Physician incomes and work patterns across specialties: 1975 and 1983-84

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Survey data on physician income and work patterns are examined and compared for 1975 and 1983-84. Specialty, hours and weeks worked, location, practice size, and incorporation status are examined. Dollar figures for 1975 are adjusted to show real-dollar income changes over the period. Incomes for surgical specialties were highest. In real-dollar terms, nonsurgical specialties exhibited sluggish growth or even fell. Urban-rural differences in real income and hours worked narrowed over time. Incorporation and group affiliation were positively related to income levels in both surveys, but number of hours worked was not. Limitations and interpretation of these data are discussed last.

Introduction and background

Physicians in the United States comprise less than one-half of 1 percent of the population yet determine how nearly 12 percent of the Nation's gross national product will be spent (Eisenberg, 1985). Indeed, physicians' decisions on use of hospital services, diagnostic testing, and other medical resources are critical determinants not only of clinical practice patterns but of overall health expenditures as well. Physician fees and corresponding income levels, although representing only one-fifth of total health care dollars spent, are nevertheless useful indicators of decisions that govern the way 70 percent (Davis and Schieber, 1984) to 90 percent (Eisenberg, 1985) of each health care dollar is spent.

In this article, we examine physician income levels in the United States. We compare physician income and work pattern survey data collected in 1975 and again in 1983-84 in the National Physicians' Practice Costs and Income Survey. In an earlier *Research and Statistics Note* from the Social Security Administration, Thorndike (1977) presented 1975 physician net income figures and work pattern variation by the five specialties surveyed—general practice, internal medicine, pediatrics, general surgery, and obstetrics-gynecology. The 1975 survey was the first initiative by the Social Security Administration to periodically undertake a national data collection effort on physician practice income, office expenses, and a range of demographic and insurance-related variables. Subsequent surveys in 1976, 1977, 1978, 1983-84, and 1986-87 have been undertaken by the Health Care Financing Administration (HCFA). Each survey was conducted through the National Opinion Research Center and was designed to be nationally representative of non-Federal, patient-care practitioners. Physicians in all of these surveys were asked (usually by telephone) to answer a similar set of questions about their practices and to provide some biographical information.

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Methods

The individual surveys are less than completely comparable in a number of ways. In earlier surveys, some physicians were excluded based on specialty, employment status, and practice size. (For example, employee physicians were excluded in the 1975 survey.) The first survey was the least extensive and included only 5 different specialties, compared with 17 specialties in the later surveys. The wording of specific questions has also been subject to some change in later surveys.

The basic sampling design and approach of the specific 1975 and 1983-84 surveys should be briefly explained. In the earlier National Physicians' Practice Costs and Income Survey, data were collected from 2,000 fee-for-service, office-based physicians. The sample design was based on a three-step procedure. First, 101 nationally representative primary sampling units (PSU's) were chosen to form a master probability sample. Then a subsample of 30 PSU's was chosen from the larger sample. Finally, physicians were selected within PSU's. The five specialties surveyed were sampled in proportion to their percentage of the total physician population. It is not clear from available information whether the specialty internal medicine included only general internists or all internists, including specialties regarded as medical subspecialties.

The sampling frame for the 1983-84 National Physicians' Practice Costs and Income Survey was the Physician Master File, maintained by the American Medical Association (AMA). The file includes both AMA members and nonmember physicians, and it is generally regarded as the sampling frame of choice for national surveys of physicians. The file contained a list of 331,264 active patient-care physicians who, according to AMA records, met the sample population definition, namely all physicians in the 50 States and District of Columbia who are not Federal employees and who are engaged in providing patient care in a hospital or office-based setting. Excluded were residents, inactive physicians, and physicians whose specialty was unclassified. A single-stage, stratified, random sampling design was utilized. The 136 discrete strata in the sample resulted from the interaction of three basic dimensions: specialty groups

(17 strata), geographic regions defined by the U.S. Bureau of the Census (4 strata), and degree of urbanization (2 strata: metropolitan statistical area or not metropolitan statistical area). Smaller sized specialties, such as cardiology and orthopedic surgery, were oversampled to achieve a minimum of 200 sample cases for each specialty group. Of the 8,952 contacted cases, 2,100, or 23.5 percent, were found to be ineligible. Of the 6,852 eligible cases, a total of 4,729 physicians responded. Completion rates varied widely by specialty, with a high of 77 percent among anesthesiologists and a low of 53 percent among cardiologists. The overall completion rate, when weighted by specialty, was 67.7 percent.

