

Hospital-Based Physicians: Current Issues and Descriptive Evidence

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Hospital-based physicians (HBPs) have been the recipients of considerable attention in health policy debates in recent years. This paper discusses issues and trends concerning HBPs and presents evidence on practice characteristics, compensation methods, and incomes of anesthesiologists, pathologists, and radiologists. Some comparisons with office-based MDs are included. The primary data source is composed of physician surveys sponsored by the Health Care Financing Administration and conducted by the National Opinion Research Center in 1977 and 1978. Findings generated from these surveys support past research showing that radiology is the most lucrative HBP specialty, followed by pathology and anesthesiology; hospital-based practice tends to be considerably more lucrative than office-based practice, taken as a whole. Survey findings are discussed in light of current policy developments in the health services sector.

Introduction

In recent years, the issues surrounding the use and costs of ancillary hospital services have established a strong foothold in the debate over inflation in health care expenditures. The term "hospital-based physician" (HBP) has evolved to distinguish physicians who provide ancillary services from the majority of office-based MDs who supply the bulk of physicians' services to the consuming public.¹ Most office-based physicians typically provide many of their services in hospitals, but their practices are not nearly so integrated with hospital facilities and personnel as are the practices of HBPs, who generally do not maintain offices outside the hospital.

This paper contains information on physicians in the three "traditional" HBP specialties of anesthesiology, pathology, and radiology, with emphasis on the latter two. These specialties represent a preponderance of HBP services, but there has been considerable growth in other types of practices confined to the hospital, including cardiology, electrodiagnosis, and emergency medicine.² In addition, the growth of full-time chiefs of service has added not

only to the fraction of physicians who are based in the hospital but also to the spectrum of specialties represented in hospital-based practice. Thus, many of the issues discussed below extend well beyond the three specialties specifically addressed.

Section II identifies policy issues that distinguish HBPs from office-based physicians. Section III examines trends in HBP compensation over the past 15 years and offers a partial explanation for changes during this period. Section IV presents cross-sectional evidence from recent surveys, sponsored by the Health Care Financing Administration (HCFA) and conducted by the National Opinion Research Center (NORC), on selected characteristics of HBP practices. Some comparisons with office-based physicians are included. Summary and concluding remarks are contained in Section V.

Issues

How are HBPs different from office-based MDs in ways that inspire policy interest? Incomes of HBPs, particularly radiologists and pathologists, tend to be higher, on average, than those of most office-based MDs. Part of the interest in HBP incomes is due to the vast differences between salaried HBPs and those who are paid on a "piecemeal" basis, generally either through fee-for-service or a percentage of departmental revenue (Arthur Andersen and Co., 1977). While physicians' incomes have long been a topic of some controversy, it is worth noting that radiology and pathology are among the few specialties that have

¹The only unambiguous definition of the term "hospital-based physician" was developed by the American Medical Association in the mid-1960s (see Gaffney and Glandon, 1979). A primary criterion of the AMA definition is that such physicians are employed on salary by the hospital. Because this criterion would be inappropriate in the present context, the less precise but more generic definition that relies on the degree of physician involvement with the hospital is used in this paper.

²See, for example, "Full-Time Physicians in Hospitals" (1974), Michela (1977), and Kaskiw (1978).

received criticism from within the medical profession.³ High incomes, of course, are not a sufficient cause for alarm and certainly could not be used as the basis for regulatory intervention. But in a market that is known to depart in significant ways from the competitive ideal, high incomes represent an attention-getting signal in the policy milieu.

One very plausible explanation for current levels of HBP incomes is based on the notion of temporary disequilibrium arising from vast increases in demand for ancillary services. Available evidence indicates that recently the use of ancillary services has grown even more than the overall use of basic hospital services (Scitovsky, 1977; Scitovsky and McCall, 1977; Redisch, 1978), but this observation is accompanied by some suspicion about underlying causes. Technological advances have created new diagnostic and therapeutic ancillary procedures that have been of incalculable benefit to many patients, but there is also cause to believe that "defensive medicine" accounts for a large part of this growth.⁴ No one knows how many lab tests and X-rays are performed solely to reduce the threat of malpractice litigation, but this trend represents a major obstacle to controlling inflation in health service expenditures.

Several structural characteristics of HBP practices have attracted policy interest in recent years. One is the nature and variety of HBP compensation methods, alluded to above, which will be discussed in the next section. Another is cross-subsidization, a term that describes the traditional pricing system in many hospitals whereby some services are priced much higher, relative to costs, than others. The system involves generation of excess revenues from HBP departments, especially radiology and pathology, to subsidize net losses in other departments (Ammer, 1971; Redisch, 1978; Somers and Somers, 1967). The misallocation of resources and non-competitive behavior implied by this system make cross-subsidization a natural target for regulation. Consequently, cross-subsidization has encountered resistance from several State hospital rate review agencies.⁵

A structural feature of HBP practices that falls within the purview of antitrust enforcement agencies is what industrial organization economists would term "exclusive dealing" arrangements.⁶ Hospitals typically

³See, for example, Kastal (1972), Rourke (1972), and various occasional letters and short pieces that appear from time to time in non-technical professional journals such as *Medical Economics*, *Medical World News*, and *Hospital Physician*.

⁴According to a 1976-77 survey of physicians by the American Medical Association, over one-third of respondents indicated that the malpractice litigation threat had caused them to order more tests and procedures for their patients than in previous years (Henderson, 1979).

⁵As the growth of prospective reimbursement and hospital rate review continues, we may expect increasingly critical scrutiny of cross-subsidization. For example, Maryland's Health Services Cost Review Commission has substantially restricted the amount of cross-subsidization allowable in Maryland hospitals' rate structures (Cohen, 1978).

⁶See Scherer (1970), Chapter 21 for a general discussion of exclusive dealing arrangements and Thompson (1979), Havighurst (1980), and Calvani and James (1980) for applications to the health field.

supply the space, equipment, and staffing to HBPs under arrangements that exclude competing HBPs from using these resources.⁷ Such arrangements may not precisely fit the criteria for antitrust enforcement specified under the antitrust laws and established precedents, and their effect on competition in the physicians' services market is certainly not clear. Yet despite what appears to be a current hiatus in antitrust activity in the health sector, we may expect more attention to be paid to hospital-HBP exclusive arrangements in the future.

