

Changing the Behavior of the Physician:
A Management Perspective

*Proceedings of the Twenty-First Annual Symposium on Hospital Affairs
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The Twenty-First Annual Symposium on Hospital Affairs conducted by the Graduate Program in Hospital Administration and Center for Health Administration Studies of the Graduate School of Business, University of Chicago, was held at the Center for Continuing Education on the University of Chicago's campus on June 1-2, 1979. These symposia are a reflection of the strong concern of the Graduate Program in Hospital Administration with complex current issues in health care management.

The topic for this, the Twenty-First Symposium, was chosen by a committee of the Alumni Association because of its relevance in this period of changing environment for health care institutions. These proceedings are published and distributed in the hope that they will prove useful to both practitioners and students of health care management.

Special thanks are due Mrs. Margarita O'Connell and Mrs. June Veenstra, who staffed the symposium, and to Ms. Roberta Baranowski who edited these proceedings.

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Introductory Remarks

CHAIRMAN RONALD ANDERSEN

I would like to welcome you to the Twenty-first Annual Symposium on Hospital Affairs, conducted for the alumni, friends, and colleagues of the Program in Hospital Administration of the Center for Health Administration Studies at the University of Chicago. It is part of our program in continuing education, originated by Ray Brown, and carried on by George Bugbee and Joel May.

The topic for the symposium has to do with changing the behavior of the physician, from a management perspective. The theme was developed by the organizing committee, which included the officers of the alumni association and representatives of the various classes, as well as the faculty of the program.

Odin Anderson had the responsibility for inviting speakers. He's very pleased, and we as a group are very pleased with the people who will be participating. We expect to have a fine session and hope for your involvement as we go along.

The general purpose of the symposium, and I think an emphasis in this first session, is looking at problems from varying perspectives. Odin Anderson has emphasized constantly the value of looking at things from a cross-national perspective. An illustration is the young sociologist who was doing a study of decision making and problem definition as it varies among countries.

Part of his research was during an international flight going across the ocean. He noticed that among the flight attendants were an English girl, a stewardess from the U.S., one from Sweden, and one from France. He thought this would be a good opportunity to begin his study.

He approached the stewardesses and said, "Would you participate in this small study I'm engaged in?" And they said, "Certainly, after everything is calmed down and we are out over the ocean."

He got them together later and said, "Now, I'd like you to imagine that on one of your flights there is a problem, and the plane goes down. You are the sole survivor, and you are washed up onto what appears to be a deserted island. But it isn't a deserted island.

"Two years ago a naval vessel ran aground and has been there all this time, but no one knew about it. There are a thousand vigorous young men stranded on this island without the benefit of female companionship.

"Now, these thousand young men are bearing down on you. You are on shore, having just been washed up. How would you respond to this problem?"

The English girl said, "I would do the only honorable thing I could and throw myself back in the ocean and drown."

The American girl said, "I would pick the strongest one and marry him."

The Swedish girl said, "Well, I would form a committee. We would discuss the problem and work out a solution that would best meet the needs of our newly formed community."

The French girl just shrugged and the sociologist said, "Mademoiselle, don't you understand the situation you would be in here, with the thousand vigorous young men bearing down on you?"

"Oui, Monsieur, I understand the situation, but what is the problem?"

How Physicians Are Managed in Other Countries

ODIN W. ANDERSON

The first general session of the symposium convened on Friday morning, June 1, 1979, with Ronald Andersen, professor and associate director-research of the Center for Health Administration Studies in the Graduate School of Business at the University of Chicago, presiding as chairman.

CHAIRMAN RONALD ANDERSEN: Without further ado, I'd like to introduce our first speaker, Odin Anderson, professor in the Graduate School of Business and director of the hospital administration program.

DR. ODIN W. ANDERSON: I had no idea that Ron knew that this had happened on one of my flights across Europe. I thought when I traveled alone nothing got back home. Obviously, because of my cultural conditioning, I selected the Swedish girl.

Ronald said that I had a lot to do with selecting people and, with the help of the faculty, inviting them after we got the main theme set up. You will notice I invited myself first, for the opening. You will also notice that I have given myself the shortest time of any of the speakers, probably less than ten minutes in order to set the stage. There really isn't very much to say about the situation in Europe regarding doctors.

Are there arrangements to change the behavior of the medical profession in Europe and Canada comparable to the PSRO legislation in this country? Are there arrangements where the physician is essentially at risk by being collectively responsible for the solvency of a pooled fund? On the whole, the answer is no. There is, however, a greater and generally successful attempt to protect the patient from charges in excess of the negotiated fees for the physicians.

As observed by William Glaser in his informative and useful book, *Health Insurance Bargaining: Foreign Lessons for Americans*: "American Medicine is one of the few situations where the customer rarely knows or understands his obligations for payment in advance." In Europe and in Canada, there are close-ended fee schedules and few, if any, attempts at moni-

toring physician decision making of the PSRO type for hospital admissions and length of stay. In this country the opposite holds, open-ended fee schedules and one might say close-ended physician decision making regarding hospital admission and length of stay.

Partial exceptions may be Canada, West Germany, and Sweden, which do exercise some surveillance over physician volume of services outside of the hospital by running profiles of their practices. Even in these countries, however, the surveillance seems rather gross in that it attempts to flush out the most extreme types of deviant practices. No country appears to use its health insurance system to reorganize physicians' practices outside of the hospitals, even though the system is the major source of payment.

Can physicians bargain effectively, namely, in their own interests with a monopsonist government? (I wanted to make sure that I had the right word so I asked an economist this morning. I've always been bothered by the word "monopsonist," because it sounds obscene. I used to use the word "monopolist," which simply sounds greedy.) Well, can they bargain in their own interest with a monopsonist government in a democratic political system? The answer from foreign experience, at least so far, is clearly yes. Physicians carry a tremendous bargaining power in relation to government because physicians are also a monopoly and one which the politicians and public fear will withhold services if it cannot have its way.

Indeed, physician strikes have happened in Saskatchewan, Belgium, France, and to a limited extent in the United Kingdom among house officers; likewise in the United States. And things came very close to a strike in Sweden among hospital-based physicians some years ago.

I think it is significant to note that the United States has been an innovator in the techniques of collective bargaining in the private sector and increasingly in the public employment sector. Still, the United States has had intractable problems in paying physicians with its official health insurance programs and, for that matter, in the voluntary insurance programs because (quoting Glaser again), "It has depended either on unilateral government regulation, on 'market forces,' or on pro-

vider discretion rather than on some system of negotiation.”

Europe and Canada, on the other hand, have had a gradual and structural evolution of official fee schedules. The official fee schedules began as guides formulated by medical associations for the instruction of their members. Eventually these became more codified as private insurance spread through worker benefit associations and sickness insurance societies. Thus health insurance costs could become predictable at least for unit charges, whether costs were shared by the patient or not.

These fees became full and binding as countries moved into government health insurance. The concept of reasonable and prevailing fees, as enshrined in Medicare, simply never entered the minds of the professions, nor certainly the government policy makers and bureaucrats, as responsible and practical.

The fee and/or salary bargaining process is highly structured and regularized in Europe and Canada between governments and the profession, or a specific organization, as in countries where administration is delegated to insurance agencies, e.g., West Germany.

The bargaining system reveals the cultural and political style of each country—the highly volatile (but still contained) style of France and Belgium, for example, or the methodical and ordered style of the Netherlands, Switzerland, and Sweden. In either case, I am told that bargaining sessions are greatly lubricated by holding them in first class restaurants.

Ever since the passage of the legislation mandating utilization review committees in hospitals for Medicare in 1965, and for PSRO in 1972, I have been wondering why, of all countries, the United States is the only one which actively tries to intervene in the clinical decision making of physicians and does so in a purportedly open market health service economy.

In Europe, such intervention has not been actively suggested and was not even thought of until our own PSRO legislation and implementation became known. In the European so-called socialized systems, the diagnostic and therapeutic discretionary powers of the physicians are still greatly respected, and it also

appears that physicians are more trusted in this regard than in the United States.

My theory is that, aside from the greater regard for professionalism in Europe than in the United States, other countries are much less reluctant to function within some structured system of fee and salary schedules, budget limits, bargaining methods, and boundaries of supply than in the United States.

We do not like structures and boundaries. We prefer processes to structures, hence we conceived of the PSRO, which moves directly into the heart of the physician's clinical decision-making process, rather than fee bargaining as such. It is hoped thereby that once we have rational clinical decisions, we will have a basis for rational budgets and volume of services.

Interestingly, my European colleagues appear to look longingly at our emerging concept of the PSRO, because they eventually want to contain both structures and the clinical decision-making process.

In general, then, all of us seem to be moving in the same direction anyway—to set up structures, boundaries, and budget caps and also to devise methods of monitoring physician clinical decision making. Can the physicians thereby be managed? Well, maybe we will find out in the next day and a half.