Despite these differences in design and scope of the two surveys, comparisons of results can provide some perspective on physician practice changes over a time period that has included a number of marked changes in American health care, including substantial expansion of the supply of physicians and changes in the methods by which a range of providers (hospitals, physicians, and others) receive payment for services.

Net income comparisons for 1975 and 1983-84 are broken down by specialty, weeks worked per year, incorporation status, location, hours worked per week, and number of physicians in the practice. Net income is defined as earnings after expenses but before taxes are deducted. A rural area is defined as a population center with fewer than 100,000 inhabitants. It should be noted that the exact wording of the net income question changed from 1975 to 1983-84. Deferred compensation, bonuses, and other forms of income were explicitly included in the 1983-84 income question but not in the 1975 question. We would expect that these additional elements of income were implicitly included in the earlier survey; most physicians would probably find it difficult to exclude them.

Because the 1975 survey results are available only in hard-copy, aggregate form in which average values are reported, comparisons could not be tested for statistical significance. However, statistics such as the standard errors and numbers of observations for the 1983-84 survey are available from the authors on request. The 1983-84 survey data tapes are also publicly available.[1]

In addition to comparing nominal dollar figures, we have adjusted the 1975 dollar figures to 1983 real-dollar levels for the five types of specialties common to both surveys using the Fixed Weight Price Index for Personal Consumption Expenditures (Council of Economic Advisors, 1987, p. 250). This allows some insight into real-dollar income changes over the period examined.

Findings

Data for general practitioners (GP's), internists, pediatricians, general surgeons, and obstetrician-gynecologists (OB-GYN's)—specialists surveyed in both 1975 and 1983-84—are displayed in Tables 1-6. Information on nine more specialties surveyed only in the latter period are also shown in the tables. We have excluded from this article income figures for hospital-based specialty groups—radiologists, anesthesiologists, and pathologists.

Table 1

Average net income of physicians, by specialty: United States, 1975 and 1983-84

Specialty	1975		1983-84
	Nominal	Adjusted[1]	
All physicians	$53,600	$92,930	[2]$93,158
General practice	44,800	77,673	73,579
Internal medicine	53,900	93,451	85,371
Pediatrics	50,100	86,862	77,860
General surgery	61,300	106,281	111,287
Obstetrics-gynecology	64,600	112,002	115,678
Family practice	NA	NA	76,023
Cardiovascular specialties	NA	NA	134,377
Other medical specialties	NA	NA	109,025
Orthopedic surgery	NA	NA	142,870
Ophthalmology	NA	NA	124,692
Urology	NA	NA	114,316
Other surgery	NA	NA	121,066
Psychiatry	NA	NA	78,600
Other specialties	NA	NA	106,244

[1]Nominal dollar figures for 1975 were adjusted to 1983 real-dollar levels using the Fixed Weight Price Index for Personal Consumption Expenditures.
[2]Includes only specialties surveyed in both 1975 and 1983-84.

NOTE: NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

In 1975, of the five specialties surveyed, OB-GYN's had the highest income nationally in nominal terms, and GP's had the lowest (Table 1). Comparing nominal dollar figures in 1983, GP's still had the lowest income of any specialty. Although OB-GYN's continued to lead in income among the five primary care specialties, a number of surgical specialists and the cardiovascular specialists had the highest incomes. Orthopedic surgeons were, in fact, the highest paid specialists surveyed in 1983-84.

Examination of the adjusted income figures reveals further interesting patterns with time. All of the more cognitive-based specialties effectively earned less in 1983-84 than in 1975, with pediatrics having the most pronounced overall real income erosion over time. Real income rose over the time period only for general surgeons and OB-GYN's. As a consequence, the spread, or range, of income levels among the specialties also became more pronounced, increasing by almost 20 percent if the single lowest and highest levels are compared.

