open ended **and code actual number)**

NUMPRX

DK (DK)
RF (Refused)

_____ _____
(517) (518)

(If code "00" in "SITE", Skip to #A5a1; Otherwise, Continue)

A5. We'd like you to think about the practice location at which you spend the greatest amount of time in direct patient care. Is this practice located in **(county and state from fone file)**?**(INTERVIEWER NOTE: Surgeons should give the location of their office, not the hospital where they perform surgery.)**

1 Yes - **(Skip to #A6)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(1174)

A5a. **(If code "2" or "8-9" in #A5, ask:)** In what county and state is the practice located. (Open ended) **(VERIFY SPELLING)**

DK (DK)
RF (Refused)

COUNTY:

_____ _____
(1434-1458)

STATE:

_____ _____
(1459)(1460)

A5a1 **(If code "00" in "SITE", ask:)** We'd like you to think about the practice location at which you spend the greatest amount of time in direct patient care. In what county and state is the practice located? (Open ended) **(VERIFY SPELLING)**

DK (DK)
RF (Refused)

COUNTY:

_____ _____
_____ (1434-1458)

STATE:

_____ _____
_____ (1459)(1460)

A6. In what year did you begin medical practice after completing your undergraduate and graduate medical training? **(INTERVIEWER NOTE: A residency or fellowship would be considered graduate medical training.)** (Open ended **and code last two digits of year)**

YRBGNX

98 (DK)
99 (Refused)

_____ _____
_____ (523) (524)

A7. We have your primary specialty listed as **(response in "SPECIALTY")**. Is this correct? **(If necessary, read:)** We define primary specialty as that in which the most hours are spent weekly.

1 Yes - **(Autocode "SPECIALTY" in #A8)**

2 No - **(Continue)**

8 (DK) **(Thank and Terminate)**
9 (Refused) **(Thank and Terminate)** _____(525)

A8. **(If code "2" in #A7, ask:)** What is your primary specialty? **(If necessary, read:)** We define primary specialty as that in which the most hours are spent weekly. (Open ended **and code from hard copy) (INTERVIEWER NOTE: Probe for codable response)**

A8. (Continued:)

(If code "2" in S1 [MD-AMA LIST])

001	Allergy	(A)
133	Adolescent Medicine	(ADL)
127	Addiction Medicine	(ADM)
132	Addiction Psychiatry	(ADP)
002	Allergy & Immunology	(AI)
003	Allergy & Immunology/ Diagnostic Laboratory Immunology	(ALI)
005	Aerospace Medicine	(AM)
085	Adolescent Medicine	(AMI)
006	Anesthesiology	(AN)
007	Pain Management	(APM)
026	Abdominal Surgery	(AS)
103	Anatomic Pathology	(ATP)
104	Bloodbanking/Transfusion Medicine	(BBK)
049	Clinical Biochemical Genetics	(CBG)
008	Critical Care Medicine (Anesthesiology)	(CCA)
050	Clinical Cytogenetics	(CCG)
128	Critical Care Medicine	(CCM)
086	Critical Care Pediatrics	(CCP)
027	Critical Care Surgery	(CCS)
009	Cardiovascular Diseases (Cardiology)	(CD)
051	Clinical Genetics	(CG)
054	Child Neurology	(CHN)
010	Child & Adolescent Psychiatry	(CHP)
105	Clinical Pathology	(CLP)
052	Clinical Molecular Genetics	(CMG)
055	Clinical Neurophysiology	(CN)
011	Colon & Rectal Surgery	(CRS)
124	Cardiothoracic Surgery (Thoracic Surgery)	(CTS)
012	Dermatology	(D)
013	Clinical & Laboratory Dermatological Immunology	(DDL)
035	Diabetes	(DIA)
106	Dermatopathology	(DMP)
014	Diagnostic Radiology	(DR)
015	Emergency Medicine	(EM)
036	Endocrinology & Metabolism	(END)
016	Sports Medicine	(ESM)
140	Medical Toxicology (Emergency Medicine)	(ETX)
018	Forensic Pathology	(FOP)
019	Family Practice	(FP)
020	Geriatric Medicine	(FPG)
078	Facial Plastic Surgery	(FPS)
021	Sports Medicine	(FSM)
022	Gastroenterology	(GE)
061	Gynecological Oncology	(GO)
023	General Practice	(GP)
024	General Preventive Medicine	(GPM)
029	General Surgery	(GS)
062	Gynecology	(GYN)
037	Hematology	(HEM)

A8. (Continued:)

038	Hepatology	(HEP)
107	Hematology Pathology	(HMP)
030	Head & Neck Surgery	(HNS)
136	Hematology/Oncology	(HO)
070	Hand Surgery	(HSO)
101	Hand Surgery	(HSP)
031	Hand Surgery	(HSS)
039	Cardiac Electrophysiology	(ICE)
040	Infectious Diseases	(ID)
004	Immunology	(IG)
041	Clinical & Laboratory Immunology	(ILI)
042	Internal Medicine	(IM)
043	Geriatric Medicine	(IMG)
044	Sports Medicine	(ISM)
129	Legal Medicine	(LM)
138	Medical Management	(MDM)
063	Maternal & Fetal Medicine	(MFM)
053	Medical Genetics	(MG)
108	Medical Microbiology	(MM)
137	Internal Medicine/Pediatrics	(MPD)
099	Public Health & General Preventive Medicine	(MPH)
056	Neurology	(N)
058	Critical Care Medicine (Neurosurgery)	(NCC)
045	Nephrology	(NEP)
057	Nuclear Medicine	(NM)
109	Neuropathology	(NP)
087	Neonatal/Perinatal Medicine (Neonatology/Perinatology)	(NPM)
117	Nuclear Radiology	(NR)
059	Neurological Surgery	(NS)
060	Pediatric Neurosurgery	(NSP)
046	Nutrition	(NTR)
071	Adult Reconstructive Orthopedics	(OAR)
064	Obstetrics & Gynecology	(OBG)
065	Obstetrics	(OBS)
066	OB Critical Care Medicine	(OCC)
134	Foot & Ankle Orthopedics	(OFA)
068	Occupational Medicine	(OM)
072	Musculoskeletal Oncology	(OMO)
047	Medical Oncology	(ON)
073	Pediatric Orthopedics	(OP)
069	Ophthalmology	(OPH)
074	Orthopedic Surgery	(ORS)
028	Other Specialty	(OS)
075	Sports Medicine (Orthopedic Surgery)	(OSM)
076	Orthopedic Surgery of the Spine	(OSS)
079	Otology	(OT)
080	Otolaryngology	(OTO)
077	Orthopedic Trauma	(OTR)
082	Psychiatry	(P)
130	Clinical Pharmacology	(PA)
147	Pulmonary Critical Care Medicine	(PCC)
110	Chemical Pathology	(PCH)
111	Cytopathology	(PCP)
088	Pediatrics	(PD)
089	Pediatric Allergy	(PDA)

A8. (Continued:)

098	Pediatric Cardiology	(PDC)
090	Pediatric Endocrinology	(PDE)
145	Pediatric Infectious Diseases	(PDI)
081	Pediatric Otolaryngology	(PDO)
091	Pediatric Pulmonology	(PDP)
118	Pediatric Radiology	(PDR)
032	Pediatric Surgery	(PDS)
139	Medical Toxicology (Pediatrics)	(PDT)
144	Pediatric Emergency Medicine	(PE)
017	Pediatric Emergency Medicine	(PEM)
135	Forensic Psychiatry	(PFP)
092	Pediatric Gastroenterology	(PG)
093	Pediatric Hematology/Oncology	(PHO)
112	Immunopathology	(PIP)
094	Clinical & Laboratory Immunology	(PLI)
143	Palliative Medicine	(PLM)
100	Physical Medicine & Rehabilitation	(PM)
142	Pain Medicine	(PMD)
095	Pediatric Nephrology	(PN)
146	Pediatric Opthalmology	(PO)
113	Pediatric Pathology	(PP)
096	Pediatric Rheumatology	(PPR)
102	Plastic Surgery	(PS)
097	Sports Medicine (Pediatrics)	(PSM)
114	Anatomic/Clinical Pathology	(PTH)
141	Medical Toxicology (Preventive Medicine)	(PTX)
116	Pulmonary Diseases	(PUD)
083	Psychoanalysis	(PYA)
084	Geriatric Psychiatry	(PYG)
119	Radiology	(R)
067	Reproductive Endocrinology	(REN)
048	Rheumatology	(RHU)
115	Radioisotopic Pathology	(RIP)
120	Neuroradiology	(RNR)
123	Radiation Oncology	(RO)
121	Radiological Physics	(RP)
150	Spinal Cord Injury	(SCI)
149	Sleep Medicine	(SM)
151	Surgical Oncology	(SO)
148	Selective Pathology	(SP)
033	Trauma Surgery	(TRS)
152	Transplant Surgery	(TTS)
125	Urology	(U)
025	Undersea Medicine	(UM)
126	Pediatric Urology	(UP)
131	Unspecified	(US)
122	Vascular & Interventional Radiology	(VIR)
034	Vascular Surgery	(VS)

997 Other (list) - **(USE VERY SPARINGLY; Thank and Terminate)**

998 (DK) **(Thank and Terminate)**
999 (Refused) **(Thank and Terminate)**

	(526)	(527)	(528)

A8. (Continued:)

(If code "1" in S1 [DO-AOA LIST])

002	Allergy and Immunology	AI
003	Allergy-Diagnostic Lab Immunology	ALI
004	Immunology	IG
005	Preventive Medicine-Aerospace Medicine	AM
006	Anesthesiology	AN
006	Anesthesiology	CAN
006	Anesthesiology	IRA
006	Anesthesiology	OBA
006	Anesthesiology	PAN
007	Pain Management	APM
007	Pain Management	PMR
008	Critical Care-Anesthesiology	CCA
009	Cardiovascular Diseases-Cardiology	C
009	Cardiovascular Diseases-Cardiology	CVD
009	Cardiovascular Diseases-Cardiology	IC
010	Pediatric Psychiatry	CHP
010	Pediatric Psychiatry	PDP
011	Colon & Rectal Surgery	CRS
012	Dermatology	D
014	Diagnostic Radiology	DR
015	Emergency Medicine	EM
015	Emergency Medicine	EMS
015	Emergency Medicine	FEM
015	Emergency Medicine	IEM
016	Sports Medicine (Emergency Medicine)	ESM
017	Pediatric Emergency Medicine	PEM
018	Forensic Pathology	FOP
019	Family Practice	FP
019	Family Practice	UFP
020	Geriatrics-General or Family Practice	GFP
020	Geriatrics-General or Family Practice	GGP
021	Sports Medicine-Family or General Practice	SFP
021	Sports Medicine-Family or General Practice	SGP
022	Gastroenterology	GE
023	General Practice	GP
024	Preventive Medicine	PVM
025	Undersea Medicine	UM
026	Abdominal Surgery	AS
027	Critical Care-Surgery or Trauma	CCS
027	Critical Care-Surgery or Trauma	CCT
028	Other Specialty	OS
029	Surgery-General	S
030	Head & Neck Surgery	HNS
031	Hand Surgery	HS
031	Hand Surgery	HSS
032	Pediatric Surgery	PDS
033	Traumatic Surgery	TRS
034	Vascular Surgery-General or Peripheral	GVS
034	Vascular Surgery-General or Peripheral	PVS
036	Endocrinology	END
037	Hematology	HEM
039	Cardiac Electrophysiology	ICE
040	Infectious Diseases	ID
041	Diag Lab Immunology-Int Med	ILI
042	Internal Medicine	IM

A8. (Continued:)

042	Internal Medicine	IP
043	Geriatrics-Internal Medicine	GER
043	Geriatrics-Internal Medicine	GIM
044	Sports Medicine	ISM
044	Sports Medicine	PMS
044	Sports Medicine	RMS
044	Sports Medicine	SM
045	Nephrology	NEP
046	Nutrition	NTR
047	Oncology	ON
048	Rheumatology	RHU
050	Clinical Cytogenetics	CCG
051	Clinical Genetics	CG
053	Medical Genetics	IMG
054	Pediatric or Child Neurology	CHN
054	Pediatric or Child Neurology	PDN
055	Clinical Neurophysiology	CN
056	Neurology	N
056	Neurology	NMD
056	Neurology	NP
056	Neurology	NPN
057	Nuclear Medicine	NI
057	Nuclear Medicine	NM
057	Nuclear Medicine	NV
058	Critical Care-Neuro Surgery	NCC
059	Neurological Surgery	NS
061	Gynecological Oncology	GO
062	Gynecology	GS
062	Gynecology	GYN
063	Maternal & Fetal Medicine	MFM
064	Obstetrics & Gynecology	OBG
064	Obstetrics & Gynecology	OGS
065	Obstetrics	OBS
066	Critical Care-Obstetrics & Gynecology	OCC
067	Reproductive Endocrinology	RE
068	Occupational Medicine	OCM
068	Occupational Medicine	OM
069	Ophthalmology	COR
069	Ophthalmology	OAS
069	Ophthalmology	OCR
069	Ophthalmology	OGL
069	Ophthalmology	OPH
069	Ophthalmology	VRS
070	Hand Surgery-Orthopedic Surg	HSO
071	Adult Reconstructive Orthopedics	OAR
072	Musculoskeletal Oncology	OMO
073	Pediatric Orthopedics	OP
074	Orthopedic Surgery	AJI
074	Orthopedic Surgery	OR
074	Orthopedic Surgery	ORS
075	Sports Medicine-Orthopedic Surgery	OSM
076	Orthopedic Surgery-Spine	OSS
078	Facial Plastic Surgery	OPL
080	Otolaryngology or Rhinology	OTL
080	Otolaryngology or Rhinology	OTR
080	Otolaryngology or Rhinology	RHI
081	Pediatric Otolaryngology	PDO
082	Psychiatry	P

A8. (Continued:)

083	Psychoanalysis	PYA
084	Geriatric Psychiatry	PYG
085	Adolescent Medicine-Family or General Practice	AFP
085	Adolescent Medicine-Family or General Practice	AGP
086	Pediatric Intensive Care	PIC
087	Neonatology	NE
088	Pediatrics	PD
089	Pediatric Allergy & Immunology	PAI
091	Pediatric Pulmology Medicine	PDX
092	Pediatric Gastroenterology	PG
093	Pediatric Hematology-Oncology	PHO
094	Pediatric Diag Lab Immunology	PLI
095	Pediatric Nephrology	PNP
096	Pediatric Rheumatology	PPR
097	Sports Medicine - Pediatrics	PSM
098	Pediatric Cardiology	PDC
099	Preventive Medicine/Epidemiology/Public Health	EPI
099	Preventive Medicine/Epidemiology/Public Health	OE
099	Preventive Medicine/Epidemiology/Public Health	PH
099	Preventive Medicine/Epidemiology/Public Health	PHP
100	Physical Medicine & Rehabilitation	IAR
100	Physical Medicine & Rehabilitation	PDR
100	Physical Medicine & Rehabilitation	PM
100	Physical Medicine & Rehabilitation	RM
101	Hand Surgery-Plastic Surg	HSP
102	Plastic Surgery	OOP
102	Plastic Surgery	PLR
103	Anatomic Pathology	AP
104	Blood Banking-Transfusion Medicine	BBT
104	Blood Banking-Transfusion Medicine	LBM
105	Clinical Pathology	CLP
106	Dermatopathology	DPT
107	Hematology-Pathology	HEP
108	Medicine Microbiology	MMB
109	Neuropathology	NPT
110	Chemical Pathology	CP
111	Cytopathology	CY
112	Immunopathology	IPT
113	Pediatric Pathology	PP
114	Anatomic/Clinical Pathology	APL
114	Anatomic/Clinical Pathology	PTH
115	Radioisotopic Pathology	RIP
116	Pulmonary Diseases	PUD
116	Pulmonary Diseases	PUL
117	Nuclear Radiology	NR
118	Pediatric Radiology	PRD
119	Radiology	DUS
119	Radiology	R
119	Radiology	RI
119	Radiology	RT
119	Radiology	RTD
120	Neuroradiology	NRA
121	Radiological Physics	RP
122	Angiography & Intervent'l Radiology	ANG
122	Angiography & Intervent'l Radiology	SCL
123	Radiation Oncology	RO
123	Radiation Oncology	TR
124	Cardiovascular/Thoracic Cardiovascular Surgery	CVS

A8. (Continued:)

124	Cardiovascular/Thoracic Cardiovascular Surgery	TS
125	Urology	U
125	Urology	URS
126	Pediatric Urology	UP
127	Addictive Diseases	ADD
128	Critical Care-Medicine	CCM
129	Legal Medicine	LM
130	Clinical Pharmacology	PA
131	Unknown Blank	
133	Adolescent Medicine	ADL
134	Orthopedic Foot & Ankle Surg	OFA
135	Forensic Psychiatry	FPS
136	Hematology & Oncology	HEO
137	Internal Med-Pediatrics	IPD
139	Toxicology	TX
142	Psychosomatic Medicine	PYM
145	Pediatric Infectious Diseases	PID
146	Pediatric Ophthalmology	PO
147	Pulmonary-Critical Care	PUC
153	MOHS Micrographic Surgery	DMS
154	Hair Transplant	HT
155	Osteo Manipulative Treat +1	OM1
156	Spec Prof in Osteo Manip Med	OMM
157	Sports Medicine - OMM	OMS
158	Osteo Manipulative Medicine	OMT
159	Proctology	PR
160	Internship	IN
161	Retired	RET
162	Transitional Year	TY
209	Nuclear Cardiology	NC
997	Other (list) - **(USE VERY SPARINGLY; Thank and Terminate)**	
998	(DK) **(Thank and Terminate)**	
999	(Refused) **(Thank and Terminate)**	

_____ (526) (527) (528)

(If code "003", "005-007", "013-014", "018", "025", "028", "057", "099", "103-115", "117-123", "129-131", "135", "138-143", "148-149", "160-162" or "209" in #A8, read:) In this survey, we are only interviewing physicians in certain specialties, and your specialty is not among those being interviewed. So, it appears that we do not need any further information from you at this time, but we thank you for your cooperation. - **(Thank and Terminate)**

(If code "042", "088" or "137" in #A8, Continue;
If code "001-002", "004", "009", "012", "015-016", "020-022", "024", "035-041", "043-048", "055-056", "085", "116", "128", "136" or "147" in #A8, Skip to #A9a;
If code "017", "049-054", "063", "086-087", "089-094", "095-098", "133" or "144-145" in #A8, Skip to #A9b;
Otherwise, Skip to #A15)

A9. **(If code "042", "088" or "137" in #A8, ask:)** Do you spend more hours weekly in general **(response in #A8)**, or a subspecialty in **(response in #A8)**? **(INTERVIEWER NOTE: If respondent says "50/50 split", code as "1")**

1 General - **(Skip to #A15)**

2 Subspecialty (including adolescent medicine or geriatrics) - **(Skip to #A10)**

8 (DK) **(Skip to #A15)**
9 (Refused) **(Skip to #A15)** _____(529)

A9a. **(If code "001-002", "004", "009", "012", "015-016", "020-022", "024", "035-041", "043-048", "055-056", "085", "116", "128", "136" or "147" in #A8, ask:)** Do you spend most of your time practicing in **(response in #A8)**, or in general internal medicine? **(INTERVIEWER NOTE: If respondent says "50/50 split", code as "1")**

1 Subspecialty
2 General internal medicine (or general family practice)
3 General pediatrics
8 (DK)
9 (Refused) _____(1280)

(All in #A9a, Skip to #A15)

A9b. **If code "017", "049-054", "063", "086-087", "089-098", "133" or "144-145" in #A8, ask:)** Do you spend most of your time practicing in **(response in #A8)**, or in general pediatrics? **(INTERVIEWER NOTE: If respondent says "50/50 split", code as "1")**

1 Subspecialty
2 General internal medicine (General Family Practice)
3 General pediatrics
8 (DK)
9 (Refused) _____(877)

(All in #A9b, Skip to #A15)

A10. **(If code "2" in #A9, ask:)** And what is that subspecialty? **(If "More than one", read:)** We're interested in the one in which you spend the most hours weekly. (Open ended **and code from hard copy) (CHECK SPELLING)**

(If code "2" in S1 [MD-AMA LIST])

001	Allergy	(A)
133	Adolescent Medicine	(ADL)
127	Addiction Medicine	(ADM)
132	Addiction Psychiatry	(ADP)
002	Allergy & Immunology	(AI)
003	Allergy & Immunology/ Diagnostic Laboratory Immunology	(ALI)
005	Aerospace Medicine	(AM)
085	Adolescent Medicine	(AMI)
006	Anesthesiology	(AN)
007	Pain Management	(APM)
026	Abdominal Surgery	(AS)
103	Anatomic Pathology	(ATP)
104	Bloodbanking/Transfusion Medicine	(BBK)
049	Clinical Biochemical Genetics	(CBG)
008	Critical Care Medicine (Anesthesiology)	(CCA)
050	Clinical Cytogenetics	(CCG)
128	Critical Care Medicine	(CCM)
086	Critical Care Pediatrics	(CCP)
027	Critical Care Surgery	(CCS)
009	Cardiovascular Diseases (Cardiology)	(CD)
051	Clinical Genetics	(CG)
054	Child Neurology	(CHN)
010	Child & Adolescent Psychiatry	(CHP)
105	Clinical Pathology	(CLP)
052	Clinical Molecular Genetics	(CMG)
055	Clinical Neurophysiology	(CN)
011	Colon & Rectal Surgery	(CRS)
124	Cardiothoracic Surgery (Thoracic Surgery)	(CTS)
012	Dermatology	(D)
013	Clinical & Laboratory Dermatological Immunology	(DDL)
035	Diabetes	(DIA)
106	Dermatopathology	(DMP)
014	Diagnostic Radiology	(DR)
015	Emergency Medicine	(EM)
036	Endocrinology & Metabolism	(END)
016	Sports Medicine	(ESM)
140	Medical Toxicology (Emergency Medicine)	(ETX)
018	Forensic Pathology	(FOP)
019	Family Practice	(FP)
020	Geriatric Medicine	(FPG)
078	Facial Plastic Surgery	(FPS)
021	Sports Medicine	(FSM)
022	Gastroenterology	(GE)
061	Gynecological Oncology	(GO)
023	General Practice	(GP)
024	General Preventive Medicine	(GPM)
029	General Surgery	(GS)
062	Gynecology	(GYN)
037	Hematology	(HEM)

A10. (Continued:)

038	Hepatology	(HEP)
107	Hematology Pathology	(HMP)
030	Head & Neck Surgery	(HNS)
136	Hematology/Oncology	(HO)
070	Hand Surgery	(HSO)
101	Hand Surgery	(HSP)
031	Hand Surgery	(HSS)
039	Cardiac Electrophysiology	(ICE)
040	Infectious Diseases	(ID)
004	Immunology	(IG)
041	Clinical & Laboratory Immunology	(ILI)
042	Internal Medicine	(IM)
043	Geriatric Medicine	(IMG)
044	Sports Medicine	(ISM)
129	Legal Medicine	(LM)
138	Medical Management	(MDM)
063	Maternal & Fetal Medicine	(MFM)
053	Medical Genetics	(MG)
108	Medical Microbiology	(MM)
137	Internal Medicine/Pediatrics	(MPD)
099	Public Health & General Preventive Medicine	(MPH)
056	Neurology	(N)
058	Critical Care Medicine (Neurosurgery)	(NCC)
045	Nephrology	(NEP)
057	Nuclear Medicine	(NM)
109	Neuropathology	(NP)
087	Neonatal/Perinatal Medicine (Neonatology/Perinatology)	(NPM)
117	Nuclear Radiology	(NR)
059	Neurological Surgery	(NS)
060	Pediatric Neurosurgery	(NSP)
046	Nutrition	(NTR)
071	Adult Reconstructive Orthopedics	(OAR)
064	Obstetrics & Gynecology	(OBG)
065	Obstetrics	(OBS)
066	OB Critical Care Medicine	(OCC)
134	Foot & Ankle Orthopedics	(OFA)
068	Occupational Medicine	(OM)
072	Musculoskeletal Oncology	(OMO)
047	Medical Oncology	(ON)
073	Pediatric Orthopedics	(OP)
069	Opthalmology	(OPH)
074	Orthopedic Surgery	(ORS)
028	Other Specialty	(OS)
075	Sports Medicine (Orthopedic Surgery)	(OSM)
076	Orthopedic Surgery of the Spine	(OSS)
079	Otology	(OT)
080	Otolaryngology	(OTO)
077	Orthopedic Trauma	(OTR)
082	Psychiatry	(P)
130	Clinical Pharmacology	(PA)
147	Pulmonary Critical Care Medicine	(PCC)
110	Chemical Pathology	(PCH)
111	Cytopathology	(PCP)
088	Pediatrics	(PD)
089	Pediatric Allergy	(PDA)

A10. (Continued:)