The physician still remains the most powerful element in any kind of a health service system as long as patients do not boycott the profession. So far this is an unlikely possibility.

My own feeling, or as a physician says when he does not know what to say about a patient, my clinical impression is that the profession will be much more adamant about clinical freedom than income levels because the profession knows it can handle income bargaining with laymen, but may be fearful of encroachments on clinical decision making prerogatives. And it would seem that it is mainly the issue of clinical decision-making prerogatives we are considering when we ponder how to handle the physician from a management perspective.

Organizational Theory and the Physician

SELWYN BECKER

CHAIRMAN ANDERSEN: Our next speaker is Selwyn Becker, long-time friend and associate of the program and professor of the Graduate School of Business, University of Chicago. Sel will be discussing organizational theory as it relates to physician management.

DR. SELWYN BECKER: Odin has been in Chicago for nearly twenty years and he thinks monopsony is an obscene word, when everybody knows that federal regulation is the obscene word.

The topic I want to discuss is organizational control of human resources. And I will address that general topic as well as the specific one of hospital control of physician performance and behavior.

Generally speaking, there are only two relevant organizational problems: the problem of coordination and the problem of control. These problems are conceptually independent and frequently one finds actual organizational problems which either are coordination or control problems, but quite frequently one also finds that actual problems are a mixture of the two, with some coordination aspects and some control aspects. Classifying all organization problems as one of two kinds, or as a hybridization of the two, presumes that a prior issue has been resolved—that organization goals and priorities, and problems associated with their establishment, are relatively clear. We shall return to this presumption later in this presentation, but first, let us consider how organizations attain coordination and control.

Coordination refers to the integrated movement of physical resources and human effort in the direct pursuit of the goals of the organization. Control refers to ensuring that the coordination plan is executed with the prescribed amounts of physical resources and human time and effort.

The coordination plan is determined by the entrepreneur, in simple cases, or by upper-level management, in more complex circumstances. The plan is then converted into a variety of procedures, rules, and regulations, designed to coordinate human and physical resources, in order to efficiently produce some good or

service. By “efficiently produce,” I imply that the good or service is produced reliably and with a minimum expenditure of resources. Typically, the best way to achieve efficiency is through standardization of behavior. To the extent possible, work behavior is reliably reproduced, or standardized, by following the prescribed sets of procedures, rules, and regulations.

When circumstances become more complicated, either because the environment demands rapid response, or the organization has grown to the point where there are many procedures to choose from, then some of the procedure—designating or rule-making power is distributed to lower level managers in the organization. This is typically known, in one form or another, as decentralization. Despite the fact that in this form of organization decision making is at lower levels and the number of decision-making units is increased, coordination by and large is still achieved the same way—standardization of behavior by establishing procedures and rules.

Sometimes the work is so complex and difficult to standardize that long periods of training are necessary before a human can perform the task reliably. In such cases, the training frequently is performed outside the organization, sometimes by an organization specialized for that purpose, and sometimes by a university, and sometimes by a combination of the two. This kind of complex work we call “professional,” and the training is designed to impart specified knowledge and skill rather than “here is exactly how to do the job.” Coordination procedures of the organization impart the latter. Hence, professional training is a way of standardizing skills which should result in relatively reliable behavior, just as specifying procedures does in less complex situations.

Once trained, the professional joins some organization which requires his skill, and he proceeds to aid the organization in its goal attainment by applying the knowledge and skill acquired (and perhaps standardized) in the other, the training organization. After some mutual adjustment and socialization, this arrangement should provide satisfactory outcomes both to the organization and the professional.

There can be endless variations on this theme, but

basically, coordination in organizations is achieved by standardizing behavior or standardizing skills or some more-or-less complex combination or variation of the two.

Once the organization has solved the coordination problem, it then attempts to control—to achieve the desired coordination with the least expenditure of physical resources and human time and effort. A variety of formal and informal devices and strategies are used to effect control. Locks and keys, guards, threats, legal and moral sanctions, accounting systems, bonuses, incentive systems, all have been used as control devices to insure future appropriate use of resources and to determine if past use has been appropriate.

All of these devices are part of the contracts entered into by the individual and the organization. Every individual who joins an organization enters into two contracts with the organization: a written or verbal formal agreement which we can call the explicit contract, and a tacit but no less binding implicit contract.

In the explicit contract are elaborated the inducements offered by the organization: remuneration (the form of it, perks, fringes, etc.); how remuneration is to be determined (thus formalizing an agreement on part of the incentive and accounting systems); and the contributions sought by the organization from the individual (job duties and responsibilities).

Equally powerful, but not as well recognized, is the implicit contract whereby the individual, in accepting a relationship with an organization, recognizes and legitimizes the authority structure of that organization. By agreeing to a hierarchical relationship in which someone reports to him, or he to someone else, he accepts and endorses the idea of an authority system and acknowledges that he will participate and be a part of that authority system.

The authority system conveys status and implies deference. The authority system partly defines and endorses local custom and group norms. In fact, the entire functioning of the informal organization, the network of peer and friendship patterns, the communication and rumor patterns, the informal and perhaps unspoken but powerful sanction systems only can be understood in terms of the organization's authority system. All define the implicit contract. The reality is that the control of organization resources relies on both the explicit and the implicit contracts.

Let us turn to the professional in the organization and examine how he relates to the control systems.

The engineer goes to school, learns the content of his discipline, refines his skills, and then is hired by some organization. They agree to a salary, a bonus based on profit, a title, what he should accomplish, and what his goals relative to the organization ought to be, thus defining the explicit contract.

The implicit contract recognizes that he is a professional engineer, that he will apply the skills, standards, and ethics he presumably acquired elsewhere for the benefit of his new organization. He joins the group. If they come in on Saturday morning, so does he. If he produces he gets paid, gets raises, and all other good things. If he fails to satisfy his superior he doesn't receive raises or promotions and eventually he will be replaced.

Although the implicit contract has a control function it is usually relatively less important than the formal remuneration and incentive systems. Primarily, it performs the coordinating function. The implicit contract recognizes that the professional and his training organization will determine how the work is to be coordinated, the in-house pecking order, etc. The explicit contract will determine if those ways of coordinating lead to acceptable outcomes, and, further, it promises that the reward structure will be affected by the judgment of those outcomes.

This set of relationships characterizes many different professionals in a variety of organizational settings: lawyers in corporations or in law firms; accountants either in corporations or in accounting firms; doctors or Ph.D.'s in various R & D settings or in other bureaucratic mechanisms. All function in the same set of relationships.

What about the doctor and the hospital? To what degree can the hospital control, modify, or shape physician behavior via the explicit contract?

Typically, the most powerful statement in the explicit contract is that in return for clinical privileges the physician will conform to the by-laws of the hospital. The by-laws may include such requirements as "must serve on relevant committees" and other activities which are related, if at all, only most tenuously to either defining or evaluating outcomes. Goals stated in the explicit contract or by-laws usually are in the form, "the medical staff will carry out the functions delegated to it by the board." That is not what I call a precisely defined target. In other words, neither real

goals nor accounting and incentive systems tied to goals are part of the explicit contract.

Clearly, control rests on the implicit contract. The implicit contract entered into by physicians and hospitals is similar to that of other professionals. The training institutions determine coordination procedures. They standardize knowledge and skills. They also simultaneously define the role of the physician and his relationship to medical students, to nurses, to hospital administrators, and other hospital personnel. The physician in his dealing with the medical student and the intern defines the physician's role and the authority structure of which he is a part. Typically, the role is that of a near-omnipotent master at the very top of the authority system—at least that's what the intern sees of the system.

There is, however, one significant difference in the physician-hospital contract compared with that of other professionals and their organizations. Because the training program also includes an apprenticeship, either in the form of an internship or a residency, the goals the physician should strive for also are defined and subsequently become part of that implicit contract. In other words, whatever it is that the physician is to maximize—some combination of personal goals and desires modified by the training and apprenticeship programs (which include his peers in those settings)—the hospital organization in which the physician behaves has little or no say in the development of what is being maximized.

The specific content of this part of the implicit contract, of course, will vary from one training site to another and will be modified by the personal goals of the teaching and neophyte physicians. Whether or not it includes the ideas that patients are there for interns to practice and learn on, that hospitals are organized specifically to enable the physicians to earn as much income as possible, you all know better than I, so I shall not attempt to elaborate those contents.

If there are no controls in the explicit contract and if the controls in the implicit contract are inappropriate, we must ask how the hospital organization controls the physician. The answer is that as they are currently structured, hospital organizations don't control physicians except at the most superficial levels of behavior. They might require a physician to participate in committee meetings and decisions, but they have great difficulty if he chooses to treat patients in a way contrary to committee recommendations, so long as he avoids

legal entanglements.

What then can be done? First, the explicit contract. It might be possible to develop some system whereby the hospital can exert some influence over the remuneration patterns of the physician.