Nominal and adjusted physician average net incomes in urban and rural practice locations are shown by specialty in Table 2. For the five comparable specialties, the income gap between urban and rural physicians almost disappeared from 1975 to 1983-84. The 1975 nominal income data had an overall difference of $5,700, almost 12 percent, between the five specialties of urban and rural

[1]These data tapes are available from the National Technical Information Service, HCFA Contract No. 500-83-0025.

Table 2

Average net income of physicians, by urban-rural practice and specialty: United States, 1975 and 1983-84

Specialty	Urban			Rural		
	1975			1975		
	Nominal	Adjusted[1]	1983-84	Nominal	Adjusted[1]	1983-84
All physicians	$54,200	$93,971	$93,759	$48,500	$84,088	[2]$90,854
General practice	45,100	78,193	72,559	43,200	74,899	75,513
Internal medicine	54,800	95,011	87,155	46,400	80,447	76,799
Pediatrics	50,000	86,689	78,156	51,300	88,943	76,104
General surgery	61,100	105,934	107,105	64,200	111,308	124,486
Obstetrics-gynecology	65,300	113,216	117,759	53,600	92,930	104,361
Family practice	NA	NA	73,706	NA	NA	80,550
Cardiovascular specialties	NA	NA	134,386	NA	NA	134,282
Other medical specialties	NA	NA	108,731	NA	NA	111,855
Orthopedic surgery	NA	NA	145,202	NA	NA	129,792
Ophthalmology	NA	NA	125,139	NA	NA	121,885
Urology	NA	NA	112,675	NA	NA	120,710
Other surgery	NA	NA	122,352	NA	NA	108,078
Psychiatry	NA	NA	78,428	NA	NA	81,525
Other specialties	NA	NA	106,722	NA	NA	104,184

[1]Nominal dollar figures for 1975 were adjusted to 1983 real-dollar levels using the Fixed Weight Price Index for Personal Consumption Expenditures.
[2]Includes only specialties surveyed in both 1975 and 1983-84.

NOTE: NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

Table 3

Hours worked weekly by physicians, by urban-rural practice and specialty: United States, 1975 and 1983-84

Specialty	Total		Urban		Rural	
	1975	1983-84	1975	1983-84	1975	1983-84
All physicians	58.0	[1]58.8	57.4	[1]59.0	61.2	[1]58.0
General practice	57.2	54.1	56.3	53.0	60.9	56.2
Internal medicine	57.8	60.1	57.8	60.5	58.1	57.8
Pediatrics	55.5	54.8	54.0	54.3	65.1	57.7
General surgery	60.7	60.6	60.4	60.5	62.8	60.8
Obstetrics-gynecology	58.6	62.2	58.1	63.0	62.9	58.2
Family practice	NA	59.0	NA	58.9	NA	59.3
Cardiovascular specialties	NA	65.8	NA	66.8	NA	55.5
Other medical specialties	NA	57.5	NA	57.3	NA	59.6
Orthopedic surgery	NA	62.2	NA	60.6	NA	69.9
Ophthalmology	NA	51.5	NA	51.4	NA	52.1
Urology	NA	59.1	NA	58.7	NA	60.1
Other surgery	NA	56.4	NA	56.7	NA	54.2
Psychiatry	NA	52.3	NA	52.0	NA	58.0
Other specialties	NA	55.7	NA	55.3	NA	57.2

[1]Includes only specialties surveyed in both 1975 and 1983-84.

NOTE: NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

physicians. By comparison, 1983-84 urban-rural income differences for the same five specialties were $2,905 in absolute dollars, or slightly more than 3 percent. The urban-rural differences for 1983-84 were a bit more pronounced when compared across all 14 specialty categories—$5,848, or 6.4 percent. (This difference is not displayed but was calculated separately from reported net incomes shown in Tables 1 and 2.) In 1975, pediatricians had the least income difference between urban and rural practices; OB-GYN's, the greatest. Two specialties, pediatricians and general surgeons, earned more in the rural areas. Nationally and in both urban and rural locations general surgeons and OB-GYN's earned, on average, more than the three medical specialties of general practice, internal medicine, and pediatrics.

