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# Data Watch

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## Trends In Physician Income

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by Gregory C. Pope and John E. Schneider

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Now is a particularly appropriate time to examine trends in physician income. The federal Medicare program has begun the transition to a new method of paying physicians. A fundamental premise of the Medicare fee schedule, variants of which are likely to be adopted by many private insurers, is that surgeons are overpaid relative to physicians that provide primarily evaluation and management services. But how, in fact, have primary care specialties, whose incomes will be raised by the fee schedule, fared financially relative to surgical specialties over the past decade? Are the alleged imbalances in financial return “correcting themselves,” making the fee schedule unnecessary? Furthermore, will fee reductions for invasive services and diagnostic tests planned in the fee schedule be a financial hardship for procedure-oriented specialties?

In addition to raising fees for evaluation and management relative to procedural services, the Bush administration and Congress are considering cutting Medicare physician fees absolutely in an attempt to rein in skyrocketing Medicare physician spending and meet deficit reduction targets. National spending for physician services rose rapidly during the 1980s, from \$63.1 billion in 1980 to \$117.6 billion in 1989, in constant 1989 dollars.<sup>1</sup> It is relevant to ask how much physicians have profited from this doubling of real expenditures. One possibility is that greater expenditures have simply compensated physicians for higher practice costs, without dramatically raising their net incomes. Physicians, for example, have lamented large increases in their malpractice insurance premiums in the mid-1980s. Another possibility is that a rapidly rising physician supply absorbed the growth in expenditures: the physician-to-population ratio grew by 21 percent from 1980 to 1989.<sup>2</sup> Some observers have predicted that intensified competition among the larger numbers of physicians would put downward pressure on their fees and incomes. Others have used the trend in physician income as an indicator of whether physicians are now in surplus.<sup>3</sup> Was the growth in physician

practice costs and supply so rapid during the 1980s that income per physician stagnated despite much larger expenditures?

The 1980s also saw a massive shift from inpatient to outpatient care and the development and diffusion of many surgical and diagnostic techniques. Coronary artery bypass grafts, percutaneous transluminal coronary angioplasty, the extracapsular technique for cataract surgery, magnetic resonance imaging, computed tomography scanning, lithotripsy, and ultrasound are among the most prominent of the newly widespread technologies. Have physicians exploited new technologies and the less-regulated outpatient setting to increase their net incomes? Which physicians have seen the greatest economic gain?

The physician population itself has changed in the past decade. Lower-earning women and minorities now comprise a larger proportion of the physician work force, while higher-earning specialists continue to replace lower-earning general practitioners. The large "baby boom" cohort of physicians has entered the traditionally most remunerative middle-aged years.<sup>4</sup> This DataWatch examines trends in physician net income from 1978 to 1989, concentrating on the latter half of this period.

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## Measuring Income

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We rely on two periodic sample surveys of physicians to measure trends in physician income and practice characteristics: the American Medical Association (AMA) Socioeconomic Monitoring System surveys and the Health Care Financing Administration (HCFA) Physician Practice Cost and Income Surveys (PPCIS). Each survey is made up of telephone interviews with a representative sample of approximately 4,000 nonfederal physicians who have completed their residency and who spend at least twenty hours per week in patient care. All estimates of average incomes or other data from either survey are subject to random error because they are based on the responses of only a few physicians.

Each survey requests the physician respondent to report net income from medical practice after practice deductions but before taxes. In addition to net profit and/or salary, the physician is asked to include such elements of compensation as retirement plan contributions, deferred compensation, bonuses, and fringe benefits. When comparing income over time, we adjust it for inflation using the consumer price index (CPI) to convert actual into "real" income. The AMA survey is fielded annually. Because of changes in AMA sample and survey methodology, AMA income figures are not fully comparable before and after 1981. For this reason, we analyze AMA-reported income trends only after 1981.