1) He could be required to post a performance bond—as many independent contractors promising to deliver goods or services to an organization are required to do.

2) Payment for all inpatients from a third-party payer could go to the hospital with the hospital having discretion over whether or not to disburse the physician's share, depending on his performance and how closely it conformed to hospital goals and policies.

3) Institution of real accounting systems using outside auditors with penalties for poor performance. This is unlike the current system of retrospective medical audits (with no effect on income) in which the outside audit done by the JCAH (Joint Commission on Accreditation of Hospitals) typically counts number of committee reports committed to paper—totally unrelated to any outcome except that of increasing overall costs of health care.

I will leave the discussion of the efficacy of these and other incentives to the next speaker and turn to the implicit contract. First, and without reservation, any administrator who does not personally interview the applicant physician prior to staff appointment in an effort to determine what he, the physician, understands the implicit contract to be, has already lost the battle if not the war. In fact, the application and appointment process is the optimal time for changing the terms of the implicit contract. This is the period of time when understandings and agreements between chief of staff, administrator, and prospective new staff member can be made and perhaps put into the explicit contract.

For instance, the administrator should explore with the physician the physician's attitudes about what is appropriate behavior for the physician vis-à-vis the hospital and vice versa. How many hours of committee work does he "owe" the hospital? Is it appropriate for the hospital to expect the physician to perform community liaison or public relations functions? Does the physician expect the hospital will gladly schedule the O.R. on Sundays for voluntary surgery on his patients? How does he expect the hospital to process his requests for equipment? On these, and a variety of topics important to the administrator, the physician's views should be explored and a mutual accommodation

achieved prior to appointment.

However, it is also clear that while such action could yield benefits it really is too little, too late. The implicit contract is almost totally defined in the training programs. Most obviously the way to exert control through the implicit contract is to influence its definition. You and your various organizations should have input into medical school curricula and practicums, as well as some say in how interns and residents are supposed to behave as physicians, vis-à-vis the hospital organization.

Why is it that associations of hospital organizations have so little to say in these matters? Why is it that the people in charge of a finite number of organizations, which constitute virtually the sole supplier of a resource needed by the physicians—a perfect situation for a cartel stronger than OPEC—are unable to influence the definition of the implicit contract? Is it possible that no strategies have been developed because no one really knows what American hospitals are trying to accomplish? Is it possible, gentlemen and ladies, that you don't have well-elaborated goal structures for your organization? Without goals, how can you determine what inputs you want to go into the training programs and their definition of the implicit contract?

Lewis Carroll said it quite well. "Would you tell me please, which way I ought to go from here," said Alice. "That depends a good deal on where you want

to get to," said the cat. "I don't much care where. . . ," said Alice. "Then it doesn't matter which way you go," said the cat.

CHAIRMAN ANDERSEN: I can't imagine that there aren't burning questions to ask after Sel's remarks. Any comments pertaining particularly to his discussion of the implicit and explicit contract?

QUESTION: Professor Becker, you mentioned one possibility was to make the implicit contract explicit at the employment interview. Are there advantages to keeping a contract or parts of a contract implicit, or reasons why you wouldn't want to make the contract explicit?

DR. SELWYN BECKER: I would say that would depend on the initial balance of power. The bargaining party with the greater power in the initial position would always want to have the implicit contract remain implicit, and the less powerful party would want as much of the implicit contract made explicit as possible. In this situation, it is my belief that the hospital is clearly in the weaker power position and it would be to its benefit to make as explicit as possible the terms of the implicit contract.

Economic Theory and the Physician

MARK V. PAULY

CHAIRMAN ANDERSEN: We will move along to our next speaker, Mark Pauly, professor in the Department of Economics, Northwestern University. I am pleased you traveled down from the North Side to join us, Mark.

DR. MARK V. PAULY: I never thought of monopsony as being especially an obscene term. I always used to worry about Sherman Antitrust economics; conscious parallelism always sounded kind of racy to me.

INTRODUCTION¹

First, I am going to talk about the general question of what economic theory has to say about managing the physician. Then I want to discuss the particular policy issue of hospitals' revenue limitations and an alternative to revenue limitations which puts physicians at risk for hospital care.

Physicians do appear to respond to economic incentives, though not always and not all to the same extent. Nevertheless, it would be difficult to argue with the notion that the incentives facing physicians ought to be structured to produce the behavior one regards as desirable. If physicians respond to incentives, then their behavior will be appropriate, and if they do not respond, at least no harm is done. The difficult part is determining which incentives will produce which behavior, and then trying to decide what is appropriate behavior in the first place. Incentives are like radio waves; they are all around us, but are often very difficult to detect unless one is tuned in. A common difficulty is that one may assume that incentives are wholly absent—because, like radio waves, no one can see them—and then go on to set up new incentives which might make sense if they were the only set of influences, but which may be either excess baggage or counterproductive when laid over the actually existing set of incentives.

¹ An earlier version of this paper, "Hospital Revenue Limitations and Medical Staff Behavior," was prepared for the Health Care Financing Administration (HCFA). Support was provided by an HCFA grant to the Center for Health Services and Policy Research.

A first principle of management (or something which ought to be a first principal of management) is that one should worry most about the incentives that deal with spending the largest amount of resources. Most of the research on physician incentives has not followed this principle.

Either immediately or at a distance, the physician directs resources to ambulatory and hospitalized patients. The resources consumed by hospitalized patients are approximately twice as great as those consumed by nonhospitalized patients, yet the amount of economic research on physician behavior in hospitals (while never quantified) is surely one-tenth of that on physician behavior in providing ambulatory care. Moreover, the problem of "managing" physicians (whatever that may mean precisely) is almost surely more germane to the large numbers of physicians typically found on a hospital's staff than to the one or two-person proprietorships which typically provide ambulatory care.

For these reasons, I will discuss primarily what economic theory indicates, and what empirical tests of that theory have found with regard to physician behavior within the hospital.

An important first message from economic theory concerned with physician behavior in the hospital is that the concept of "managing the physician" may be a misnomer for the task in most hospitals. "Managing" in a typical organization involves the control of individuals with direct contractual or trade relationships with the firm (e.g., employees or input suppliers). In the typical not-for-profit hospital, almost all physicians have little direct contractual relationship with the hospital. What arrangements they do have are usually limited to medical staff membership, and the medical staff is usually independent of (but, as we shall see, strongly related to) the corporate organization of the hospital. Physicians collectively are not managed; they manage. The task to be discussed might more properly be described as one of choosing ways for physicians collectively to manage their own individual behavior.

Most economic theory dealing with physician behavior in hospitals has in fact postulated that the hospital behaves as if it were run by and for physicians.

This can be rationalized either by observing fairly extensive direct control, or by noting that, if competition for physicians among hospitals is reasonably brisk, physicians will select hospitals which do what they want, and the hospital will behave as if it catered to physician desires. There have also been models of the hospital which postulate that "the hospital," as an entity, maximizes a utility function depending on prestige, output, or quality, but these models have been silent on physician behavior in hospitals. Recent discussions of physician behavior in hospitals have emphasized primarily the physician's role in directing the production process within the hospital, and the importance of taking this role into account in designing hospital reimbursement policies.

The argument is simple: beyond routine hotel services, most of the decisions on resource allocation within the hospital are made, either individually or collectively, by medical staff physicians who are not contractually related to the hospital. Appropriate incentives—financial or otherwise—should therefore be focused on the group making the decision, not on the hospital administrator who has only limited power to influence medical staff behavior. Carl Stevens (1977) has proposed the useful metaphor of the physician as the driver behind the wheel and the administration (at most) as one of the passengers (along with the trustees and employees) in the back seat. Revenue limitations are as effective as trying to change a car's direction by influencing one of the back seat passengers.

It would seem to be obvious that limitations placed on the hospital administrator will be less effective than incentives targeted directly on physicians, who otherwise will tend to treat hospital inputs as if they are "free."

Similarly, John Eisenberg and Arnold Rosoff (1978), in the context of a lucid discussion of the need to put physicians at risk for medically "unnecessary" services, assert that "something more than mere denial of payment to the hospital is necessary in these cases if the doctor is to be motivated toward cost saving."

As a result, there have been a number of proposals to put the medical staff (either individually or collectively) at risk for hospital costs and so provide more appropriate incentives. The SAFECO plan (described in Enthoven, 1978), some IPAs (Egdahl, 1973), and prepaid group practices do just that. In this paper, however, I will argue that the connection between hospital revenue and medical staff incentives (and conse-

quent behavior) for minimizing the cost for a given number of hospital admissions may be much more direct than it first appears. Imposition by the federal government or by other third party payers of extreme alterations in physician-hospital relationships may not be needed to achieve efficiency, although revenue constraints themselves, if they persist, may eventually alter hospital organizational arrangements in important ways. I will show that in some situations revenue constraints may have effects on the medical staff which are stronger than those obtained by putting individual staff members at financial risk. Incentives for physicians to alter the rate of hospital admissions will be shown to depend critically on the form of the volume adjustment in the revenue limitation plan. Appropriate volume adjustments can give incentives to reduce hospitalization rates that are nearly as strong as those in HMOs. Finally, I will review what empirical information there is under either theory on the relationship between the medical staff and hospital costs (and vice versa), and try to derive from this some predictions about the nature of changes in medical staff behavior that would be induced by revenue limitations.