In the 1983-84 survey, cardiovascular specialists in urban and rural practices reported almost identical incomes. Rural physicians in several specialties—general practitioners, family practitioners, other medical specialists, general surgeons, urologists, and psychiatrists—actually reported higher incomes, on average, than their urban counterparts did, with general surgeons having the greatest absolute

differences in income levels. Incomes were more likely to be higher in urban areas for surgical specialties than for other specialties. Surgical specialty differences may reflect differences in the availability of secondary and tertiary centers of care and/or existing referral patterns that often bring patients to urban centers for a more intensive and complex mix of services and procedures. Examination of real-dollar adjustment comparisons again reveals a pattern of relative income erosion for nonsurgical specialists over the time period covered. The lone exception is the rural general practitioner.

Looking at hours worked, rural doctors responding to the 1975 survey (Table 3) worked 3.8 hours a week longer than their urban colleagues. Although there was only a minimal difference in hours worked by urban and rural internists, rural pediatricians averaged 11 hours per week more than their metropolitan counterparts. As shown in Table 3, rural pediatricians still averaged more hours per week in 1983-84, but the gap had narrowed substantially. Hours per week dropped across the range of specialties for rural physicians and were often lower than for their urban counterparts. Perhaps this reflects improved distribution of physicians across geographic areas over the last decade, as discussed, for example, in Newhouse et al. (1982). According to the 1975 survey, surgical specialties averaged longer hours than medical specialties. This finding was generally not repeated with the later survey data. However, for one surgical specialty, orthopedic surgery, a rural-urban difference of almost 10 hours per week was found.

Comparisons of hours worked should be viewed with some caution. Small sample sizes (e.g., a range from 9 to 111 respondents for rural specialty cells) render these estimates less than robust because of the large standard errors of the later survey estimates. Thorndike (1977) also noted that the earlier survey results could be upwardly biased, as was the case with other survey data from the American Medical Association, that she examined.

No single pattern of income distribution and number of weeks worked can be seen for the 1975 survey data (Table 4). For each specialty, peak net incomes varied. However, OB-GYN's consistently (adjusted and unadjusted income) earned the most for 41-47 weeks of work; pediatricians for 48-50 weeks; and general surgeons for more than 50 weeks. For 1983-84 survey results shown in Table 4, orthopedic surgeons and cardiovascular specialists generally had the highest specialty income in each category of weeks worked. This pattern is similar to net income information presented in Tables 1 and 2, with surgical specialties doing well relative to nonsurgical counterparts.

Somewhat paradoxically, according to both early and recent survey results, for all physicians combined, net incomes have been highest when they worked 41-47 weeks per year. This was also generally the case by specialty in 1975 and in 1983-84. Average income, in turn, decreased across specialties for both time periods as the number of weeks increased to more than 50. The adjusted comparisons are especially marked as number of weeks increases. The providers working more than 50 weeks per year have consistently fared more poorly over the time period examined, regardless of specialty. Thorndike (1977) noted that, for the 1975 data, the decrease did not necessarily mean that working longer decreased income but probably meant that rural physicians,

Table 4

Average net income of physicians, by number of weeks worked per year and specialty: United States, 1975 and 1983-84

	41-47 weeks worked			48-50 weeks worked			More than 50 weeks worked		
	1975[1]			1975[1]			1975[1]		
Specialty	Nominal	Adjusted[2]	1983	Nominal	Adjusted[2]	1983	Nominal	Adjusted[2]	1983
All physicians	$55,500	$96,225	[3]$100,146	$53,300	$92,410	[3]$94,228	$52,200	$90,503	[3]$78,155
General practice	53,700	93,104	71,401	45,100	78,193	74,875	44,700	77,500	69,514
Internal medicine	56,100	97,265	87,615	52,800	91,543	87,041	51,800	89,810	74,624
Pediatrics	46,100	79,927	80,725	51,700	89,636	79,195	49,300	85,475	71,956
General surgery	65,600	113,736	123,557	60,300	104,547	110,612	66,500	115,296	86,073
Obstetrics-gynecology	69,100	119,804	112,987	62,900	109,306	123,681	63,000	109,228	91,630
Family practice	NA	NA	76,564	NA	NA	79,851	NA	NA	67,038
Cardiovascular specialties	NA	NA	165,063	NA	NA	127,562	NA	NA	105,888
Other medical specialties	NA	NA	121,970	NA	NA	110,911	NA	NA	79,618
Orthopedic surgery	NA	NA	149,749	NA	NA	138,347	NA	NA	172,023
Ophthalmology	NA	NA	136,086	NA	NA	125,058	NA	NA	78,861
Urology	NA	NA	129,929	NA	NA	111,573	NA	NA	91,601
Other surgery	NA	NA	124,981	NA	NA	119,341	NA	NA	118,100
Psychiatry	NA	NA	82,415	NA	NA	78,790	NA	NA	73,420
Other specialties	NA	NA	120,992	NA	NA	102,576	NA	NA	102,221