In the HCFA PPCIS survey, income data for 1978, 1983, and 1988 are

available. Because of sample limitations in the 1978 and 1988 surveys, income trends can be examined only for physicians who were self-employed or employed by another physician.<sup>5</sup> Henceforth, for brevity, we will refer to this group as “self-employed physicians” since the overwhelming majority are self-employed. Self-employed physicians comprise about three-quarters of all nonfederal patient care physicians, excluding residents. Employees of hospitals, clinics, or health maintenance organizations (HMOs) are excluded from the PPCIS analysis. The PPCIS data were analyzed by the authors using the survey computer tapes.<sup>6</sup>

We also use data from the Current Population Survey (CPS), an annual survey of the civilian, noninstitutionalized population conducted by the U.S. Bureau of the Census.<sup>7</sup> It allows comparison of physician income trends to those of other occupations using a consistent methodology. The Census Bureau does not break out physicians as a separate occupational category, but physicians comprise most of the category “health diagnosing occupations.” We report comparative CPS income trends for males only because physicians are overwhelmingly male and because male and female income trends diverged in the 1980s. To control for hours worked, we limit CPS comparisons to full-time, year-round workers.

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### Trends In Physician Net Income

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Average real physician income grew by a strong 24 percent from 1982 (\$125,500 in 1989 dollars) to 1989 (\$155,800) (Exhibit 1). Almost all of this increase occurred in the latter four years, 1986 to 1989.<sup>8</sup> Surgeons’ and medical specialists’ incomes grew rapidly from 1982 to 1989 (by 33 percent and 31 percent, respectively), while general practitioners’ average income was flat (only a 5 percent gain) (Exhibit 2). By 1989,

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#### Exhibit 1

#### Average Physician Net Income, 1982-1989, In 1989 Dollars

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Thousands of 1989 dollars

160

140

120

100

1982      1983      1984      1985      1986      1987      1988      1989

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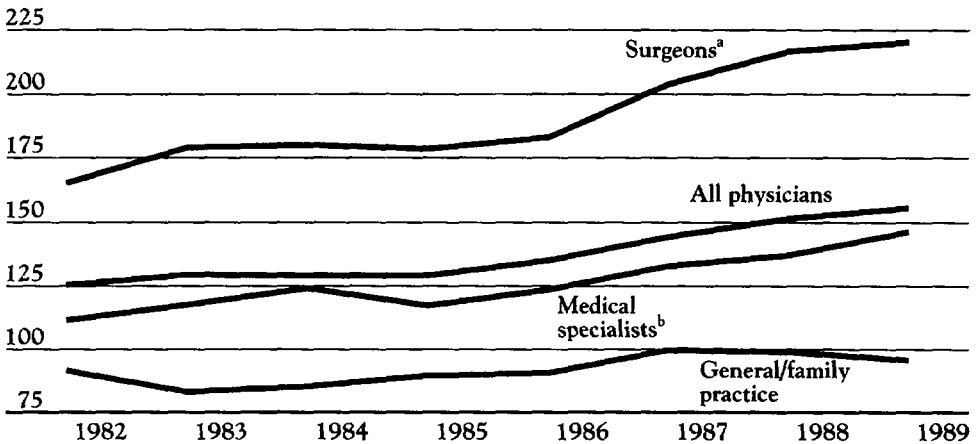
Source: American Medical Association, *Socioeconomic Characteristics of Medical Practice*, 1990-1991 ed.

Note: Nonfederal patient care physicians, excluding residents. Average annual net income from medical practice after expenses and before taxes.

## Exhibit 2

Average Physician Net Income, 1982-1989. In 1989 Dollars

Thousands of 1989 dollars



Source: American Medical Association, *Socioeconomic Characteristics of Medical Practice*, 1990-1991 ed.

Note: Nonfederal patient care physicians, excluding residents. Income from medical practice after expenses and before taxes.

<sup>a</sup> Excluding obstetrician/gynecologists.

<sup>b</sup> Excluding pediatricians.

surgeons averaged \$220,500 in net income, more than double the \$95,900 income of general practitioners and 50 percent greater than the \$146,500 income of medical specialists.

The HCFA physician surveys confirm the pattern shown by the AMA data in Exhibits 1 and 2. The real net income of self-employed physicians grew only 4 percent between 1978 and 1983 but then surged by 32 percent between 1983 and 1988. The real incomes of self-employed general/family practitioners and medical specialists actually fell slightly between 1978 and 1983 before strong growth of 14 percent and 30 percent, respectively, between 1983 and 1988. Self-employed surgeons' incomes rose 10 percent between 1978 and 1983, then accelerated to a 39 percent gain from 1983 to 1988. Over the decade 1978-1988, surgeons doubled the percentage real income gains of medical specialists (46 versus 24 percent) and quintupled the gains of general/family practitioners (46 versus 9 percent).