A final characteristic of HBP practices that is relevant to current health policy relates to the role of government as a monitor of health service expenditures. Increased government purchase of health services and inflation in this sector have intensified public demand for accountability. Regulatory programs have, for the most part, developed separately for hospital and physician services, and herein lies a problem for monitoring HBP service expenditures. Because there is so much variation in methods by which HBPs and hospitals share department revenues and expenses, none of the information sources on hospitals or physicians is very thorough for tracking trends in HBP department expenditures. Also, none of the regulatory programs is particularly well suited to this task. Consequently, there is considerable support for accountability-enhancing programs such as Senator Talmadge's proposal to reform reimbursement under Medicare and Medicaid (95th Congress, S. 1470), which would limit hospital-HBP arrangements that have proved most difficult to monitor in the past.

Thus, there is policy interest in HBP practices on several fronts, and related issues tend to be unresolved. The next section adopts a historical view toward trends in methods of HBP compensation, a subject which takes a prominent place in nearly all policy discussions involving HBPs.

Compensation of Hospital-Based Physicians

METHODS OF COMPENSATION

At the heart of most issues concerning HBPs are the arrangements negotiated by HBPs and hospitals regarding the distribution of revenues and costs pertaining to HBP department services. At present, very little is known about how these arrangements affect HBP productivity, unit costs of service, and volume of services delivered. Only slightly more information exists on the association between compensation methods and HBP incomes. Such questions clearly have policy relevance; it would be very risky for Congress or regulatory agencies to promulgate policies affecting HBP-hospital relationships without understanding how such relationships are determined or how they affect patient costs and use of health services.

⁷In an article very critical of the non-competitive features of hospital-HBP arrangements, Gabel and Redisch (1978) refer to HBPs as "the franchised monopolists" because of their ability to obtain exclusive rights to the use of department resources.

There are three primary ways that HBPs are compensated for their services—salary, percentage of department revenue, and fee-for-service.⁸ With the understanding that these methods are often found in combination and seldom exist in pure form, the following definitions are offered.

Major Variants of the Salary Method

- All HBP department MDs are employees of the hospital and receive a salary for their services.
- Some HBP department MDs are salaried by other department MDs (or by the HBP practice) who receive compensation for the practice's services via some other method.

The second variant typically occurs when a young HBP, or one new to a geographic area, is employed by an older, more established HBP. In some instances, the hospital negotiates its arrangements only with the department chief. Hospitals with all HBPs in a department on salary tend to be larger, teaching hospitals. In this case, the compensation method is influenced by other considerations (such as membership on a medical school faculty).

Major Variants of the Percentage Method

- The HBP practice receives a specified percentage of gross department billings (sometimes after deductions for charity, bad debts, and/or discounts).
- The HBP practice receives a percentage of net department revenues (gross billings less deductions and department expenses).

Until recently, percent of department revenue was the most prevalent method of paying pathologists and radiologists, with percent-of-gross being much more frequently used than percent-of-net. Percent-of-net is the more difficult of the two systems to implement because of potential ambiguities in calculating net revenues (Reals, 1977; American Hospital Association, 1976) and potential legal complexities (Horty, 1972). Departures from these definitional arrangements include instances where HBPs pay for some departmental inputs under percent-of-gross arrangements (Matthews, 1973) and instances where not all costs are allocated to HBP departments under percent-of-net arrangements. Such departures tend to narrow the differences between the two percentage forms of compensation.

Major Variants of the Fee-for-Service Method

- The HBP practice bills patients for professional services, and the hospital bills patients separately for non-professional services.
- All billing is done by the hospital, which compensates the HBP practice a specified amount for each service performed.

- All billing is done by the practice, which compensates the hospital for the use of its facilities and staff.

The first and second methods are far more common than the third, which is typically organized as a leasing arrangement whereby the practice runs the HBP department and leases the hospital's facilities and equipment. Fee-for-service has traditionally been the prevalent method of reimbursing anesthesiologists and has become increasingly important, in recent years, for pathologists and radiologists. For the latter two specialties, it is common for the hospital to do the billing for both professional and nonprofessional services. When the hospital acts as the HBP practice's bill collector, economies arising from combined billing may be realized.⁹

Other methods of compensating HBPs, such as salary plus percentage arrangements, are primarily combinations of the basic types. In addition, it is not uncommon to observe minimum guarantee and maximum remuneration provisions in arrangements governing HBP compensation by the hospital.¹⁰ Such provisions can change the nature of compensation dramatically. For example, a percentage arrangement with an HBP revenue ceiling below the specified percent times actual department revenue in essence becomes a salary-like compensation system—at the margin, changes in department output have no effect on HBP income.¹¹ Suffice it to say that HBP compensation tends to be much more complex than the definitions and statistics presented in this section would suggest.

Incentives associated with different HBP compensation methods comprise another complex subject. Discussions of HBP incentives in the literature are largely conjectural since there is no unified theory on

⁸It is important to distinguish between HBP compensation and billing for HBP services. Compensation is how HBPs are paid; billing is how HBP services are charged. There is no necessary relationship between the two activities. For example, Medicare's principles of reimbursement require separation of professional and non-professional services in billings for HBP services. Physicians' professional services are reimbursed by Part B on the basis of reasonable charges, and non-professional services (such as supervision of technicians) are reimbursed by Part A on the basis of reasonable costs. This separation must take place by law, regardless of how HBPs are paid. The role of Medicare in HBP compensation is discussed later in this section.

⁹This observation is based on preliminary data from a survey conducted in late 1979 by the American Hospital Association, which was funded by Grant No. 95-P-97176/3 from the Health Care Financing Administration to the Urban Institute, with a subcontract to Vanderbilt University.

¹¹That such ceilings are sometimes in effect is apparent in unpublished data provided to the author by the College of American Pathologists. I am grateful to Dr. William Hartmann for procuring these data.

⁸This list is somewhat simplified. For other categorizations and discussion, see Van Dyke *et al.*, 1968; Arthur Andersen and Co., 1977; American Hospital Association, 1976; Kaskiw, 1978.

which to draw in this area, nor is there much useful empirical evidence.¹² Further, it is essential to recognize that selection of a compensation system is endogenous to both HBP and hospital decision-making. Incentives are certainly important, but we know far too little at present about joint physician-hospital behavior to be able to compare incentives under the different HBP compensation methods on the basis of common sense reasoning or intuition alone.