[1]1975 figures exclude time at medical meetings.
[2]Nominal dollar figures for 1975 were adjusted to 1983 real-dollar levels using the Fixed Weight Price Index for Personal Consumption Expenditures.
[3]Includes only specialties surveyed in both 1975 and 1983-84.

NOTES: Income of physicians working 40 hours per week or less is not reported because of too few observations. NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

who, on average, earned lower incomes, also worked more weeks per year. For both sets of data, it should also be kept in mind that, although more working hours (as measured by number of weeks) may pay off in higher gross earnings, the marginal return (especially net return) per unit of time may fall off sharply. Most physicians are self-employed. Unlike salaried physicians, who receive a constant return on work effort, self-employed physicians (particularly if among the majority working in solo practice or in a small group) probably do not have a fixed level of return. Given fixed costs of practicing and increasing productivity at the margin over some range, income should be an increasing function of units of time over this range. However, as marginal productivity declines and/or practice cost functions slope upward, income should fall.

Sloan (1975) has argued that physician earnings per unit of time fall as work effort increases for two reasons. First, the physician's marginal product falls over time because of fatigue, difficulty scheduling appointments, and so on. These diseconomies are

Table 5

Average net income of physicians, by corporate status and specialty: United States, 1975 and 1983-84

	Incorporated			Unincorporated		
	1975			1975		
Specialty	Nominal	Adjusted[1]	1983-84	Nominal	Adjusted[1]	1983-84
All physicians	$64,100	$111,135	[2]$103,794	$48,200	$83,568	[2]$78,087
General practice	53,500	92,757	86,852	42,800	74,206	63,766
Internal medicine	61,300	106,280	90,213	49,100	85,128	80,615
Pediatrics	53,700	93,104	85,588	48,500	84,088	64,469
General surgery	68,900	119,457	118,143	55,700	96,571	98,380
Obstetrics-gynecology	74,400	128,993	124,623	54,100	93,797	86,801
Family practice	NA	NA	81,580	NA	NA	70,384
Cardiovascular specialties	NA	NA	148,881	NA	NA	92,587
Other medical specialties	NA	NA	121,486	NA	NA	82,597
Orthopedic surgery	NA	NA	143,615	NA	NA	137,039
Ophthalmology	NA	NA	150,650	NA	NA	89,099
Urology	NA	NA	119,098	NA	NA	92,507
Other surgery	NA	NA	129,558	NA	NA	99,979
Psychiatry	NA	NA	82,836	NA	NA	74,350
Other specialties	NA	NA	114,627	NA	NA	89,617

[1]Nominal dollar figures for 1975 were adjusted to 1983 real-dollar levels using the Fixed Weight Price Index for Personal Consumption Expenditures.
[2]Includes only specialties surveyed in both 1975 and 1983-84.