098	Pediatric Cardiology	(PDC)
090	Pediatric Endocrinology	(PDE)
145	Pediatric Infectious Diseases	(PDI)
081	Pediatric Otolaryngology	(PDO)
091	Pediatric Pulmonology	(PDP)
118	Pediatric Radiology	(PDR)
032	Pediatric Surgery	(PDS)
139	Medical Toxicology (Pediatrics)	(PDT)
144	Pediatric Emergency Medicine	(PE)
017	Pediatric Emergency Medicine	(PEM)
135	Forensic Psychiatry	(PFP)
092	Pediatric Gastroenterology	(PG)
093	Pediatric Hematology/Oncology	(PHO)
112	Immunopathology	(PIP)
094	Clinical & Laboratory Immunology	(PLI)
143	Palliative Medicine	(PLM)
100	Physical Medicine & Rehabilitation	(PM)
142	Pain Medicine	(PMD)
095	Pediatric Nephrology	(PN)
146	Pediatric Opthalmology	(PO)
113	Pediatric Pathology	(PP)
096	Pediatric Rheumatology	(PPR)
102	Plastic Surgery	(PS)
097	Sports Medicine (Pediatrics)	(PSM)
114	Anatomic/Clinical Pathology	(PTH)
141	Medical Toxicology (Preventive Medicine)	(PTX)
116	Pulmonary Diseases	(PUD)
083	Psychoanalysis	(PYA)
084	Geriatric Psychiatry	(PYG)
119	Radiology	(R)
067	Reproductive Endocrinology	(REN)
048	Rheumatology	(RHU)
115	Radioisotopic Pathology	(RIP)
120	Neuroradiology	(RNR)
123	Radiation Oncology	(RO)
121	Radiological Physics	(RP)
150	Spinal Cord Injury	(SCI)
149	Sleep Medicine	(SM)
151	Surgical Oncology	(SO)
148	Selective Pathology	(SP)
033	Trauma Surgery	(TRS)
152	Transplant Surgery	(TTS)
125	Urology	(U)
025	Undersea Medicine	(UM)
126	Pediatric Urology	(UP)
131	Unspecified	(US)
122	Vascular & Interventional Radiology	(VIR)
034	Vascular Surgery	(VS)

997 Other (list) - **(USE VERY SPARINGLY; Thank and Terminate)**

998 (DK) **(Thank and Terminate)**
999 (Refused) **(Thank and Terminate)**

_____ (530) (531) (532)

(If code "1" in S1 [DO-AOA LIST])

002	Allergy and Immunology	AI
003	Allergy-Diagnostic Lab Immunology	ALI
004	Immunology	IG
005	Preventive Medicine-Aerospace Medicine	AM
006	Anesthesiology	AN
006	Anesthesiology	CAN
006	Anesthesiology	IRA
006	Anesthesiology	OBA
006	Anesthesiology	PAN
007	Pain Management	APM
007	Pain Management	PMR
008	Critical Care-Anesthesiology	CCA
009	Cardiovascular Diseases-Cardiology	C
009	Cardiovascular Diseases-Cardiology	CVD
009	Cardiovascular Diseases-Cardiology	IC
010	Pediatric Psychiatry	CHP
010	Pediatric Psychiatry	PDP
011	Colon & Rectal Surgery	CRS
012	Dermatology	D
014	Diagnostic Radiology	DR
015	Emergency Medicine	EM
015	Emergency Medicine	EMS
015	Emergency Medicine	FEM
015	Emergency Medicine	IEM
016	Sports Medicine (Emergency Medicine)	ESM
017	Pediatric Emergency Medicine	PEM
018	Forensic Pathology	FOP
019	Family Practice	FP
019	Family Practice	UFP
020	Geriatrics-General or Family Practice	GFP
020	Geriatrics-General or Family Practice	GGP
021	Sports Medicine-Family or General Practice	SFP
021	Sports Medicine-Family or General Practice	SGP
022	Gastroenterology	GE
023	General Practice	GP
024	Preventive Medicine	PVM
025	Undersea Medicine	UM
026	Abdominal Surgery	AS
027	Critical Care-Surgery or Trauma	CCS
027	Critical Care-Surgery or Trauma	CCT
028	Other Specialty	OS
029	Surgery-General	S
030	Head & Neck Surgery	HNS
031	Hand Surgery	HS
031	Hand Surgery	HSS
032	Pediatric Surgery	PDS
033	Traumatic Surgery	TRS
034	Vascular Surgery-General or Peripheral	GVS
034	Vascular Surgery-General or Peripheral	PVS
036	Endocrinology	END
037	Hematology	HEM
039	Cardiac Electrophysiology	ICE
040	Infectious Diseases	ID
041	Diag Lab Immunology-Int Med	ILI
042	Internal Medicine	IM

A10. (Continued:)

042	Internal Medicine	IP
043	Geriatrics-Internal Medicine	GER
043	Geriatrics-Internal Medicine	GIM
044	Sports Medicine	ISM
044	Sports Medicine	PMS
044	Sports Medicine	RMS
044	Sports Medicine	SM
045	Nephrology	NEP
046	Nutrition	NTR
047	Oncology	ON
048	Rheumatology	RHU
050	Clinical Cytogenetics	CCG
051	Clinical Genetics	CG
053	Medical Genetics	IMG
054	Pediatric or Child Neurology	CHN
054	Pediatric or Child Neurology	PDN
055	Clinical Neurophysiology	CN
056	Neurology	N
056	Neurology	NMD
056	Neurology	NP
056	Neurology	NPN
057	Nuclear Medicine	NI
057	Nuclear Medicine	NM
057	Nuclear Medicine	NV
058	Critical Care-Neuro Surgery	NCC
059	Neurological Surgery	NS
061	Gynecological Oncology	GO
062	Gynecology	GS
062	Gynecology	GYN
063	Maternal & Fetal Medicine	MFM
064	Obstetrics & Gynecology	OBG
064	Obstetrics & Gynecology	OGS
065	Obstetrics	OBS
066	Critical Care-Obstetrics & Gynecology	OCC
067	Reproductive Endocrinology	RE
068	Occupational Medicine	OCM
068	Occupational Medicine	OM
069	Ophthalmology	COR
069	Ophthalmology	OAS
069	Ophthalmology	OCR
069	Ophthalmology	OGL
069	Ophthalmology	OPH
069	Ophthalmology	VRS
070	Hand Surgery-Orthopedic Surg	HSO
071	Adult Reconstructive Orthopedics	OAR
072	Musculoskeletal Oncology	OMO
073	Pediatric Orthopedics	OP
074	Orthopedic Surgery	AJI
074	Orthopedic Surgery	OR
074	Orthopedic Surgery	ORS
075	Sports Medicine-Orthopedic Surgery	OSM
076	Orthopedic Surgery-Spine	OSS
078	Facial Plastic Surgery	OPL
080	Otolaryngology or Rhinology	OTL
080	Otolaryngology or Rhinology	OTR
080	Otolaryngology or Rhinology	RHI
081	Pediatric Otolaryngology	PDO
082	Psychiatry	P

A10. (Continued:)

083	Psychoanalysis	PYA
084	Geriatric Psychiatry	PYG
085	Adolescent Medicine-Family or General Practice	AFP
085	Adolescent Medicine-Family or General Practice	AGP
086	Pediatric Intensive Care	PIC
087	Neonatology	NE
088	Pediatrics	PD
089	Pediatric Allergy & Immunology	PAI
091	Pediatric Pulmology Medicine	PDX
092	Pediatric Gastroenterology	PG
093	Pediatric Hematology-Oncology	PHO
094	Pediatric Diag Lab Immunology	PLI
095	Pediatric Nephrology	PNP
096	Pediatric Rheumatology	PPR
097	Sports Medicine - Pediatrics	PSM
098	Pediatric Cardiology	PDC
099	Preventive Medicine/Epidemiology/Public Health	EPI
099	Preventive Medicine/Epidemiology/Public Health	OE
099	Preventive Medicine/Epidemiology/Public Health	PH
099	Preventive Medicine/Epidemiology/Public Health	PHP
100	Physical Medicine & Rehabilitation	IAR
100	Physical Medicine & Rehabilitation	PDR
100	Physical Medicine & Rehabilitation	PM
100	Physical Medicine & Rehabilitation	RM
101	Hand Surgery-Plastic Surg	HSP
102	Plastic Surgery	OOP
102	Plastic Surgery	PLR
103	Anatomic Pathology	AP
104	Blood Banking-Transfusion Medicine	BBT
104	Blood Banking-Transfusion Medicine	LBM
105	Clinical Pathology	CLP
106	Dermatopathology	DPT
107	Hematology-Pathology	HEP
108	Medicine Microbiology	MMB
109	Neuropathology	NPT
110	Chemical Pathology	CP
111	Cytopathology	CY
112	Immunopathology	IPT
113	Pediatric Pathology	PP
114	Anatomic/Clinical Pathology	APL
114	Anatomic/Clinical Pathology	PTH
115	Radioisotopic Pathology	RIP
116	Pulmonary Diseases	PUD
116	Pulmonary Diseases	PUL
117	Nuclear Radiology	NR
118	Pediatric Radiology	PRD
119	Radiology	DUS
119	Radiology	R
119	Radiology	RI
119	Radiology	RT
119	Radiology	RTD
120	Neuroradiology	NRA
121	Radiological Physics	RP
122	Angiography & Intervent'l Radiology	ANG
122	Angiography & Intervent'l Radiology	SCL
123	Radiation Oncology	RO
123	Radiation Oncology	TR
124	Cardiovascular/Thoracic Cardiovascular Surgery	CVS

A10. (Continued:)

124	Cardiovascular/Thoracic Cardiovascular Surgery	TS
125	Urology	U
125	Urology	URS
126	Pediatric Urology	UP
127	Addictive Diseases	ADD
128	Critical Care-Medicine	CCM
129	Legal Medicine	LM
130	Clinical Pharmacology	PA
131	Unknown Blank	
133	Adolescent Medicine	ADL
134	Orthopedic Foot & Ankle Surg	OFA
135	Forensic Psychiatry	FPS
136	Hematology & Oncology	HEO
137	Internal Med-Pediatrics	IPD
139	Toxicology	TX
142	Psychosomatic Medicine	PYM
145	Pediatric Infectious Diseases	PID
146	Pediatric Ophthalmology	PO
147	Pulmonary-Critical Care	PUC
153	MOHS Micrographic Surgery	DMS
154	Hair Transplant	HT
155	Osteo Manipulative Treat +1	OM1
156	Spec Prof in Osteo Manip Med	OMM
157	Sports Medicine - OMM	OMS
158	Osteo Manipulative Medicine	OMT
159	Proctology	PR
160	Internship	IN
161	Retired	RET
162	Transitional Year	TY
209	Nuclear Cardiology	NC
997	Other (list) - **(USE VERY SPARINGLY; Thank and Terminate)**	
998	(DK) **(Thank and Terminate)**	
999	(Refused) **(Thank and Terminate)**	

_____ (530) (531) (532)

A11. Are you board-certified in **(response in #A10)**?

1 Yes - **(Skip to #A19)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(878)

A12. **(If code "2" or "8-9" in #A11, ask:)** Are you board-eligible in **(response in #A10)**?

1 Yes
2 No
8 (DK)
9 (Refused) _____(533)

A13. Are you board-certified in **(response in #A8)**?

1 Yes - **(Skip to #A19)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(534)

(If code "1" in #A12, Skip to #A19; Otherwise, Continue)

A14. **(If code "2" or "8-9" in #A13, ask:)** Are you board-eligible in **(response in #A8)**?

1 Yes
2 No
8 (DK)
9 (Refused) _____(535)

(All in #A14, Skip to #A19)

A15. **(If code "137" in #A8, ask:)** Are you board-certified in **(response in #A8)**? **(INTERVIEWER NOTE: If physician is says "Board certified in Internal Medicine" or "Board certified in Pediatrics", code as "1")**

(Otherwise, ask:) Are you board-certified in **(response in #A8)**?

1 Yes - **(Skip to #A19)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(536)

A16. **(If code "2" or "8-9" in #A15 AND code "137" in #A8, ask:)** Are you board-eligible in **(response in #A8)**? **(INTERVIEWER NOTE: If physician says "Board eligible in Internal Medicine" or "Board eligible in Pediatrics", code as "1")**

(Otherwise, ask:) Are you board-eligible in **(response in #A8)**?

1 Yes
2 No
8 (DK)
9 (Refused) _____(537)

(If code "019", "023", "042", "088" or "137" in #A8, Skip to #A19; Otherwise, Continue)

A17. Are you board certified in any specialty?

1 Yes - **(Skip to #A19)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(538)

(If code "1" in #A16, Skip to #A19; Otherwise, Continue)

A18. **(If code "2" or "8-9" in #A17, ask:)** Are you board eligible in any specialty?

1 Yes
2 No
8 (DK)
9 (Refused) _____(539)

A19. Many of the remaining questions are about your practice and your relationships with patients. Before we begin those questions, let me ask you: Thinking very generally about your satisfaction with your overall career in medicine, would you say that you are CURRENTLY **(read 5-1)**?

CARSAT

5 Very satisfied
4 Somewhat satisfied
3 Somewhat dissatisfied
2 Very dissatisfied
1 OR, Neither satisfied nor dissatisfied

8 (DK)
9 (Refused) _____(540)

CLOCK: (2816-2819)

SECTION B
UTILIZATION OF TIME

B1. **(If code "2" in #A4 AND code "03-97", "DK" or "RF" in #A4a OR If code "8-9" in #A4, ask:)** Considering all of your practices, approximately how many weeks did you practice medicine during 1995? Exclude time missed due to vacation, illness and other absences. **(If necessary, read:)** Exclude family leave, military service, and professional conferences. If your office is closed for several weeks of the year, those weeks should NOT be counted as weeks worked. (Open ended **and code actual number)**

(If code "2" in #A4 AND code "02" in #A4a, ask:) Considering both of your practices, approximately how many weeks did you practice medicine during 1995? Exclude time missed due to vacation, illness and other absences. **(If necessary, read:)** Exclude family leave, military service, and professional conferences. If your office is closed for several weeks of the year, those weeks should NOT be counted as weeks worked. (Open ended **and code actual number)**

(If code "1" in #A4, ask:) Approximately how many weeks did you practice medicine during 1995? Exclude time missed due to vacation, illness and other absences. **(If necessary, read:)** Exclude family leave, military service, and professional conferences. If your office is closed for several weeks of the year, those weeks should NOT be counted as weeks worked. (Open ended **and code actual number)**

WKSWRKX

53-97	BLOCK
DK	(DK)
RF	(Refused)

_____ (541) (542)

B2. **(If code "2" in #A4 AND code "03-97", "DK" or "RF" in #A4a OR If code "8-9" in #A4, ask:)** Considering all of your practices, during your last complete week of work, approximately how many hours did you spend in all medically related activities? Please include all time spent in administrative tasks, professional activities and direct patient care. Exclude time on call when not actually working. (Open ended **and code actual number)**

(If code "2" in #A4 AND code "02" in #A4a, ask:) Considering both of your practices, during your last complete week of work, approximately how many hours did you spend in all medically related activities? Please include all time spent in administrative tasks, professional activities and direct patient care. Exclude time on call when not actually working. (Open ended **and code actual number)**

(If code "1" in #A4, ask:) During your last complete week of work, approximately how many hours did you spend in all medically related activities? Please include all time spent in administrative tasks, professional activities and direct patient care. Exclude time on call when not actually working. (Open ended **and code actual number)**

169-
997 BLOCK
DK (DK)
RF (Refused)

_____ (543) (544) (545)

B3. **(If code "001-168" in #B2, ask:)** Of these **(response in #B2)** hours, how many did you spend in direct patient care activities? **(If necessary, read:)** INCLUDE time spent on patient record-keeping, patient-related office work, and travel time connected with seeing patients. EXCLUDE 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. **(If appropriate, read:)** INCLUDE ALL PRACTICES, not just the main practice. (Open ended **and code actual number)**

(If code "DK" or "RF" in #B2, ask:) About how many hours did you spend in direct patient care activities? **(If necessary, read:)** INCLUDE time spent on patient record-keeping, patient-related office work, and travel time connected with seeing patients. EXCLUDE 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. **(If appropriate, read:)** INCLUDE ALL PRACTICES, not just the main practice. (Open ended **and code actual number)**

169-997	BLOCK			
DK	(DK)			
RF	(Refused)			
		____ (546)	____ (547)	____ (548)

(If response in #B3 = response in #B2, Continue;
If response in #B3 > response in #B2, Skip to B4;
Otherwise, Skip to #B6)

B3a. So, you spent all of your time working in direct patient care, is that right?

1	Yes - **(Skip to #B6)**	
2	No - **(Continue)**	
8	(DK) **(Skip to #B6)**	
9	(Refused) **(Skip to #B6)**	_____(575)

B3b. **(If code "2" in #B3a, ask:)** I have recorded that you spent **(response in #B2)** hours in all medically related activities and **(response in #B3)** hours in direct patient care. Which of these is incorrect?

1	All medically related activities hours - **(Continue)**	
2	Direct patient care hours - **(Skip to #B3d)**	
3	(Neither are correct) - **(Continue)**	
4	(Both are correct) **(Skip to #B6)**	
8	(DK) **(Skip to #B6)**	
9	(Refused) **(Skip to #B6)**	_____(576)

B3c. **(If code "1" or "3" in #B3b, ask:)** Thinking of your last complete week of work, approximately how many hours did you spend in all medically related activities? Please include all time spent in administrative tasks, professional activities and direct patient care. Exclude time on call when not actually working. (Open ended **and code actual number)**

169-
997 BLOCK
DK (DK)
RF (Refused)

_____ (577) (578) (579)

B3d. **(If code "2" or "3" in #B3b, ask:)** Thinking of your last complete week of work, about how many hours did you spend in direct patient care activities? **(If necessary, read:)** INCLUDE time spent on patient record-keeping, patient-related office work, and travel time connected with seeing patients. EXCLUDE 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. **(If appropriate, read:)** INCLUDE ALL PRACTICES, not just the main practice. (Open ended **and code actual number)**

169-
997 BLOCK
DK (DK)
RF (Refused)

_____ (674) (675) (676)

(All in #B3d, Skip to #B6)

B4. I may have made a recording mistake. My computer is showing that I*ve recorded more hours spent in direct patient care than in ALL medical activities. So, during your last complete week of work, approximately how many hours did you spend in ALL medically related activities? Please include all time spent in administrative tasks, professional activities and direct patient care, as well as any hours spent on call when actually working? (Open ended **and code actual number)**

169-
997 BLOCK
DK (DK)
RF (Refused)

_____ (549) (550) (551)

B5. And of those total [**(response in #B4)**] hours, about how many did you spend in direct patient care activities? **(If necessary, read:)** INCLUDE time spent on patient record-keeping, patient-related office work, and travel time connected with seeing patients. EXCLUDE 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. **(If appropriate, read:)** INCLUDE ALL PRACTICES, not just the main practice. (Open ended **and code actual number)**

169-997 BLOCK
DK (DK)
RF (Refused)

_____ (552) (553) (554)

B6.
HRFREEX

(If code "8-9" in #A4 OR If code "03-97", "DK" or "RF" in #A4a, ask:) Again thinking of all your practices, during the LAST MONTH, how many hours, if any, did you spend providing CHARITY care? By this we mean, that because of the financial need of the patient you charged either no fee or a reduced fee. Please do not include time spent providing services for which you expected, but did not receive, payment. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual number)**

(If code "02" in #A4a, ask:) Again thinking of both of your practices, during the LAST MONTH, how many hours, if any, did you spend providing CHARITY care? By this we mean, that because of the financial need of the patient you charged either no fee or a reduced fee. Please do not include time spent providing services for which you expected, but did not receive, payment. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual number)**

(If code "1" in #A4, ask:) During the LAST MONTH, how many hours, if any, did you spend providing CHARITY care? By this we mean, that because of the financial need of the patient you charged either no fee or a reduced fee. Please do not include time spent providing services for which you expected, but did not receive, payment. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual number)**

(If necessary, read:) EXCLUDE bad debt and time spent providing services under a discounted fee for service contract or seeing Medicare and

(If code "06" in "STATE", read:) MediCAL patients.

(If code "04" in "STATE", read:) AHCCCS ("Access") patients.

(If code "01-03", "05" or "07-56" in "STATE", read:) Medicaid patients.

(If necessary, read:) By the LAST MONTH, we mean the last 4 weeks.

B6. (Continued:)

DK (DK)
RF (Refused)

_____ (1064)(1065)(1066)

(If code "1" in #A4, Skip to SECTION C; Otherwise, Continue)

(If code "2" or "8-9" in #A4, read:) In many of the questions throughout this survey, we will be asking you to tell us about your main practice. By that we mean the one where you spend the most patient care hours in a typical week.

B7. **(If code "2" or "8-9" in #A4, ask:)** Of the time you spend in direct patient care, about what percentage do you typically spend in your main practice? **(Probe:)** Your best estimate would be fine. (Open ended **and code actual percent)**

PERCENT:

000	None			
001	1 percent or less			
101	Resp not given in percent/Resp given in hours			
DK	(DK)			
RF	(Refused)	(557)	(558)	(559)

HOURS:

000	None			
100	100+			
101	Response not given in hours			
DK	(DK)			
RF	(Refused)	(560)	(561)	(562)

CLOCK: (2824-2827)

SECTION C
TYPE AND SIZE OF PRACTICE

CA. PRACTICE: **(Code only)**

1 **(If code "1" in #A4:)** Practice

2 **(If code "2" or "8-9" in #A4, ask:)** Main Practice _____(563)

(READ:) Now I would like to ask you a series of questions about the **(response in #CA)** in which you work.

C1. Are you a full owner, a part owner, or not an owner of this practice? **(INTERVIEWER NOTE: A shareholder of the practice in which they work should be coded as "2 - Part owner")**

OWNPR

1	Full owner	**(Continue)**
2	Part owner	**(Continue)**
3	Not an owner	**(Skip to #C3)**
8	(DK)	**(Skip to #C3)**
9	(Refused)	**(Skip to #C3)**

_____(564)

C2. **(If code "1" or "2" in #C1, ask:)** Which of the following best describes this practice? Is it **(read 06-16, then 01)**? **(INTERVIEWER NOTE: A free-standing clinic includes ambulatory care, surgical and emergency care centers)**

TOPOWNX

01	OR, Something else (list)	
02-05	HOLD	
06	A practice owned by one physician (solo practice)	
07	A two physician practice	
08	A group practice of three or more physicians (see AMA definition on card)	
09	A group model HMO	**(Skip to #C7)**
10	A staff model HMO	**(Skip to #C7)**
11-15	HOLD	
16	A free-standing clinic	**(Skip to #C4)**
98	(DK)	**(Skip to #C4)**
99	(Refused)	**(Skip to #C4)**

_____ (565) (566)

(If code "1" in #C1 AND code "06" in #C2, Skip to #C7; Otherwise, Skip to #C4)

C3. **(If code "3" or "8-9" in #C1, ask:)** Which of the following best describes your current employer or employment arrangement? Are you employed by **(read 06-16, then 01)**? **(INTERVIEWER NOTE: Stop once response is given)** **(If necessary, read:)** An EMPLOYER is the entity that pays you and should not be confused with where you work. For instance, your employer could be a group practice even if you work in a hospital.

TOPEMPX

01	OR, Something else (do NOT list here) -	**(Skip to #C3b)**
02-05	HOLD	
06	A practice owned by one physician (solo practice) -	**(Skip to #C5)**
07	A two physician practice	**(Skip to #C4)**
08	A group practice of three or more physicians (see AMA definition on card)	**(Skip to #C4)**
09	A group model HMO	**(Skip to #C7)**
10	A staff model HMO	**(Skip to #C7)**
12	A medical school or university	**(Skip to #C10)**
13	A non-government hospital or group of hospitals	**(Skip to #C10)**
14	City, county or state government -	**(Continue)**
16	A free-standing clinic -	**(Skip to #C4)**
98	(DK)	**(Skip to #C3b)**
99	(Refused)	**(Skip to #C3b)**

_____ _____
(567) (568)

C3a. **(If code "14" in #C3, ask:)** Is this a hospital, clinic or some other setting?

1	Hospital
2	Clinic
3	Other (do NOT list)
8	(DK)
9	(Refused)

_____(678)

(All in #C3a, Skip to #C10)

C3b. **(If code "01" or "98-99" in #C3, ask:)** Are you employed by **(read 11-21, as appropriate, then 01)**?

01	Something else (list) -	**(Skip to #C10)**
02-10	HOLD	
11	Other HMO, insurance company or health plan	**(Skip to #C10)**
15	An integrated health or delivery system	**(Skip to #C10)**
17	A physician practice management company or other for-profit investment company	**(Skip to #C10)**
18	Community health center - **(Continue)**	
19	Management Services Organization (MSO)	**(Skip to #C10)**
20	Physician-Hospital Organization (PHO)	**(Skip to #C10)**
21	Locum tenens -	**(Skip to #C10)**
98	(DK)	**(Skip to #C4)**
99	(Refused)	**(Skip to #C4)**

_____ _____
(679) (680)

C4. Do one or more of the other physicians in the practice in which you work have an ownership interest?

OTHPAR

1	Yes	
2	No	
8	(DK)	
9	(Refused)	_____(569)

C5. Do any of the following have an ownership interest in the practice in which you work? This ownership interest may include ownership of only the assets or accounts receivable. Does **(read A-D)** have an ownership interest in the practice? **(If necessary, read:)** Do not include leased equipment.