An appropriate starting point for comparing different HBP compensation arrangements is to ask why, in a system dominated by fee-for-service medicine, salary and percentage arrangements have proliferated. The answer probably lies in the nature of HBP outputs (keeping in mind that there are substantial differences among HBP specialties). In particular, the services of pathologists and radiologists tend to be produced in relatively small units, such as lab tests and X-rays, and these physicians rarely contact their patients directly.¹³ The costs of billing patients for HBP services are relatively large compared to charges, making economies in billing practices relatively important compared to other types of medical practice. A comparison between percentage compensation (with all billing done by the hospital) and separate fee-for-service billing by the HBP practice, two popular compensation arrangements, is useful to illustrate this point.

Under the percentage arrangement, the hospital sends a single bill to patients (or third parties) for ancillary services delivered. Once revenues have been accumulated for a specified period, the HBP share is calculated by applying the predetermined fixed percentage. Unless the third-party payer requires it (as Medicare does), there is no need for the hospital to relate HBP compensation to the performance of specific services because the percentage application subsumes this process.

Under separate fee-for-service billing, both the hospital and the HBP practice submit bills, doubling (or nearly so) the number, if not the cost, of transactions to collect revenues. In addition, the physician, who typically in radiology and pathology departments has not seen the patient and may not have been directly involved in the patient's workup, must prepare charges in terms of specific patient services, a task that may be onerous. Moreover, patients sometimes object to being billed by physicians that they have not seen personally (Hitt, 1977). Thus, one can appreciate that, in the past, transaction cost considerations have made percentage compensation arrangements relatively advantageous.

Most of the transaction cost advantages of percentage compensation are available under salaried HBP compensation as well. Historically, there has

been some resistance to salaried physician compensation within the medical profession, but the proportion of HBPs on salary has remained well above the corresponding proportion for physicians in office-based specialties. One should not assume that it is resistance of physicians alone that works against salaried HBP compensation. Hospitals may prefer percentage or even fee-for-service HBP compensation if such "piecemeal" arrangements, relative to salary, are perceived to expand HBP department revenues.¹⁴

TRENDS IN HBP COMPENSATION

Of all characteristics of HBP practices, by far the most studied is the hospital-HBP compensation arrangement. Inferences can be drawn about changes in compensation arrangements in the post-Medicare period from data on HBP compensation from 1965 to 1978. However, because of differing data sources, assumptions, and definitions, statistics produced by different studies are not sufficiently comparable to calculate precise changes in these distributions. With this limitation in mind, data from six studies and 10 years have been reduced to estimated distributions, in percentage form, of HBP compensation among the three primary compensation types: salary, percentage, and fee-for-service.¹⁵ Distributions for pathologists and radiologists are shown in Table 1.

Data sources for the 10 surveys are reported in the footnote to Table 1. Some of the major differences between these surveys that limit data comparability are notable. First, the hospital is the data source in all studies except (10), the HCFA-NORC surveys, in which the physician is the data source.¹⁶ Study (9) also

¹⁴It is reasonable to assume that hospitals' preferences for piecemeal arrangements are, in part, dependent upon their ability to implement a policy of cross-subsidization through their pricing decisions. Where third parties and regulatory agencies restrict cross-subsidization, hospitals may have relatively greater preference for salaried HBP remuneration. However, evidence presented by Hellinger (1979) indicates that departments having HBPs on salary do not have lower volume of output than departments where HBPs are on percentage compensation. Hellinger's work illustrates the fallibility of conventional wisdom in this area.

¹⁵Where possible, compensation arrangements have been included under one of the three basic types. (For example, leasing arrangements have been included under fee-for-service.) Uncategorizable arrangements have been eliminated from Table 1, and the percentages of the three basic types of compensation were normalized to add to 100. This enhances our ability to trace compensation method changes over time.

¹⁶The HCFA-NORC surveys were initiated in 1976 in response to a perceived need for more thorough and regular data on physicians' practices than were available from other sources. In 1977, the survey was broadened to include development of a modified instrument to accommodate the special characteristics of HBPs in anesthesiology, pathology, and radiology. The HCFA-NORC surveys use telephone interviews of physicians and their employees as the primary data collection technique. The overall response rate for both office-based and hospital-based physicians was approximately 70 percent in 1977 and approximately 65.5 percent in 1978. Responses were obtained from 543 HBPs in 1977 and 501 HBPs in 1978. Table 1 combines these responses to reduce sampling variation apparent in the data.

¹²For discussions of HBP incentives, see Ammer, 1971; Blakely, 1973; Kaskiw 1978; Gabel and Redisch, 1978; and Hellinger, 1979. The latter source provides the most extensive theoretical discussion of incentives as well as some empirical tests.

¹³Hospital-based physicians tend to engage in far more supervisory and administrative activities than office-based physicians. See, for example, Hartmann and Gardner, 1977, for a detailed description of the professional and administrative functions of pathologists.

TABLE 1
Best Estimate Distributions of Methods of Compensating Pathologists and Radiologists Among Three Primary Compensation Methods, 1965-1978, in Percent

Methods of Compensation	Year of Data ¹									
	(1) 1965	(2) 1965	(3) 1965	(4) 1966	(5) 1968	(6) 1969	(7) 1972	(8) 1974	(9) 1975	(10) 1977-78
Pathologists										
Salary	25%	28%	23%	25%	28%	19%	17%	21%	33%	45%
Percentage	55	48	62	53	41	50	54	47	46	15
Fee for Service	20	24	15	22	31	31	29	32	21	40
Total	100	100	100	100	100	100	100	100	100	100
Radiologists										
Salary	15	20	12	15	18	7	6	10	18	13
Percentage	73	69	82	67	46	64	64	56	41	20
Fee for Service	12	11	6	18	36	29	30	34	41	67
Total	100	100	100	100	100	100	100	100	100	100

¹Data sources (full citations are in references section): (1) and (4), Somers and Somers (1967); (2) and (5), Van Dyke *et al.* (1968); (3) and (6), Begole *et al.* (1972); (7), Blakely (1973); (8), *Modern Health Care* (1974) [(7) and (8) both report findings of surveys performed by A. T. Kearney, Inc.]; (9), Arthur Andersen and Co. (1977); (10), HCFA-NORC Surveys, 1977-1978.

NOTE: The hospital is the data source in all of the studies cited above, with the exception of (10). The HCFA-NORC Surveys use the physician as the data source.

reports data pertaining to physicians. In all other studies, the hospital is the unit of observation, except that (2) and (5) weight hospitals by bed size. Studies (2), (5), (7), and (8) report data pertaining to HBP department chiefs. Studies (1), (3), (4), and (6) use American Hospital Association (AHA) survey data without specifying whether reported arrangements pertain to all or a subset of department HBPs. Since the hospital is the unit of observation in these studies, it is likely that hospitals with multiple arrangements in a single department also reported the arrangement with the department chief. This probably has the effect of underestimating the proportion of salaried HBPs, since physician employees of non-salaried HBPs would be excluded from these distributions.