In short, after a stagnant period in the late 1970s to early 1980s, physicians' real income rose handsomely in the late 1980s. Surgeons' incomes grew at a faster rate than those of other major specialties over the decade 1978 to 1988, widening their already considerable advantage at the beginning of the period. General/family practitioners earn increasingly less than specialists and have seen only modest gains in average income.

The average real net income of self-employed physicians in every detailed specialty rose from 1983 to 1988, with considerable differences by specialty (Exhibit 3). Average incomes of cardiologists, orthopedic surgeons, and ophthalmologists exploded over this period, rising by more than 40 percent (adjusted for inflation) in only five years.<sup>9</sup> On the other hand, the primary care specialties of general/family practice and internal medicine experienced percentage gains only one-quarter as large.<sup>10</sup>

In 1988, the income range across specialties was approximately three to one (Exhibit 4).<sup>11</sup> Self-employed cardiovascular/thoracic surgeons netted an average of \$310,500, compared with an average of \$102,500 for self-employed general/family practitioners. Cardiovascular/thoracic surgeons, orthopedic surgeons, and cardiologists earned most, and primary care physicians least. In 1988, self-employed cardiovascular/thoracic and orthopedic surgeons netted an average of over \$100 per hour.

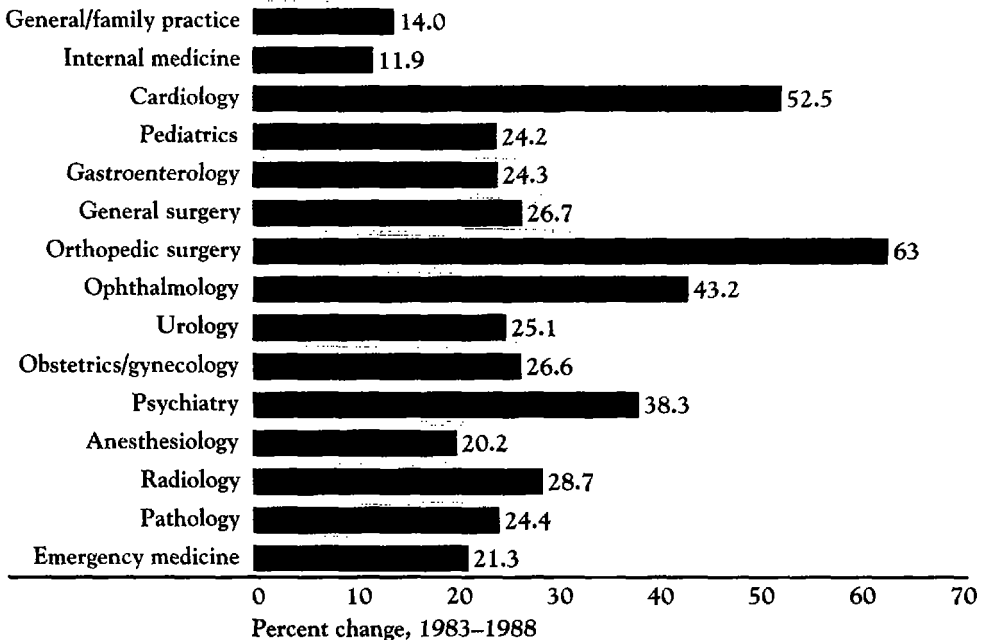
The rate of physician income growth in the 1980s exceeded that of all occupations taken together, professional occupations, and college gradu-