1	Yes	
2	No	
8	(DK)	
9	(Refused)	
A.	Another physician group	_____(612)
B.	A hospital or group of hospitals	_____(613)
C.	An insurance company, health plan or HMO	_____(614)
D.	Any other organization **(listed on next screen)**	_____(615)

(If code "1" in #C5-D, Continue;
If code "2" to ALL in #C5 A-D, Skip to #C6a;
Otherwise, Skip to #C7)

C6. **(If code "1" in #C5-D, ask:)** What kinds of organizations are these? (Open ended and code) **(ENTER ALL RESPONSES)**

			*
01	Other (list)	1	_____(616)
02	(DK)	2	
03	(Refused)	3	
04	No others	4	
05	HOLD		
06	Integrated health or delivery system	6	
07	Physician practice management or other for-profit investment company	7	
08	Management Services Organization (MSO)	8	
09	Physician-Hospital Organization (PHO)	9	
10	University/Medical school	0	
11	Medical Foundation or Non-profit Foundation	1	_____(617)
12	Other Non-profit or community-based organization	2	
		HOLD	(618-627)

C6a. **(If code "3" in #C1 AND code "2" in #C4 AND code "2" to ALL in #C5 A-D, ask:)** Who owns the practice in which you work? (Open ended)

01 Other (list)
02 (DK)
03 (Refused)
04 HOLD
05 HOLD

_____ (772) (773)

C7. How many physicians, including yourself, are in the practice? Please include all locations of the practice. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual number)** **(INTERVIEWER NOTE: If asked, this includes both full- and part-time physicians)**

NPHYSX

997 997+
DK (DK)
RF (Refused)

_____ (628) (629) (630)

C8. How many physician assistants, nurse practitioners, nurse midwives, and clinical nurse specialists are employed by the practice including all locations? Include both full- and part-time employees in your answer. **(Probe:)** Please include only those who fit these categories. Your best estimate would be fine. (Open ended **and code actual number)** **(INTERVIEWER NOTE: Do NOT include office staff or nursing or other personnel who do not fit these categories; examples: LPNs or RNs who are not nurse practitioners or clinical nurse specialists should not be included)**

NASSISX

997 997+
DK (DK)
RF (Refused)

_____ (631) (632) (633)

(If code "08" in #C2 or #C3 AND code "025-997" in #C7, Continue; Otherwise, Skip to #C10)

C9. Is your practice either a group model HMO or organized exclusively to provide services to a group model HMO?

1 Yes
2 No
8 (DK)
9 (Refused) _____(634)

C10. In the last two years, were you part of a practice that was purchased by another practice or organization? **(If necessary, read:)** We are only interested in purchases over the last two years that occurred while you were part of the practice.

ACQUIRD

1 Yes - **(Continue)**

2 No **(Skip to "SECTION D")**
8 (DK) **(Skip to "SECTION D")**
9 (Refused) **(Skip to "SECTION D")** _____(635)

C11. **(If code "1" in #C10, ask:)** At the time of the purchase, were you a full owner, a part owner, or not an owner of the practice that was purchased? **(INTERVIEWER NOTE: If multiple purchases, ask about the most recent)**

OWNPURX

1 Full owner
2 Part owner
3 Not an owner
8 (DK)
9 (Refused) _____(636)

CLOCK: (2832-2835)

SECTION D
MEDICAL CARE MANAGEMENT

MANAGEMENT STRATEGIES

(READ:) Now I would like to ask you a series of questions about various medical care management techniques or strategies that are sometimes used to manage the care physicians provide to their patients. For each, I'll ask you how large an effect they have on your practice of medicine. The choices are: a very large effect, large, moderate, small, very small, or no effect at all. **(If code "2" or "8-9" in #A4, read:)** As you answer, please think only about your main practice.

D1. At present, **(read and rotate A-F)**? Would you say that (it has/they have) a **(read 5-0)**? **(If physician says "Do not use/receive", read:)** Does this mean (it has/they have) no effect?

5 Very large
4 Large
3 Moderate
2 Small
1 Very small
0 OR, no effect at all

8 (DK)
9 (Refused)

EFDATA

A. How large an effect does your use of computers to obtain or record clinical data, such as medical records and lab results, have on your practice of medicine **(INTERVIEWER NOTE: This could include the physician*s own computer system or that provided by a health insurance plan or HMO, hospital or other institution.)**

_____ _____(637)

EFTREAT

B. How large an effect does your use of computers to obtain information about treatment alternatives or recommended guidelines have on your practice of medicine **(INTERVIEWER NOTE: This could include the physician*s own computer system or that provided by a health insurance plan or HMO, hospital or other institution.)**

_____ _____(639)

D1. (Continued:)

EFRMNDR

C. **(If code "019-020", "023", "043", "062", "064-065", "085" or "133" in #A10/#A8, OR If code "1" in #A9, OR If code "2" or "3" in #A9a, OR If code "2" or "3" in #A9b, ask:)** How large an effect do reminders that you receive from either a medical group, insurance company or HMO alerting you about specific preventive services that may be due for your individual patients have on your practice of medicine **(INTERVIEWER NOTE: includes reminders from either the medical practice, insurance companies, clinics or HMOs. Does NOT include general educational material about preventive services or other reminders that are not about specific services for specific patients.)**

_____ _____(641)

EFGUIDE

D. How large an effect does your use of FORMAL, WRITTEN practice guidelines such as those generated by physician organizations, insurance companies or HMOs, or government agencies have on your practice of medicine **(INTERVIEWER NOTE: Exclude guidelines that are unique to the physician.) (If physician says that s/he uses his/her own guidelines, read:)** In this question, we are only interested in the use of formal, written guidelines such as those generated by physician organizations, insurance companies or HMOs, or other such groups.

_____ _____(643)

EFPROFL

E. How large an effect do the results of practice profiles comparing your pattern of using medical resources to treat patients with that of other physicians have on your practice of medicine **(INTERVIEWER NOTE: We are not interested in informal feedback, but only specific, quantified information about the physician*s practice patterns.)** **(If necessary, read:)** A practice profile is a report that is usually computer generated which compares you to other physicians on things like referrals to specialists, hospitalizations, or other measures of cost-effectiveness.

_____ _____(645)

EFSURV

F. How large an effect does feedback from patient satisfaction surveys have on your practice of medicine

_____ _____(647)

(There is no D2 - D6)

(If code "019-020", "023", "043", "085" or "133" in #A10/#A8, OR If code "1" in #A9, OR If code "2" or "3" in #A9a, OR If code "2" or "3" in #A9b, Continue; Otherwise, Skip to "READ" before #D11)

(READ:) Now I would like to ask you a couple of questions about the range and complexity of conditions you treat without referral to specialists.

D7. During the last 2 years, has the complexity or severity of patients* conditions for which you provide care without referral to specialists **(read 5-1)**? **(INTERVIEWER NOTE: If respondent says he/she has not been practicing medicine for 2 years, ask about time since he/she started.)**

CMPPROV

5 Increased a lot
4 Increased a little
3 Stayed about the same
2 Decreased a little
1 OR, Decreased a lot

8 (DK)
9 (Refused) _____(649)

D8. In general, would you say that the complexity or severity of patients* conditions for which you are currently expected to provide care without referral is **(read 5-1)**?

CMPEXPC

5 Much greater than it should be
4 Somewhat greater than it should be
3 About right
2 Somewhat less than it should be
1 OR, Much less than it should be

8 (DK)
9 (Refused) _____(650)

D9. During the last two years, has the number of patients that you refer to specialists **(read 5-1)**?

SPECUSE

5 Increased a lot
4 Increased a little
3 Stayed about the same
2 Decreased a little
1 Decreased a lot

8 (DK)
9 (Refused) _____(651)

D10. Some insurance plans or medical groups REQUIRE their enrollees to obtain permission from a primary care physician before seeing a specialist. For roughly what percent of your patients do you serve in this role? (Open ended **and code actual percent)**

(If necessary, read:) The term "gatekeeper" is often used to refer to this role.

(If necessary, read:) Include only those patients for whom it is required, not for patients who choose to do so voluntarily.

PCTGATE

000	None	**(Skip to SECTION E)**
001	1 percent or less	**(Skip to SECTION E)**
002-100		**(Skip to SECTION E)**
DK	(DK)	**(Continue)**
RF	(Refused)	**(Continue)**

_____ (652) (653) (654)

D10a **(If code "DK" or "RF" in #D10, ask:)** Would you say you serve in this role for **(read 1-2)**?

1 Less than 25 percent of your patients, OR - **(Skip to #D10c)**

2 25 percent or more of your patients - **(Continue)**

8	(DK)	**(Skip to SECTION E)**
9	(Refused)	**(Skip to SECTION E)**

_____(655)

D10b **(If code "2" in #D10a, ask:)** Would you say for **(read 1-2)**?

1 Less than 50 percent of your patients, OR
2 50 percent or more of your patients

8 (DK)
9 (Refused)

_____(656)

(All in #D10b, Skip to SECTION E)

D10c **(If code "1" in #D10a, ask:)** Would you say for **(read 1-2)**?

1 Less than 10 percent of your patients, OR
2 10 percent or more of your patients

8 (DK)
9 (Refused) _____(657)

(All in #D10c, Skip to SECTION E)

(READ:) Now I would like to ask you a couple of questions about the range and complexity of conditions you treat.

D11. During the last two years, has the complexity or severity of patients* conditions at the time of referral to you by primary care physicians **(read 5-1)**?

CMPCHG

5 Increased a lot
4 Increased a little
3 Stayed about the same
2 Decreased a little
1 OR, Decreased a lot

8 (DK)
9 (Refused) _____(658)

D12. In general, would you say that the complexity or severity of patients* conditions at the time of referral to you by primary care physicians is **(read 5-1)**?

CMPLVL

5 Much greater than it should be
4 Somewhat greater than it should be
3 About right
2 Somewhat less than it should be
1 OR, Much less than it should be

8 (DK)
9 (Refused) _____(659)

D13. During the last two years, has the number of patients referred to you by primary care physicians **(read 5-1)**?

CHGREF

5 Increased a lot
4 Increased a little
3 Stayed about the same
2 Decreased a little
1 OR, Decreased a lot

8 (DK)
9 (Refused) _____(660)

CLOCK: (2840-2843)

SECTION E
VIGNETTES

**(If code "019", "023" or "137" in #A8, OR
If code "2" or "3" in #A9a OR
If code "2" or "3" in #A9b, Continue;
Otherwise, Skip to "Note" after #EA)**

EA. Does your **(response in #CA)** include providing care to **(read 1-3)**?

WHOCARE

1 Adults only
2 Children only, OR
3 Both adults and children

8 (DK) **(Skip to SECTION F)**
9 (Refused) **(Skip to SECTION F)** _____(661)

**(If code "042" in #A8 AND code "1" in #A9, OR
If code "1" in #EA, code as "1" in "FORM";
If code "088" in #A8 AND code "1" in #A9, OR
If code "2" in #EA, code as "2" in "FORM";
If code "3" in #EA, code as "3" in "FORM";
Otherwise, Skip to SECTION F)**

FORM:

FORM

1 FORM 1 (Rotate E1, E3, E4, E5, E9 and E10)
2 FORM 2 (Rotate E11, E16, E17, E18, E20 and E21)
3 FORM 3 (Randomly select and rotate)
(Either E5 or E9 AND Either E1 or E10 AND
Either E3 or E4 AND Either E17 or E20 AND
Either E11 or E16 AND Either E18 or E21) _____(662)

(READ:) I am going to read a description of a patient and I*ll ask about a possible test, treatment, or recommendation. We want you to think about patients with similar problems you*ve seen in your own practice during the past twelve months. The key question I*ll ask is for what percentage of the patients with that problem would you recommend the test, treatment, or evaluation? Reasons for not recommending the treatment may include feeling that no treatment, or that an alternative treatment, is a better option. Any percentage, from zero to 100 percent, is a valid response.

(If code "2" or "8-9" in #A4, read:) As you answer, please think only about your main practice.

**(If code "2" in "FORM", Skip to #E11;
Otherwise, Continue)**

E1. **(If code "1" or "3" in "FORM", ask:)** What about treating an elevated cholesterol with oral agents for a 50 year old man who has no other cardiac risk factors except elevated cholesterol? After six months on a low cholesterol diet, his total cholesterol is 240 and his LDL is 150. His HDL cholesterol is 50, giving a ratio of total cholesterol to HDL cholesterol of 4.8. For what percentage of such patients would you recommend oral agents at this point? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VCHOL

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) - **(**	**Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (663) (664) (665)

E1a. **(If code "DK" in #E1, ask:)** Would you recommend oral agents **(read 6-1)**?

VCHOLF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(666)

(There is no #E2)

E3. **(If code "1" or "3" in "FORM", ask:)** What about a urology referral for further evaluation of symptoms of benign prostatic hyperplasia in a 60 year old man. He is moderately symptomatic, has no evidence of renal compromise or cancer. The patient is somewhat bothered by these symptoms. For what percentage of such patients would you recommend a urology referral? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VHYPER

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (712) (713) (714)

E3a. **(If code "DK" in #E3, ask:)** Would you recommend a urology referral **(read 6-1)**?

VHYPERF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(715)

E4. **(If code "1" or "3" in "FORM", ask:)** What about a cardiology referral after a stress test for a 50 year old man with a one month history of exertional chest pain. On no medications, after 6 minutes of exercise, he developed 2 millimeters of ST depression in leads II, III, and F. For what percentage of such patients would you recommend a cardiology referral at this point? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VCHEST

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (716) (717) (718)

E4a. **(If code "DK" in #E4, ask:)** Would you recommend a cardiology referral **(read 6-1)**?

VCHESTF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(719)

E5. **(If code "1" or "3" in "FORM", ask:)** What about an MRI for a 35-year-old man who developed low back pain after shoveling snow three weeks ago. He presents to the office for an evaluation. On examination there is a new left foot drop. For what percentage of such patients would you recommend an MRI? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VBACK

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (720) (721) (722)

E5a. **(If code "DK" in #E5, ask:)** Would you recommend an MRI **(read 6-1)**?

VBACKF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(723)

(There is no #E6 - #E8)

E9. **(If code "1" or "3" in "FORM", ask:)** What about PSA screening in an asymptomatic 60 year old white man who has no family history of prostate cancer and a normal digital rectal exam. For what percentage of such patients would you recommend a PSA (Prostate Specific Antigen) test? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

V60MAN

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) - **(**	**Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (736) (737) (738)

E9a. **(If code "DK" in #E9, ask:)** Would you recommend a PSA test **(read 6-1)**?

V60MANF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(739)

E10. **(If code "1" or "3" in "FORM", ask:)** What about recommending an office visit for a 40 year old monogamous, married woman who calls to report a two day history of vaginal itching and thick white discharge. She has no abdominal pain or fever. For what percentage of such patients would you recommend an office visit to evaluate the vaginal discharge? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VVITCH

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) - **(**	**Continue)**
RF	(Refused) -	**Skip to "Next item")**

_____ (740) (741) (742)

E10a **(If code "DK" in #E10, ask:)** Would you recommend an office visit **(read 6-1)**?

VVITCHF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(743)

(If code "1" in "FORM", Skip to SECTION F; Otherwise, Continue)

E11. **(If code "2" or "3" in "FORM", ask:)** What about use of DDAVP for an otherwise healthy 10 year old boy who presents with long-term primary enuresis (en-your-ee-sis), repeatedly negative urinalysis and cultures, and who has failed fluid restriction and environmental interventions. For what percentage of such patients would you recommend DDAVP? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VENUR

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) - **(**	**Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (744) (745) (746)

E11a **(If code "DK" in #E11, ask:)** Would you recommend DDAVP **(read 6-1)**?

VENURF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(747)

(There is no #E12 - #E15)

E16. **(If code "2" or "3" in "FORM", ask:)** What about an office visit for an otherwise healthy 10 year old boy whose parent calls to report a two day history of fever to 101 degrees, sore throat, nasal stuffiness, and no other signs or symptoms. For what percentage of such patients would you recommend an office visit in the next day or so? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VTHRT

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (764) (765) (766)

E16a **(If code "DK" in #E16, ask:)** Would you recommend an office visit in the next day or so **(read 6-1)**?

VTHRTF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(767)

E17. **(If code "2" or "3" in "FORM", ask:)** What about a chest x-ray for a previously healthy 10 year old girl with a three day history of fever to 101.5, productive cough, tachypnea (tah-kip-knee-uh) and rales at the right base. She is taking fluids, is uncomfortable, but not in acute distress. For what percentage of such patients would you recommend a chest x-ray? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VCOUGH

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ ____ ____ ____
(768) (769) (770)

E17a **(If code "DK" in #E17, ask:)** Would you recommend a chest x-ray **(read 6-1)**?

VCOUGHF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(771)

E18. **(If code "2" or "3" in "FORM", ask:)** What about referral to an ENT specialist for PE tubes for an otherwise healthy 24 month old girl who presents with a history of six episodes of suppurative (SUPper-uh-tive) otitis media over the last year, treated with antibiotics with complete clearing. After her fifth episode she was placed on prophylactic antibiotics, but had a recurrence that again responded completely to antimicrobials. She is otherwise in good health and has normal hearing. For what percentage of such patients would you recommend referral to an ENT specialist for placement of PE tubes? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VSUPOT

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (812) (813) (814)

E18a **(If code "DK" in #E18, ask:)** Would you recommend referral to an ENT specialist for placement of PE tubes **(read 6-1)**?

VSUPOTF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(815)

(There is no #E19)

E20. **(If code "2" or "3" in "FORM", ask:)** What about a sepsis workup including at least a CBC, sterile urine, and blood cultures, for a well-appearing and otherwise normal, full-term six week old child with a fever of 101. In what percentage of such patients would you recommend a sepsis workup including at least a CBC, sterile urine, and blood cultures? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

V6FEVR

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) -	**(Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (820) (821) (822)

E20a **(If code "DK" in #E20, ask:)** Would you recommend a sepsis workup **(read 6-1)**?

V6FEVRF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(823)

E21. **(If code "2" or "3" in "FORM", ask:)** What about referral to an allergist for a four year old with eczema and seasonal asthma whose asthma has been managed with intermittent oral steroids and bronchodilators. The frequency of asthma attacks is increasing despite prophylactic use of inhaled steroids. For what percentage of such patients would you recommend referral to an allergist for evaluation? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Consider all your patients with similar clinical descriptions.

VECZEM

000	None	**(Skip to "Next item")**
001	1 percent or less	**(Skip to "Next item")**
002-100		**(Skip to "Next item")**
DK	(DK) - **(**	**Continue)**
RF	(Refused) -	**(Skip to "Next item")**

_____ (824) (825) (826)

E21a **(If code "DK" in #E21, ask:)** Would you recommend referral to an allergist for evaluation **(read 6-1)**?

VECZEMF

6	Always
5	Almost always
4	Frequently
3	Sometimes
2	Rarely, OR
1	Never
8	(DK)
9	(Refused)

_____(827)

CLOCK: (2848-2851)

SECTION F
PHYSICIAN-PATIENT INTERACTIONS

F1. Next I am going to read you several statements. For each, I*d like you to tell me if you agree strongly, agree somewhat, disagree somewhat, disagree strongly, or if you neither agree nor disagree. **(If code "2" or "8-9" in #A4, read:)** As you answer, please think only about your main practice. **(Read and rotate A-E and H, then F and G)** Do you **(read 5-1)**? **(If necessary, read:)** We'd like you to think across all patients that you see in your practice.

5 Agree strongly
4 Agree somewhat
3 Disagree somewhat
2 Disagree strongly
1 OR, do you neither agree nor disagree

7 (Doctor does not have office) [A only]
7 (Doctor does not have continuing relationship with patients) [H only]
8 (DK)
9 (Refused)

A. I have adequate time to spend with my patients during their office visits? **(INTERVIEWER NOTE: Do not further differentiate the level of visit, that is, whether brief, intermediate, etc.)** **(If necessary, read:)** We would like you to answer in general or on AVERAGE over all types of visits.
_____ _____(828)

B. **(If code "7" in #F1-A, ask:)** I have adequate time to spend with my patients during a typical patient visit **(INTERVIEWER NOTE: This does not include surgery)**
_____ _____(871)

CLNFREE
C. I have the freedom to make clinical decisions that meet my patients* needs
_____ _____(829)

HIGHCAR
D. It is possible to provide high quality care to all of my patients
_____ _____(830)

NEGINCN
E. I can make clinical decisions in the best interests of my patients without the possibility of reducing my income
_____ _____(831)

USESPCS
F. **(If code "019-020", "023", "043", "085" or "133" in #A10/#A8, OR If code "1" in #A9, OR If code "2" or "3" in #A9a, OR If code "2" or "3" in #A9b, ask:)** The level of communication I have with specialists about the patients I refer to them is sufficient to ensure the delivery of high quality care
_____ _____(832)

F1. (Continued:)

COMPRM

G. **(If "BLANK" in F1-F, ask:)** The level of communication I have with primary care physicians about the patients they refer to me is sufficient to ensure the delivery of high quality care

_____ _____(833)

PATREL

H. It is possible to maintain the kind of continuing relationships with patients over time that promote the delivery of high quality care

_____ _____(834)

(There is no F2 - F7)

F8. Now I'm going to ask you about obtaining certain services for patients in your **(response in #CA)** when you think they are medically necessary. How often are you able to obtain **(read and rotate A, B and E, then read and rotate C and D, then read and rotate F and G, as appropriate)** when you think (they are/it is) medically necessary? Would you say **(read 6-1)**? **(If physician says it depends on which patients, read:)** We'd like you to think across all the patients that you see in your **(response in #CA)** and tell us how often you are able to obtain these services when you think they are medically necessary.

6 Always
5 Almost always
4 Frequently
3 Sometimes
2 Rarely
1 OR, Never

7 (Does not apply)
8 (DK)
9 (Refused)

OBREFS

A. **(If code "019", "020", "023", "043", "085" or "133" in #A10/#A8 OR code "1" in #A9 OR code "2" or "3" in #A9a OR code "2" or "3" in #A9b, ask:)**
Referrals to specialists of high quality

(Otherwise, ask:)
Referrals to other specialists of high quality _____(835)

OBANCL

B. High quality ancillary services, such as physical therapy, home health care, nutritional counseling, and so forth _____(836)

OBHOSP

C. Non-emergency hospital admissions _____(837)

OBINPAT

D. Adequate number of inpatient days for your hospitalized patients _____(838)

OBIMAG

E. High quality Diagnostic Imaging Services _____(839)

F8. (Continued:)

OBMENTL

F. **(If code "010", "019", "020", "023", "043", "062", "064-065", "082-085", "127", "132" or "133" in #A10/#A8 OR code "1" in #A9 OR code "2" or "3" in #A9a OR code "2" or "3" in #A9b, ask:)**
High quality INPATIENT MENTAL health care _____(840)

OBOUTPT

G. **(If code "010", "019", "020", "023", "043", "062", "064-065", "082-085", "127", "132" or "133" in #A10/#A8 OR code "1" in #A9 or code "2" or "3" in #A9a OR code "2" or "3" in #A9b, ask:)**
High quality OUTPATIENT MENTAL health services _____(841)

F9. Now I*d like to ask you about new patients the practice in which you work might be accepting. Is the practice accepting all, most, some, or no new patients who are insured through **(read A-C)**? **(INTERVIEWER NOTE: Medicaid and Medicare beneficiaries who are enrolled in managed care plans should be included in A or B, respectively.)**

4 All
3 Most
2 Some
1 No new patients/None

8 (DK)
9 (Refused)

NWMCARE

A. Medicare, including Medicare managed care patients _____(843)

NWMCAID

B. **(If code "06" in "STATE", ask:)**
MediCAL, including MediCAL managed care patients

(If code "04" in "STATE", ask:)
AHCCCS ("Access")

(If code "01-03", "05" or "07-56" in "STATE", ask:)
Medicaid, including Medicaid managed care patients _____(842)

NWPRIV

C. Private or commercial insurance plans including managed care plans and HMOs with whom the practice has contracts
(If necessary, read:) This includes both fee for service patients and patients enrolled in managed care plans with whom the practice has a contract. It excludes Medicaid or Medicare managed care _____(844)

CLOCK: (2856-2859)

SECTION G
PRACTICE REVENUE

G1. Now I'm going to ask you some questions about the patient care revenue received by the **(response in #CA)** in which you work. Approximately what percentage of the PRACTICE REVENUE FROM PATIENT CARE would you say comes from **(read A-B)**? (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** We're asking about the patient care revenue of the practice in which you work, not just the revenue from the patients YOU see. **(INTERVIEWER NOTE: "Other public insurance" includes Champus, Champva adn Tricare)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

A. Payments from all Medicare, including Medicare managed care

_____ (845) (846) (847)

B. **(If code "06" in "STATE", ask:)**
Payments from MediCAL or any other public insurance, including Medicaid managed care

(If code "04" in "STATE", ask:)
Payments from AHCCCS ("Access") or any other public insurance

(If code "01-03", "05" or "07-56" in "STATE", ask:)
Payments from Medicaid or any other public insurance, including Medicaid managed care

_____ (848) (849) (850)

(There is no C or D)

(If response in #G1-A + response in #G1-B > 100, Continue; Otherwise, Skip to #G3)

G1a. I have recorded that the combined practice revenue from Medicare and Medicaid is greater than 100 percent, can you help me resolve this? Approximately what percentage of the practice's revenue from patient care comes from **(read A-B)**? **(INTERVIEWER NOTE: Revenue from patients covered by both Medicare and Medicaid should be counted in MEDICARE ONLY)** (Open ended **and code actual percent)** **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** We're asking about the patient care revenue of the practice in which you work, not just the revenue from the patients YOU see.