The studies vary considerably in sampling methods, sample sizes, and definitions of compensation arrangements. For example, the proportions of arrangements reported as "other," the category eliminated from Table 1, ranged from a low of three percent to a high of 19 percent. A detailed examination of these differences is beyond the scope of this analysis; it is sufficient to say that Table 1's figures should not be accepted uncritically.

With these limitations in mind, Table 1 does reveal some discernible tendencies. First, there are four study pairs, [(1) and (4), (2) and (5), (3) and (6), and (7) and (8)], that report information on two years.¹⁷ Because each survey in a pair uses the same data sources and collection techniques, within-pair findings should be comparable. The three pairs reporting data beginning in 1965 indicate unchanging or slightly declining use of salaried HBP compensation, moderate to pronounced decreases in percentage compensation, and

definite increases in fee-for-service compensation. The study pair for the years 1972 and 1974 reports similar trends, except that salaried compensation increased slightly. Taken as a whole, the studies strongly suggest a decline in percentage compensation of HBPs and a concomitant increase in fee-for-service compensation since 1965.

The HCFA-NORC data [study (10) in Table 1] merit the most attention because they are the most current, are based on a probability sample of physicians, and were obtained via telephone interview rather than questionnaire. Sampling variation, definitional differences, and the sampling unit (physicians rather than hospitals) no doubt account for some of the differences in compensation distributions between this source and the others represented in Table 1.¹⁸ However, the same trends are apparent in the HCFA-NORC data as in the rest of the table. Percentage compensation of HBPs is definitely declining. Among radiologists, the trend is toward fee-for-service compensation. Among pathologists, the decline in percentage compensation is accompanied by increases in both fee-for-service and salaried compensation.

Pathologists would logically be more inclined toward salaried practice and radiologists toward fee-for-service because the costs of transactions of fee-for-service practice are relatively higher for pathologists than radiologists. Radiology services tend to be produced in larger units than pathology services, and the radiologist typically reads X-rays while the pathologist participates directly in only a small fraction of lab tests.

¹⁸Fee-for-service and "a fixed percentage of each charge" are treated as equivalent in the HCFA-NORC survey instrument. This may have resulted in some arrangements that researchers would classify as percentage being recorded as fee-for-service.

¹⁷Van Dyke *et al.*, actually reported data for four years, 1965-68. Because inclusion of all four years' data would give too much weight to one study, only the end years are reported in Table 1.

We cannot hope to discover causes for these trends in HBP compensation through statistical methods, but we can make some deductions by examining events that have occurred in the past 15 years. The following scenario, which relies heavily on the role of Medicare and Medicaid (established as a result of the Social Security Amendments of 1965), is offered as a partial explanation of the trend away from percentage compensation of pathologists and radiologists.¹⁹

Prior to implementation of Medicare in 1966, hospital-based practice was relatively stable, much more so than is suggested by Table 1's statistics on HBP compensation between 1965 and 1978. Pre-Medicare, the major issue concerning HBPs was organized medicine's fight against "the corporate practice of medicine" (Somers and Somers, 1967), which centered on the legality and professional ethics of hospitals submitting bills and collecting fees for services rendered by HBPs. In some States, this practice was declared illegal; by the 1960s, however, restrictions had diminished, and hospitals and HBPs were largely left alone to negotiate mutually acceptable compensation arrangements (Somers and Somers, 1961).

Before Medicare, separate fee-for-service billing by pathologists and radiologists was extremely rare.²⁰ At this time there was little incentive to incur the extra costs of separate billing for hospital and HBP services. Most third parties, including Blue Cross, covered HBP services as a part of hospitalization benefits (Somers and Somers, 1967). Percentage compensation was a logical, low cost method for hospitals and physicians to divide revenues earned by pathology and radiology departments.²¹

¹⁹Descriptions of the status of HBP practice during the period of Medicare's enactment are based largely on Herman and Anne Somers' excellent analysis in *Medicare and the Hospitals* (1967). With remarkable foresight, the Somers predicted widespread movement of HBPs to separate billing, fee-for-service practice following implementation of Medicare.

²⁰Somers and Somers (1967) reported that as of December 31, 1965, 11.1 percent of pathologists and 12.5 percent of radiologists billed directly. The authors maintain that these figures probably include some shifts to direct billing immediately prior to collection of these data (after passage but before implementation of the Medicare law). Some early surveys did not even include fee-for-service as a specified alternative in questions on HBP compensation. See Begole *et al.* (1972) and Steinle (1970). The latter source provides some evidence that percentage arrangements were even more prevalent in the late 1950s than in the mid-1960s.

²¹Of course, salaried HBP compensation should also be associated with relatively low transaction costs in billing for HBP services. Figures presented in Dyckman (1976), based on Internal Revenue Service data (wherein the physician is the unit of observation), suggest that the proportion of pathologists and radiologists receiving a salary as their primary form of compensation in 1965 was considerably higher than corresponding proportions for 1965 based on studies reported in Table 1. Given the different methodologies, etc., of these studies discussed in the previous section, and the trends suggested by Table 1, the conclusion of Gabel and Redisch (1978)—that Medicare brought about a decline in salary compensation of HBPs—may be mistaken.

Medicare threw a monkey wrench into the relationships between hospitals and HBPs by requiring separation of charges for professional and hospital services. A physician's time is considered a professional service if the physician personally performs a service that contributes to the diagnosis or treatment of the patient. Other services performed by HBPs are considered hospital services (*Federal Register*, 1980). The separation requirement created substantial clerical demands and, more importantly, undermined many of the advantages of financial integration of hospital and HBP activities.²² Not surprisingly, representatives of HBPs (especially the American College of Radiology, the College of American Pathologists, and the American Medical Association) protested vigorously against the way in which the Medicare regulations were written.²³

Prior to Medicare's implementation, the "optional method" of payment was devised to allow the hospital to submit bills for HBP services without an item-by-item separation of the professional and non-professional components. Instead, the professional component may be identified as a fixed proportion of the total bill for services. As required by law, the optional method must result in a hospital-professional split that would not differ significantly from the aggregate split when bills are itemized. Moreover, this provision did not release HBPs from the necessity of determining which of their services are chargeable under Part B of Medicare as professional services and which must be charged under Part A as hospital services.²⁴

The Social Security Amendments of 1967 made some further changes in the regulations governing payment for HBP services, also designed to reduce administrative burdens and promote integration between HBPs and hospitals. The 1967 Amendments allowed all radiology and pathology services rendered to inpatients to be charged to the hospital (Part A) portion of Medicare at 100 percent of reasonable charges.²⁵ This provision was intended to reduce HBP

²²Somers and Somers (1967) refer to the separation provision as "the Medicare blunder."