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### Exhibit 3

#### Percent Change In Average Real Net Income Of Self-Employed Physicians, By Specialty, 1983-1988

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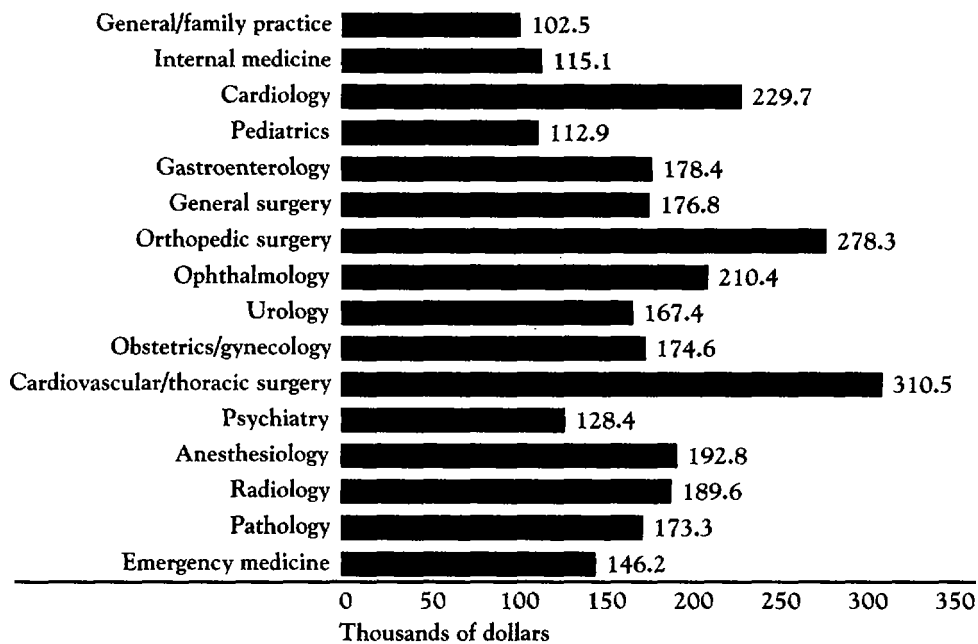


Source: Health Care Financing Administration, Physicians' Practice Cost and Income Surveys (PPCIS), various years.

Note: Nonfederal patient care physicians. Income from medical practice after expenses and before taxes. Self-employed physicians include physicians employed by another physician.

**Exhibit 4**

**Average Net Income Of Self-Employed Physicians, By Specialty,  
Thousands Of Dollars, 1988**



Source: Health Care Financing Administration, Physicians' Practice Cost and Income Survey (PPCIS), 1988.

Note: Nonfederal patient care physicians. Income from medical practice after expenses and before taxes. Self-employed physicians include physicians employed by another physician.

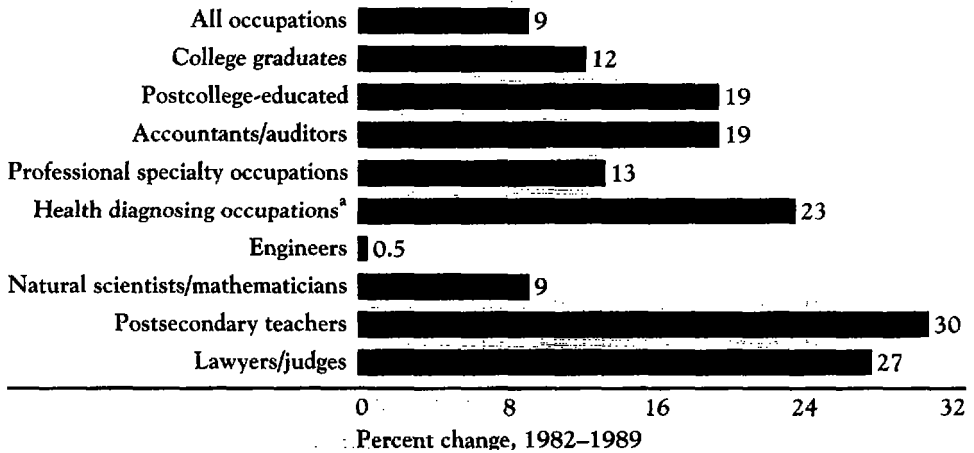
ates (Exhibit 5). Physicians comprise about 70 percent of the category "health diagnosing occupations," which also includes dentists, podiatrists, optometrists, and veterinarians.<sup>12</sup> However, the rapid earnings growth experienced by physicians was not unique. The postcollege-educated as a group, accountants and auditors, lawyers and judges, and postsecondary teachers achieved similar rates of earnings increase from 1982 to 1989. Physician income gains seem to be part of a generally greater return to highly educated labor in the 1980s. Nevertheless, physicians remain the most highly compensated profession, and their absolute income gain in the 1980s exceeded that of any other profession.