000 None
001 1 percent or less
DK (DK)
RF (Refused)

A. Payments from all Medicare, including Medicare managed care

_____ (845) (846) (847)

B. **(If code "06" in "STATE", ask:)**
Payments from MediCAL or any other public insurance, including Medicaid managed care

(If code "04" in "STATE", ask:)
Payments from AHCCCS ("Access") or any other public insurance

(If code "01-03", "05" or "07-56" in "STATE", ask:)
Payments from Medicaid or any other public insurance, including Medicaid managed care

_____ (848) (849) (850)

(There is no #G2)

G3. Now again 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? **(If necessary, read:)** Under capitation, a fixed amount is paid per patient per month regardless of services provided. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual percent)** **(INTERVIEWER NOTE: Includes payments made on a capitated or other prepaid basis from Medicare or Medicaid)**

000 None
001 1 percent or less
002-100
DK (DK)
RF (Refused)

_____ (938) (939) (940)

(There is no #G3a - #G5)

G6. Thinking again about the practice in which you work, we have a few questions about contracts with managed care plans such as HMOs, PPOs, IPAs and Point-Of-Service plans. First, roughly how many managed care contracts does the practice have? **(Probe:)** Your best estimate would be fine. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. **(INTERVIEWER NOTE: Include Medicare managed care, Medicaid managed care, and other government managed care contracts but not traditional Medicare or Medicaid.)** (Open ended **and code actual number)**

00	None -	**(Skip to #G7)**
01-19		**(Skip to #G8)**
20-97		**(Skip to #G6b)**
DK	(DK)	**(Continue)**
RF	(Refused)	**(Continue)**

_____ (958) (959)

G6a. **(If code "DK" or "RF" in #G6, ask:)** Would you say less than 3 contracts, 3 to 10, or more than 10 contracts?

0	(None) -	**(Skip to #G7)**
1	Less than 3 (1 or 2)	**(Skip to #G8)**
2	3 to 10	**(Skip to #G8)**
3	More than 10 (11+)	**(Skip to #G8)**
8	(DK)	**(Skip to #G8)**
9	(Refused)	**(Skip to #G8)** _____(960)

G6b. **(If code "20-97" in #G6, ask:)** Just to be sure, is this the number of contracts, or patients?

1	Contracts -	**(Skip to #G8)**
2	Patients -	**(Continue)**
8	(DK)	**(Skip to #G8)**
9	(Refused)	**(Skip to #G8)** _____(860)

G6c. **(If code "2" in #G6b, ask:)** In this question, we are asking about contracts. So, roughly how many managed care CONTRACTS does the practice have? (Open ended **and code actual number)**

00 None - **(Continue)**

01-
97 **(Skip to #G8)**

DK (DK) **(Skip to #G8)**
RF (Refused) **(Skip to #G8)**

_____ (861) (862)

G7. **(If code "00" in #G6 or code "0" in #G6a or code "00" in #G6c, ask:)** What percentage, if any, of the patient care revenue received by the practice in which you work comes from all managed care combined? Please include ALL revenue from managed care including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care programs include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ (863) (864) (865)

(All in #G7, Skip to SECTION H)

G8. **(If code "02-97" in #G6c or code "1-3" in #66a or code "02-97" in #G6, ask:)** What percentage of the patient care revenue received by the practice in which you work comes from these **(response in #G6c/#G6a/#G6)** managed care contracts combined? **(If code "001-100", "DK" or "RF in #G3, read:)** Please include ALL revenue from these contracts including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

(If code "01" in #G6c or #G6, ask:) What percentage of the patient care revenue received by the practice in which you work comes from this managed care contract? **(If code "001-100", "DK", or "RF", read:)** Please include ALL revenue from this contract including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe once lightly:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

(If code "DK" or "RF" in #G6c or code "8" or "9" in #G6a, ask:) What percentage of the patient care revenue received by the practice in which you work comes from all of the practice's managed care contracts combined? **(If code "001-100", "DK", or "RF", read:)** Please include ALL revenue from these contracts including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe once lightly:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

000	None	**(Continue)**
001	1 percent or less	**(Continue)**
002-100		**(Continue)**
DK	(DK)	**(Skip to #G9)**
RF	(Refused)	**(Skip to #G9)**

_____ _____ (962) _____ (963) _____ (964)

(If response in #G8 is less than response in #G3, Continue;
If response in #G3 + response in #G8="0", Skip to SECTION H;
If response in G8 > "000", Skip to #G8d)

G8a. **(If response in #G8 is less than response in #G3, ask:)** I have recorded that your revenue from all managed care contracts is less than the amount you received on a capitated or prepaid basis. We would like you to include all capitated payments in estimating managed care revenue. Would you like to change your answer of **(read 1-2)**?

1 **(Response in #G8)** percent from all managed care contracts, OR - **(Continue)**

2 **(Response in #G3)** percent received on a capitated or prepaid basis - **(Skip to #G8c)**

3 (Both) - **(Continue)**

4 (Neither) **(Skip to "Note" before #G9)**
8 (DK) **(Skip to "Note" before #G9)**
9 (Refused) **(Skip to "Note" before #G9)** _____(965)

(If code "01-19" in #G6, Skip to #G8b;
If code "20-97" in #G6 AND code "1" in #G6b, Skip to #G8b;
If code "8", "9" or "BLANK" in #G6a AND
code "DK", "RF" or "BLANK" in #G6c,
Skip to #G8d;
Otherwise, Continue)

G8b. **(If code "1" or "3" in #G8a, ask:)**

(If code "02-97" in #G6c or code "1-3" in #G6a or code "02-97" in #G6, ask:) So, what percentage of the practice's revenue from patient care would you say comes from all of these managed care contracts combined? (Open ended **and code actual percent)**

(If code "01" in #G6c or #G6, ask:) So, what percentage of the practice's revenue from patient care would you say comes from this managed care contract? (Open ended **and code actual percent)**

000 None - **(Skip to SECTION H)**

001 1 percent or less
DK (DK)
RF (Refused)

_____ (966) (967) (968)

G8c. **(If code "2" or "3" in #G8a, ask:)** So what percentage of patient care revenue received by the practice in which you work is paid on a capitated or other prepaid basis? **(If necessary, read:)** Under capitation, a fixed amount is paid per patient per month regardless of services provided. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual percent)**

000 None
001 1 percent or less
002-
100
DK (DK)
RF (Refused)

_____ (872) (873) (874)

G8d. **(If response in #G8=response in #G3, ask:)** So, all of the practice's managed care revenue is paid on a capitated, or prepaid basis, is this correct?

1 Yes - **(Skip to "Note" before #G9)**

2 No - **(Continue)**

8 (DK) **(Skip to "Note" before #G9)**
9 (Refused) **(Skip to "Note" before #G9)** _____(866)

G8e. **(If code "2" in #G8d, ask:)** I have recorded that **(response in #G8)** percent of the practice revenue is from managed care and that **(response in #G3)** percent of the practice revenue is paid on a capitated or prepaid basis. Which of these is incorrect?

1 Revenue from managed care - **(Continue)**

2 Revenue paid on capitated or prepaid basis - **(Skip to #G8g)**

3 Both are correct - **(Skip to "Note" before #G9)**

4 Neither are correct - **(Continue)**

8 (DK) **(Skip to "Note" before #G9)**
9 (Refused) **(Skip to "Note" before #G9)** _____(867)

G8f. **(If code "1" or "4" in #G8e, ask:)**

(If code "02-97" in #G6c or #G6 or code "1-3" in #G6a, ask:) What percentage of the patient care revenue received by the practice in which you work comes from these [**(response in #G6c/#G6)**] managed care contracts combined? **(If code "001-100", "DK" or "RF in #G3, read:)** Please include ALL revenue from these contracts including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

(If code "01" in #G6c or #G6, ask:) What percentage of the patient care revenue received by the practice in which you work comes from this managed care contract? Please include ALL revenue from this contract including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

(If code "DK" or "RF" in #G6c or code "8" or "9" in #G6a, ask:) What percentage of the patient care revenue received by the practice in which you work comes from all of the practice's managed care contracts combined? Please include ALL revenue from these contracts including, but not limited to, any payments made on a capitated or prepaid basis. **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care contracts include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. **(If necessary, read:)** Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

000	None -	**(Skip to SECTION H)**
001	1 percent or less	**(Continue)**
002-100		**(Continue)**
DK	(DK)	**(Continue)**
RF	(Refused)	**(Continue)**

_____ (868) (869) (870)

G8g. **(If code "2" or "4" in #G8e, ask:)** Now 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? **(If necessary, read:)** Under capitation, a fixed amount is paid per patient per month regardless of services provided. **(Probe:)** Your best estimate would be fine. (Open ended **and code actual percent)** **(INTERVIEWER NOTE: Includes payments made on a capitated or other prepaid basis from Medicare or Medicaid)**

000 None
001 1 percent or less
002-100
DK (DK)
RF (Refused)

_____ (671) (672) (673)

(If code "01" in #G6c or #G6, Skip to "Note" before #G11; Otherwise, Continue)

G9. **(If code "000-100" in #G8, ask:)** Now thinking of the ONE managed care contract that provides the largest amount of revenue for the practice in which you work, what percentage of the practice revenue would you say comes from this contract? **(Probe:)** Your best estimate will be fine. (Open ended **and code actual percent)**

(If code "DK" or "RF" in #G8, ask:) Would you be able to estimate, what percentage of the practice's revenue comes from the ONE contract that provides the largest amount of revenue in the practice in which you work? **(Probe:)** Your best estimate will be fine. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ (969) (970) (971)

(If code "8" or "9" in #G6a or "DK" or "RF" in #G6c, Skip to "Note" before #G11; Otherwise, Continue)

(If response in #G9 > response in #G8b, Continue;
If response in #G9 = response in #G8b AND
NOT code "01" in #G6, Skip to #G9c;
If "BLANK" in #G8b, Continue;
If response in #G9 > response in #G8, Continue;
If response in #G9 = response in #G8 AND
NOT code "1" in #G6, Skip to #G9c
Otherwise, Skip to "Note" before #G11)

G9a. I have recorded that the percentage of revenue that comes from the largest managed care contract is greater than the total revenue from all managed care contracts. Can you help me resolve this? What percentage of the practice's revenue from patient care would you say comes from the **(response in #G6c/#G6a/#G6)** managed care contracts combined? **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care plans include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ (1012) (1013) (1014)

G9b. Now thinking of the ONE managed care contract that provides the largest amount of revenue for the practice in which you work, what percentage of the practice revenue would you say comes from this contract? **(Probe:)** Your best estimate will be fine. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ (1015) (1016) (1017)

(All in #G9b, Skip to "Note" before #G11)

G9c. I may have recorded something incorrectly. Earlier I recorded that the practice in which you work has more than one managed care contract. But, I have also recorded that the percentage of revenue that comes from the largest managed care contract is the same as the total revenue from all managed care contracts. Can you help me resolve this? How many managed care contracts does the practice in which you work have with health insurers or payers? **(If necessary, read:)** Managed care plans include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. **(INTERVIEWER NOTE: Can include Medicare managed care, Medicaid managed care, and other government managed care contracts but not traditional Medicare or Medicaid.)** (Open ended **and code actual number)**

00 - **(Skip to SECTION H)**

01 One - **(Skip to "Note" before #G11)**

02-
97 **(Continue)**
DK (DK) **(Continue)**
RF (Refused) **(Continue)**

_____ (1018) (1019)

G9d. What percentage of the practice's revenue from patient care would you say comes from these **(response in #G9c)** managed care contracts combined? **(Probe:)** Your best estimate will be fine. **(If necessary, read:)** Managed care plans include, but are not limited to those with HMOs, PPOs, IPAs, and point-of-service plans. Managed care includes any type of group health plan using financial incentives or specific controls to encourage utilization of specific providers associated with the plan. Direct contracts with employers that use these mechanisms are also considered managed care. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ (1020) (1021) (1022)

G9e. Now thinking of the ONE managed care contract that provides the largest amount of revenue for the practice in which you work, what percentage of the practice revenue would you say comes from this contract? **(Probe:)** Your best estimate will be fine. (Open ended **and code actual percent)**

000 None
001 1 percent or less
DK (DK)
RF (Refused)

_____ _____(1023) _____(1024) _____(1025)

(There is no #G10)

(If response in #G3 = response in #G8 AND code "1" in #G8d, Skip to SECTION H; If code "000" in #G3, Skip to "SECTION H"; Otherwise, Continue)

G11. Would you say that all, most, some, or none of the patient care revenue received from this managed care contract is paid on a capitated or prepaid basis?

CAPAMTC

4 All
3 Most
2 Some
1 None

8 (DK)
9 (Refused) _____(1028)

(There is no #G12)

CLOCK: (2864-2867)

SECTION H
PHYSICIAN COMPENSATION METHODS & INCOME LEVEL

(If code "1" in #C1 AND code "06" in #C2, Skip to #H9; Otherwise, Continue)

(READ:) Now, I'm going to ask you a few questions about how the practice compensates you personally.

(If code "2" or "8-9" in #A4, read:) Again, please answer only about the main practice in which you work.

H1. Are you a salaried physician?

SALPAID

1 Yes - **(Skip to #H3)**

2 No **(Continue)**
8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(1030)

H2. **(If code "2" or "8-9" in #H1, ask:)** Are you paid in direct relation to the amount of time you work, such as by the shift or by the hour?

SALTIME

1 Yes - **(Skip to #H4)**

2 No **(Skip to #H7)**
8 (DK) **(Skip to #H7)**
9 (Refused) **(Skip to #H7)** _____(1031)

H3. **(If code "1" in #H1, ask:)** Is your base salary a fixed amount that will not change until your salary is renegotiated or is it adjusted up or down during the present contract period depending on your performance or that of the practice? **(If necessary, read:)** Adjusted up or down means for example, some practices pay their physicians an amount per month that is based on their expected revenue, but this amount is adjusted periodically to reflect actual revenue produced. **(INTERVIEWER NOTE: Base salary is the fixed amount of earnings, independent of bonuses or incentive payments.)**

SALADJ

1 Fixed amount - **(Continue)**

2 Adjusted up or down - **(Skip to #H7)**

8 (DK) **(Continue)**
9 (Refused) **(Continue)** _____(1032)

H4. **(If code "1" in #H2 OR code "1" or "8-9" in #H3, ask:)** Are you also currently eligible to earn income through any type of bonus or incentive plan? **(INTERVIEWER NOTE: Bonus can include any type of payment above the fixed, guaranteed salary.)**

BONUS

1 Yes
2 No
8 (DK)
9 (Refused) _____(1033)

H5. I am going to read you a short list of factors that are sometimes taken into account by medical practices when they determine the compensation paid to physicians in the practice. For each factor, please tell me whether or not it is EXPLICITLY considered

(If code "1" in #H1 AND code "2" or "8-9" in #H4, ask:) when your salary is determined. Does the **(response in #CA)** consider **(read A-D)**?

(If code "1" in #H1 AND code "1" in #H4, ask:) when either your base salary or bonus is determined. Does the **(response in #CA)** consider **(read A-D)**?

(If code "1" in #H2 AND code "2" or "8-9" in #H4, ask:) when your pay rate is determined. Does the **(response in #CA)** consider **(read A-D)**?

(If code "1" in #H2 AND code "1" in #H4, ask:) when either your pay rate or bonus is determined. Does the **(response in #CA)** consider **(read A-D)**?

1 Yes
2 No
8 (DK)
9 (Refused)

A. Factors that reflect your own productivity **(If necessary, read:)** Examples include the amount of revenue you generate for the practice, the number of relative value units you produce, the number of patient visits you provide, or the size of your enrollee panel _____(1034)

B. Results of satisfaction surveys COMPLETED BY YOUR OWN PATIENTS _____(1035)

C. Specific measures of quality of care, such as rates of preventive care services for your patients _____(1036)

H5. (Continued:)

D. Results of practice profiling comparing your pattern of using medical resources to treat patients with that of other physicians **(INTERVIEWER NOTE: A practice profile is a report that is usually computer generated which compares you to other physicians on things like referrals to specialists, hospitalizations and other measures of cost effectiveness.)** _____(1037)

(If code "2" or "8-9" in #H5-D, Skip to #H9; Otherwise, Continue)

H6. **(If code "1" in #H5-D, ask:)** Are these profiles risk-adjusted to consider the health status of your patients or the severity of their illnesses? **(INTERVIEWER NOTE: Other than by age and gender)**

1 Yes
2 No
8 (DK)
9 (Refused) _____(1038)

(All in #H6, Skip to #H9)

H7. **(If code "2" or "8-9" in #H2 or code "2" in #H3, ask:)** I am now going to read you a short list of factors that are sometimes taken into account by medical practices when they determine the compensation paid to physicians in the practice. For each factor, please tell me whether or not it is EXPLICITLY considered when your compensation is determined. Does the **(response in #CA)** in which you work consider **(read A-D)**?

1 Yes
2 No
8 (DK)
9 (Refused)

A. Factors that reflect YOUR OWN productivity **(If necessary, read:)** Examples include the amount of revenue you generate for the practice, the number of relative value units you produce, the number of patient visits you provide, or the size of your enrollee panel _____(1039)

B. Results of satisfaction surveys COMPLETED BY YOUR OWN PATIENTS _____(1040)

C. Specific measures of quality of care, such as rates of preventive care services for your patients _____(1041)

H7. (Continued:)

D. Results of practice profiles comparing your pattern of using medical resources to treat patients with that of other physicians **(INTERVIEWER NOTE: A practice profile is a report that is usually computer generated which compares you to other physicians on things like referrals to specialists, hospitalizations and other measures of cost effectiveness.)** _____(1042)

(If code "2" or "8-9" in #H7-D, Skip to #H9; Otherwise, Continue)

H8. **(If code "1" in #H7-D, ask:)** Are these profiles risk-adjusted to consider the health status of your patients or the severity of their illnesses? **(INTERVIEWER NOTE: Other than by age and gender)**

1 Yes
2 No
8 (DK)
9 (Refused) _____(1067)

H9. Of your total income from your **(response in #CA)** during calendar year 1995, approximately what percent would you estimate was earned in the form of bonuses, returned withholds, or other incentive payments based on your performance? (Open ended **and code actual percent)**

***PCTINC*X**

000 None - **(Continue)**

001 1 percent or less - **(Skip to #H10)**

002-100 **(Skip to #H10)**

DK (DK) **(Skip to #H10)**
RF (Refused) **(Skip to #H10)**

_____ (1043) (1044) (1045)

H9a. **(If code "000" in #H9, ask:)** Were you eligible to earn any bonuses or other performance-based payments in 1995? **(INTERVIEWER NOTE: This question is asking about eligibility to earn bonuses in 1995. Earlier question (#H4) asked about whether the physician is eligible to earn a bonus at the time of the interview.)**

EBONUS

1 Yes
2 No
8 (DK)
9 (Refused) _____(1046)

H10. During 1995, what was your own net income from the practice of medicine to the nearest $1,000, after expenses but before taxes? Please include contributions to retirement plans made for you by the practice and any bonuses as well as fees, salaries and retainers. Exclude investment income. **(If code "2" in #A4, read:)** Also, please include earnings from ALL practices, not just your main practice. **(If necessary, read:)** We define investment income as income from investments in medically related enterprises independent of a physician's medical practice(s), such as medical labs or imaging centers. **(If "Refused", read:)** This information is important to a complete understanding of community health care patterns and will be used only in aggregate form to ensure your confidentiality of the information. (Open ended **and code actual number)** **(If response is > $1 million, verify)**

INCOMEX

0000001-
9999999 **(Skip to #H11)**

DK (DK) **(Continue)**
RF (Refused) **(Continue)**

_____ _____(1047) _____(1048) _____(1049) _____(1050) _____(1051) _____(1052) _____(1053)

H10a **(If code "DK" in #H10, ask:)** Would you say that it was **(read 01-04)**?

(If code "RF" in #H10, ask:) Would you be willing to indicate if it was **(read 01-04)**?

01 Less than $100,000
02 $100,000 to less than $150,000
03 $150,000 to less than $250,000
04 $250,000 or more

98 (DK)
99 (Refused) _____(1054) _____(1055)

(There is no #H11 - #H12)

CLOCK: (2873-2876)

SECTION I
ENDING

I1. Your check for $25 will be mailed to you within the next few days. Should we send the check to **(address from fone file)**?

1 Yes - **(Skip to #I3)**

2 No - **(Continue)**

8 (DK) **(Skip to #I3)**
9 (Refused) **(Skip to #I3)** _____(1063)

I2. **(If code "2" in #I1, ask:)** To what address should we send the check? (Open ended)

STREET ADDRESS:

_____ _____
_____ (1212-1241)

CITY:

_____ _____
_____ (1242-1266)

STATE:

_____ _____
_____ (1267-1268)

ZIP:

_____ _____
_____ (1269-1273)

I3. Is the address of the practice we have been talking about during this interview **(read 1-2)**?

1 **(Address from fone file)** - **(Skip to "Note" before #I5)**

2 **(Address in #I2)** - **(Skip to "Note" before #I5)**

3 No/Neither - **(Continue)**

8 (DK) **(Skip to "Note" before #I5)**
9 (Refused) **(Skip to "Note" before #I5)** _____(876)

I4. Will you please give me the address of the practice we have been talking about during this interview? (Open ended)

STREET ADDRESS:

_____ (1312-1341)

CITY:

_____ (1342-1366)

STATE:

_____ (1367-1368)

ZIP:

_____ (1369-1373)

(If code "08-10" in #C2 or #C3, Continue; Otherwise, Skip to SECTION J)

I5. What is the name of the practice we have been talking about during this interview? **(If necessary, read:)** Over the next few years, we will also be doing surveys of group practices and other physician organizations. This information will help us identify all group practices in your community. (Open ended)

00001 Other (list)
00002 HOLD
00003 HOLD
00004 No/Yes mind giving
00005 HOLD

99998 (DK)
99999 (Refused)

_____ (1412) (1413) (1414) (1415) (1416)

(There is no #I6 - #I9)

CLOCK: (2869-2872)

SECTION J
SWEEP-UP

(There is no #J1 - #J3)

J4. This concludes the survey unless you have any brief comment you would like to add. (Open ended)

0001 Other (list)
0002-
0004 No/Nothing
9998 (DK)
9999 (Refused)

_____ (1075) (1076) (1077) (1078)

J5. INTERVIEWER CODE ONLY: **(INTERVIEWER NOTE: Do NOT offer to send study report to respondent unless physician requests it. Report will not be available until mid 1997 at the earliest)** Did respondent ask for study report?

1 Yes
2 No _____(1420)

(VALIDATE PHONE NUMBER AND THANK RESPONDENT)

INTERVIEWER I.D.#: _____ _____ _____ _____
(241) (242) (243) (244)

CLOCK: (2844-2847)

DESCRIPTIVE NAMES ONLY: NEED ACTUAL FONE FILE NAMES AND NUMBER OF COLUMNS!