²³Major objections of medical organizations to Medicare's principles of reimbursement for HBP services and SSA's responses to these objections are summarized in Willcox (1966). Gabel and Redisch (1978) and Hellinger (1979) express the view that these principles increased the economic power of HBPs in their negotiations with hospitals.

²⁴This discussion describes only the tip of the iceberg of Medicare's principles and procedures for reimbursement of HBP services. See McKibben (1978) for a more detailed summary.

²⁵Reimbursements to physicians under Part B of Medicare are made on the basis of "customary-prevailing-reasonable" criteria. A physician's fee meets the customary criterion if it does not exceed what she/he has customarily charged for a period of time, and the prevailing criterion is met if the fee does not exceed the 75th percentile of fees charged for the same procedure by other physicians in a locality. If both these criteria are met, or if a higher fee can be justified on the basis of extenuating circumstances, the fee is deemed reasonable. Medicare reimbursements under Part B are subject to deductible provisions and are limited to 80 percent of reasonable charges. See Sloan and Steinwald (1975) for a more detailed discussion of this procedure.

incentives for separate billing and thereby reduce processing costs to providers and to the Social Security Administration, even though it made more Federal dollars available for financing HBP services.

Judging from the figures in Table 1, these concessions did little to halt the trend toward separate billing fee-for-service practice of HBPs. As far as Medicare is concerned, this trend can be ascribed to two factors. First, Medicare's principles of reimbursement, by requiring separation of professional and non-professional components, have reduced the transaction cost advantages of combined hospital-HBP billing compared to separate fee-for-service billing by HBPs. Second, Medicare and its companion program, Medicaid, vastly increased the amount of third-party dollars available to pay for private fees charged by HBPs. To what degree the trends in HBP compensation can be attributed to these factors is uncertain; we have no way of knowing what would have happened in the absence of Medicare or with a law designed specifically not to interfere with existing integrated charging and remuneration systems. Yet, apart from increased private insurance coverage in the 1960s and 1970s for ambulatory health services generally, it is difficult to identify other factors that could have exerted so great an influence.²⁶

²⁶According to Gabel and Redisch (1978), Medicare and Medicaid accounted for 37 percent of aggregate hospital revenues in 1976 and probably for an even higher proportion in HBP departments.

A Profile of HBP Practices

This section presents a statistical profile of selected attributes of HBP practices based on the HCFA-NORC survey of physicians conducted in 1977 and 1978. These statistics are contained in Tables 2 through 4. Tables 3 and 4 also contain data on office-based physicians.²⁷ The tables include averages for anesthesiologists, as well as pathologists and radiologists. In some respects anesthesiologists are more akin to office-based MDs (particularly surgeons) than other HBPs. Anesthesiologists' outputs are more discrete, and these HBPs are predominantly fee-for-service practitioners who directly provide services to patients. While most of the controversy surrounding HBPs focuses on pathologists and radiologists, inclusion of statistics on anesthesiologists is useful for comparative purposes.

Some of the differences between anesthesiologists and other HBPs are apparent in Table 2. The former are much more likely to be independent (that is, non-contract) solo practitioners who confine their practices to a single hospital. The vast majority of pathologists and radiologists are in non-solo practices on contract with one or more hospitals or clinics. The

²⁷Data on office-based MDs were obtained from a slightly different instrument than the one used to survey HBPs. The office-based MD survey was conducted at the same time as the HBP surveys and encompassed a representative sample of 17 office-based specialties. See footnote 16.

TABLE 2
Selected Practice Characteristics of Hospital-Based Physicians, 1976 and 1977

Percent of HBPs:	Anesthesiologists	Pathologists	Radiologists
• in solo practice, 1977	55.2%	19.2%	19.3%
• with multiple hospital affiliations, 1977	17.2	17.8	26.8
• with secondary practices, 1977	13.7	29.6	25.1
• on contract with hospitals, 1977	48.7	95.4	86.3
• on contract with clinics, 1977	1.8	15.8	24.8
• in departments with equipment acquisition costing over \$5,000 in 1976	1.4	31.8	37.3
Percent of HBPs with Total or Partial Subsidies from Hospitals or Clinics in 1976 for the Following Practice Inputs¹:			
• personnel	52.5%	81.6%	52.4%
• office space and utilities	88.2	84.6	74.8
• medical equipment	73.0	86.0	78.5
• medical supplies	87.2	88.5	79.8
Working Time:			
• weeks practiced, 1976	47.4	47.7	47.4
• hours per week spent in medical activities, 1977 ²	60.6	51.1	56.0
• hours per week spent in administrative activities, 1977 ²	4.3	8.1	4.8

¹Non-salaried HBPs only.

²Hours data pertain to a representative week in 1977. Medical activities include time spent making rounds, supervising employees on medical tasks, traveling to and from sites of medical practice, etc. Administrative activities include time spent filling out insurance forms, billing patients, supervising employees on financial and other non-medical tasks, etc.

Source: HCFA-NORC Survey of Physician Practice Costs and Incomes, 1977

expansiveness of pathology and radiology departments is reflected in the proportions of such departments with equipment acquisitions costing over \$5,000. Roughly one-third of these departments had such acquisitions in 1976.

The second part of Table 2 indicates the degree to which HBP practice costs are subsidized by hospitals and clinics. The level of subsidy is highest for pathologists. Although these levels are generally very high compared to office-based MDs, they are not 100 percent as conventional wisdom would suggest. Many HBPs do pay for all or part of certain inputs, particularly for personnel. These proportions are consistent with data comparing average net to gross revenues in Table 4.

The last part of Table 2 gives working time averages for HBPs. Radiologists and pathologists tend to have fewer hours of work than anesthesiologists and office-based MDs. (Office-based MDs averaged 47.4 weeks practiced in 1976; in a representative week in 1977, they spent 60.1 hours in medical activities and 4.6 hours in administrative activities.) The fraction of total hours devoted to administrative activities is relatively high for pathologists, which is not surprising given the nature of practice in this specialty.