NOTE: NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

Table 6

Average net income of physicians, by size of practice and specialty: United States, 1975 and 1983-84

	Solo practice			2-5 physicians in practice		
	1975			1975		
Specialty	Nominal	Adjusted[1]	1983-84	Nominal	Adjusted[1]	1983-84
All physicians	$48,900	$84,782	[2]$87,835	$62,100	$107,668	[2]$102,965
General practice	42,500	73,686	70,447	53,400	92,584	80,783
Internal medicine	51,700	89,636	81,929	57,200	99,172	95,270
Pediatrics	47,400	82,181	73,684	52,700	91,370	83,320
General surgery	56,700	98,305	106,459	69,900	121,191	118,689
Obstetrics-gynecology	55,300	95,878	109,768	75,100	130,207	122,667
Family practice	NA	NA	69,622	NA	NA	84,256
Cardiovascular specialties	NA	NA	108,991	NA	NA	163,108
Other medical specialties	NA	NA	94,849	NA	NA	129,242
Orthopedic surgery	NA	NA	124,422	NA	NA	165,459
Ophthalmology	NA	NA	117,436	NA	NA	134,182
Urology	NA	NA	106,133	NA	NA	124,001
Other surgery	NA	NA	118,149	NA	NA	128,614
Psychiatry	NA	NA	78,396	NA	NA	81,334
Other specialties	NA	NA	98,612	NA	NA	115,599

[1]Nominal dollar figures for 1975 were adjusted to 1983 real-dollar levels using the Fixed Weight Price Index for Personal Consumption Expenditures.
[2]Includes only specialties surveyed in both 1975 and 1983-84.

NOTES: Incomes of physicians in groups of 6 or more are not reported because there were too few observations. NA is not available.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the National Physicians' Practice Costs and Income Survey, 1975 and 1983-84.

reflected in overall earnings figures. Second, the physician lowers his or her fee as the supply of services and procedures (and hence units of time) increases. As Mitchell (1982) noted in a study of women physicians' incomes, self-employed physicians who work fewer hours on average may not have moved as far down their demand curve as other physicians and hence enjoy relatively greater returns on the marginal unit of time worked. As the supply of physicians increases, this marginal return to income may decrease further with increasing competition for patients. Although later survey data results could be interpreted as suggestive of such a pattern, research has not definitely resolved the individual physician's wage-work hour profile. These patterns may just as validly reflect cross-sectional survey differences among physicians whose individual wage-work hour profiles in fact increase but who choose to work fewer hours.

Incorporated physicians earned more than unincorporated doctors in both 1975 and 1983-84 (Table 5). Because incorporation provides tax advantages to those earning high incomes, this was expected. Similarly, a higher proportion of physicians among the specialties with the higher incomes were incorporated. In 1975, 34 percent of the physicians sampled were incorporated: 20 percent of general practitioners, 40 percent of internists, 42 percent of general surgeons, and 49 percent of OB-GYN's (Thorndike, 1977). Our calculations (not shown in tables) revealed that, by 1983-84, many more physicians, 61 percent, were incorporated. Among the higher income specialties, this pattern was even clearer: 74 percent of cardiovascular specialists, 83 percent of orthopedic surgeons, and 58 percent of ophthalmologists were incorporated, compared with only 43 percent of general practitioners. Estimates for both time periods are probably conservative because large group practices, which are usually incorporated, were underrepresented in these samples. Underrepresentation occurred because the number of large group practices is small relative to the other categories, and practice size was not a sampling stratum in the survey.

Because most group practices are incorporated and physicians who practice alone are less likely to be so, the distribution of net incomes of solo-practice physicians compared with those in group practice (Table 6) was similar to that in Table 5. The comparable numbers tended to vary little from 1975 to 1983-84. There were some notable standouts, such as incorporated pediatricians in group practice, who seem to have fared much better over time than other pediatricians have. A combination of tax advantages and the production efficiencies of larger groups may have contributed to maintenance of their income levels. However, OB-GYN's in groups appear to have fared worse during this period than OB-GYN's who chose solo practice did.

Discussion

Physician incomes have never been the direct focus of public policies. However, as Sloan (1975) and many other observers have noted, a plethora of health policies past and present have influenced or been affected by reported patterns of physician earnings. In this article, we report the latest available results on physician income from the HCFA National

Table 7

Average net income of physicians, by source of data and specialty: United States, 1983

Specialty	National Physicians' Practice Costs and Income Survey	American Medical Association
General practice	$73,579	[1]$68,500
Family practice	76,023	[1]68,500
Internal medicine	85,371	93,300
Cardiovascular specialties	134,377	NA
Pediatrics	78,360	70,700
Other internal medicine	109,025	NA
General surgery	111,287	NA
Orthopedic surgery	142,870	NA
Ophthalmology	124,692	NA
Urology	114,316	NA
Obstetrics-gynecology	115,678	119,900
Other surgery	121,066	NA
Psychiatry	78,600	80,000
Other specialties	106,244	NA

[1]Includes both family and general practice.