1. MEDICAL EDUCATION: **(Code from fone file)**

2. PHYSICIAN NAME: **(Code from fone file)**

3. GENDER: **(Code from fone file)**

4. PREFERRED PROFESSIONAL MAILING ADDRESS: **(Code from fone file)**

5. GEOGRAPHIC CODES (STATE, COUNTY, ZIP, MSA, CENSUS REGION OR DIVISION): **(Code from fone file)**

6. BIRTH DATE: **(Code from fone file)**

7. BIRTH PLACE: **(Code from fone file)**

8. CITIZENSHIP AND VISA: **(Code from fone file)**

9. LICENSURE DATE: **(Code from fone file)**

10. NATIONAL BOARD COMPLETION DATE: **(Code from fone file)**

11. MAJOR PROFESSIONAL ACTIVITY: **(Code from fone file)**

12. PRIMARY SPECIALTY: **(Code from fone file)**

13. SECONDARY SPECIALTY: **(Code from fone file)**

14. PRESENT EMPLOYMENT: **(Code from fone file)**

15. AMERICAN SPECIALTY BOARD CERTIFICATION: **(Code from fone file)**

16. CURRENT AND FORMER MEDICAL TRAINING - (INSTITUTION, SPECIALTY, TRAINING DATES): **(Code from fone file)**

17. CURRENT AND FORMER GOVERNMENT SERVICE: **(Code from fone file)**

18. ECFMG CERTIFICATE: **(Code from fone file)**

19. TYPE OF PRACTICE: **(Code from fone file)**

20. TELEPHONE NUMBER: **(Code from fone file)**

21. FAX NUMBER: **(Code from fone file)**

Appendix B

The CTS Physician Survey Questionnaire Logic and Skip Pattern

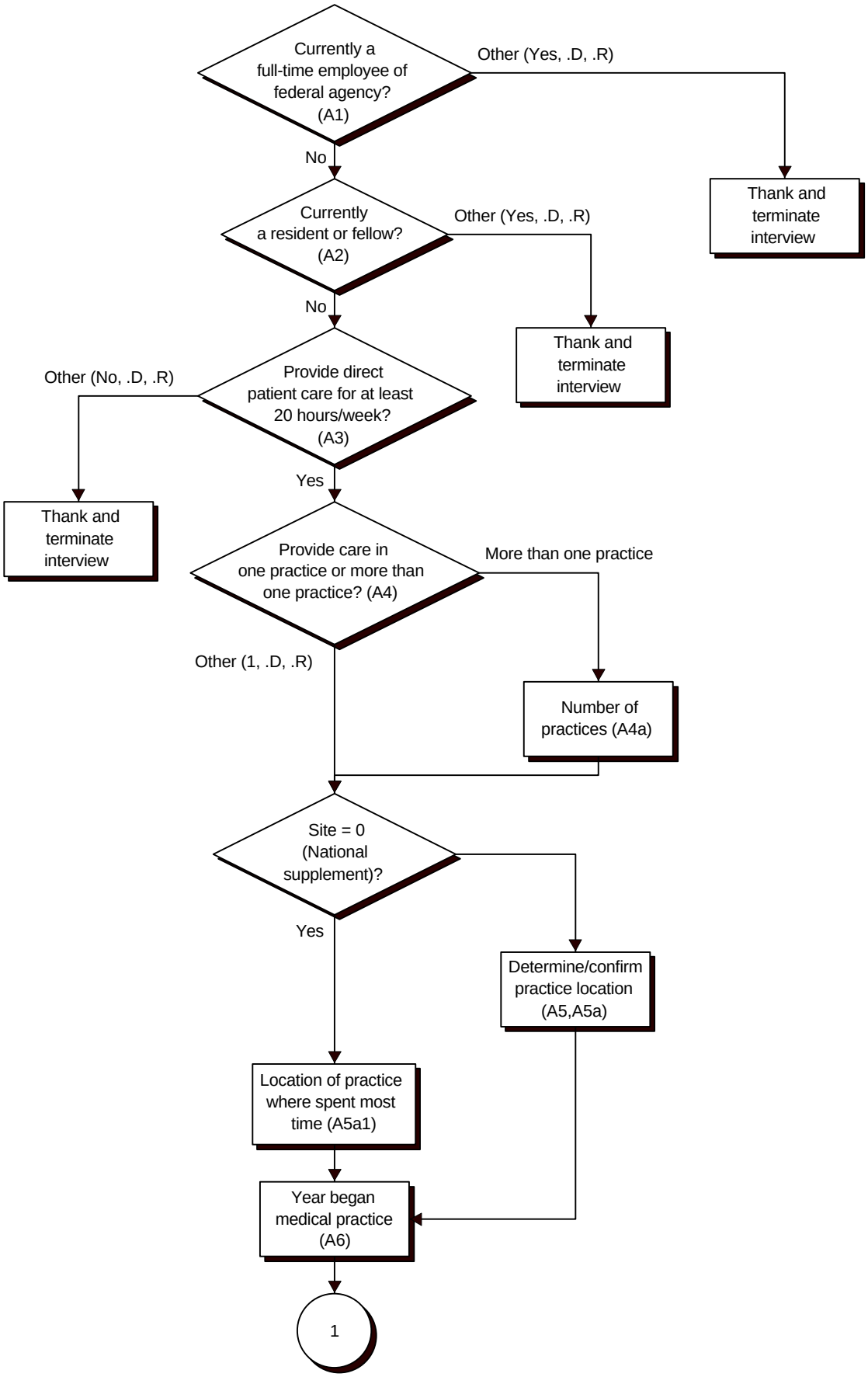
Round One

The CTS Physician Survey
Questionnaire Logic and Skip Pattern

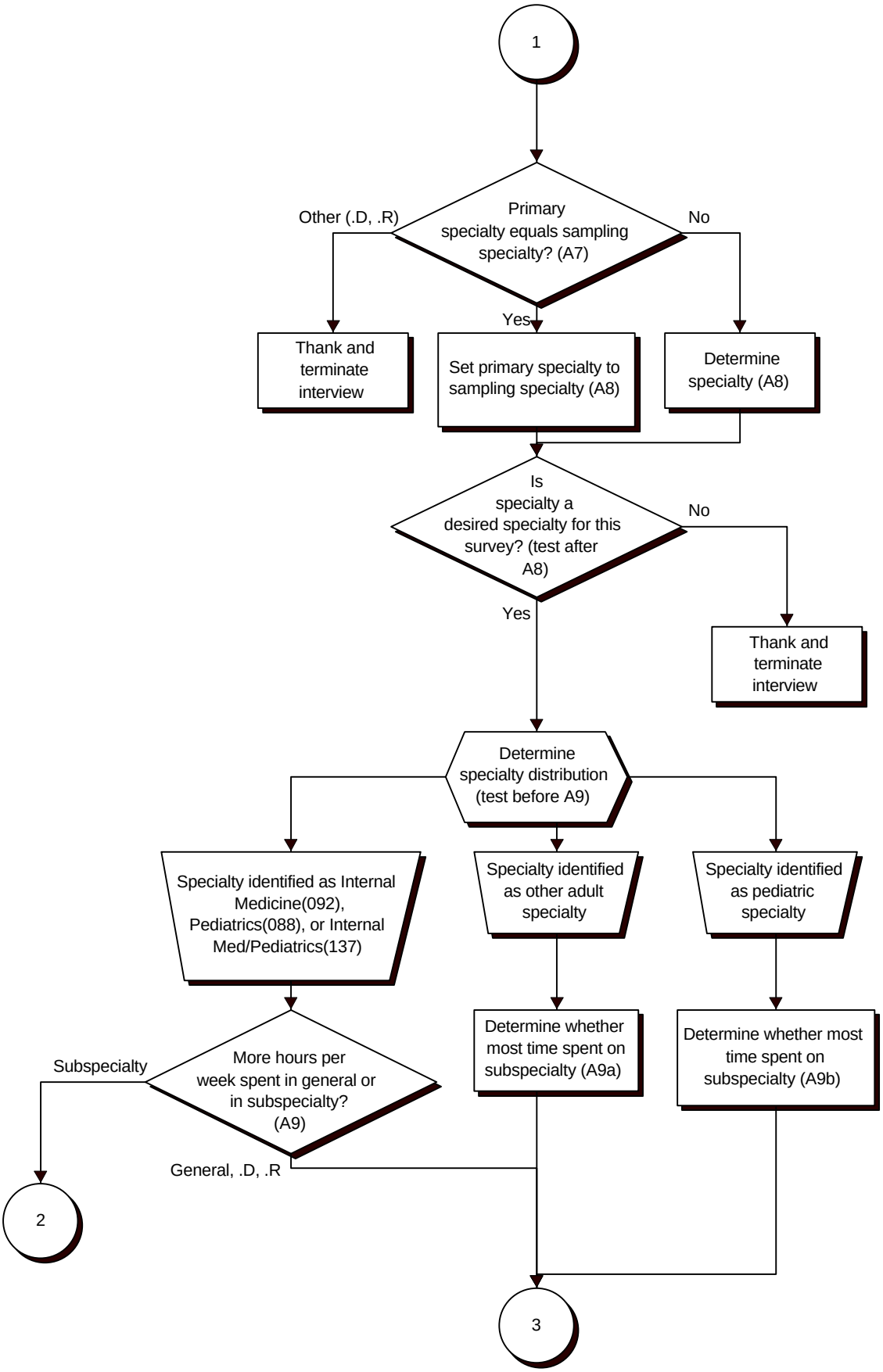
Key to Diagram Abbreviations

.D -- Don't know
.R -- Refused

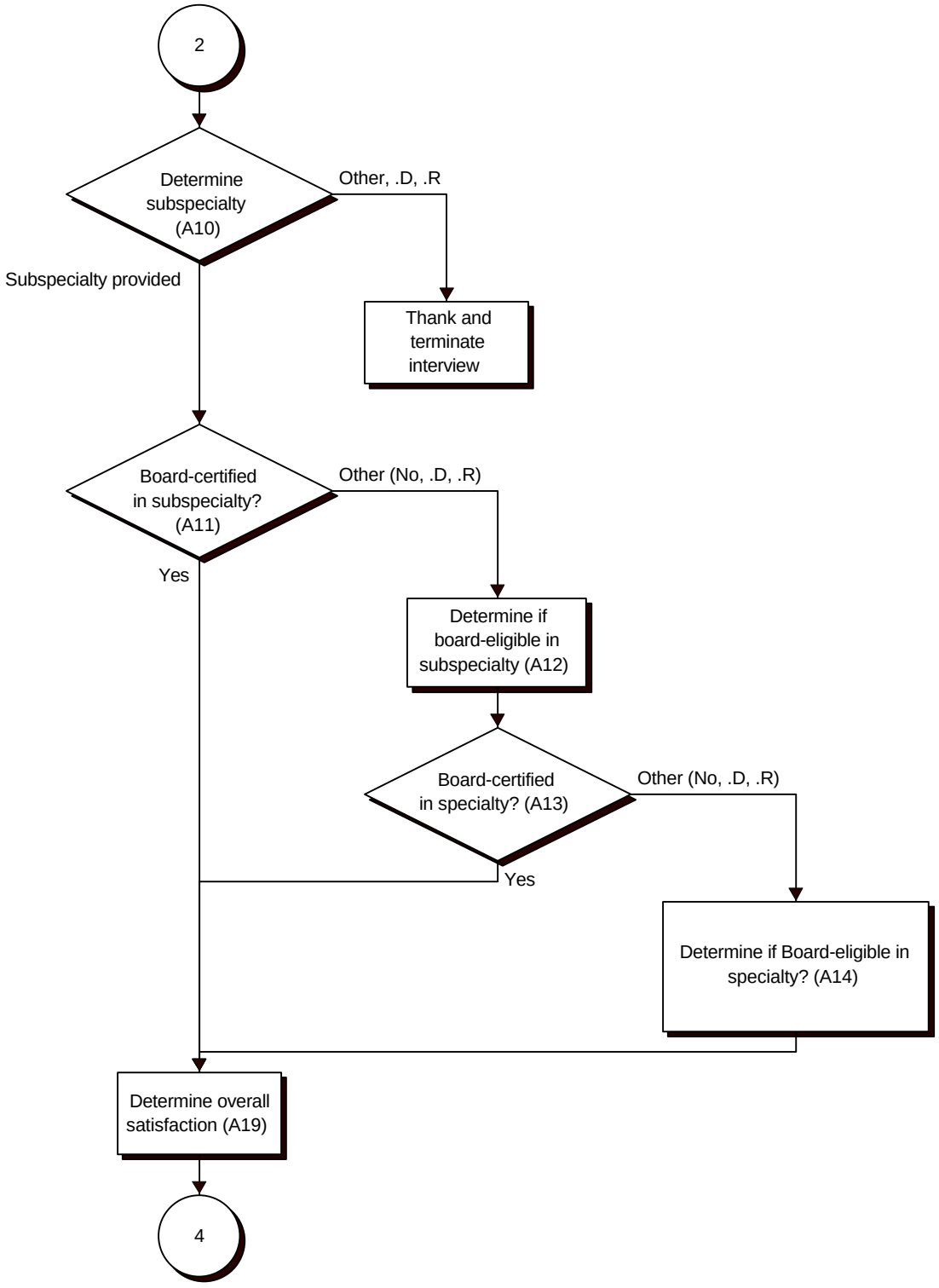
Section A: Physician Supply and Specialty Distribution



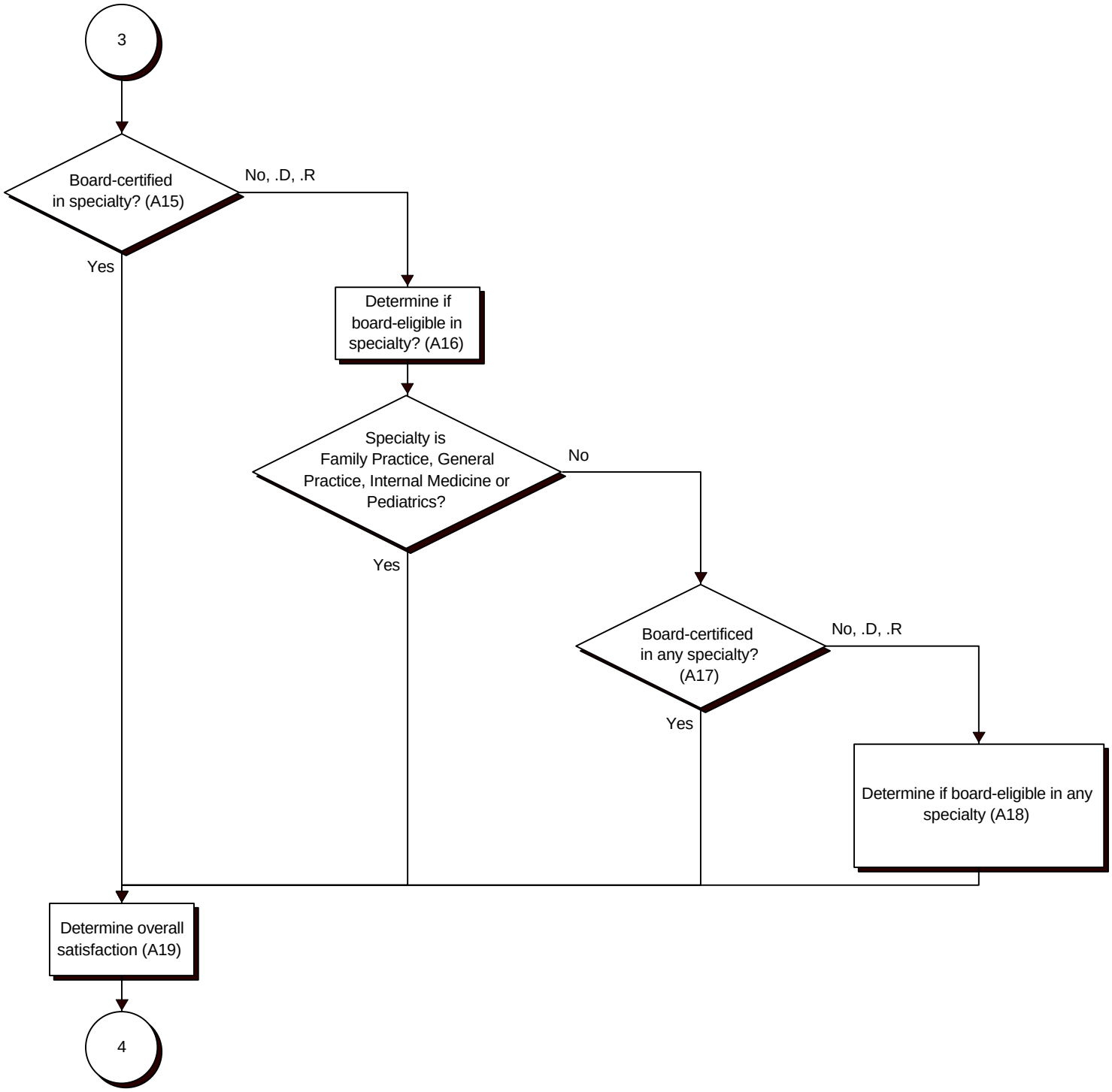
Section A: Physician Supply and Specialty Distribution - continued



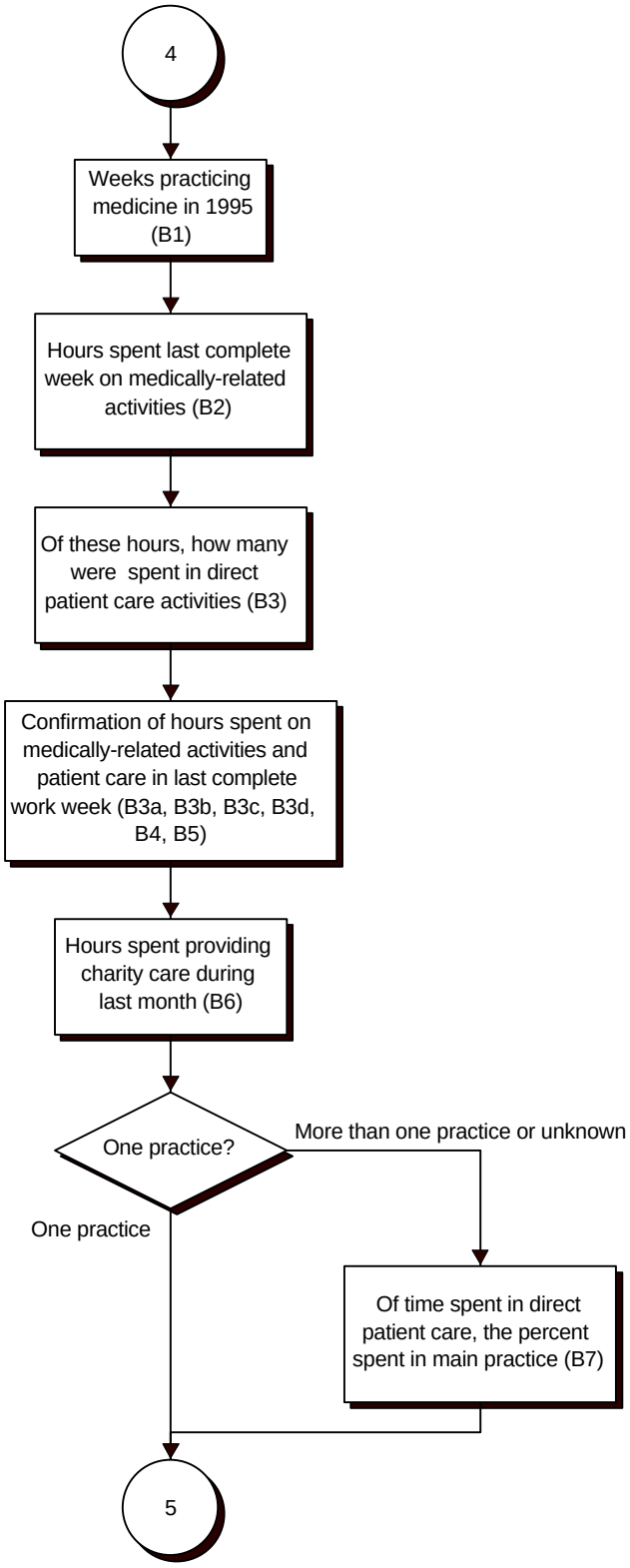
Section A: Physician Supply and Specialty Distribution - continued



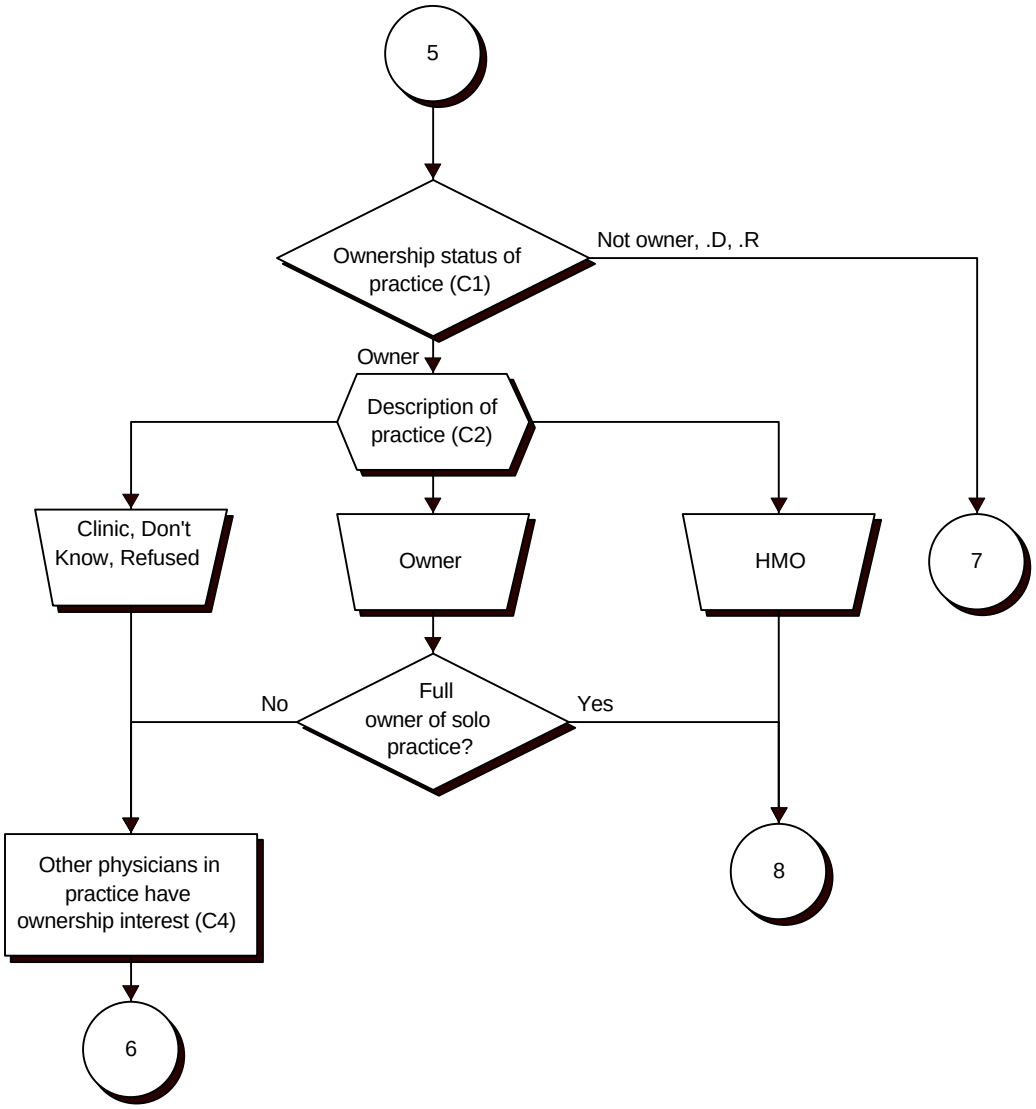
Section A: Physician Supply and Specialty Distribution - continued