Table 3 presents information on the insurance coverage of patients of HBPs and office-based MDs. Several studies have demonstrated that insurance exerts a major influence on the behavior of patients and health service providers. The first part of Table 3 gives distributions of patient insurance coverage by specialty, and the second part provides data on the extent to which fees for common HBP and non-HBP

procedures are covered by the different insurers. Insurers are listed in order of generosity of payment from least to most generous. This ordering is consistent over all types of procedures—Medicaid is least generous, followed by Medicare (Part B), Blue Shield, and commercial insurance. Differences in average proportions of fees covered among the four types of insurance programs are often substantial.

Anesthesiologists have the lowest proportion of patients without coverage for their services, probably because surgical services tend to be relatively well-covered. The coverage figures for office-based MDs represent a wide range of surgical and non-surgical procedures. HBPs tend to have a slightly higher proportion of patients covered by Medicare and/or Medicaid (coverage under these two programs often overlaps) and a lower proportion covered by commercial insurance than do office-based MDs.

For comparative purposes, two procedures were selected for office-based MDs in the second part of Table 3—follow-up office visit (a common non-surgical procedure) and hernia repair (a common surgical procedure). Holding insurer constant, HBPs tend to have a slightly higher proportion of their fees covered than office-based MDs. For each insurer, pathologists tend to have the highest proportion of fees covered, and radiologists are next. Coverage for anesthesia services is lowest among the HBP specialties.

Differences in distributions of insurance coverage and proportions of fees covered between hospital-based and office-based MDs are slight and, to some extent, offsetting. Therefore, based on Table 3's

TABLE 3
Distribution of Patient Insurance Coverage and Mean Proportions of Fees Covered by Insurer for Selected Procedures, 1977

	Distribution of Patient Insurance Coverage (%) ¹				
	No Coverage	Medicaid	Medicare Part B	Blue Shield	Commercial Insurance
Anesthesiologists	8.3	13.7	28.0	37.5	27.6
Pathologists	12.1	13.3	27.4	41.5	11.9
Radiologists	12.8	14.5	27.7	39.5	20.4
Office-Based MDs	11.6	12.9	26.2	37.6	28.1
Mean Fees and Mean Proportions of Fees Covered					
	Fee	Medicaid	Medicare Part B	Blue Shield	Commercial Insurance
Anesthesiologists:					
Anesthesia for 30 Minute					
Tonsillectomy	\$ 93.76	0.523	0.703	0.869	0.932
Pathologists:					
Complete Blood Count	\$ 8.19	0.801	0.815	0.954	0.968
Radiologists:					
Chest X-ray	\$ 14.87	0.687	0.799	0.958	0.945
Office-Based MDs:					
Follow-up Office Visit	\$ 13.91	0.642	0.758	0.884	0.921
Surgical Hernia Repair	\$624.00	0.544	0.749	0.885	0.914

¹Percentages add to more than 100 due to overlapping coverage.

Source: HCFA-NORC Survey of Physician Practice Costs and Incomes, 1977

statistics, one would not expect patient insurance coverage to cause HBP behavior to differ markedly from that of office-based MDs.²⁸

Table 4 presents income figures by specialty broken down by the three primary methods of HBP compensation.²⁹ Office-based MD income statistics are presented under fee-for-service headings; the very few non-fee-for-service office-based physicians were omitted from calculation of these statistics. Table 4 clearly indicates that the HBP specialties are considerably more lucrative than office-based specialties taken as a whole. This is true regardless of whether one uses net income or adjusted net income (which incorporates deferred income) per hour of medical activity as the measure of income.³⁰ The most lucrative HBP specialty is radiology, followed by pathology and anesthesiology. These findings are generally consistent with past research on HBP incomes by specialty (Gaffney and Glandon, 1979; Arthur Andersen and Co., 1977).

Table 4 indicates that fee-for-service practice is the most lucrative form of HBP compensation for anesthesiologists and radiologists, and percentage compensation is most lucrative for pathologists. Salaried compensation is the least lucrative for all HBP specialties. The difference between salaried and fee-for-service compensation is greatest for radiologists and least for anesthesiologists. Although it is very risky to infer reasons underlying trends from cross-sectional data, one can see that, other things being equal, fee-for-service practice offers a more attractive alternative to percentage arrangements than does salaried practice. Indeed, these statistics

suggest that departure from percentage arrangements causes few financial hardships for HBPs who switch to fee-for-service practice. However, on financial grounds alone, salaried practice does appear to be a relatively unattractive alternative for radiologists and pathologists.³¹

As one would expect, net income to gross income ratios are higher for HBPs than for office-based MDs, and these ratios tend to be higher for salaried HBPs than for non-salaried. However, these differences are not as great as *a priori* expectations. Two things account for differences between gross and net practice incomes. First, many physicians defer income through pension plans and other means, and deferred income is not included in reported net income (although it is included in gross income).³² Table 4 indicates that HBPs tend to have considerably higher levels of deferred income than office-based MDs, and non-salaried HBPs tend to have more deferred income than their salaried counterparts. Second, many HBPs, like office-based MDs (but to a lesser extent), incur practice expenses. Combined with the information on subsidies in Table 2, these statistics tend to refute the conventional wisdom that hospitals and clinics provide all the non-MD resources for production of services in HBP departments.

Income data presented in Table 4 are roughly comparable to survey findings generated by the American Medical Association (AMA). Based on data provided in Gaffney and Glandon (1979), net income per hour in 1978 was estimated to be \$28.37 for anesthesiologists, \$34.00 for radiologists, and \$25.89 for all non-Federal patient-care MDs (including both office- and hospital-based MDs). Compared to statistics based on HCFA-NORC data in Table 4, the AMA figures are for a slightly different time period, do not take deferred income into account, and use a slightly different definition of hours of work.

Data presented by Arthur Andersen and Co. (1977) imply that inflation-adjusted HBP incomes are much higher than those shown in Table 4. Comparability between Arthur Andersen data and HCFA-NORC data, however, is severely limited. Findings of the Andersen study suggest that the ranking of the three HBP specialties in lucrativeness is the same as shown in

²⁸This discussion ignores potential relationships between coverage distributions and fee levels, a distinct possibility. However, in the aggregate, no such relationship is apparent in these data.

²⁹Table 4's statistics are based on combined responses from the 1977 and 1978 HCFA-NORC surveys. Thus, the income and related figures are averaged over 1976 and 1977. The survey data were combined because breaking down these figures by compensation method reduces cell sizes, and pooling two years reduces sampling variation considerably.