### Factors Not Explaining Physician Income Growth

There is a widespread perception that increasing physician specialization and other changes in the physician work force are important factors behind physicians' income gains. On the contrary, we found that changes in the age/sex/foreign medical graduate (FMG)/specialty mix of

## Exhibit 5

Percent Change In Real Average Annual Earnings, By Education And Occupation, 1982-1989



Source: U.S. Bureau of the Census, Current Population Reports, various years.

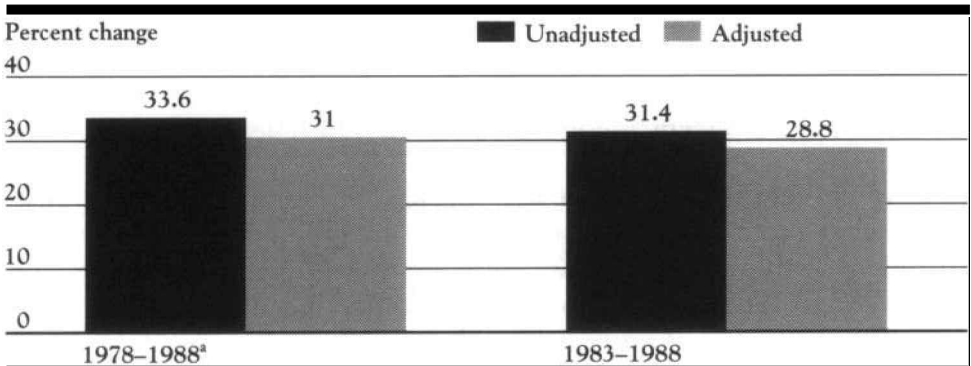
Note: Male, year-round, full-time workers.

<sup>a</sup> Approximately 70 percent physicians. Also includes dentists, optometrists, podiatrists, and veterinarians.

physicians explain only a small amount of income gains (Exhibit 6).<sup>13</sup> The rapidly growing proportion of female physicians, who traditionally have earned less, has tended to lower average physician income, but changes in age, FMG status, and specialty mix have tended to raise incomes. Overall, the changing mix explains less than 10 percent of

## Exhibit 6

Percent Change In Average Real Net Income Of Self-Employed Physicians, Unadjusted And Adjusted For Age, Sex, FMG, And Specialty Mix, 1978-1988



Source: Health Care Financing Administration, Physicians' Practice Cost and Income Surveys (PPCIS), various years.

Note: Nonfederal patient care physicians, excluding residents. Self-employed physicians include physicians employed by another physician. FMG is foreign medical graduate.

<sup>a</sup>Physicians in groups of fewer than ten, in sixteen specialties.

growth in self-employed physicians' average income over the past five to ten years.

Greater physician work effort also explains only a small amount of rising income. Hours worked by nonfederal patient care physicians, excluding residents, did grow slightly; from 1982 to 1989, weeks practiced per year rose by 1.1 percent, and hours in patient care activities per week increased by 3.9 percent.<sup>14</sup> However, these increases are not large enough to account for the 24 percent growth in real income over the same period. Among self-employed physicians, average hourly income rose by 23 percent, compared with 32 percent real growth in annual income from 1983 to 1988. Most of physician income gains in the 1980s were due to higher average hourly earnings, not to greater work effort.

Neither are physicians earning more because they are treating more patients. Average total patient contacts per nonfederal patient care physician actually fell from 1982 to 1989, by a statistically significant 5.8 percent.<sup>15</sup> The average number of office visits was about the same in 1989 as in 1982; visits on hospital rounds fell sharply after 1983 as a result of the marked shift to outpatient care in the mid-1980s. In spite of reduced inpatient activity, the mean number of surgical procedures per physician rose by a statistically significant amount as ambulatory surgery skyrocketed in the 1980s. The mix of contacts has shifted from office and hospital visits toward more lucrative surgical procedures.

Slow growth in practice expenses is another factor that does not account for gains in net income during the 1980s. On the contrary, the practice expenses of self-employed physicians increased rapidly, by 47 percent (adjusted for inflation) from 1982 to 1989.<sup>16</sup> Malpractice expenses rose especially quickly, growing by 108 percent. Nevertheless, physicians enjoyed large increases in net income, as gross revenues grew even faster than practice expenses. Obstetricians, who have faced particularly large increases in malpractice insurance premiums, have experienced above-average net income growth, according to AMA data.<sup>17</sup>

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### Reasons For Physician Income Growth In The 1980s

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**Greater volume and profit per service.** Provision of more services and higher profit per service contributed roughly equally to physician income growth in the 1980s. We estimate that 42 percent of the growth from 1982 to 1988 in real net income per office-based physician was due to a greater number of services provided per physician, and the remaining 58 percent resulted from higher unit-profit margins.<sup>18</sup> Since physician supply increased rapidly in the 1980s) across all physicians as a group, growth in volume of services was the dominant factor explaining rising net income. It accounted for two-thirds of aggregate income

growth, while increased unit-profit margins explain only one-third.