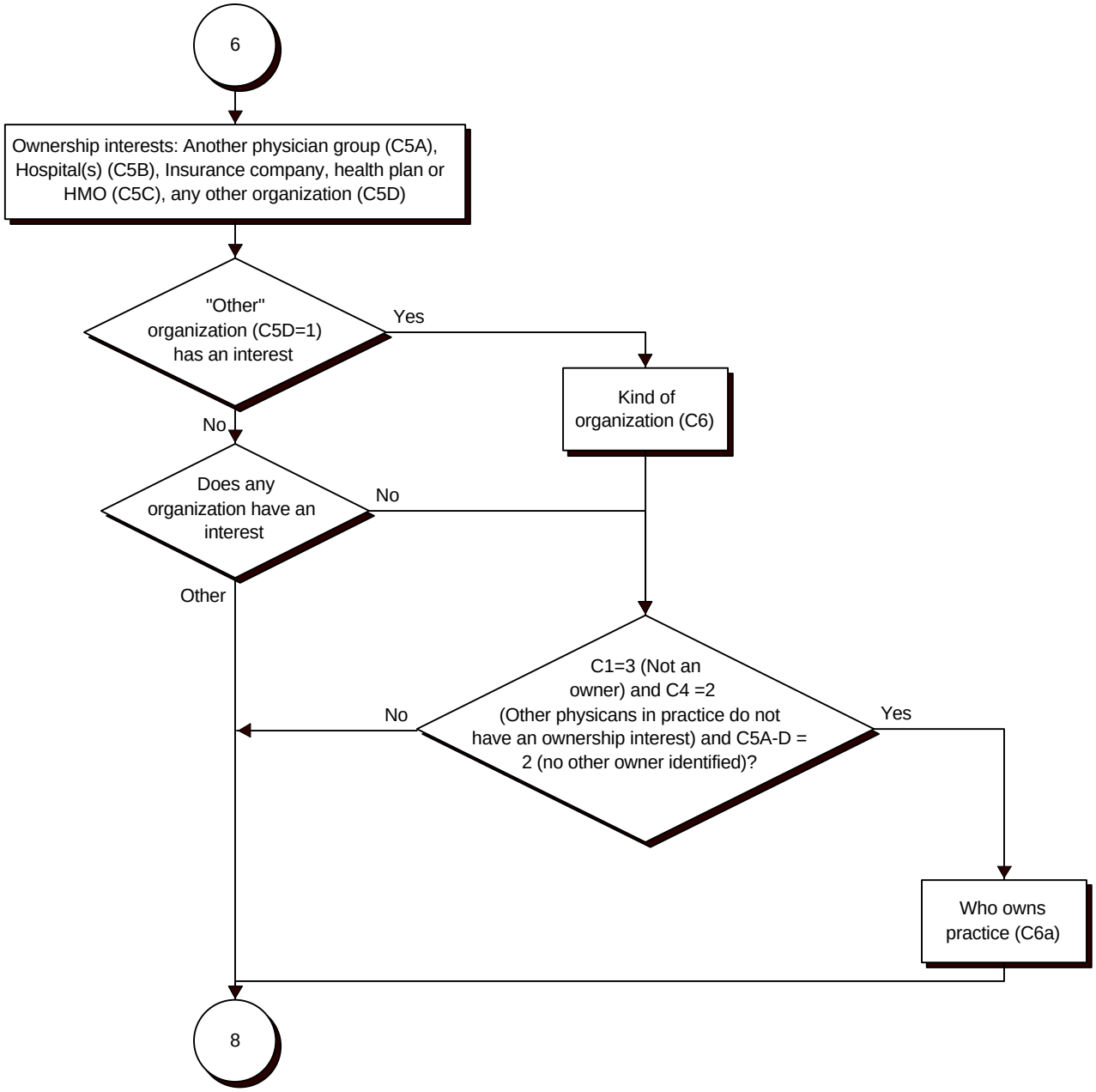
Section B: Utilization of Time



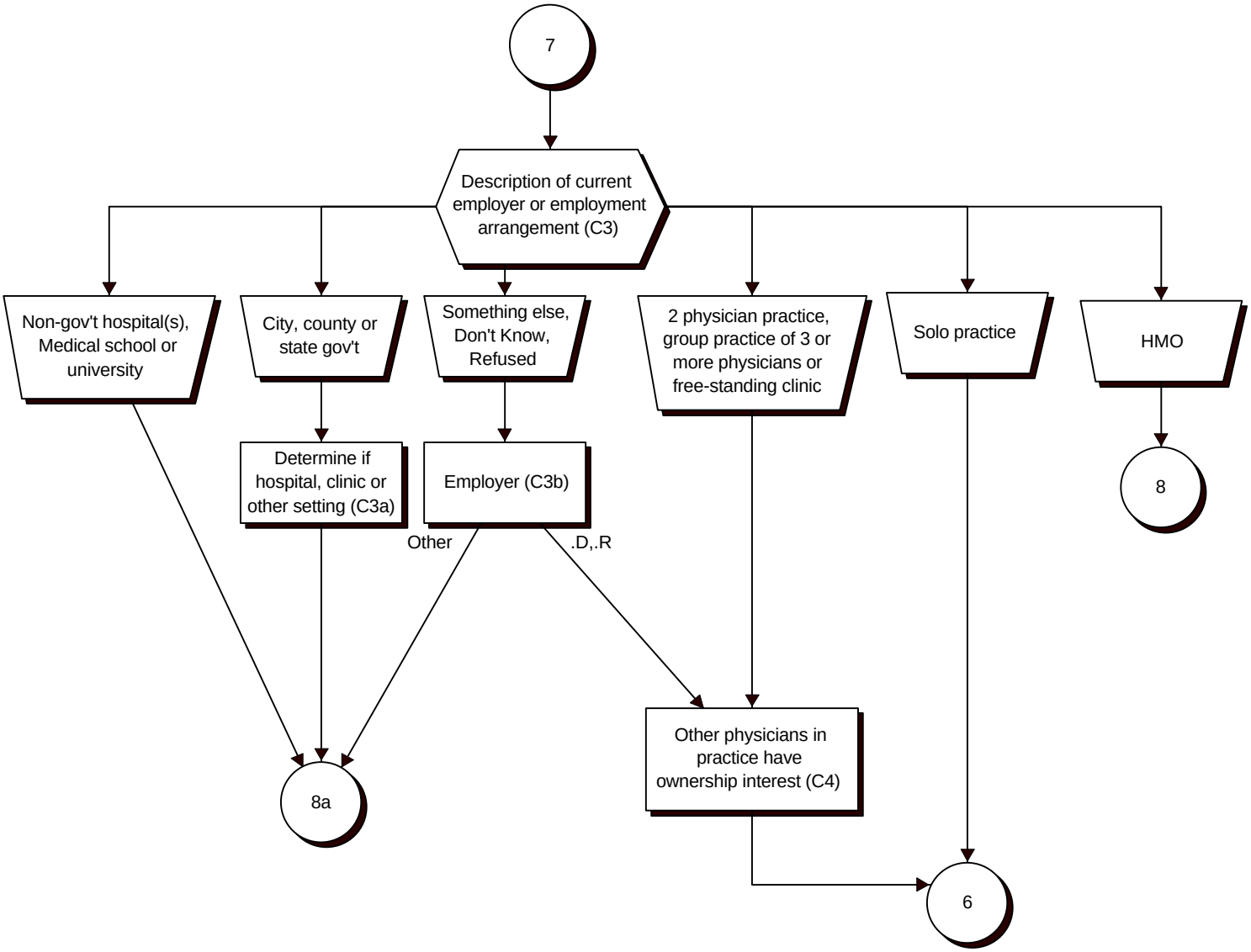
Section C: Type and Size of Practice



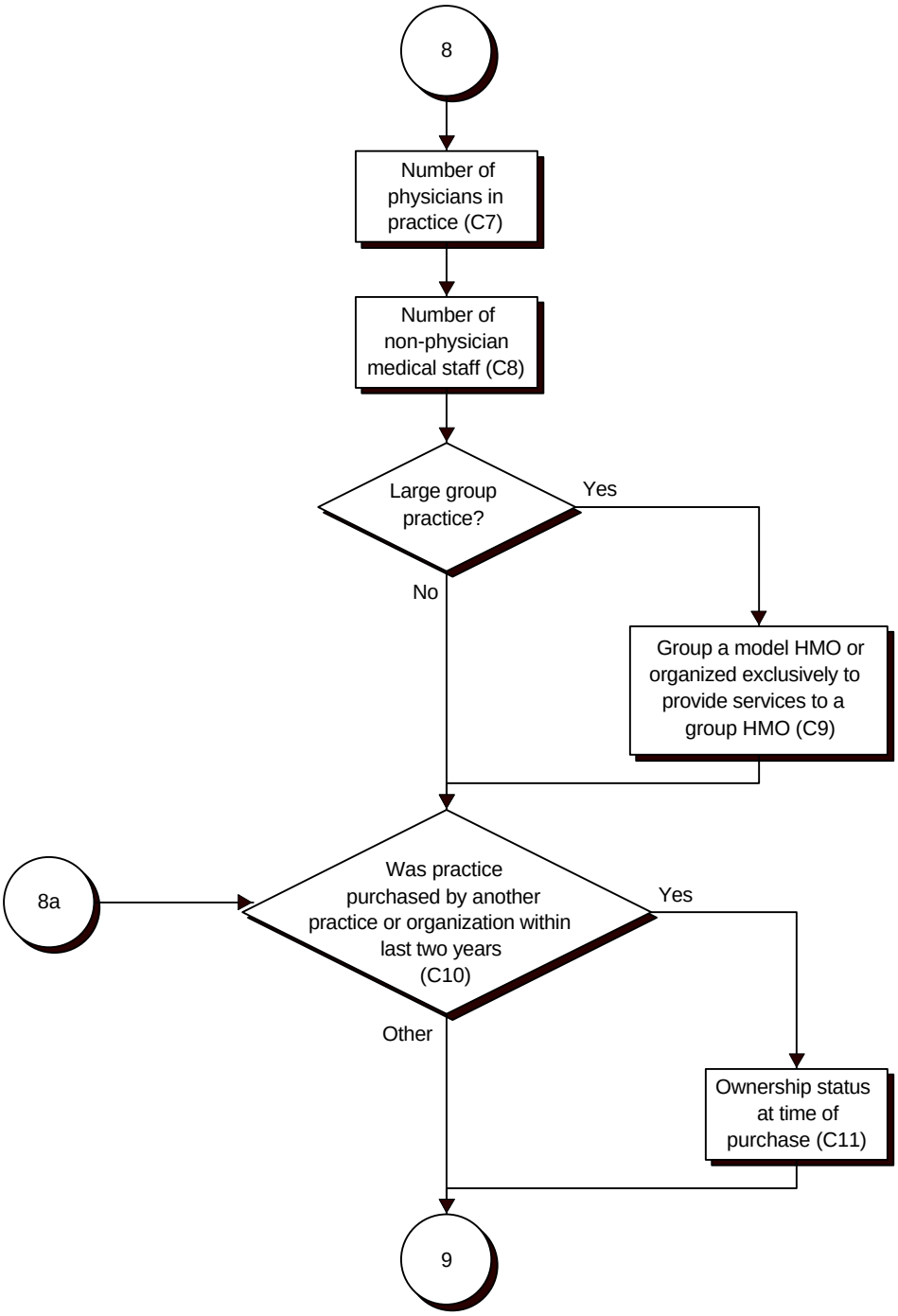
Section C: Type and Size of Practice - continued



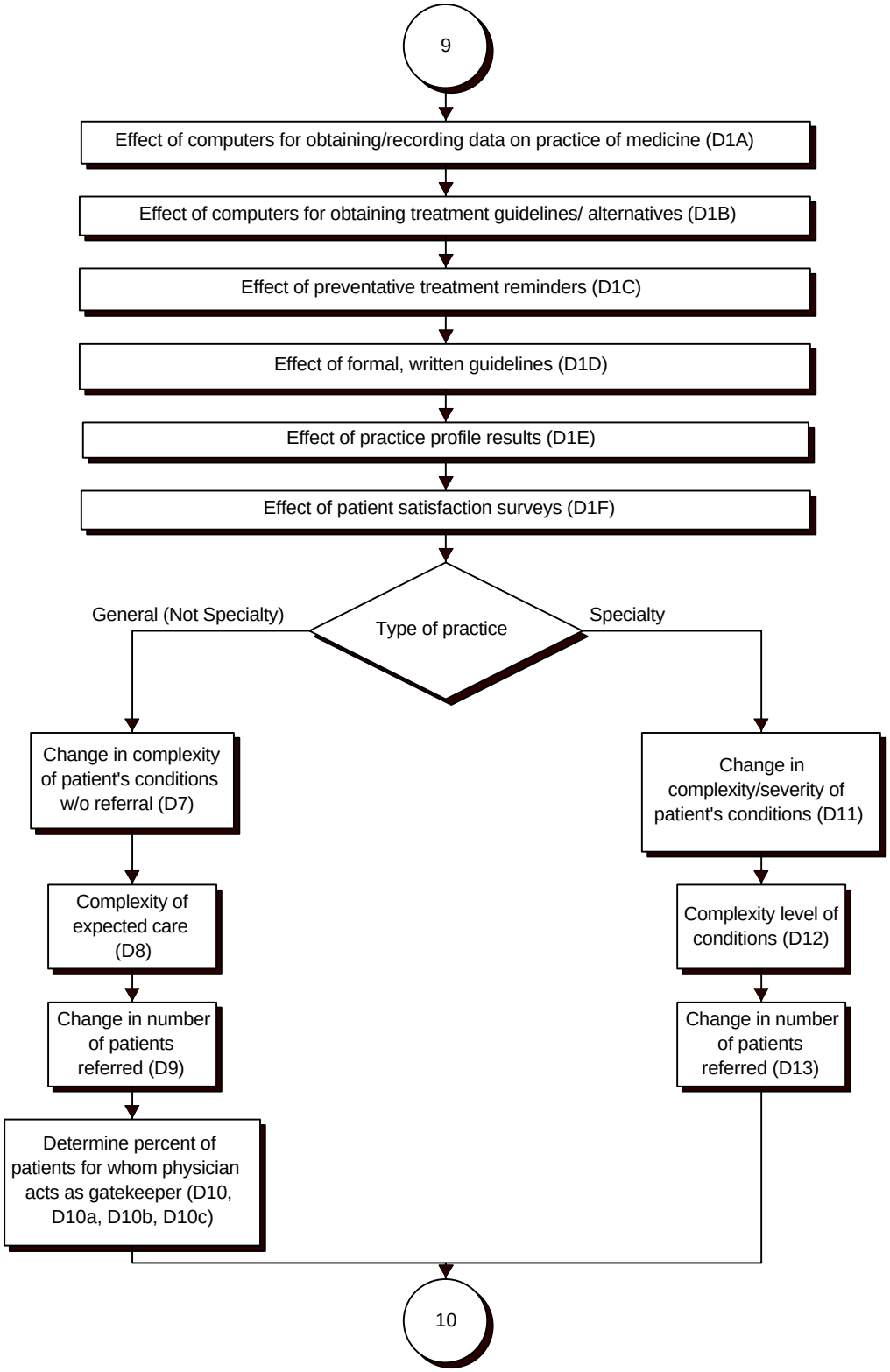
Section C: Type and Size of Practice - continued



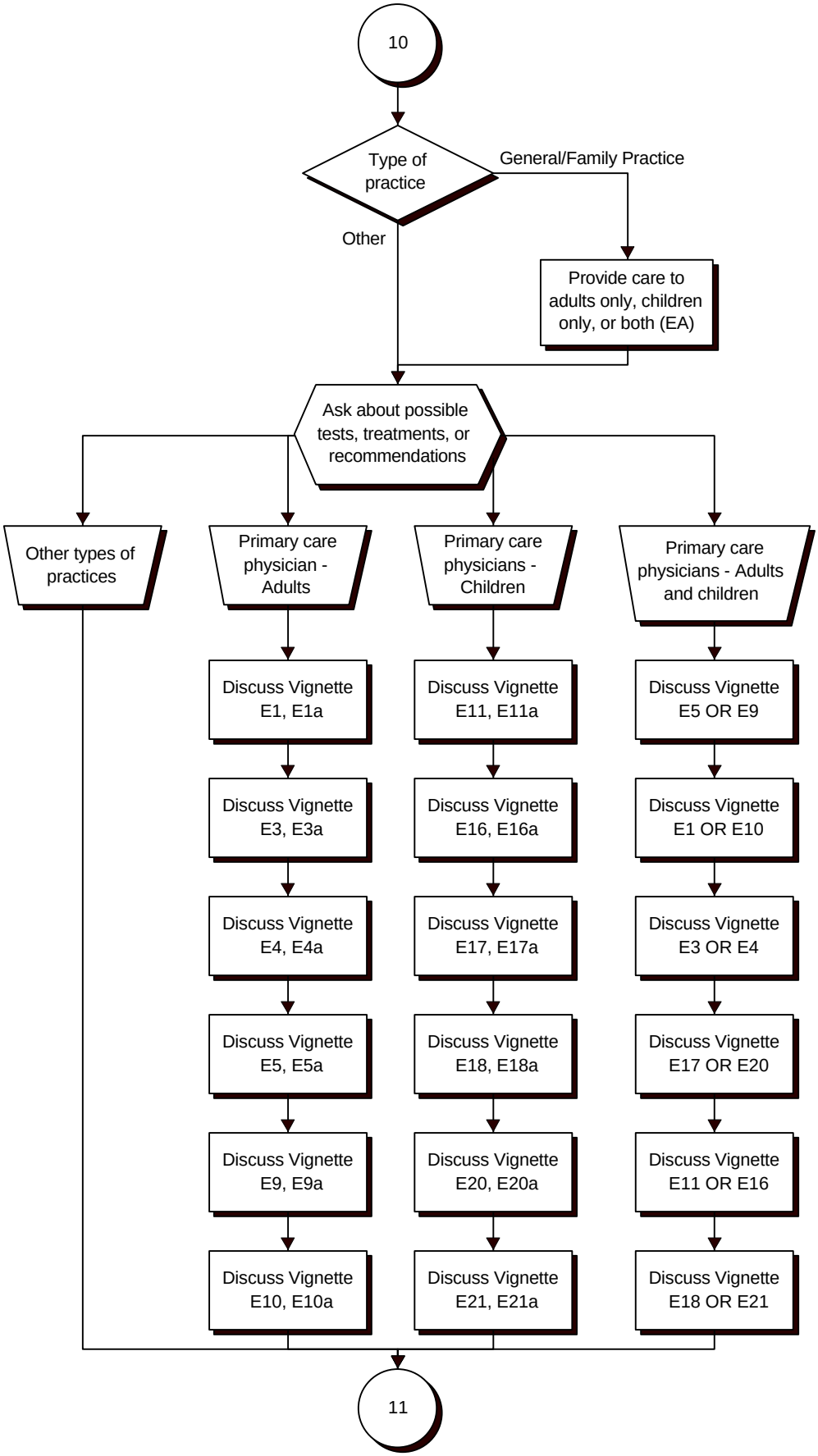
Section C: Type and Size of Practice - continued



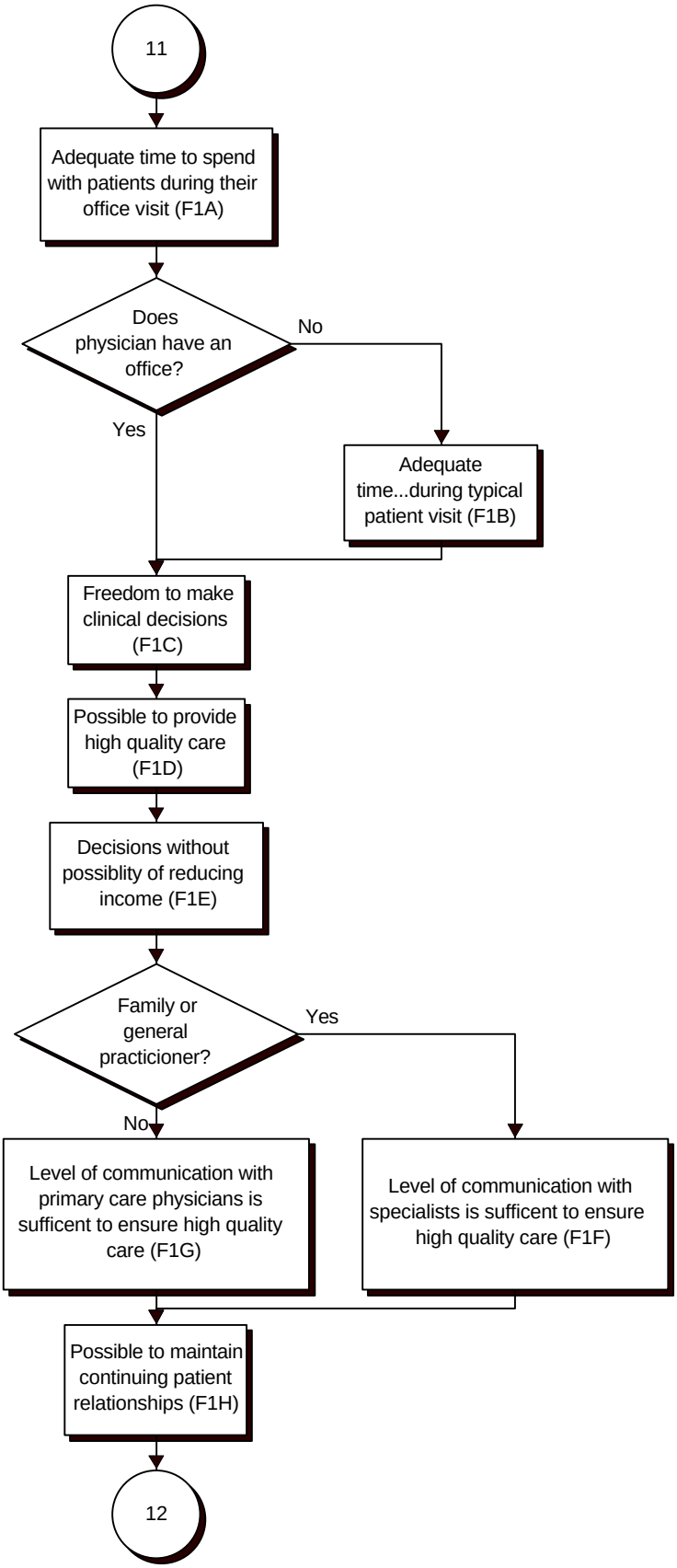
Section D: Medical Care Management



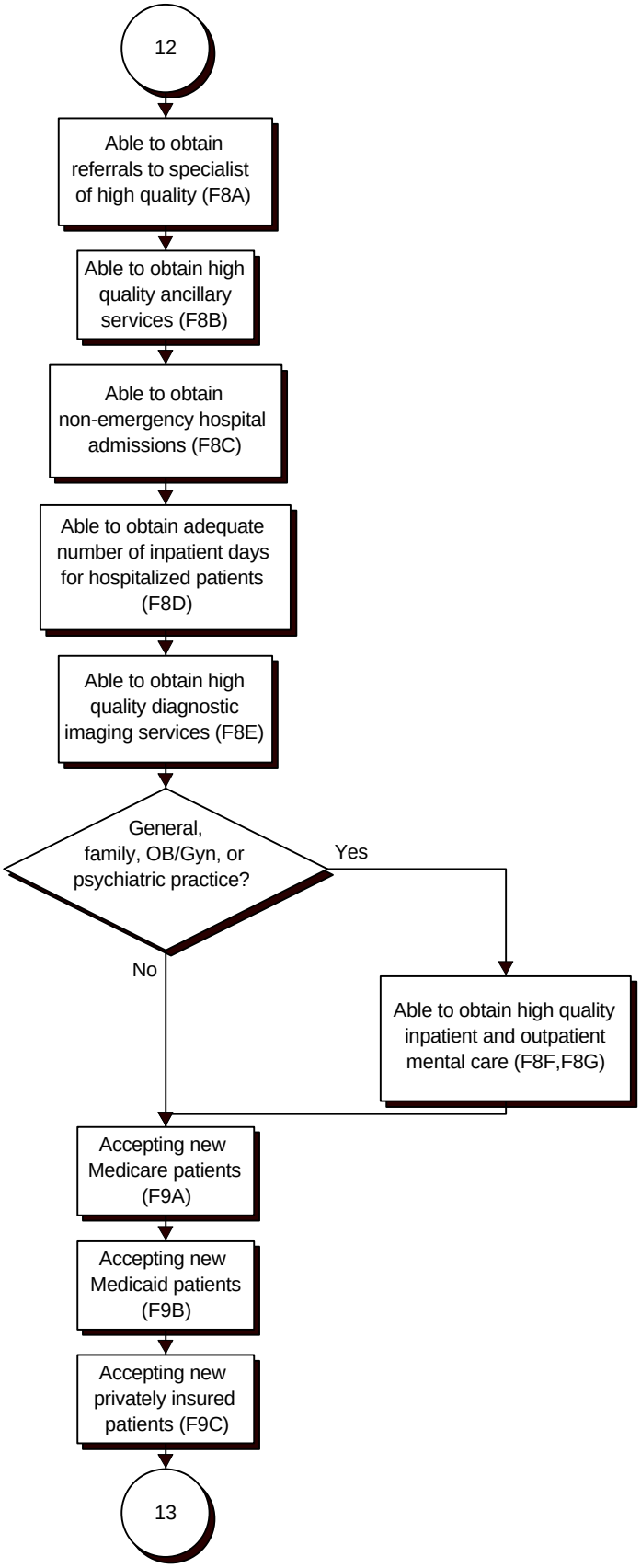
Section E: Vignettes



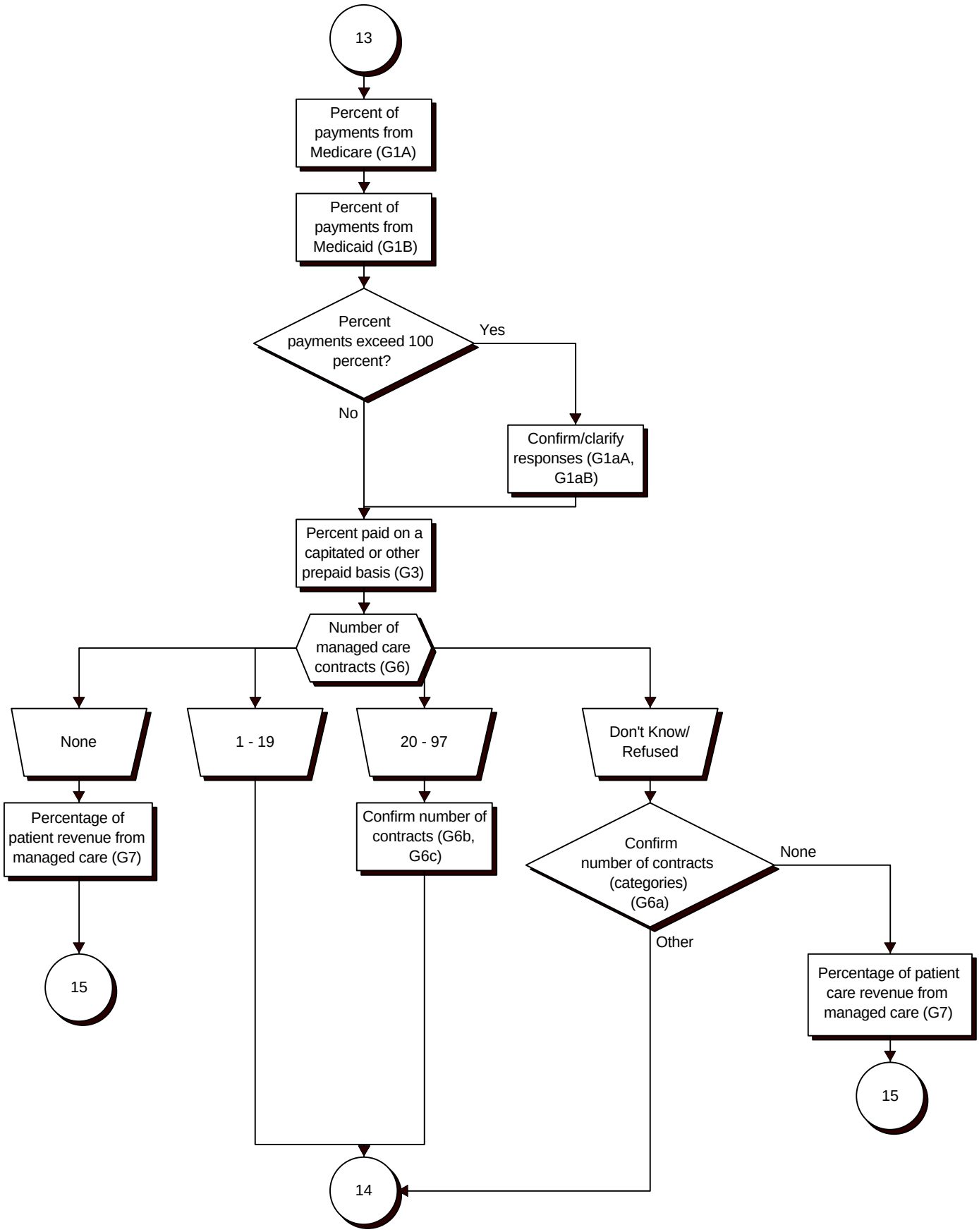
Section F: Physician-Patient Interactions



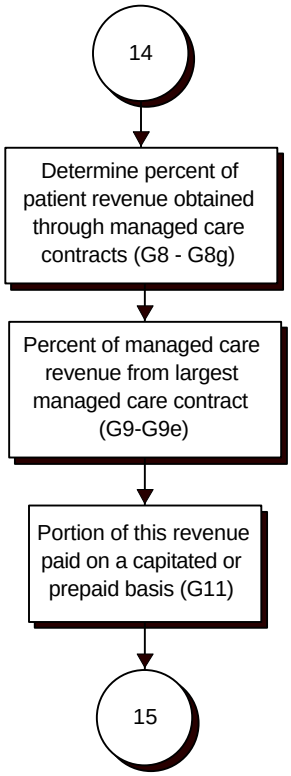
Section F: Physician-Patient Interactions - continued