In order to present the argument, I will discuss the imposition of revenue constraints in a hospital which nonsalaried physicians both control completely and direct toward (or have the administrator direct toward) maximizing their money incomes. While this extreme model is surely a caricature of a complex organizational entity, it will serve to highlight the financial incentives and physician response to them.

REVENUE LIMITATIONS AND THE MEDICAL STAFF: FIRST ROUND EFFECT

While there usually is no contractual arrangement between a community hospital and the physicians who treat patients in it, hospital costs—or, more precisely, the hospital inputs those costs represent—are not irrelevant to members of the medical staff. There are two important kinds of linkages. First, and most obviously, the level of hospital inputs affects the physician's ability to produce his own services, and hence to generate revenue for those services. Some hospital inputs are substitutes for the physician's time; an appointment at a hospital with more interns and residents may permit the physician to treat his patients with less of his own working time. Other inputs may

be complements to the physician's time in the sense of enhancing his productivity; a particular piece of equipment, or the availability of operating room time, may substantially enhance the physician's ability to produce income-generating output. Either way, the availability of hospital inputs may permit the physician to produce more output and generate more income from a given amount of his own time. The second linkage comes from a potential relationship between the hospital's charge and the charge the physician can collect, in those circumstances in which both bills are not completely covered by insurance. Greater out-of-pocket payments to the hospital because of higher hospital costs reduce what the physician can collect when selling a given amount of his own services. While virtually complete insurance coverage may make both charges irrelevant, there may perhaps still be sufficient out-of-pocket payment for hospital care (especially for the marginal dollar for the marginal customer) that hospital gross costs and charges are still of some concern.

Now suppose the hospital is in equilibrium with regard to the level of its inputs, but then a revenue constraint is imposed on it which causes hospital revenues to be lower than they would otherwise be. If the revenue constraint is binding, any decision by a physician to order inputs or procedures that generate an extra dollar in cost implies that the hospital's deficit is potentially increased by one dollar. In the first round, the medical staff may take no additional action, but there will still be important consequences. Hospital deficits, at a minimum, reduce the hospital's working capital. But working capital is productive, and so this reduction will eventually affect physician income.² How much it will affect income depends upon the initial level of capital.

At the one extreme is the example of full cost coverage insurance inducing the hospital to add capital (and other inputs) as long as the marginal physician income product is positive. This means that any substitution of hospital input for the physician's own inputs, and any level of style or type of care for which the physician could collect larger fees, has already been accomplished. Since the marginal physician income productivity of any hospital input (including working capital) would be low, the initial reduction in physi-

² The hospital which is running low on working capital may have to turn patients away, or avoid ordering supplies or equipment, and thus affect physician productivity.

cian incomes caused by a hospital deficit would be small. At the other extreme, certificate-of-need controls, rate review, and reimbursement practices of third parties may have limited hospital inputs to so great an extent that the marginal physician income product is quite high. In such a case, a dollar in hospital deficit could cost the medical staff more than a dollar in wealth. Finally, as a sort of "middle" possibility, if the level of capital is such that each dollar yields r cents per year in physician income, and if the market interest rate is r percent, the present discounted value of the lost income stream would be exactly one dollar.

Where the level of capital actually is, in a typical hospital, is not known. Compared to physicians in an HMO who shared all of the net revenues, the medical staff in a hospital in which capital has a physician income product of less than r percent would be less "at risk."³

Whatever the physician income productivity of hospital capital, as long as it is positive, it will still be the case that physicians are at risk for the cost of hospital care. Additional resource use in a hospital under a revenue constraint does reduce hospital capital, which in turn reduces net physician income. Hospital losses are equivalent to a reduction of some amount in the total income of the medical staff. In effect, a revenue constraint means that excess resource use in the hospital by any medical staff member reduces the "tools" potentially available in the doctor's workshop and consequently the income those physicians could have generated had the tools been available.

PHYSICIAN RESPONSE: SECOND-ROUND EFFECTS

The fact that an extra dollar of hospital inputs under revenue constraint "costs" some amount of long-term physician income does not imply that a given physician should not order those inputs. The inputs themselves have a marginal physician income product; they bring in revenue for the physician. A trade-off must be made between the cost of inputs (in terms of their potential reduction in capital) and the benefits (in terms of the income increased by the use of those inputs).

Ideally (from its point of view) the income-maximizing medical staff wants to choose that set of inputs and level of deficit at which: (a) given the level

³ Compared, however, to some IPAs in which physicians may be at risk for as little as ten percent of hospital cost, as in the Sacramento IPA (Egdahl, 1973), physicians in a typical hospital may be at greater risk for hospital costs per unit.

of deficit, the set of inputs which maximizes total physician income is used, and (b) the deficit is set at the level at which a dollar of deficit reduces physician income-wealth by one dollar.

The earlier discussion suggests that if capital is at or below the optimal level, the optimal deficit will be zero. If capital is excessive, a temporary deficit can be used to reduce it to the appropriate level.

The major message from this bit of theory is that under a revenue limit, hospital input use is in fact costly for physicians who are concerned about their incomes. In contrast to the open-ended nature of present hospital reimbursement (cost-based reimbursement with virtually full coverage and no revenue constraint), hospital resource use will begin to matter to physicians under revenue limitation. "Excess" use of hospital inputs will affect physician income. In this sense, the consequences (and therefore the incentives) associated with physician use of hospital inputs will, one suspects, be quite different under revenue limitation from what those incentives are now under largely cost-based reimbursement. One might therefore expect some sizable changes in physician behavior from the present situation.

Under the present regime of complete or nearly complete cost-based insurance coverage, the present general unconcern for and ignorance of hospital costs by physicians is quite rational. Concern and knowledge are both costly goods. A given physician's actions to reduce hospital costs would produce negligible benefits for himself or for his patients, since any cost savings would be shared with all other persons covered by the insurance plan. If it isn't rational for the physician to take actions that reduce costs (in the sense that no benefit is obtained thereby) it is also not rational to be concerned with or informed about those costs. Policy changes which simply inform physicians about hospital costs, or try to raise concern levels, are likely to be ineffective because they only change information, not incentives.

Under explicit hospital revenue limitations, however, physician attitudes and behavior are likely to change because incentives will change. As shown in the previous section, the level of hospital costs will come to matter a great deal to the medical staff. The financial viability of their workshop, and its relative competitive position, can be seriously influenced by the presence or absence of collective measures by the medical staff to keep costs within the revenue limits.

In consequence, the rational policy for the medical staff will surely change.

WHAT CHANGES WILL OCCUR UNDER WHICH ARRANGEMENTS?

How actual policy (whether rational or not) is likely to change under alternative arrangements is the critical issue to which the rest of this paper will be devoted. The most obvious characteristic of the incentives offered to physicians under hospital revenue constraints is that the initial impact of the constraints has a "collective" or "public" dimension as far as the medical staff as a group is concerned. Any additional resource use by any one physician, under revenue constraints, affects the level of resources available to all staff physicians. In this sense an individual physician's behavior can generate "public bads" shared with just those physicians who use the hospital. The degree of "collectivity" is probably smaller than that in the incentive to an individual physician under an Individual Practice Association (IPA), which usually enrolls nearly all the physicians in a county, or that in a prepaid group practice (PGP) which is often larger than the staff of a single hospital. It will therefore be of some interest to speculate how hospital medical staffs will respond to this changed environment, how responses will differ with characteristics of the medical staff, and how those responses would differ from those in an IPA or PGP, on the one hand, and from those under proposals that put individual doctors at risk, on the other.

The indirectness of the impact of hospital revenue limits on physicians' income may suggest that a superior policy for minimizing the cost of a given number of hospital admissions would be one in which individual physicians are put directly at risk for hospital costs. There have been a number of proposals for such systems (Harris, 1979; Stevens, 1977), and some approximations of them already exist, in the form of the SAFECO system in Seattle and similar arrangements in Wisconsin (Enthoven, 1978). These letter plans also affect incentives for the rate of hospitalization.

A procedure which simply charged physicians for hospital inputs but did not change the form of insurance coverage would be likely to have little effect. If the physician had to "pay" the hospital bill, but could then collect the full amount of cost or charge from a third-party payer, all that would have been accom-

plished would have been the construction of an additional loop in the conduit of funds from consumers to input suppliers. One might argue that making physicians aware of hospital costs or charges has benefits in itself (Feldstein, 1967, Harris, 1979). It seems unlikely, however, that information without incentives will have much effect. Moreover, the efficient physician will not see hospital bills anyway; he will instruct his bookkeeper and accountant to take care of that matter for him. Since there are probably economies of scale in billing, transfer of payment for hospital bills to individual physicians will almost surely raise administrative costs. If the medical staff as a whole becomes liable for hospital costs, there is also the problem of creating (or at least transferring) the reimbursement mechanism to the staff. There seem to be almost no advantages, not even informational ones, from such a transfer.