These conclusions are consistent with other evidence. Studies using Medicare data have shown large increases in volume for many procedures, especially surgery, radiology, and special diagnostic tests.<sup>19</sup> Moreover, many of the procedures that are increasing most rapidly are among the most profitable relative to physician time and effort.<sup>20</sup> These include cataract operations, coronary artery bypass graft surgery, and upper gastrointestinal endoscopy. Conversely, cognitive services such as visits, which are thought to be relatively underpaid, have not grown as rapidly.

In addition to raising charges faster than expenses are increasing and providing a more profitable mix of services, physicians have attained higher unit-profit margins by lowering their cost per service. Specialists have achieved enormous economies of scale and productivity gains for certain procedures through "learning by doing," as techniques have been refined and volumes have risen.<sup>21</sup> Despite a mid-1980s fee freeze and some "overpriced procedure" reductions, fees for such services as cataract surgery and coronary artery bypass grafts have not fallen enough to reflect productivity gains. Moreover, as volume has grown in the 1980s, physicians have been able to spread fixed practice costs such as office rent, equipment, and malpractice insurance over a greater number of services. They have also lowered costs by providing related services jointly (for example, completing a diagnostic test during an office visit). Fees have not been reduced to fully reflect lower costs.

**Slower increase in physician supply.** The physician supply and the physician-to-population ratio continued to grow rapidly in the 1980s. Nevertheless, the rate of increase in supply slowed. The average annual rate of increase in patient care physicians per person (excluding residents) fell from 3.7 percent between 1978 and 1983 to 1.9 percent between 1983 and 1989. For a given rate of increase in the demand for physician services, a slower rate of supply growth implies a higher rate of increase in income per physician. The average annual rate of growth in real income per physician was nearly three times as high between 1983 and 1989 (3.1 percent per year) as it was between 1978 and 1983 (1.1 percent per year). Nevertheless, the rate of increase in the aggregate real net income of physicians as a group was virtually identical in the two periods (6.0 percent per year versus 5.9 percent per year). The higher growth in income per physician was almost entirely due to the reduction in the rate of growth of the physician supply from 1983 to 1989 (2.9 percent per year) as compared with the period from 1978 to 1983 (4.8 percent per year).<sup>22</sup> Moreover, over the past decade (1978–1989), the number of surgeons grew less rapidly (2.8 percent per year) than the overall number of patient care physicians (3.8 percent per year, excluding residents). This helps to explain surgeons' rapid income gains.

**More comprehensive insurance coverage.** Out-of-pocket expenses as a proportion of total spending for physician services have been falling for a long time, and the trend continued in the 1980s. In 1970, 42 percent of national expenditures on physician services were paid for out of pocket. This proportion fell to 27 percent in 1980 and 19 percent in 1989.<sup>23</sup> Lower out-of-pocket cost (that is, more comprehensive insurance coverage) increases patients' willingness to use physician services, allowing physicians to raise their incomes by increasing both the volume of services and prices. The specialties whose services are covered most completely by insurance—particularly surgery—have experienced the most rapid income growth. Specialties whose services are less well insured—for example, general practice and pediatrics—have fared less well.