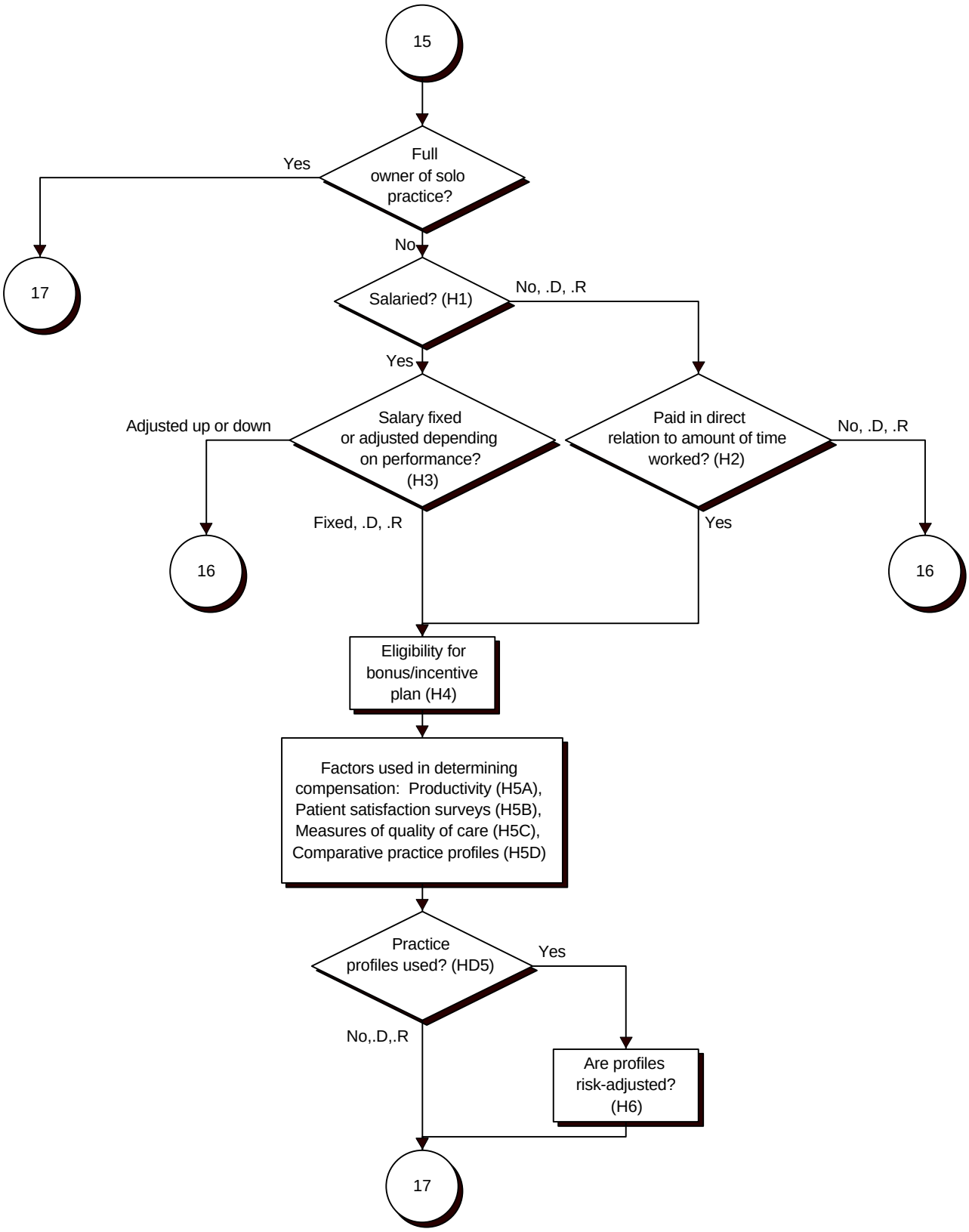
Section G: Practice Revenue



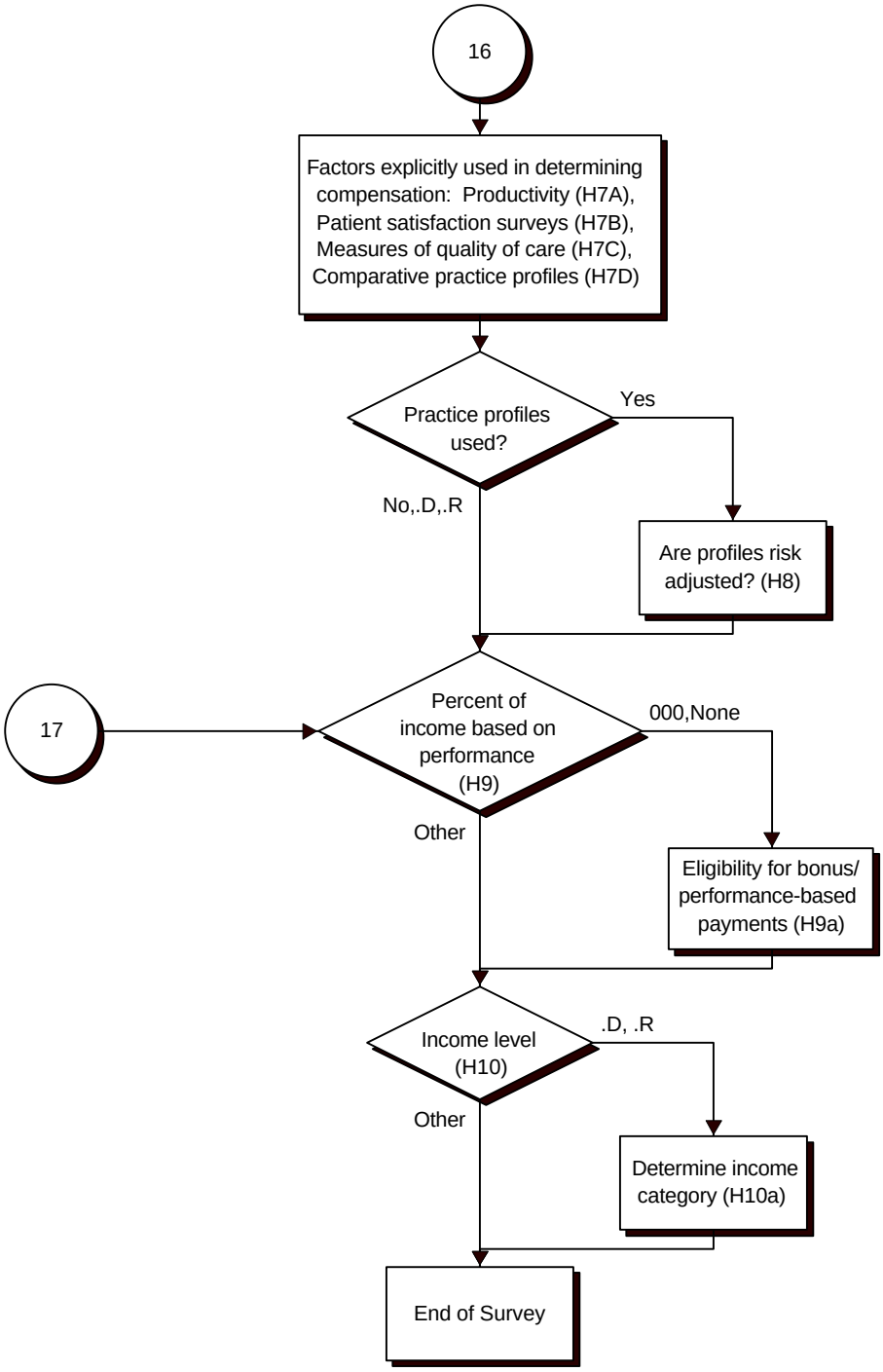
Section G: Practice Revenue - continued



Section H: Physician Compensation



Section H: Physician Compensation - continued



Appendix C

Derivation of Standard Error Look-up Tables

Appendix C

Derivation of Standard Error Look-up Tables

The standard errors in the tables in Appendix D were derived as follows.[1]

C.1. Percentages

To calculate standard errors for percentages (Tables D.1 through D.9), a representative set of categorical variables from the CTS Physician Survey was selected. These representative variables can be grouped into the following categories:

- Practice type and ownership: PRCTYPE, MULTPR, C5OWNER,[2] OWNPR, NWMCAID
- Board certification: BDCERT
- Compensation: ELIGBON, SALWAGE[3]
- Opinion questions: CARSAT, CLNFREE, CMPEXPC, EFGUIDE, EFPROFL, EFSURV, HIGHCAR, NEGINCN, OBHOSP, OBOUTPT, SQUAL

These variable names (other than the compensation variables) can be cross-referenced in the CTS Physician Survey Public Use File Codebook.

For each categorical variable with more than two possible values, we created a series of dichotomous variables--one for each possible response. Each dichotomous variable indicates whether the respondent chose that category (value set to one) or one of the other categories (value set to zero).

Weighted percentages and associated standard errors and design effects were produced for these variables using SUDAAN software (release 7.5, SAS-callable for Windows 95 and NT, Taylor Series default option for variance estimation) for 2 estimate types and 13 population subgroups:

---

[1]The methods used were based on those described in "Sample Design, Sampling Weights, Imputation, and Variance Estimation in the 1995 National Survey of Family Growth," *Vital and Health Statistics*, Series 2, No. 124, February 1998, National Center for Health Statistics.

[2]This variable underwent masking for the Public Use File and is included as C5OWNX.

[3]These two variables were not included on the file in their original forms due to confidentiality considerations. The variables BONUS, SALPAID, SALTIME, and SALADJ, included on both the Restricted and Public Use Files, provide compensation information.

- Estimate Types
  - National estimates, site sample only
  - National estimates, supplemental sample only

- Physician Subgroups
  - All physicians
  - All primary care physicians (PCPFLAG=1)
  - All non-primary care physicians (PCPFLAG=0)
  - Internal medicine physicians (SPECX=1)
  - Family/general practice physicians (SPECX=2)
  - General pediatricians (SPECX=3)
  - Medical specialists, including psychiatrists (SPECX=4,6)
  - Surgical specialists, including OB-GYNs (SPECX=5,7)
  - Physicians in solo or two-person practice (PRCTYPE=1)
  - Physicians in group practice of three or more (PRCTYPE=2)
  - Physicians in other practice settings (PRCTYPE=3,4,5,6)
  - Physicians in practice with managed care revenue above median of 35 percent (PMC>35)
  - Physicians in practice with managed care revenue at or below median (PMC<36)

The output from the SUDAAN runs was then saved in several data files, which were used to derive regression models in SAS. The goal here was to derive a generalized function to predict design effects, given the size of the estimate and the unweighted sample size.

Before these models were run, estimates with an unweighted sample size of less than 100, a relative standard error of greater than 0.3,[4] or a particularly small or large design effect[5] were flagged as outliers and excluded from the regression runs. For the remaining estimates, a $\log_{10}$ transformation was used for the point estimate (p), for its complement ($q=1-p$), for the design effect (*DEFF*), and for the unweighted sample size (n_u).

A series of linear regression models (SAS's PROC REG) was fit, using the categorical variables specified above. If the model was not significant (at α=.10) with all three independent variables, or if the model was significant but any of the three coefficients was not significant (at α=.10), independent variables were dropped until the best model was fit.[6] The models were specified as:

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[4]The relative standard error is calculated as the standard error of an estimate divided by the estimate. It is used as a measure of the instability of an estimate.

[5]If greater than 20 or less than 0.8.

[6]These models predict design effects with less error than that which occurs when one simply uses a mean or median design effect; however, their predictive power is relatively low. The R^2 for these models ranged from .088 to .318. To estimate design effects with greater confidence, you would need to use the Restricted Use File with specialized software to calculate them directly.

$$\hat{D} = \log_{10}(DEFF) = b_o + b_1 \log_{10}(n_u) + b_2 \log_{10}(p) + b_3 \log_{10}(q).$$

These models were run for categorical variables (excluding outliers) for the 26 combinations of estimate types and population subgroups described above.

For national estimates, the models for internal medicine physicians, family/general practice physicians, medical specialists, and physicians in group practice were not significant. For the remaining subgroups, design effects were derived by combining the predicted design effects for national estimates from the site sample and from the supplemental sample (based on the model above) in a linear fashion as follows:

$$\hat{DEFF}(comb) = \frac{\lambda^2 \, \hat{DEFF}_{site}}{p_{site}} + \frac{(1-\lambda)^2 \, \hat{DEFF}_{supp}}{p_{supp}}$$

where $\hat{DEFF}_i = 10^{\hat{D}_i}$ is the anti-log of the predicted $\log_{10}$ design effect $\hat{D}_i$ based on the associated regression model for sample i (site or supplement), p_i is the proportion of the combined unweighted (nominal) sample size contributed by sample i,[7] and λ is the proportion of the total effective sample size[8] for the combined sample attributable to the site sample. This design effect $\hat{DEFF}(comb)$ was then used in the following standard error formula to produce the tables:

$$S.E.(p) = \sqrt{\frac{p \cdot q \cdot \hat{DEFF}(comb)}{n_u - 1}}.$$

C.2. Means of Quasi-Continuous Variables

As described in Chapter 3, "quasi-continuous" variables are those with responses that are expressed in terms of percentages and whose values are therefore bounded by 0 and 100. To calculate standard errors for these means (Tables D.10 through D.21), the following representative set of quasi-continuous variables from the CTS physician survey was selected:

- Percent values from vignettes: VCOUGH, VHYPER

[7] A value of 0.89 for p_{site} (and 0.11 for p_{supp}) was used in deriving the tables.

[8] The effective sample size is calculated as the nominal sample size divided by the design effect. The average value of 0.8606 for λ, incorporated in the combined weights, was used in deriving the tables.

- Percent of patients for whom physician is a gatekeeper: PCTGATE

- Percent income, payments, revenue from various sources: PMC, PBIGCON, PCAPREV, PMCARE, PMCAID, PCTINCN[9]

These variable names can be cross-referenced in the CTS Physician Survey Public Use File Codebook.

Weighted means and associated standard errors and design effects were produced for these variables using SUDAAN software for the same combinations of estimate types and population subgroups described above for percentage estimates.

The goal for the quasi-continuous variable means was to derive a generalized function to predict standard errors, given the unweighted sample size and the weighted mean.

Before these models were run, estimates with an unweighted sample size of less than 100, a relative standard error of greater than 0.3, or a particularly small or large design effect[10] were flagged as outliers and excluded from the regression runs. For the remaining estimates, a $\log_{10}$ transformation was used for the standard error (*SE*), for the unweighted sample size (n_u) and for the weighted mean ($mean_w$).

A series of linear regression models was fit, using the quasi-continuous variables specified above. If the model was not significant with both independent variables, the best model was fit.[11] The models were specified as:

$$\hat{S} = \log_{10}(SE) = b_o + b_1 \log_{10}(n_u) + b_2 \log_{10}(mean_w).$$

These models were run for quasi-continuous variables (excluding outliers) for the 26 combinations of estimate types and population subgroups described above.

For national estimates, the models for general pediatricians were not significant. For the remaining subgroups, standard errors were derived by combining the predicted standard errors for national estimates from the site sample and from the supplemental sample (based on the model above) as follows:

[9]This variable underwent masking for the Public Use File and is included as PCTINCX.

[10]If greater than 20 or less than 0.8.

[11]The R^2 for these models ranged from .333 to .899.

$$\hat{SE}(comb) = \sqrt{(n_{site}+n_{supp})\left[\frac{\lambda^2(\hat{SE}_{site})^2}{n_{site}} + \frac{(1-\lambda)^2(\hat{SE}_{supp})^2}{n_{supp}}\right]}$$

where n_i is the unweighted sample size for sample i (site or supplement), $\hat{SE}_i$ is the anti-log of the predicted $\log_{10}$ standard error based on the associated regression model for sample i, and λ is the value defined previously (.8606).

C.3. Small Cell Size Warning

If the number of observations used in your estimate is less than 100, your estimate is likely to be unstable, and you should not use the relevant table in Appendix D to obtain an estimate of the standard error.

Appendix D

Standard Error Tables

APPENDIX D

STANDARD ERROR TABLES FOR NATIONAL ESTIMATES FROM THE COMBINED SAMPLE OF THE CTS PHYSICIAN SURVEY PUBLIC USE FILE

PERCENTAGE ESTIMATES — Table No.

All Physicians D.1
Primary Care Physicians D.2
Non-Primary Care Physicians D.3
General Pediatricians D.4
Surgical Specialists D.5
Physicians in Solo or Two-Person Practice D.6
Physicians in HMO, Medical School, Hospital, or Other Practice Setting D.7
Physicians in Practice with Managed Care Revenue above Median D.8
Physicians in Practice with Managed Care Revenue at/below Median D.9

MEAN ESTIMATES FOR QUASI-CONTINUOUS VARIABLES
(Interview questions for which individual response is expressed in terms of a percentage)

All Physicians D.10
Primary Care Physicians D.11
Non-Primary Care Physicians D.12
Internal Medicine Physicians D.13
Family/General Practice Physicians D.14
Medical Specialists D.15
Surgical Specialists D.16
Physicians in Solo or Two-Person Practice D.17
Physicians in Group Practice (Three or More) D.18
Physicians in HMO, Medical School, Hospital, or Other Practice Setting D.19
Physicians in Practice with Managed Care Revenue above Median D.20
Physicians in Practice with Managed Care Revenue at/below Median D.21

TABLE D.1

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, ALL PHYSICIANS (OR ANY SUBSET)*

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
12,500	0.26%	0.38%	0.46%	0.53%	0.58%	0.61%	0.64%	0.66%	0.68%
12,000	0.27%	0.39%	0.47%	0.53%	0.58%	0.62%	0.65%	0.67%	0.69%
11,500	0.27%	0.39%	0.48%	0.54%	0.59%	0.63%	0.66%	0.68%	0.70%
11,000	0.28%	0.40%	0.49%	0.55%	0.60%	0.64%	0.67%	0.69%	0.71%
10,500	0.28%	0.41%	0.49%	0.56%	0.62%	0.66%	0.69%	0.71%	0.72%
10,000	0.29%	0.41%	0.50%	0.57%	0.63%	0.67%	0.70%	0.72%	0.74%
9,500	0.29%	0.42%	0.51%	0.58%	0.64%	0.68%	0.71%	0.73%	0.75%
9,000	0.30%	0.43%	0.52%	0.60%	0.65%	0.70%	0.73%	0.75%	0.77%
8,500	0.31%	0.44%	0.54%	0.61%	0.67%	0.71%	0.74%	0.77%	0.78%
8,000	0.31%	0.45%	0.55%	0.62%	0.68%	0.73%	0.76%	0.79%	0.80%
7,500	0.32%	0.46%	0.56%	0.64%	0.70%	0.75%	0.78%	0.80%	0.82%
7,000	0.33%	0.47%	0.58%	0.66%	0.72%	0.77%	0.80%	0.83%	0.85%
6,500	0.34%	0.49%	0.59%	0.68%	0.74%	0.79%	0.83%	0.85%	0.87%
6,000	0.35%	0.50%	0.61%	0.70%	0.76%	0.81%	0.85%	0.88%	0.90%
5,500	0.36%	0.52%	0.63%	0.72%	0.79%	0.84%	0.88%	0.91%	0.93%

* See note at end of table.

TABLE D.1

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, ALL PHYSICIANS (OR ANY SUBSET)*
-- Continued

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
5,000	0.38%	0.54%	0.66%	0.75%	0.82%	0.87%	0.91%	0.94%	0.96%
4,500	0.39%	0.56%	0.69%	0.78%	0.85%	0.91%	0.95%	0.98%	1.00%
4,000	0.41%	0.59%	0.72%	0.82%	0.89%	0.95%	0.99%	1.02%	1.05%
3,500	0.43%	0.62%	0.76%	0.86%	0.94%	1.00%	1.05%	1.08%	1.10%
3,000	0.46%	0.66%	0.80%	0.91%	1.00%	1.06%	1.11%	1.15%	1.17%
2,500	0.49%	0.71%	0.86%	0.98%	1.07%	1.14%	1.19%	1.23%	1.26%
2,000	0.54%	0.77%	0.94%	1.07%	1.17%	1.24%	1.30%	1.34%	1.37%
1,500	0.60%	0.86%	1.05%	1.19%	1.31%	1.39%	1.45%	1.50%	1.53%

* Separate tables are provided for all primary care physicians (D.2), all non-primary care physicians (D.3), general pediatricians (D.4), surgical specialists (D.5), physicians in solo or two-person practice (D.6), physicians in HMO, medical school, hospital, or other practice settings, excluding private group practices of three or more (D.7), physicians in practice with a higher percentage of revenue from managed care (D.8), and physicians in practice with a lower percentage of revenue from managed care (D.9). We recommend that you use one of these other tables if your estimate is limited to one of these subgroups (or any subset within it).

TABLE D.2

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE,
ALL PRIMARY CARE PHYSICIANS (OR ANY SUBSET)*

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
7,200	0.36%	0.49%	0.58%	0.65%	0.71%	0.75%	0.78%	0.80%	0.82%
7,000	0.36%	0.50%	0.59%	0.66%	0.71%	0.76%	0.79%	0.81%	0.82%
6,500	0.37%	0.51%	0.61%	0.68%	0.74%	0.78%	0.81%	0.83%	0.85%
6,000	0.38%	0.53%	0.63%	0.70%	0.76%	0.80%	0.83%	0.86%	0.88%
5,500	0.40%	0.54%	0.65%	0.72%	0.78%	0.83%	0.86%	0.89%	0.90%
5,000	0.41%	0.56%	0.67%	0.75%	0.81%	0.86%	0.90%	0.92%	0.94%
4,500	0.43%	0.59%	0.70%	0.78%	0.85%	0.90%	0.93%	0.96%	0.98%
4,000	0.45%	0.61%	0.73%	0.82%	0.89%	0.94%	0.98%	1.00%	1.02%
3,500	0.47%	0.65%	0.77%	0.86%	0.93%	0.99%	1.03%	1.06%	1.08%
3,000	0.50%	0.69%	0.82%	0.91%	0.99%	1.05%	1.09%	1.12%	1.14%
2,500	0.54%	0.74%	0.88%	0.98%	1.06%	1.12%	1.17%	1.20%	1.23%
2,000	0.58%	0.80%	0.96%	1.07%	1.16%	1.23%	1.28%	1.31%	1.34%
1,500	0.65%	0.90%	1.07%	1.20%	1.30%	1.37%	1.43%	1.47%	1.50%
1,000	0.77%	1.05%	1.25%	1.40%	1.52%	1.61%	1.67%	1.72%	1.75%

* A separate table is provided for general pediatricians (D.4). We recommend that you use this other table if your estimate is limited to this subgroup (or any subset within it).

TABLE D.3

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, ALL NON-PRIMARY CARE PHYSICIANS (OR ANY SUBSET)*

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
5,350	0.38%	0.52%	0.62%	0.69%	0.75%	0.79%	0.82%	0.85%	0.86%
5,300	0.38%	0.52%	0.62%	0.69%	0.75%	0.79%	0.83%	0.85%	0.87%
5,000	0.39%	0.53%	0.63%	0.71%	0.77%	0.81%	0.84%	0.87%	0.88%
4,500	0.40%	0.55%	0.66%	0.74%	0.80%	0.84%	0.88%	0.90%	0.92%
4,000	0.42%	0.58%	0.68%	0.77%	0.83%	0.88%	0.92%	0.94%	0.96%
3,500	0.44%	0.60%	0.72%	0.81%	0.87%	0.92%	0.96%	0.99%	1.01%
3,000	0.46%	0.64%	0.76%	0.85%	0.92%	0.98%	1.02%	1.04%	1.07%
2,500	0.50%	0.68%	0.81%	0.91%	0.99%	1.04%	1.09%	1.12%	1.14%
2,000	0.54%	0.74%	0.88%	0.99%	1.07%	1.13%	1.18%	1.21%	1.24%
1,500	0.60%	0.82%	0.98%	1.10%	1.19%	1.26%	1.31%	1.35%	1.38%
1,000	0.70%	0.96%	1.14%	1.28%	1.39%	1.47%	1.53%	1.57%	1.60%
500	0.90%	1.25%	1.48%	1.66%	1.80%	1.90%	1.98%	2.04%	2.08%

* A separate table is provided for surgical specialists (D.5). We recommend that you use this other table if your estimate is limited to this subgroup (or any subset within it).