NOTES: National Physicians' Practice Costs and Income Survey data are for 1983-84. NA is not available.

SOURCES: National Physicians' Practice Costs and Income Survey data: Health Care Financing Administration, Office of Research and Demonstrations, 1983-84. American Medical Association data: (American Medical Association, 1984).

Table 8

Median net income of physicians, by source of data and specialty: United States, 1983

Specialty	National Physicians' Practice Costs and Income Survey	*Medical Economics*[1]	American Medical Association
General practice	$65,000	$68,130	[2]$63,000
Family practice	65,000	76,200	[2]63,000
Internal medicine	85,000	83,450	80,000
Cardiovascular specialties	110,000	NA	NA
Pediatrics	75,000	74,060	61,500
Other internal medicine	95,000	NA	NA
General surgery	110,000	105,500	NA
Orthopedic surgery	130,000	142,320	NA
Ophthalmology	110,000	112,500	NA
Urology	110,000	NA	NA
Obstetrics-gynecology	110,000	109,170	107,000
Other surgery	110,000	NA	NA
Psychiatry	75,000	NA	72,000

[1]In this survey, net income is defined as follows. For unincorporated physicians, it is individual income from practice minus tax-deductible professional expenses before income taxes. For incorporated physicians, it is total compensation from practice (salary, any bonuses, and corporate funds set aside for retirement) before income taxes.
[2]Includes both family and general practice.

NOTES: National Physicians' Practice Costs and Income Survey data are for 1983-84. NA is not available.

SOURCES: National Physicians' Practice Costs and Income Survey data: Health Care Financing Administration, Office of Research and Demonstrations, 1983-84. *Medical Economics* data: (Owens, 1984). American Medical Association data: (American Medical Association, 1984).

Physicians' Practice Costs and Income Survey. The information is placed in the context of earlier survey results to compare the extent to which physician incomes and selected work patterns have changed over roughly the past decade.

Perhaps the greatest change, as indirectly measured in these surveys, is the increased prominence, or focus, of individually identified specialties. In 1975, HCFA found it appropriate to survey only five individual specialties; by 1983-84, that number had more than tripled. Agency records do not allow a clear understanding as to whether survey designers made this change because of shifts in the physician population. Although there was a distinct shift in the balance between GP's and family practitioners (FP's) during this period, the other four specialties included in the earlier survey actually increased as a percent of the physician population. The proportion of GP's fell from 10.8 percent to 5.4 percent of the population from 1975 to 1983, and FP's grew from 3.1 percent to 6.9 percent. However, general internists, general surgeons, pediatricians, and OB-GYN's combined grew from 32.8 percent to 34.8 percent of the physician population (American Medical Association, 1987, Table A-2). Nevertheless, it is the additional specialties in the later survey, especially the surgical specialties such as orthopedics and ophthalmology, that appear clearly dominant in terms of income. Although cardiovascular specialists fared relatively well, it is not discernible from the survey data to what extent the numbers include nonsurgical providers such as cardiologists as opposed to providers such as cardiovascular surgeons.

Meanwhile, in real-dollar terms, average net incomes of nonsurgical specialties generally had sluggish or even negative growth. This finding of erosion or stability in real income levels over the time period is similar to AMA findings (1984, findings from Table 39, deflated by the Consumer Price Index) that net income before taxes for all physicians combined actually declined from 1973 to 1983. The disparate clusterings of incomes across specialties could be argued as reinforcement of current perceptions (Physician Payment Review Commission, 1987) that current third-party policies need to refocus payments toward primary care, rural, and nonsurgical services and procedures.

Similar interspecialty patterns persist when comparing average and median net incomes and when comparing National Physicians' Practice Costs and Income Survey data with 1983 survey data compiled by the American Medical Association (1984) and the private publication *Medical Economics* (Owens, 1984), shown in Tables 7 and 8.