**Outpatient shift and technology diffusion.** Real physician income was relatively flat from 1982 to 1985; it only began growing rapidly after 1985. Although the coincidence is not exact, the timing of the spurt in physician income suggests a connection with the shift from inpatient to outpatient care with the implementation of Medicare's prospective payment system (PPS) in 1983. Private third-party payers have also encouraged the substitution of outpatient for inpatient care. The result was an explosion in outpatient surgery and diagnostic testing in hospital outpatient departments, freestanding surgery and imaging centers, independent laboratories, and physicians' offices.<sup>24</sup>

Physicians' higher outpatient earnings have more than offset their reduced inpatient revenues. They now earn an entrepreneurial return on capital (equipment, building space) and labor (aides) that was formerly appropriated by hospitals.<sup>25</sup> Lower cost and convenience for patients has probably been a major reason that the volume of many procedures and tests has skyrocketed in the outpatient setting. Without a hospital admission, patients can avoid expensive inpatient deductibles and copayments. Their time costs are also lower because of the convenience of ambulatory surgical centers and doctors' offices. Outpatient procedures are often less invasive, less painful, and less risky than inpatient procedures and have shorter recovery times. The much less stringent utilization review afforded to outpatient activity than to inpatient admissions may be another important factor in higher outpatient volumes.

Technical advances and diffusion have enabled the growth of many outpatient procedures and tests and also augmented physicians' inpatient earnings in the 1980s. Older procedures/technologies such as joint replacements and open-heart surgery have 'also been refined and are performed on more patients than before because of improved outcomes. Physicians, especially procedure-oriented ones, simply have more ways to make money now.

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## Implications

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Rapid physician income growth in the 1980s suggests that it would not impose a financial hardship, on average, for physicians to contribute to federal deficit reduction through lower Medicare fees. Certain specialties, particularly in surgery, have enjoyed substantial average income gains in the past decade and are now earning enormous imputed hourly "wages." Most physician income gains have been due to higher financial return per hour worked, not greater work effort. Higher hourly earnings may simply be a windfall to physicians; it is not clear that these earnings are needed to elicit an appropriate supply of services. Medicare and other fees have not been reduced to fully reflect productivity gains achieved for certain procedures.

Of course, Medicare physician payment policy should not be based solely on trends in physician income and the size of the federal deficit. Access for Medicare beneficiaries to physician services depends, in part, on the level of Medicare fees. This level must take into account the fees of competing private insurers, the reaction of private insurers to Medicare fee changes, the response of physicians to fee reductions, and other factors. Moreover, fees should be kept at a level high enough to recruit and retain an adequate number of physicians. In the long run, an adequate physician supply depends on fees that will make medicine as attractive a profession as other alternatives available to highly educated individuals. Currently, there is little question that medicine is highly attractive financially.

Although the average real income of all specialties rose in the 1980s) gains varied widely by specialty. Alleged imbalances in financial return between surgeons and primary care specialties are not being "corrected" over time in the marketplace. Rather, surgeons and certain other specialties are widening their financial advantage. These trends tend to support the policy, crystallized in the Medicare fee schedule, of lowering fees for invasive procedures and diagnostic tests relative to evaluation and management services. To be sure, surgeons and other specialists whose incomes have grown rapidly have provided many services that have benefited patients. However, the low and declining proportion of expenditures for physician services that are paid out of pocket suggests that many of these services, at the margin, are valued by patients at less than their cost. Any lessening of the supply of these services that follows fee reductions may lower costs more than benefits.