There are two alternative ways of changing insurance coverage. One strategy would place limits on the "hospital" part of the payment to the physician, while the other would pay a limited total payment to the physician from which he would have to pay for hospital costs. These two strategies are not really so different, since physician fees would presumably be subject to some limit even under the first method. The major difference has to do with the ease with which doctors might be able to subsidize hospitals. Under the second method, it is easy for physicians to permit hospital costs to rise "excessively"; they simply accept lower net payment for their own services. Under the first method, hospital costs in excess of the limit would imply a hospital deficit; the deficit could obviously be underwritten by the medical staff, but there would be greater administrative problems in doing so.

In order to understand these differences better, it is useful to explore the impact of revenue limitations on the hospital's input choices. Under the present (open-ended) system of hospital cost reimbursement, there are three reasons why hospital costs might be excessively high. First, hospitals may be producing in a technically inefficient way. Second, hospitals may be using additional inputs to provide care of high "style" or "quality". Third, hospital costs might be high because physicians substitute hospital inputs for their own.

It would not be in the interest of the medical staff to permit technical inefficiency in the hospital under either direct physician risk or revenue limitation. Obviously, if physicians must pay hospital costs, and

retain the residual part of a fixed total payment, inefficiency costs doctors money. Alternatively, reduction in efficiency can benefit a staff under hospital revenue limitation, because lower hospital costs will permit the employment of more inputs to enhance physician income. Indeed even with no revenue limitation, but less than complete insurance coverage, physicians would not prefer technical inefficiency, although the value to them of its reduction could be less. One should add, however, that the factual (as opposed to anecdotal) evidence on the present existence of pure technical inefficiency in hospitals is not especially strong. There is little evidence that individual hospitals, at present, could produce exactly what they presently produce at lower cost, given the hospital's size and case mix. So the incentives to minimize inefficiency under procedures putting the physician at risk may not bring about major changes for this reason.

Putting physicians directly at risk may also change the way they view the style or quality of care. A lavish and costly style would reduce their incomes, and so there will be an incentive to change style. Under revenue limitation, if the level of costs associated with the physician-income maximizing level of style exceeds the limit, physicians have two choices. They can reduce costs to the limiting value, and suffer a reduction in income. Or they can keep costs up, but underwrite the hospital's deficit from part of their incremental income. Which strategy will be followed will depend upon the circumstances, but it is highly likely that revenue limitation will lead to a reduction in style or quality of care. The value of quality may be less than that of the cost saved, but a trade-off will still need to be made.

Finally, and less frequently noticed, physicians put at direct financial risk for hospital costs will have an incentive to substitute their own time for hospital inputs, especially when a small amount of extra time or care by the physician may avoid an expensive hospital procedure. In a similar way, under revenue limitation, the physician may find that the only way he can produce some outputs is to use more of his own time. (He may also have to substitute some of his office inputs.) There will be fewer interns and residents, fewer nurses, longer delays in getting and using laboratory tests or operating rooms.

All of these changes will reduce physician productivity per hour (and probably in total), but this result is not necessarily undesirable. In fact, both theory and

available empirical evidence suggest that physicians overuse hospital inputs relative to their own time (Pauly, forthcoming). Reducing hospital inputs and increasing physician time will save enough in hospital cost to more than offset any reasonable measure of the cost of increased physician time. There is some evidence that this overuse does in fact occur, its cause is thought to be hospital insurance coverage, which subsidizes the cost of hospital inputs.

Since the opportunities for eliminating pure "fat" in the form of technical inefficiency are limited, reductions in the style of care and increases in physician inputs will need to be accomplished. As far as the medical staff collectively is concerned, hospital revenue limitations and procedures to put the medical staff explicitly at risk for hospital costs are virtually equivalent in their incentives for these actions. The only differences are the point of initial impact, and the fact that hospital deficits may be administratively more difficult to cover under the hospital revenue limitation scheme. In general, then, differences all turn on the administrative problems of dealing with various mechanisms, not with the fundamental incentives themselves.

ADMINISTRATIVE CONSIDERATIONS AND HOSPITAL COST CONTAINMENT

I have shown that it is in physicians' interests to contain costs regardless of the "directness" of cost containment incentives. The important question becomes one of administrative-organizational efficacy. That is, we need to ask which method of offering incentives to physicians will promote the least-cost and most effective response. Obviously, incentives which impact on one part of an organization's structure can and will be transmitted to other parts of the structure. In a world of costless adjustment, organization becomes irrelevant and the locus of original impact will not affect final equilibrium. In a more realistic model, however, where there is grit in the organizational machinery, common sense and cost minimization both suggest that it is desirable to locate the initial impact of incentives as close as possible to the place where change must occur. If, for example, most change needs to occur at the level of orders given by individual physicians, then incentives should be focused there. If, on the other hand, the largest cutbacks should occur on inputs whose levels are determined by the medical staff collectively, then incentives should

impact there. Finally, if the level of inputs the administrator determines are ones that should be cut back, incentives should impact initially in the hospital as a whole. In practice, input decisions will almost surely have to be changed to some extent at all decision levels, but the critical questions still are: (1) where should change be greatest, and (2) which channels to transmit incentives function more effectively than others.

Very little is known about these questions. Note that, in any case, either financial incentives ("prices") or by-laws and operating procedures ("rules") can be used to affect individual physician behavior. In general, prices work well if actions can be easily measured and if the actions of only one agent affect the outcome. When the outcome depends on the coordinated activities of many agents, either prices work less well, or price structures need to be more complex.

Beyond this, there is little that we can say without knowing the nature of the changes in physician decisions that would be needed to maximize physician income under revenue constraints. For example, would "excessive" lab tests be curtailed in a preferable fashion by a system of charges to physicians for tests, by rules indicating the number and circumstances in which tests should occur, or by limiting the capacity of the laboratory to perform tests?

The government or other third-party payers may not want to foster the kind of cutback in response to revenue limitation which the medical staff would choose to maximize its income. For example, the staff might prefer to reduce community services, while the government may feel that some laboratory tests ought to go. The message is fairly obvious; locate the incentives in the group whose behavior is to be affected. While some of the impact will be dissipated throughout the organizational structure, some will probably remain where it was placed. If such clinical decisions as those described above are regarded as in need of correction, the medical staff might be the group target for cost control measures.

What about charging physicians for resources they use up, as Harris and Stevens have suggested? The medical staff itself may choose (perhaps with administrator prompting) to adopt such a scheme. One suspects, however, that initial incentives may be in kind rather than in cash. For instance, a surgeon may find that units of blood, lab tests, or operating room time

may be charged against a fixed quota of such items (although he may be able to trade quotas with other physicians). There does not, however, seem to be any strong reason for imposing a charge system on the staff, once a revenue cap has been put into effect. There is a potential efficiency gain from letting the staff name its own poison, and choosing the type of limiting method it prefers best. Different hospitals may have staffs with different preferences in this regard. The relatively small, closely-knit staff in a typical, medium-sized community hospital may be able to achieve a high degree of cooperation without resort to the more formal, internal incentive system that a large teaching hospital would find advantageous.

One should also note that while putting the medical staff at risk may improve incentives for the physician to keep costs down, there is a potential cost from doing so: it increases the amount of financial risk to which he is exposed. Should his patients' conditions be ones which are serious, or ones whose seriousness cannot be documented well enough for purposes of adjusting the revenue limit, then his income will be reduced. While these unusual deviations will average out over large numbers of physicians, they can be relatively large for an individual physician or group of physicians.

The assumption of risk is obviously relevant to the question of the "price" that would be needed to induce a physician to participate voluntarily in a reimbursement scheme which puts him at risk. For the hospital subject to revenue limitation, the total staff must be subject to risk. The question is whether ways could be found to cushion the risk assumed by individual physician staff members without overly diminishing the incentives for efficiency. The group as a whole may prefer to self-insure or pool risk to some extent.

HOSPITAL ADJUSTMENT TO REVENUE LIMITS: WHAT WOULD BE CUT?