³⁰Net income was adjusted by adding estimates of deferred income (e.g., pension plans) to realized net income before dividing by estimated hours spent in medical activities in 1976. The hours estimates are the product of weeks worked in 1976 times hours worked in a reference week in 1977 (see Table 2). Hours spent in medical activities rather than total hours were used as the denominator mainly because the hours figures reported by HCFA-NORC survey respondents were rather high compared to past evidence on physician working time. For example, AMA data on total hours worked per week in 1978 reported in Gaffney and Glandon (1979), which are based on a larger number of respondents than the HCFA-NORC surveys, show mean hours for anesthesiologists of 50.3 and for radiologists of 47.8 (Table 16, p. 203); pathologists' hours were not reported). Use of medical rather than total hours has the effect of increasing (slightly) the per hour income figures, but it does not greatly affect income comparisons, with one exception. Because they devote a relatively high proportion of their time to administrative activities, the net income per hour statistics pertaining to pathologists are probably a bit inflated. For comparative purposes, these averages should be about 5 to 10 percent lower than the figures shown in Table 4, although this does not change the findings qualitatively.

³¹These remarks must be tempered by the fact that income figures reported in Table 4 do not include the value of fringe benefits which are higher under salaried practice than the alternative forms of practice. For example, the proportion of salaried HBPs receiving life and/or health insurance benefits in 1977 was about 70 to 75 percent, while the corresponding proportion for non-salaried HBPs was on the order of 15 to 30 percent. However, many of these benefits, such as malpractice insurance, would be practice expenses if not subsidized by hospitals. Therefore, the net income statistics partially account for differences in fringes. It should be emphasized that salaried HBPs are often members of medical school faculties, and these physicians, both HBPs and office-based MDs, typically earn less than their non-teaching colleagues.

³²The HCFA-NORC survey question on deferred income is expressed in terms of "pensions, profit-sharing, and retirement programs." There is a distinct possibility that some other forms of deferred income were excluded and the reported figures are therefore underestimated. Of course, this possibility applies to both office-based and hospital-based MDs.

TABLE 4
Mean Gross and Net Physician Incomes by Compensation Method, 1976-77

	Anesthesiologists		Pathologists		Radiologists		Office-Based MDs	
		(n) ³		(n)		(n)		(n)
Gross Income Per FTE MD								
Salary	\$ 80,168	(39)	\$ 68,135	(83)	\$ 79,361	(46)	—	
Percentage	90,793	(19)	113,742	(25)	146,028	(59)	—	
Fee for Service	112,356	(222)	160,564	(66)	138,297	(213)	\$130,600	(6475)
All ¹	106,278	(304)	109,953	(182)	130,605	(336)	—	
Net Income Per FTE MD								
Salary	\$ 53,614	(38)	\$ 53,196	(83)	\$ 51,342	(41)	—	
Percentage	63,235	(19)	79,571	(29)	71,968	(66)	—	
Fee for Service	64,908	(233)	74,737	(71)	77,697	(219)	\$ 59,254	(6752)
All ¹	63,810	(311)	65,004	(192)	73,322	(344)	—	
Ratio of Net to Gross Income								
Salary	0.758	(35)	0.800	(81)	0.805	(38)	—	
Percentage	0.715	(17)	0.703	(23)	0.603	(56)	—	
Fee for Service	0.645	(202)	0.716	(53)	0.662	(179)	0.555	(5479)
All ¹	0.665	(277)	0.751	(163)	0.666	(289)	—	
Deferred Income								
Salary	\$ 7,616	(32)	\$ 5,427	(78)	\$ 8,294	(30)	—	
Percentage	10,208	(19)	10,892	(32)	12,606	(51)	—	
Fee for Service	11,886	(225)	12,789	(67)	15,774	(212)	\$ 7,196	(6569)
All ¹	11,436	(296)	8,985	(188)	14,423	(325)	—	
Adjusted Net Income per Hour of Medical Activity²								
Salary	\$ 26.54	(26)	\$ 29.37	(72)	\$ 25.76	(25)	—	
Percentage	23.12	(16)	43.21	(28)	33.61	(53)	—	
Fee for Service	28.93	(195)	40.06	(60)	40.00	(186)	\$ 24.64	(5392)
All ¹	28.41	(254)	35.83	(167)	37.55	(280)	—	

¹The "All" category includes some HBPs with "other/unknown" methods of compensation.

²Estimates of deferred income are added to reported net income for computing adjusted net income per hour of medical activity.

³n = number of cases used in the computation of related averages.

Source: HCFA-NORC Surveys of Physician Practice Costs and Incomes, 1977 and 1978.

Table 4 and that net incomes of salaried HBPs per hour of effort are considerably below those of non-salaried HBPs. In these respects the HCFA-NORC and Andersen data are consistent, but further comparisons would be unwarranted.³³

In summary, descriptive statistics derived from the 1977 and 1978 HCFA-NORC surveys are generally supportive of conventional beliefs about HBPs, but these data contain some surprises as well. For example, the level at which HBPs, including those on salary, incur practice expenses is unexpected. Insurance coverage

distributions reveal slight differences between HBPs' and office-based MDs' practices, but, in the aggregate, they indicate nothing that would lead one to expect major behavioral differences. The ranking of average earnings of the three HBP specialties, with radiology the highest, followed by pathology and anesthesiology, is consistent with the findings of past research, as is the finding that HBPs tend to earn substantially more than office-based MDs. In the aggregate, the income statistics indicate no important financial disincentives to the movement of radiologists and pathologists away from percentage to fee-for-service compensation. They do, however, reveal substantial financial barriers to salary compensation.

Summary and Implications

High HBP incomes, growth in ancillary service expenditures, methods of HBP compensation, cross-subsidization in hospital pricing structures, exclusive dealing arrangements between HBPs and hospitals, and lack of accountability for HBP service expenditures are all sources of policy unrest. Lack of reliable information on HBP practices and trends intensifies this unrest. Based primarily on data from the 1977 and 1978 HCFA-NORC surveys of physicians, this paper has attempted to fill in part of the information gap. It

remains to summarize some of the highlights of the descriptive analysis and discuss implications for the future.