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## NOTES

1. Unpublished data from Health Care Financing Administration, Office of the Actuary.
2. Nonfederal patient care physicians (including residents) per civilian population. *Physician Characteristics and Distribution in the U.S.*, J 990 (Chicago: American Medical Association, 1990), Table A-8.
3. W.B. Schwartz and D.N. Mendelson, "No Evidence of an Emerging Physician Surplus," *Journal of the American Medical Association* (26 January 1990): 557-560.
4. R.J. Willke and P.S. Cotter, "Young Physicians and Changes in Medical Practice Characteristics between 1975 and 1987," *Inquiry* (Spring 1989): 84-99.
5. In addition, the 1978 PPCIS only surveyed physicians in sixteen major specialties in groups of fewer than ten physicians. We subsetted the 1983 and 1988 surveys to this sample in income comparisons involving the 1978 survey. Incomes involving only the 1983 and 1988 surveys are based on all specialties and group sizes.
6. More detail on our methods and results are available in G.C. Pope and J.E. Schneider, "Trends in Physician Income, 1978-1988" (Report to the Health Care Financing Administration under Cooperative Agreement no. 99-C-98256/1-07).
7. U.S. Bureau of the Census, *Current Population Reports*, Series P-60 (Washington, D.C.: U.S. Government Printing Office, various years).
8. Since the standard errors of the AMA all-physician income estimates are \$1,000 to \$2,000, the increases after 1985 are highly statistically significant.
9. According to the HCFA PPCIS data, cardiovascular/thoracic surgeons experienced a 121 percent increase in real income from 1983 to 1988, but a small sample of only twenty-five physicians in 1983 casts doubt on the accuracy of this percentage change. For this reason, cardiovascular/thoracic surgeons are not included in Exhibit 3.
10. The percentage gains shown in Exhibit 3 are subject to random sampling error and should be regarded as approximate. Small differences in percentage gains among specialties are not significant.
11. The relative standard errors (the standard error as a percentage of the estimate) for the estimated mean incomes in Exhibit 4 are 3 to 9 percent. For example, the  $\pm 1$  standard error range for the estimated mean general/family practice income of \$102,500 is \$98,800 to \$106,200.
12. The CPS sample sizes from which average earnings for particular occupations in Exhibit 5 are tabulated are fairly small (for example, about 500 for lawyers and judges). The relative standard errors of mean earnings for the groups shown in Exhibit 5 are 1 to 5 percent. Hence, small differences in rates of income change (roughly, less than 5 percent) should not be considered significant; also, rates of change may be sensitive to anomalous values in beginning and ending years. Occupation is self-reported on the CPS. Unlike the AMA or HCFA physician surveys, the CPS may include nonpatient care and federal physicians, although, as do the other surveys, it excludes physicians employed by the military.
13. Income changes were adjusted for changing mix by estimating pooled 1978-1988 or 1983-1988 regressions explaining real income, holding constant age/sex/FMG status/specialty mix. Willke and Cotter have used a similar methodology. See Willke and Cotter, "Young Physicians and Changes in Medical Practice Characteristics."

14. AMA, *Socioeconomic Characteristics of Medical Practice, 1990–1991*, Tables 2 and 6. The increases in hours worked seem to be statistically significant.
15. *Ibid.*, Table 23.
16. *Ibid.*, Table 49.
17. *Ibid.*, Table 58.
18. This estimate was made using data on the revenues of physician offices (from the U.S. Census Bureau's *Service Annual Survey*), mean practice costs of self-employed physicians from the AMA's *Socioeconomic Characteristics of Medical Practice*, the number of nonfederal, office-based patient care physicians from the AMA's *Physician Characteristics and Distribution in the U.S.*, and changes in charges for physician services from the consumer price index (CPI). Income was calculated as the difference between revenue per physician and practice costs. Volume of services was measured by revenue per physician deflated by growth in charges. Unit profit was calculated as a residual to satisfy the algebraic identity decomposing growth in income into growth in volume of services and profits per service. More details are available in Pope and Schneider, "Trends in Physician Income, 1978–1988." The physician services component of the CPI may overstate the rate of growth in actual unit payments received by physicians because of insurer discounting of physician charges. This tends to overstate growth in profit per service and understate growth in the volume of services. Nevertheless, sensitivity analysis indicates that the qualitative conclusion that both higher unit profits and an increased volume of services contributed significantly to physician income growth is valid even if there is some inaccuracy in the CPI.
19. See T. Kay, "Volume and Intensity of Medicare Physicians' Services: An Overview," *Health Care Financing Review* (Summer 1990): 133–146, for a summary.
20. J.B. Mitchell, G. Wedig, and J. Cromwell, "The Medicare Physician Fee Freeze: What Really Happened?" *Health Affairs* (Spring 1989): 21–33.
21. J. Cromwell, J.B. Mitchell, and W.B. Stason, "Learning by Doing in CABG Surgery," *Medical Care* (January 1990): 6–18.
22. These calculations are based on the mean income of nonfederal patient care physicians, excluding residents, from the AMA's *Socioeconomic Characteristics of Medical Practice* and the number of similar physicians from the AMA's *Physician Characteristics and Distribution in the U.S.*
23. Unpublished data, Health Care Financing Administration, Office of the Actuary.
24. The lag from PPS implementation until physicians' incomes began rising may have been caused by the time necessary to build the infrastructure for outpatient care—hospital outpatient departments, ambulatory surgery centers, independent imaging centers and laboratories—downsizing diagnostic and laboratory equipment for physicians' offices, and so forth.
25. To the extent that physicians bore more entrepreneurial risk in the 1980s, their risk-adjusted income has not risen as rapidly as their unadjusted income.