TABLE D.4

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, GENERAL PEDIATRICIANS (OR ANY SUBSET)

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
1,630	0.58%	0.82%	1.00%	1.13%	1.23%	1.30%	1.36%	1.39%	1.40%
1,600	0.58%	0.83%	1.01%	1.14%	1.24%	1.32%	1.37%	1.40%	1.42%
1,500	0.60%	0.86%	1.04%	1.18%	1.28%	1.36%	1.41%	1.45%	1.46%
1,400	0.62%	0.89%	1.08%	1.22%	1.33%	1.41%	1.46%	1.50%	1.52%
1,300	0.65%	0.92%	1.12%	1.26%	1.38%	1.46%	1.52%	1.56%	1.57%
1,200	0.67%	0.96%	1.16%	1.32%	1.43%	1.52%	1.58%	1.62%	1.64%
1,100	0.70%	1.00%	1.22%	1.37%	1.50%	1.59%	1.65%	1.69%	1.71%
1,000	0.74%	1.05%	1.27%	1.44%	1.57%	1.66%	1.73%	1.77%	1.79%
900	0.78%	1.11%	1.34%	1.52%	1.65%	1.75%	1.83%	1.87%	1.89%
800	0.83%	1.18%	1.43%	1.61%	1.75%	1.86%	1.94%	1.98%	2.01%
700	0.88%	1.26%	1.52%	1.72%	1.88%	1.99%	2.07%	2.12%	2.14%
600	0.95%	1.36%	1.65%	1.86%	2.03%	2.15%	2.24%	2.29%	2.32%
500	1.05%	1.49%	1.80%	2.04%	2.22%	2.35%	2.45%	2.51%	2.54%
400	1.17%	1.67%	2.02%	2.28%	2.48%	2.63%	2.74%	2.81%	2.84%
300	1.35%	1.92%	2.33%	2.64%	2.87%	3.04%	3.16%	3.24%	3.28%

TABLE D.5

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, SURGICAL SPECIALISTS (OR ANY SUBSET)

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
2,300	0.50%	0.69%	0.83%	0.93%	1.00%	1.06%	1.10%	1.13%	1.16%
2,000	0.54%	0.74%	0.88%	0.98%	1.07%	1.13%	1.17%	1.21%	1.23%
1,800	0.56%	0.77%	0.92%	1.03%	1.12%	1.18%	1.23%	1.26%	1.29%
1,500	0.61%	0.84%	1.00%	1.12%	1.21%	1.28%	1.33%	1.37%	1.40%
1,200	0.67%	0.92%	1.10%	1.23%	1.33%	1.41%	1.47%	1.51%	1.54%
1,000	0.72%	1.00%	1.19%	1.33%	1.44%	1.53%	1.59%	1.63%	1.67%
800	0.80%	1.10%	1.31%	1.47%	1.59%	1.68%	1.75%	1.80%	1.84%
500	0.98%	1.35%	1.61%	1.80%	1.95%	2.07%	2.15%	2.21%	2.26%
250	1.33%	1.83%	2.18%	2.44%	2.65%	2.80%	2.92%	3.00%	3.06%

TABLE D.6

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS IN SOLO OR TWO-PERSON PRACTICE (OR ANY SUBSET)

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
7,000	0.26%	0.40%	0.51%	0.59%	0.66%	0.71%	0.75%	0.78%	0.80%
6,500	0.27%	0.41%	0.52%	0.61%	0.68%	0.74%	0.78%	0.81%	0.83%
6,000	0.28%	0.43%	0.55%	0.64%	0.71%	0.77%	0.81%	0.84%	0.87%
5,500	0.29%	0.45%	0.57%	0.67%	0.74%	0.80%	0.85%	0.88%	0.91%
5,000	0.31%	0.47%	0.60%	0.70%	0.78%	0.84%	0.89%	0.92%	0.95%
4,500	0.32%	0.50%	0.63%	0.74%	0.82%	0.89%	0.94%	0.97%	1.00%
4,000	0.34%	0.53%	0.67%	0.78%	0.87%	0.94%	0.99%	1.03%	1.06%
3,500	0.37%	0.56%	0.71%	0.83%	0.93%	1.01%	1.06%	1.10%	1.14%
3,000	0.40%	0.61%	0.77%	0.90%	1.00%	1.09%	1.15%	1.19%	1.23%
2,500	0.44%	0.67%	0.85%	0.99%	1.10%	1.19%	1.26%	1.31%	1.35%
2,000	0.49%	0.75%	0.95%	1.10%	1.23%	1.33%	1.41%	1.46%	1.50%
1,500	0.56%	0.86%	1.09%	1.27%	1.42%	1.54%	1.62%	1.69%	1.74%

TABLE D.7

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS IN HMO, MEDICAL SCHOOL, HOSPITAL, OR OTHER PRACTICE SETTING (OR ANY SUBSET)*

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
4,400	0.42%	0.62%	0.76%	0.87%	0.95%	1.02%	1.06%	1.09%	1.10%
4,000	0.44%	0.64%	0.79%	0.90%	0.99%	1.05%	1.10%	1.13%	1.13%
3,500	0.46%	0.67%	0.83%	0.95%	1.04%	1.10%	1.15%	1.18%	1.19%
3,000	0.48%	0.71%	0.88%	1.00%	1.10%	1.17%	1.22%	1.25%	1.26%
2,500	0.52%	0.76%	0.94%	1.07%	1.17%	1.25%	1.30%	1.34%	1.35%
2,000	0.56%	0.83%	1.02%	1.16%	1.27%	1.36%	1.42%	1.45%	1.46%
1,500	0.63%	0.92%	1.13%	1.29%	1.42%	1.51%	1.57%	1.62%	1.63%
1,000	0.73%	1.07%	1.32%	1.51%	1.65%	1.76%	1.83%	1.88%	1.89%
900	0.76%	1.12%	1.37%	1.57%	1.71%	1.83%	1.90%	1.95%	1.97%
800	0.80%	1.17%	1.43%	1.64%	1.79%	1.91%	1.99%	2.04%	2.06%

* "Other Practice Setting" does not apply to private group practices of three or more.

TABLE D.8

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS IN PRACTICE WITH HIGH REVENUE FROM MANAGED CARE* (OR ANY SUBSET)

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
7,000	0.32%	0.45%	0.55%	0.63%	0.69%	0.74%	0.77%	0.80%	0.83%
6,500	0.33%	0.47%	0.57%	0.65%	0.71%	0.76%	0.80%	0.83%	0.85%
6,000	0.34%	0.48%	0.59%	0.67%	0.73%	0.79%	0.82%	0.85%	0.88%
5,500	0.35%	0.50%	0.61%	0.69%	0.76%	0.81%	0.85%	0.88%	0.91%
5,000	0.36%	0.52%	0.63%	0.72%	0.79%	0.85%	0.89%	0.92%	0.95%
4,500	0.38%	0.54%	0.66%	0.75%	0.83%	0.88%	0.93%	0.96%	0.99%
4,000	0.40%	0.57%	0.69%	0.79%	0.87%	0.93%	0.97%	1.01%	1.04%
3,500	0.42%	0.60%	0.73%	0.83%	0.91%	0.98%	1.03%	1.06%	1.10%
3,000	0.45%	0.64%	0.78%	0.89%	0.97%	1.04%	1.09%	1.13%	1.17%
2,500	0.48%	0.69%	0.84%	0.96%	1.05%	1.12%	1.18%	1.22%	1.26%
2,000	0.53%	0.76%	0.92%	1.05%	1.15%	1.23%	1.29%	1.34%	1.38%
1,500	0.60%	0.85%	1.04%	1.18%	1.29%	1.38%	1.45%	1.50%	1.55%

* Revenue from managed care above the median of 35 percent.

TABLE D.9

STANDARD ERRORS FOR PERCENTAGES: NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS IN PRACTICE WITH LOW REVENUE FROM MANAGED CARE* (OR ANY SUBSET)

Sample Size	For Percentages Near								
	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	50%
5,500	0.41%	0.57%	0.68%	0.76%	0.82%	0.87%	0.91%	0.93%	0.95%
5,300	0.42%	0.58%	0.70%	0.78%	0.84%	0.89%	0.93%	0.96%	0.97%
5,000	0.43%	0.60%	0.71%	0.80%	0.86%	0.91%	0.95%	0.97%	0.99%
4,500	0.45%	0.62%	0.74%	0.83%	0.89%	0.95%	0.98%	1.01%	1.03%
4,000	0.47%	0.64%	0.77%	0.86%	0.93%	0.98%	1.03%	1.05%	1.07%
3,500	0.49%	0.68%	0.80%	0.90%	0.97%	1.03%	1.07%	1.10%	1.13%
3,000	0.52%	0.71%	0.85%	0.95%	1.03%	1.09%	1.13%	1.16%	1.19%
2,500	0.55%	0.76%	0.90%	1.01%	1.10%	1.16%	1.21%	1.24%	1.27%
2,000	0.60%	0.82%	0.98%	1.10%	1.19%	1.25%	1.31%	1.34%	1.37%
1,500	0.66%	0.91%	1.08%	1.21%	1.31%	1.39%	1.44%	1.48%	1.51%
1,000	0.76%	1.05%	1.25%	1.40%	1.51%	1.60%	1.67%	1.71%	1.75%
900	0.79%	1.09%	1.30%	1.45%	1.57%	1.66%	1.73%	1.78%	1.82%

* Revenue from managed care at or below the median of 35 percent.

TABLE D.10

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
ALL PHYSICIANS (OR ANY SUBSET)*

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
13,000	0.227	0.307	0.416	0.496	0.563	0.620	0.672	0.719	0.762
12,000	0.235	0.318	0.431	0.515	0.584	0.644	0.697	0.746	0.791
11,500	0.240	0.325	0.440	0.525	0.595	0.656	0.711	0.760	0.806
11,000	0.245	0.331	0.449	0.536	0.607	0.670	0.725	0.776	0.823
10,500	0.250	0.338	0.458	0.547	0.621	0.684	0.741	0.793	0.840
10,000	0.256	0.346	0.469	0.560	0.635	0.700	0.758	0.811	0.859
9,500	0.262	0.354	0.480	0.573	0.650	0.716	0.776	0.830	0.880
9,000	0.268	0.363	0.492	0.587	0.666	0.734	0.795	0.851	0.902
8,500	0.275	0.373	0.505	0.603	0.684	0.754	0.816	0.873	0.926
8,000	0.283	0.383	0.519	0.620	0.703	0.775	0.840	0.898	0.952
7,500	0.292	0.395	0.535	0.639	0.724	0.799	0.865	0.925	0.981
7,000	0.301	0.408	0.552	0.659	0.748	0.824	0.893	0.955	1.013
6,500	0.312	0.422	0.571	0.682	0.774	0.853	0.924	0.988	1.048
6,000	0.323	0.438	0.593	0.708	0.803	0.885	0.959	1.026	1.087
5,500	0.337	0.456	0.617	0.737	0.836	0.922	0.998	1.068	1.132
5,000	0.352	0.477	0.645	0.770	0.874	0.963	1.043	1.116	1.183
4,500	0.370	0.500	0.678	0.809	0.918	1.012	1.096	1.172	1.243
4,000	0.390	0.529	0.716	0.855	0.969	1.069	1.157	1.238	1.313

* See note at end of table.

TABLE D.10

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
ALL PHYSICIANS (OR ANY SUBSET)*
-- Continued

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
3,500	0.416	0.563	0.762	0.910	1.032	1.137	1.232	1.318	1.397
3,000	0.447	0.605	0.819	0.978	1.109	1.222	1.324	1.416	1.501
2,500	0.487	0.659	0.892	1.065	1.208	1.332	1.442	1.543	1.636
2,000	0.540	0.732	0.991	1.183	1.342	1.479	1.602	1.714	1.817
1,500	0.619	0.838	1.135	1.356	1.537	1.695	1.835	1.963	2.081
1,000	0.751	1.017	1.377	1.644	1.864	2.055	2.226	2.381	2.524

* Separate tables are provided for all primary care physicians (D.11), all non-primary care physicians (D.12), internal medicine physicians (D.13), family/general practice physicians (D.14), medical specialists (D.15), surgical specialists (D.16), physicians in solo or two-person practice (D.17), physicians in group practice of three or more (D.18), physicians in HMO, medical school, hospital, or other practice settings (D.19), physicians in practice with a higher percentage of revenue from managed care (D.20), and physicians in practice with a lower percentage of revenue from managed care (D.21). We recommend that you use one of these other tables if your estimate is limited to one of these subgroups (or any subset within it).

TABLE D.11

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
ALL PRIMARY CARE PHYSICIANS (OR ANY SUBSET)*

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
7,500	0.282	0.392	0.547	0.663	0.761	0.847	0.924	0.995	1.060
7,000	0.291	0.406	0.565	0.685	0.786	0.875	0.954	1.027	1.095
6,500	0.302	0.420	0.585	0.710	0.815	0.906	0.989	1.064	1.134
6,000	0.314	0.437	0.608	0.738	0.846	0.941	1.027	1.105	1.178
5,500	0.327	0.456	0.634	0.769	0.882	0.981	1.071	1.152	1.228
5,000	0.343	0.477	0.664	0.805	0.924	1.027	1.121	1.206	1.286
4,500	0.361	0.502	0.699	0.847	0.972	1.081	1.179	1.269	1.352
4,000	0.382	0.532	0.740	0.897	1.029	1.144	1.248	1.343	1.432
3,500	0.409	0.568	0.790	0.958	1.098	1.221	1.332	1.434	1.528
3,000	0.441	0.613	0.852	1.033	1.185	1.317	1.437	1.546	1.647
2,500	0.483	0.671	0.933	1.131	1.297	1.442	1.572	1.691	1.802
2,000	0.541	0.751	1.043	1.264	1.449	1.611	1.757	1.890	2.014
1,500	0.626	0.869	1.207	1.462	1.676	1.863	2.031	2.184	2.327
1,000	0.772	1.071	1.486	1.800	2.062	2.292	2.498	2.687	2.862
900	0.816	1.132	1.570	1.901	2.178	2.420	2.637	2.837	3.021
800	0.868	1.204	1.669	2.021	2.315	2.572	2.804	3.015	3.211
700	0.931	1.291	1.790	2.167	2.482	2.758	3.006	3.232	3.443
600	1.011	1.401	1.942	2.350	2.691	2.990	3.258	3.504	3.732
500	1.114	1.543	2.138	2.588	2.964	3.292	3.587	3.857	4.108
400	1.256	1.739	2.409	2.915	3.337	3.706	4.038	4.342	4.624

* Separate tables are provided for internal medicine physicians (D.13) and family/general practice physicians (D.14). We recommend that you use one of these other tables if your estimate is limited to one of these subgroups (or any subset within it).

TABLE D.12

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
ALL NON-PRIMARY CARE PHYSICIANS (OR ANY SUBSET)*

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
5,300	0.436	0.498	0.569	0.615	0.650	0.679	0.704	0.725	0.744
5,000	0.447	0.510	0.583	0.631	0.667	0.696	0.721	0.743	0.763
4,500	0.467	0.534	0.610	0.660	0.697	0.728	0.755	0.777	0.798
4,000	0.491	0.561	0.641	0.694	0.733	0.766	0.793	0.817	0.839
3,500	0.520	0.594	0.679	0.734	0.776	0.811	0.840	0.865	0.888
3,000	0.555	0.635	0.725	0.784	0.829	0.866	0.897	0.924	0.948
2,500	0.600	0.686	0.784	0.848	0.896	0.936	0.969	0.999	1.025
2,000	0.661	0.754	0.862	0.932	0.986	1.029	1.066	1.099	1.127
1,500	0.747	0.853	0.975	1.054	1.114	1.164	1.205	1.242	1.274
1,000	0.888	1.014	1.159	1.253	1.325	1.383	1.433	1.476	1.515
900	0.929	1.061	1.212	1.311	1.386	1.447	1.499	1.544	1.585
800	0.977	1.116	1.275	1.378	1.457	1.521	1.576	1.624	1.666
700	1.035	1.181	1.350	1.459	1.543	1.611	1.668	1.719	1.764
600	1.105	1.262	1.442	1.559	1.647	1.720	1.782	1.836	1.884
500	1.195	1.364	1.558	1.685	1.781	1.859	1.926	1.984	2.036
400	1.314	1.501	1.714	1.853	1.959	2.045	2.118	2.182	2.239

* Separate tables are provided for medical specialists (D.15) and surgical specialists (D.16). We recommend that you use one of these other tables if your estimate is limited to one of these subgroups (or any subset within it).

TABLE D.13

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
INTERNAL MEDICINE PHYSICIANS (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
2,500	0.432	0.611	0.864	1.058	1.222	1.366	1.497	1.617	1.729
2,000	0.505	0.713	1.008	1.233	1.424	1.591	1.743	1.883	2.013
1,500	0.620	0.875	1.234	1.509	1.741	1.945	2.130	2.299	2.457
1,000	0.833	1.173	1.652	2.018	2.327	2.598	2.844	3.069	3.279
900	0.901	1.267	1.784	2.179	2.512	2.805	3.070	3.313	3.539
800	0.983	1.383	1.946	2.376	2.738	3.057	3.345	3.610	3.856
700	1.087	1.527	2.148	2.623	3.022	3.373	3.690	3.982	4.253
600	1.220	1.715	2.410	2.942	3.389	3.782	4.137	4.463	4.766
500	1.402	1.969	2.765	3.374	3.886	4.335	4.742	5.115	5.461

TABLE D.14

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
FAMILY/GENERAL PRACTICE PHYSICIANS (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
3,200	0.404	0.576	0.825	1.022	1.190	1.341	1.479	1.607	1.727
3,000	0.422	0.600	0.858	1.062	1.236	1.392	1.534	1.666	1.791
2,500	0.478	0.676	0.962	1.187	1.379	1.550	1.707	1.852	1.988
2,000	0.559	0.786	1.112	1.367	1.584	1.778	1.954	2.118	2.271
1,500	0.689	0.962	1.351	1.653	1.910	2.138	2.346	2.538	2.718
1,000	0.937	1.297	1.805	2.196	2.526	2.818	3.083	3.328	3.556
900	1.017	1.406	1.952	2.371	2.724	3.037	3.320	3.581	3.824
800	1.116	1.539	2.132	2.585	2.968	3.305	3.611	3.892	4.154
700	1.241	1.708	2.360	2.857	3.276	3.645	3.978	4.285	4.571
600	1.406	1.930	2.659	3.213	3.679	4.089	4.459	4.799	5.116

TABLE D.15

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
MEDICAL SPECIALISTS (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
3,000	0.515	0.603	0.711	0.786	0.845	0.894	0.937	0.976	1.011
2,500	0.552	0.647	0.763	0.844	0.907	0.961	1.007	1.049	1.086
2,000	0.601	0.705	0.832	0.920	0.990	1.049	1.100	1.145	1.187
1,500	0.670	0.787	0.930	1.030	1.108	1.174	1.232	1.284	1.330
1,000	0.782	0.920	1.089	1.207	1.300	1.378	1.446	1.507	1.563
900	0.814	0.958	1.135	1.258	1.355	1.437	1.508	1.572	1.630
800	0.852	1.002	1.188	1.317	1.419	1.505	1.580	1.647	1.708
700	0.896	1.056	1.252	1.388	1.496	1.587	1.666	1.737	1.801
600	0.951	1.120	1.330	1.475	1.590	1.687	1.771	1.847	1.916
500	1.019	1.202	1.428	1.584	1.709	1.813	1.905	1.986	2.060

TABLE D.16

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
SURGICAL SPECIALISTS (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
2,300	0.610	0.716	0.842	0.925	0.990	1.043	1.088	1.129	1.164
2,000	0.654	0.768	0.902	0.992	1.061	1.118	1.167	1.210	1.249
1,500	0.753	0.885	1.041	1.145	1.225	1.291	1.348	1.398	1.443
1,000	0.921	1.083	1.275	1.403	1.502	1.584	1.654	1.715	1.770
900	0.970	1.142	1.344	1.480	1.584	1.670	1.744	1.809	1.867
800	1.029	1.211	1.426	1.570	1.681	1.772	1.851	1.920	1.982
700	1.100	1.295	1.526	1.679	1.798	1.896	1.981	2.055	2.121
600	1.188	1.399	1.649	1.816	1.944	2.051	2.142	2.222	2.294
500	1.302	1.534	1.808	1.991	2.133	2.250	2.350	2.438	2.517

TABLE D.17

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
PHYSICIANS IN SOLO OR TWO-PERSON PRACTICE (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
4,700	0.347	0.484	0.677	0.823	0.945	1.053	1.149	1.238	1.320
4,500	0.354	0.495	0.691	0.840	0.965	1.075	1.174	1.265	1.349
4,000	0.375	0.524	0.732	0.890	1.023	1.139	1.244	1.340	1.429
3,500	0.401	0.560	0.782	0.950	1.092	1.216	1.328	1.430	1.525
3,000	0.432	0.603	0.843	1.025	1.177	1.311	1.432	1.542	1.645
2,500	0.472	0.660	0.922	1.121	1.288	1.434	1.566	1.686	1.799
2,000	0.527	0.736	1.029	1.251	1.437	1.600	1.747	1.882	2.007
1,500	0.607	0.848	1.185	1.440	1.655	1.843	2.012	2.167	2.311
1,000	0.741	1.036	1.446	1.759	2.020	2.250	2.456	2.646	2.822
900	0.781	1.091	1.524	1.852	2.128	2.370	2.587	2.787	2.972
800	0.828	1.156	1.615	1.963	2.255	2.511	2.742	2.953	3.150

TABLE D.18

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE,
PHYSICIANS IN GROUP PRACTICE* (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
3,500	0.509	0.616	0.745	0.833	0.902	0.959	1.009	1.052	1.092
3,000	0.552	0.668	0.808	0.904	0.978	1.041	1.095	1.142	1.185
2,500	0.607	0.735	0.890	0.996	1.078	1.147	1.206	1.259	1.307
2,000	0.683	0.827	1.002	1.121	1.214	1.292	1.359	1.419	1.473
1,500	0.796	0.964	1.168	1.308	1.417	1.508	1.586	1.656	1.719
1,000	0.987	1.197	1.452	1.626	1.762	1.876	1.974	2.062	2.140
900	1.044	1.267	1.537	1.721	1.866	1.986	2.090	2.183	2.266
800	1.112	1.349	1.638	1.835	1.989	2.117	2.228	2.327	2.416

* Three or more physicians in the practice.

TABLE D.19

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS IN
HMO, MEDICAL SCHOOL, HOSPITAL, OR OTHER
PRACTICE SETTING (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
4,500	0.366	0.525	0.753	0.930	1.080	1.214	1.334	1.446	1.550
4,000	0.385	0.552	0.791	0.977	1.134	1.274	1.401	1.517	1.627
3,500	0.407	0.583	0.836	1.032	1.199	1.346	1.480	1.604	1.719
3,000	0.435	0.623	0.892	1.102	1.279	1.436	1.579	1.711	1.833
2,500	0.470	0.674	0.965	1.191	1.382	1.552	1.706	1.848	1.980
2,000	0.519	0.742	1.063	1.311	1.522	1.708	1.878	2.034	2.179
1,500	0.589	0.843	1.206	1.488	1.727	1.938	2.129	2.306	2.471
1,000	0.709	1.013	1.448	1.785	2.071	2.324	2.553	2.764	2.962
900	0.744	1.063	1.520	1.873	2.173	2.438	2.678	2.900	3.107
800	0.786	1.123	1.605	1.977	2.294	2.573	2.827	3.060	3.279

TABLE D.20

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS
IN PRACTICE WITH HIGH REVENUE FROM
MANAGED CARE (OR ANY SUBSET)*

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
7,000	0.295	0.399	0.538	0.642	0.727	0.800	0.866	0.926	0.981
6,500	0.305	0.411	0.555	0.662	0.750	0.826	0.893	0.955	1.012
6,000	0.315	0.425	0.574	0.684	0.775	0.854	0.924	0.988	1.047
5,500	0.327	0.441	0.596	0.710	0.804	0.886	0.958	1.025	1.086
5,000	0.340	0.459	0.620	0.739	0.837	0.922	0.998	1.067	1.130
4,500	0.356	0.480	0.648	0.773	0.875	0.964	1.043	1.115	1.181
4,000	0.374	0.504	0.681	0.812	0.920	1.013	1.096	1.172	1.241
3,500	0.395	0.534	0.721	0.859	0.973	1.072	1.160	1.240	1.313
3,000	0.422	0.570	0.769	0.917	1.038	1.144	1.238	1.323	1.402
2,500	0.456	0.615	0.830	0.990	1.121	1.235	1.337	1.429	1.514
2,000	0.501	0.676	0.913	1.088	1.232	1.357	1.469	1.571	1.664
1,500	0.565	0.764	1.031	1.229	1.392	1.534	1.660	1.774	1.880
1,000	0.672	0.907	1.225	1.460	1.654	1.822	1.972	2.108	2.234

* Revenue from managed care above the median of 35 percent.

TABLE D.21

STANDARD ERRORS FOR MEANS OF QUASI-CONTINUOUS VARIABLES:
NATIONAL ESTIMATES FROM COMBINED SAMPLE, PHYSICIANS
IN PRACTICE WITH LOW REVENUE FROM
MANAGED CARE* (OR ANY SUBSET)

	For Means Near								
Sample Size	5	10	20	30	40	50	60	70	80
5,600	0.280	0.378	0.512	0.612	0.695	0.767	0.832	0.891	0.945
5,500	0.283	0.382	0.517	0.618	0.701	0.774	0.839	0.899	0.954
5,000	0.297	0.401	0.543	0.649	0.737	0.813	0.882	0.944	1.002
4,500	0.314	0.424	0.574	0.686	0.778	0.859	0.931	0.997	1.058
4,000	0.334	0.451	0.610	0.729	0.827	0.913	0.989	1.059	1.124
3,500	0.359	0.484	0.654	0.781	0.886	0.978	1.060	1.135	1.204
3,000	0.389	0.525	0.709	0.846	0.960	1.059	1.148	1.229	1.304
2,500	0.429	0.577	0.780	0.931	1.056	1.165	1.262	1.351	1.433
2,000	0.482	0.649	0.876	1.046	1.186	1.308	1.417	1.516	1.608
1,500	0.562	0.755	1.019	1.215	1.377	1.519	1.645	1.761	1.867
1,000	0.696	0.936	1.260	1.502	1.702	1.876	2.032	2.174	2.305
900	0.736	0.989	1.332	1.588	1.799	1.982	2.147	2.296	2.435
800	0.784	1.053	1.417	1.689	1.913	2.108	2.283	2.442	2.589

* Revenue from managed care at or below the median of 35 percent.