The absence of empirical information has not prevented considerable speculation about how a hospital might be expected to respond to revenue limitations. Some aspects of this speculation may be misleading because the interest of the medical staff has not been properly taken into account. Harris's discussion provides a summary:

Suppose . . . that a revenue cap is imposed. Initially, there will be some form of excess fat-

trimming. But, after some bed closings and reductions in hotel amenities the constraint will cut into patient-care resources. At this point, our model suggests, the hospital will start to ration admissions. Because the incentives will be to turn away charity cases, the regulator will adjust the reimbursement formula to penalize such deviations. When this happens, admissions officers will begin to favor charge-paying customers over Medicare patients. And where a volume adjustment is added, they will skim the cream for short-stay easy cases. It must be recognized that the hospital administrators may well find these tactics more expedient than getting staff surgeons to use less whole blood. (Harris, 1979)

Let us now consider a number of steps Harris suggests that the hospital might take to deal with revenue limits.

1. *Closing beds.* Even without considering the medical staff's interests, one can observe that with volume adjustments (as are present in all proposed revenue limitation schemes), there will not necessarily be an incentive to close beds which would have been occupied. Closing beds reduces actual costs or revenue, but rationing and reducing admissions reduces volume, which in turn reduces the permitted level of costs or revenue. There will be an advantage to closing those beds which raise costs because they are rarely full, and this action may lead to more frequent temporary periods in which there is excess demand.

2. *Reducing admissions.* The way in which the hospital's revenue or cost limit adjusts as hospital volume changes (measured, say, by number or admissions) is critical in determining the incentives offered to physicians to admit to the hospital. What is also critical is how actual costs change (marginal cost). Table 1 shows four combinations of extremes. In cells 1 and 4, changes in permitted cost exactly match changes in actual costs, so no one gains or loses. Financial incentives for the hospital or its medical staff are "neutral." In cell 3, permitted revenue or costs are fixed, but actual marginal costs are positive. Obviously there is an incentive not to increase admissions. But there is also an incentive to decrease admissions, since doing so will release "excess" revenues for purposes the hospital or medical staff prefers. Note that these incentives are not just at the level of "the hospital"; the medical staff as a whole will also want to reduce admissions. At the other extreme, in cell 2, there will

be an incentive to increase admissions in order to generate surplus revenues for the hospital which the medical staff can use. Cases in which the permitted cost or revenue increases exceed or fall short of marginal cost should have qualitative effects similar to the extreme cases. In fact, the situation in cell 3 is very much like that of an HMO, or other capitated organization, except that "the hospital" may have accounting difficulties in transferring its profits to physicians. Ways can be found—the hospital can provide offices and backup services for ambulatory care provided by physicians—but they are likely to be a little messy. But except for the difficulties produced by accounting conventions, the physicians under a hospital with a really fixed revenue or cost constraint have incentives just like those in an HMO.

Table 1
Volume Adjustment

		Volume Adjustment	
		Zero	Proportional
Marginal Cost	Zero	1	2
	Proportional	3	4

3. *Cream skimming.* But will "the hospital" be able to favor charge-paying customers and "skim the cream"? Without a queue, it is difficult to see how the hospital would be able to do this. More to the point, it is not obvious that "cream skimming" and favoring charge-paying customers will necessarily be the physician income-maximizing strategy. It is quite possible, for example, that more expensive cases may be more remunerative to physicians than short-stay easy cases, so that physicians may prefer to cut back total admissions and concentrate on more expensive cases. There is a trade-off between profits the hospital might expect to earn on its own accounts from treating cases which cost less than the revenue the hospital is permitted to receive, and the net income that physicians lose by not treating complex but lucrative cases. The total net "profit" (for hospital plus physician) will be relevant. Perhaps most important of all, it is not obvious how, without the explicit cooperation of the medical staff, "the hospital" can manipulate its case mix in the fashion described. The income consequence of being able or unable to admit and treat a patient is surely

more severe than that associated with the amount of whole blood used. If the medical staff's cooperation can be secured with regard to the latter, it can surely be secured for the former. It is quite another thing, of course, whether it will pay to monitor blood use as opposed to admissions mix, and the income-maximizing staff may prefer to concentrate its limited rule-making and enforcing capacity on the things that matter the most.

4. *Length of stay.* It seems plausible to suppose that physician income is much more strongly related to actions that take place during the first few days of a patient's stay than to those which occur during the last few days. Under present forms of insurance, however, the minor conveniences offered to physicians and to patients by having the patient stay those last few days, plus the "profitability" of those days under charge-based payment, are probably sufficient to persuade the physician to keep the patient in the hospital if the patient so desires and if third-party review permits. But with a revenue limitation, extra days of stay would be candidates for cuts. Egdahl's data on a few IPAs indicate, in fact, that if IPAs reduce hospital use (Gaus *et al.*, 1976, to the contrary notwithstanding), they do it by reducing length of stay, not by reducing admission rates (Egdahl, 1977). Indeed, incentives may be better than formal utilization review. The last days of stay may have a relatively low marginal cost, however, so that their small effect on physician incomes may be matched by a small effect on hospital costs.

MULTIPLE HOSPITALS

All of the discussion to this point has been in terms of a set of physicians inextricably linked to a single hospital. While these circumstances are sometimes approximated in reality, the more general situation is one in which the physician has, or can easily obtain, admission privileges in a number of hospitals. Hospitals compete for physicians, and vice versa. How would equilibrium in this market be affected by revenue constraints?

One way *not* to answer this question is to look at what presently happens to hospitals in financial difficulty, or which plead poverty in answer to physicians' requests. Now, physicians have the very creditable threat that they will move their patients elsewhere. Under a general revenue limitation, they may still

make such threats, but the ability of any hospital to go along will be seriously strained. A general revenue limitation program will have effects quite different from those of a single hospital in financial distress.

What will turn out to be critical will be the rules of the revenue limitation scheme, for those rules will determine the change in the relative attractiveness of various hospitals. Those hospitals forced to cut back more will become relatively less attractive, and physicians will try to shift. It is by no means obvious that they will be accepted into staffs of other hospitals as willingly as a present; that would depend on how their patient load affects the profitability of other physicians' practices. If volume adjustments do not take case mix into account, "cream skimming" can occur. The physician whose patients have below-average case cost will be more attractive as a new staff member than one whose caseload will increase the hospital deficit, if (and that is a big if) he is admitted to the medical staff at all.

If the reimbursement system rewards a particular hospital (e.g., because its case mix is less costly than average for its class), one might suppose that this would provide a buffer to change. Such a hospital can survive longer using the old ways than one on the brink of financial ruin. On the other hand, such a hospital may be in an especially strong position to use its relatively more secure financial position to seize competitive advantage. The relevant magnitudes are the cost of change and the benefit from changing.

Major teaching hospitals may lose their run-of-the-mill cases (under a reasonable case mix adjustment), and may shrink in size or incur large deficits. This is not always undesirable, of course. Hospitals with staffs that are better able to adopt cost-control policies will be preferred over those that are less able.

The general pattern of cutbacks will be dictated by their consequences for physician income. This will usually mean that (in the absence of indivisibilities) all types of cost or resource use will be reduced somewhat, but those with respect to which physician income is more elastic will be reduced the most. If physicians are primarily tied to particular hospitals, the elasticity of revenue with regard to an input or characteristic will be related to the physician and hospital-specific elasticity of demand with respect to that characteristic.⁴ Concretely, those characteristics which

attract patients to a hospital and its physicians will be cut less than others. Amenities, paradoxically, may not be candidates for cutbacks precisely for this reason.

EMPIRICAL EVIDENCE ON PHYSICIAN-HOSPITAL INTERACTIONS

All of this speculation suggests that medical staffs may behave very differently under revenue limitation from the way they do now. They also suggest that an important determinant of success under such limitations is the ability of the medical staff itself, or of the hospital administration, to bring about cooperative behavior among physicians. We can now descend (or ascend, depending on your point of view) from theory to empirical fact to see what suggestions can be offered.

We should note at the outset that empirical information on the cost implications of physician behavior in hospitals is quite scant. There is, however, one finding which stands out, and which is quite germane to the current discussion. This is the finding (confirming common sense) that smaller, more concentrated medical staffs appear to be able to cooperate to achieve lower costs for a given caseload. That is, significantly lower hospital costs are associated with smaller medical staffs, and staffs in which a larger fraction of total admission is seen by a small number of physicians (Pauly, 1978). A reasonable inference from this is that staffs which can cooperate better for the purpose of minimizing costs under current arrangements are also more likely to cooperate in adjusting costs to the lower levels required by revenue limits.

This is an important point, and one that suggests that different medical staffs will experience different effects from revenue limitations, and will need to adopt different means to cope with it. In the large medical center, with many physicians and multiple loyalties, the kinds of direct financial incentives suggested by Stevens and Harris may be the only feasible method of control. The group may be too large for voluntarily cooperative solutions to work, and too heterogeneous for rigid rules to be efficient. But in the medium-sized community hospital, with a relatively small and homogeneous active staff, such financial incentives may be unnecessary. Informal cooperation or easily adaptable rules may be all that is needed.