Some differences across these three sources do exist. Both the AMA and *Medical Economics* data are based on periodic interviews or questions sent to a random sample of medical doctors obtained (as with the HCFA National Physicians' Practice Costs and Income Survey sample) from AMA's Master File of such physicians. Definitions of the physicians eligible for sampling purposes vary slightly among the three surveys. For example, the Medical Economics Continuing Survey includes anesthesiologists as a surgical specialty and the AMA's Socioeconomic Monitoring System survey includes both office and hospital-based physicians but excludes residents. Response rates also vary. The AMA survey had a 62-percent response rate, compared with only 37 percent for the Medical Economics Continuing Survey. However, both the AMA and *Medical Economics* hold that their results are representative of the physician population.

On the whole, the findings seem to validate the representativeness of each survey. Indeed, the specialty and surgical-nonsurgical variation found in the HCFA survey are generally confirmed. Numbers from *Medical Economics* are typically slightly higher than HCFA survey numbers. In the AMA estimates, considering both average and median net income comparisons, income levels tend to be understated relative to HCFA findings. To the extent that bias exists, it probably stems from the utilization of the AMA's Physician Master File, the sampling frame selected for all three income surveys.

The changes in net income from 1975 to 1983-84 for rural physicians appear to indicate that a better balance between urban and rural payment rates has been achieved. The real net income data appear to indicate that disparities between primary care and surgical specialists have grown from 1975 to 1983, with GP's, internists, and pediatricians all losing while surgeons and OB-GYN's gain. However, this result is less clear when comparisons are made based on net income per hour worked. A crude measure of net income per hour worked was derived by dividing mean net income by mean hours worked. According to this measure, GP's have held their own and OB-GYN's experienced negative growth in income from 1975 to 1983-84.

Overall, our multiple perspectives on these comparisons with varying results help to point out a significant limitation. Although the information presented here is suggestive and useful for generating hypotheses for further analytic work, the findings and results must be interpreted with a great deal of caution. Other, uncontrolled factors may be affecting results. Therefore, it is essential that more rigorous research efforts be undertaken to investigate the possible bias and misleading figures integral to simple comparisons. The more important determinants of physician income and, to a lesser extent, hours of work may include specialty, location, and organizational characteristics (as noted in Williams, Langenbrunner, and Jencks, 1987, and other work). At the same time, this analysis of differences and changes may be limited or deceptive without knowledge of differences in the composition of the population in terms of other variables such as age and sex. The expanded medical school enrollment of the 1970's has perhaps changed the demographic composition of the physician population enough that comparisons between 1975 and 1983-84, especially income comparisons, should be controlled for those

changes. Pediatrics is a particular example of a specialty in which the average physician was younger and more likely to be female in 1983 than in 1975. Nearly all specialties are probably affected to some extent. Younger and female physicians earn less for reasons that are not necessarily caused by third-party payment or other public policies, but rather are largely natural factors not appropriate to policy interventions (as found by Mitchell, 1982, and others). Therefore, the comparisons presented here should be taken only as a first glimpse or step in understanding interspecialty and intertemporal patterns.

Continued collection and analysis of current data and information on physician practice and income patterns can contribute to an understanding of changes in the health care delivery system over the last 5 years. The U.S. General Accounting Office (1986), among others, reported that median gross incomes for all specialties grew from 1983 to 1984, with some surgical specialty incomes increasing 36 percent from the previous year. As further noted in that study, the dramatic increases were remarkable given that Congress enacted a freeze in Medicare fees effective July 1984 and that, in March 1984, the AMA publicly urged physicians to voluntarily freeze fees for all patients. More recently, Owens (1987) reported in *Medical Economics* that physician net incomes grew nearly 10 percent in 1986. According to the AMA's survey (1987) of physicians, incomes increased 6.5 percent from the previous year. Generally, AMA statistics indicate that physician real incomes have grown steadily since 1983. The extent to which these recent changes in earnings are attributable to specific factors such as fee hikes rather than volume changes (induced or otherwise) or intensity changes is not known. These findings are, however, useful as referent points until results of the next National Physicians' Practice Costs and Income Survey become available.

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