Cross-sectional evidence on practice characteristics reveals that there are both differences and similarities between the three HBP specialties studied. Anesthesiologists most resemble office-based practitioners in their preference for independent, direct billing, fee-for-service practice. The proportion of radiologists receiving compensation via fee-for-service, however, is nearly as high. In contrast, a far greater proportion of pathologists receive salaried compensation for their services. All HBPs tend to have practice costs heavily subsidized by hospitals, but evidence on specific input expenses and practice deductions indicates that these subsidies are not as high as conventional wisdom would suggest.

Distributions of insurance coverage indicate that HBPs tend to have slightly more patients with Medicare and Medicaid coverage and fewer patients with commercial insurance coverage than do office-based MDs. Of the three HBP specialties, anesthesiologists have the lowest proportion of patients without coverage and the highest with multiple coverage, probably reflecting more thorough coverage for surgical services than for ancillary services generally. In terms of percent of fees covered, commercial insurers tend to be the most generous third parties, followed by Blue Shield, Medicare-Part B, and Medicaid. Holding insurer constant, HBPs tend to have higher proportions of their fees covered than do office-based MDs, which offsets, to an uncertain extent, the high proportion of patients covered by relatively low-paying insurance programs among HBPs.

Data from the HCFA-NORC surveys support past evidence that hospital-based practice is considerably more lucrative than office-based, on the average. Estimated mean net income per hour of medical activity in 1976-77 ranged from 15 percent higher for anesthesiologists to 53 percent higher for radiologists. On a per-hour basis, fee-for-service is the most lucrative form of HBP compensation, followed closely by percentage of department revenue and not so closely by salaried compensation.

Trend data contained in Table 1 indicate a movement away from percentage compensation of pathologists and radiologists since enactment of Medicare in 1965. Reductions in percentage compensation have been accompanied by increases in both salaried and fee-for-service compensation of pathologists and by increases in fee-for-service compensation of radiologists. Medicare's regulations regarding identification of a professional component in physician billings under Part B were probably an important factor in the movement away from percentage compensation. If reduced transaction costs were a major reason underlying HBPs' and hospitals' historical preferences for percentage compensation arrangements, this advantage has largely eroded. In addition, the increase in third-party funds to pay for physicians' services generally has contributed to making fee-for-service practice relatively more attractive to HBPs.

The future of HBPs *vis a vis* regulatory activities and other exogenous influences is uncertain, but some further changes seem imminent. In particular,

passage of the Talmadge Bill or similar legislation may sound the death knell for percentage forms of compensation. Such legislation would not make percentage compensation illegal but would probably remove most of its remaining advantages, pushing even more HBPs into fee-for-service or salaried compensation.³⁴ Primarily because of monitoring difficulties, many health policy analysts will be glad to see percentage compensation of HBPs disappear. However, it should be recognized that this change is not without costs. To the extent that some HBPs and hospitals have been influenced to switch from percentage to fee-for-service arrangements, the transaction costs of billing and collecting for HBP department services have probably increased, although we currently have no way of isolating these increases. Even so, the greater ease in monitoring HBP service charges and utilization which accompanies the change in compensation arrangements may be sufficient to justify the added costs.

One development affecting HBPs at the State level is particularly worthy of mention. The State of Maryland's Health Services Cost Review Commission is currently engaged in a court battle to establish jurisdiction over fees charged by hospital-based physicians (cardiologists, radiologists, and pathologists) as a part of its hospital rate-setting authority.³⁵ This action was precipitated by a 1976 dispute over the Commission's decision to reduce compensation of HBPs at a hospital in Silver Spring, Maryland. The HBPs and hospital brought the matter before the county circuit court in 1977. The court found in favor of the Commission (that is, that the Commission did have jurisdiction to regulate HBP fees) because the services of these MDs were regarded as *hospital* services. Consequently, the costs associated with those services were subject to regulation. (At the time this action was initiated, the cardiologists were compensated on a percentage basis, the pathologists and radiologists were on fee-for-service, and all billing was done by the hospital.) On appeal, the Maryland Court of Appeals determined that the fundamental issue in the case had not been settled in the circuit court, namely, whether fees charged by HBPs could legitimately be regarded as part of the total costs of the hospital. The case was therefore remanded to the county circuit court for resolution of this issue, which was the status of the case as of spring, 1980.³⁶ If the

³⁴In early debates over the Talmadge proposal, organized medical groups, particularly the College of American Pathologists, fought the provisions so unfavorable to percentage compensation. In later debates, however, these provisions seem to have been grudgingly accepted. See U.S. Senate (1977).

³⁵*Holy Cross Hospital of Silver Spring, Inc. et al., v. Health Services Cost Review Commission* (1977, 1978, 1980). These documents and a verbal summary of the case were generously provided by Stanley Lustman, Assistant Attorney General, State of Maryland.

³⁶In May, 1980, the circuit court found in favor of the Commission by determining that the costs of the HBP services in question were indeed part of the total costs of the hospital, and therefore subject to control by the Commission. However, the court also created a loophole by adding a passage stating that HBPs can avoid Commission jurisdiction by billing patients directly for their services. Both sides are appealing the court's decision.

Maryland Health Services Cost Review Commission obtains rate review jurisdiction over fees charged by hospital-based specialists, this will establish an important precedent. Regardless of how the case turns out, but especially if the Commission wins, there are likely to be some "threat effects" of the prospect of HBP fee control by hospital rate regulation agencies. Such agencies presently exist in several States, and we may expect more to be created by State legislatures as time goes by.³⁷ If traditional arrangements between HBPs and hospitals will be regarded as a criterion for establishing authority to regulate fees, this may be an additional incentive for HBPs to switch to direct billing fee-for-service remuneration.

Thus, there are currently several forces at work that have had, and will probably continue to have, dramatic effects on the organization and financing of hospital-based physician services. If, on the basis of evidence and discussion presented in this paper, it seems that hospital-based medical practice is beset with prob-

³⁷According to a survey conducted by the American Hospital Association (Boeh, 1979), State-created agencies empowered to regulate hospital rates existed in eight States in 1979. In addition, voluntary programs with authority to control rates, many of them operated by local Blue Cross plans, existed in 13 States in 1979.

lems for the policymaker, these problems cannot be laid at the doorstep of the HBPs alone. It should be clear that the proper focus is on the whole system of physicians, hospitals, and payment mechanisms that have created the circumstances described here. On the other hand, evidence on incomes, trends, and structural characteristics suggests that HBPs may have been the beneficiaries of windfall gains arising from these circumstances. Therefore, they should not be surprised if they attract more than their "fair share" of attention as the regulatory process expands its activity in the health services sector in the 1980s.

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