There is a potential offset, however. The larger, more complex hospital (especially the large teaching hospital) may have an administration more capable of

⁴ I am indebted to M. Satterthwaite for this suggestion.

lobbying for special treatment in regulations and, once regulated, for special exceptions to those regulations. It is also possible that larger staffs may be more able to bear the fixed set-up costs of the committee structures and rule-making procedures needed to cope with revenue limits, although much of this advantage is likely to be dissipated in the task of coordinating a larger number of agents.

A characteristic with similar effects, but so far not investigated, is the homogeneity and cohesiveness of the medical staff. The more uniform the interests of the staff, the more likely they will be to cooperate. Similarity of specialty, and similarity of interests, are likely to be important here.

In addition to these characteristics of the staff as a whole, a relationship has also been found between the "hospital orientation" of the specialties which predominate on the staff and hospital costs. Diagnostic mix held constant, hospitals with more admissions attended by surgeons tend to have lower costs per admission. Surgeons, in particular, may be likely to cooperate simply because a well-equipped and well-functioning hospital is more important to their practice than to, say, pediatricians or internists. The age and experience of the medical staff is also probably related to the willingness to change. Physicians with fewer years of active practice remaining will probably be less willing to undergo the upheaval of change.

Another empirical finding, already mentioned above, is that hospital inputs are to some extent substitutes for physician inputs (Pauly, forthcoming). A likely response of the medical staff to hospital revenue limitation will therefore be an increase in physician input, both within the hospital and in the physician's office practice. The former kind of substitution is probably desirable, but the latter may constitute a kind of loophole.

There are a few other studies (Garg *et al.*, 1979; Pineault, 1977) which indicate that various aspects of the hospital's resource-using behavior, such as laboratory tests or total charges for a given patient, are related to such physician characteristics as age or type and location of medical training. With a given total stock of physicians in a market area, these kinds of characteristics obviously cannot be changed. At most, physicians could only be shifted from hospital to hospital. What is much less clear, however, is whether the physician behavior associated with these characteristics can be changed by altered incentives. If, for example,

physicians trained in the East tend to keep their patients in the hospital longer than those trained in the West, would imposition of a revenue cap provoke Eastern physicians to adopt Western ways? At a minimum, it would seem that a more precise knowledge of the relationship between physician characteristics and hospital resource use would help hospital administrators, medical staff members, and third-party payers alike in understanding cost differences across hospitals and (possibly) in developing ways to alter high-cost physician behavior. Incentives might even be targeted to physicians of particular types.

CONCLUSION

At the present time, neither hospitals taken as a whole nor medical staffs in particular seem well organized or well disposed to make cost-quality trade-offs in hospital care. But the present organizational arrangements are a consequence of recent incentive environments, and furnish an unreliable guide to how hospitals will respond in the future. In this sense, a detailed knowledge of or feel for how hospitals presently operate is likely to impede rather than assist the management of change, unless the knowledge is coupled with an understanding of fundamental incentives, precisely because hospitals in the future are likely to be quite different.

Such an understanding suggests that putting physicians at risk produces a cost consciousness not very much different from that which is the natural response of a medical staff under hospital revenue constraint. There are differences, of course, in the initial impact of these incentives, and more information than we presently have on where changes will and should be made will help to minimize the cost of incentive transmission.

The critical point, however, is that adaptation is to be expected when incentives are changed, and the best adaptation is generally the one the organization chooses. It is probably unnecessary to impose organizational changes, such as the physician-charging scheme Harris proposes. Of course, some hospitals will not adapt, and will fail, and there may be a role for provision of information on and encouragement of change.

Moreover, not all hospitals are run either by or for the medical staff to the same extent. Revenue limita-

tions will strengthen the administration's power relative to individual physicians or sub-groups of physicians, but it is not clear whether the administration's ability to take actions contrary to the wishes of the medical staff as a whole will be enhanced. Physicians will have fewer options, but they will have more interest in seeing that the opportunities they presently have are used for their benefit. The influx of large numbers of new physicians into a system in which hospitals are contracting will also tend to increase hospital administrative power and medical staff concern simultaneously.

CHAIRMAN ANDERSEN: We have time for a question or two.

DR. KLIKA: I'm curious. Mark, you said you put the physician at risk when you put the hospital under revenue limitation?

DR. PAULY: Yes.

DR. KLIKA: I don't understand that because in New York, there are seventeen broke hospitals in New York City and I don't think the physicians' incomes have suffered a damn.

DR. PAULY: Well, there are certainly other factors, but let me say first that the arrangement I'm talking about is one in which all hospitals are put at risk. Obviously, these considerations don't work if there is another hospital down the street that you can move to, that is not subject to revenue constraint, or on which the constraint is presently not binding. There will tend to be a shift of physicians from those hospitals which are not able to cope with revenue limitation to those which are.

The prediction, though, is that in those hospitals that survive—in fact, part of the reason why they survive—may be because of an ability on the part of the medical staff to get its act together, to keep costs sufficiently low so the hospital is not put out of business.

When a physician has an appointment in more than one hospital, he may well decide that one should go down the drain. But at least the one he ultimately picks to use as his primary workshop will survive. In this way medical staffs will see that they have an interest in keeping their hospital financially viable.

I think my answer is that in a multiple hospital system what I said about hospitals in general doesn't necessarily apply to each and every hospital. It may well be that physicians will decide that certain hospitals, because they are too expensive, because they are not well managed, because they are antiquated, in effect, have to go. A conscious decision may not even be needed, they may simply let those hospitals go.

DR. KLIKA: In effect, you're also saying it may take two decades for that to happen.

DR. PAULY: It may well take that long, although it depends on how strongly the constraint binds. But at least the incentives are clearly in the direction of physicians being concerned about the financial well-being of the hospitals which they need in order to treat patients. It can happen quicker, too.

DR. KLIKA: Quicker than what?

DR. PAULY: Than two decades.

MR. R. JOHNSON: I would like you to react to the problem that even though there may be some examples of hospitals where the costs might be lower because of a smaller, more cohesive staff and more physician time input, resulting in materially lower costs, nobody knows that this is really so. Neither the public nor the doctors know this. And it is really too bad, because there are situations where administration, trustees, and medical staffs have been able to lower costs. They don't have any incentive to keep doing it if there is a hospital of similar size down the street where the doctors, the trustees, and the administrators care less; where the costs are materially higher, but the only people who know it are at Blue Cross keeping the records, and they don't disclose it.

What I am saying is that one of these days, this kind of information has got to be made public in the business world. The company that didn't apply these cost-saving principles would go broke, but in the hospital world, it doesn't go broke because it can continue to operate just as long as its income is guaranteed.

That's a complicated statement and question, but I am sure you get the point.

DR. PAULY: Not only that, I agree with it. The kind of revenue limitation I am thinking of is one which

does more than just point out which hospitals have low costs. It rewards them in some sense. Most of the mechanisms have some kind of reward structure built into them, so it does provide an incentive for all hospitals to behave as highly cooperative ones do now. It offers an incentive for physicians to pick the hospital they think is going to survive, work on it, and get their act together because it rewards them for cost minimizing behavior.

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Physician Fees As Incentives

MARK S. BLUMBERG

CHAIRMAN ANDERSEN: We are very fortunate to have a person with a broad perspective to continue our discussion: a physician with a number of other skills and talents as well, Mark Blumberg, corporate planning adviser, Kaiser Foundation Health Plan in Oakland, California.

DR. MARK S. BLUMBERG: My subject is fee-for-service medical practice, with emphasis on the fees.¹ About 200,000 of the over 300,000 M.D.'s in the United States are in office-based practice and more than ninety percent of these office practitioners are in fee-for-service practice. They are clearly the dominant medical force in the U.S. health care delivery system, and it is important to know more about their incentives.

My major theme is that these fee-for-service physicians have a price system which influences their practice. I will discuss how some of the current characteristics and problems of this price system developed, and I will also present some suggestions for improvements in the system.

A secondary theme is that physicians provide a huge array of services. Their output is far too complex to measure simply by counting numbers of visits or operations. There are also great variations between specialties in the mix of their services, and thus it is very hard to generalize about all fee-for-service physicians. Within the time available, I will present my findings specialty by specialty.

The key argument is that current prices for many M.D. services are not proportional to the costs of producing those services. In other words, physicians subsidize some services out of profits on other services. I'll be using the terms "winners" and "losers" frequently for lack of more elegant terms. "Winners" are services that are high in their revenue to cost ratio and "losers" are those that are low in their revenue to cost ratios. In another publication I give many examples of winners and losers.²

¹ The interpretations, conclusions, and recommendations expressed in this presentation are the personal views of the author.

² Blumberg, M.S. "Provider Price Charges for Improved Health

I believe that relative prices influence the manner, mix, and place of providing services by doctors in specialties. Physicians do not think of the price of the service at each and every patient encounter. But, in my view, when physicians are deciding to make an investment to learn a new procedure, or making a choice of a specialty or sub-specialty, or when they are purchasing major equipment for their offices, they compare potential fee revenue with relative costs of producing a service.

When there are winner and loser services and when M.D.'s order or provide the majority of U.S. health care, there are incentives for over-use of winner services and for under-use of loser services. This is particularly true for physicians without slack, but physicians with slack will also prefer winners to losers. There are many examples of misallocated resources resulting from these inappropriate prices, including excess hospital use, excess surgery, the scarcity of doctors at nights and on weekends, specialty differences in net earnings, and geographic maldistribution of doctors.

Have you ever wondered where the current relative prices come from? The origins are lost in history, but a good many of our recent fee conventions existed or developed during the nineteenth century. In this country, formal fee schedules grew along with local medical societies. The first local medical society still in existence, the New Jersey State Medical Society, was founded in 1766. The first order of business at their first meeting was to have a committee draw up a fee schedule! At first, I thought that was somewhat amusing and possibly unique. But I found the same pattern in the history of most local medical societies in the U.S. It seems clear that one key purpose in founding local medical societies was to fix local medical prices.

In 1847, the American Medical Association was founded. Their first Code of Ethics called for every local community of doctors—then called "a faculty of doctors"—to have a uniform fee schedule:

Some general rules should be adopted by the faculty, in every town or district, relative to pecuniary

Care Use." *Health Handbook*. Edited by George K. Chacko. The Netherlands: North-Holland Publishing Company, 1979.

acknowledgements from patients; and, it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.³

A similar paragraph continued in the AMA's Code of Ethics until about 1910. By 1890, a U.S. book on the business aspects of medical practice summarized fee schedules from 36 states.⁴ I have collected fee schedules prior to 1900 from 29 states, but I believe the record must be held by the American Medical Association. They did a survey of county medical societies in the 1930s and collected 559 fee schedules from 46 states.⁵

What do I mean by fee schedule? At the least, it is a list of services offered by M.D.'s with corresponding prices. Almost all schedules make it clear that the lower or only price given is a minimum. One note indicates that discounts in the bill (but not the prices) can be given to poor people, while another note states that charges more than the set price were allowed when circumstances warranted (e.g., for wealthy patients).

These official local society fee schedules often were signed by the doctors and there were sanctions by the local society for not following them (e.g., expulsion). They were not secret and were often published in directories and even in newspapers.

I have looked back at the circumstances which prevailed when these nineteenth century fee schedules were created. My reading of contemporary literature indicates that the productive potential of physicians in most areas of this country was greater than the effective demand for their services. Hence, the doctors' primary problems in such areas were to obtain an adequate number of patients, to keep them, and to get the patients to pay. Understandably, physicians had a great fear of price-cutters, and this led to formal fee schedules.

M.D.'s did have a lot of competition. I disagree strongly with those who feel that doctors have had a natural monopoly. From the very beginning, their principal source of competition was the patient's option to seek no care at all, self-care, or lay care.

In the U.S. during the nineteenth century, there were no effective medical licensure regulations. Any-

³ Leake, Chauncey, D., ed. *Percival's Medical Ethics*. Baltimore: The Williams & Wilkins Company, 1927.

⁴ Taylor, J. J. *The Physician as a Businessman*. Philadelphia, 1891.

⁵ *Journal of the American Medical Association* 114, No. 19, 1911-1938. May 11, 1940.

body could get into medicine who could afford to go to a proprietary medical school, or to apprentice to a doctor. In addition, there were a host of "irregular" (non-M.D.) practitioners who offered low prices. So, M.D.'s faced enormous competition, particularly in attracting new patients. M.D.'s did enjoy some monopoly power in surgery, but there were many non-professionals who set bones and delivered babies.

When the doctors felt there was competition, they set their prices low, and when they perceived little competition, they set their prices high, just as would be expected. In fact, in the 1766 New Jersey fee schedule mentioned above, the first item is a home visit, and the fee was "no charge." That is certainly a loss leader. These low prices for home visits persisted throughout the nineteenth century. How did a doctor make a living under those circumstances? Charges for travel helped, but fees for other services were important. He dispensed drugs, bled his patients, gave them enemas, and did minor surgery. That's where the money came from. The visit itself was not very highly esteemed by the patient.

Later in the century, office visits became common. These were also low-priced. Doctors feared that raising the price would keep patients away.

Hospital visits were quite rare until the turn of the century, except for surgeons, and surgical fees included their visits to the hospital. Hence, fees for hospital visits really didn't become an issue until the twentieth century. The price of the hospital visit was pegged to the home visit. In those days, hospital visits were infrequent and usually meant a special trip for the doctor. Thus, initially, the hospital visit must have been a loss leader. By the middle of this century relative prices for various visits stayed the same, but by then, one trip to the hospital usually meant seeing several patients. This greatly lowered the doctor's cost of providing a hospital visit. Furthermore, many doctors had located their offices near the hospital. The loser had become a winner.

I don't know where high surgical fees came from, but they were prevalent in fourteenth century Europe. However, nobody in his right mind had elective surgery until the late nineteenth century when asepsis and anesthesia were used. The rise of elective surgery in substantial volume is quite recent.

In 1913, the American Medical Association con-

ducted a detailed national survey of thousands of doctors on fee splitting and related matters. They found that fee splitting was rampant, particularly in the Midwest, and the big cities of New England, New York, and California.⁶ In this report, they noted also that in the prior twenty-five years fees for surgeons had escalated remarkably, whereas fees for other physicians had not. One can speculate whether the high surgical fees lead to fee splitting, or whether fee splitting leads to high fees. If the surgeon plans to give to another doctor a third of his fee, he is likely to charge more.

It is possible that the modern surgeon's fee carries with it something for fee splitting, even though fee splitting probably is quite rare now.

Ancillary services have always been important sources of physician revenue. As I mentioned, bleeding and dispensing enemas were the ancillary services of their day and they were the money makers. Ancillary services have persisted as winners. Some of the fees for these services were well deserved when they were introduced. Diagnostic x-rays were very expensive. A simple chest x-ray took considerable effort.

Chart 1
Major Eras in U.S. Fee-for-Service Physician System
by System Characteristic

Era	Time Period	Sources of Payment	Basis for Prices		Price Exceptions	Market Area
			Source	Use		
I.	1760s to 1920	Direct from patient	Formal fee schedules (based on M.D. consensus) "Market Prices"	Stated price was a minimum	Price discrimination for income extremes condoned	Local medical society (city or county)
II.	1920s 1930s 1940s	Early third party payers: Workmen's Compensation Welfare EMIC "Blue Shield" VA	Formal fee schedules (based on Era I and M.D. consensus)	Fixed price with a "discount" or unit price negotiated by third party and M.D.'s	Discount often depended on patient income Nonparticipating M.D. could charge Blue Shield patient more	City, county or state
III.	1950s to 1965	Rapid growth of private third parties, (Blue Shields and commercial indemnity plans) Foundations for medical care	Relative Values (CRVs) a. First based on M.D. surveys of charges b. Later based on charges to third parties c. M.D. committee consensus for changes and new services	Conversion Factor Negotiated by third parties (full service plans-fixed price) Set by third parties (indemnity plans) In effect, a fixed price	Nonparticipating M.D. could charge Blue Shield patient more M.D.'s could charge more to patients with indemnity plans.	State or portion of state County (FMCs)
IV.	1965 to Present	Introduction of Medicare and Medicaid plus growth of other third parties	"Usual, Customary, and Reasonable" a. First based on M.D.-signed surveys for all patients b. Later based on charges to third parties	Maximum price based on fee screens set and updated by third parties Mode approaches the "maximum"	Nonparticipating M.D. could charge Medicare patients more	Some states Some portions of states Some counties Some cities

⁶ Minutes of the American Medical Association House of Delegates, Report of the Judicial Council (June 1913).

The early diagnostic x-ray fee reflected these high production costs, but the greater reductions in the cost of diagnostic x-rays were not followed by proportional decreases in fees. The electrocardiograph fee is a similar story. When it was introduced in this country just after World War I, it was a very cumbersome device which took a lot of time and skill with a corresponding high fee. But when the technology was simplified, the ECG fee didn't reflect the fact. These slow-to-change (sticky) fees have led to ancillary services becoming winners.

Until World War II, medical fees in this country were amazingly sticky. Michael Davis noted that here in Chicago between 1890 and 1931 there were few changes in the fee schedule for visits.⁷ Incidentally, the 1931 Chicago Medical Society fee schedule was published in their directory.

In his 1929 study of California's San Joaquin Val-

ley, Sinai also noticed the constancy of fees. The local fee schedule in 1875 was the same as the one in use in 1929. In his field studies, he found what doctors were charging, and 61 out of 65 were actually using the fee schedule for home calls.⁸

I would like to present some data which illustrate the foregoing discussion. Chart 1 summarizes four eras in payment for physicians' services. In Era I (1760 to 1920) most of the physicians' revenue came directly from their patients. In most communities, there were formal fee schedules which were not changed very often. These fees were arrived at by the presence or absence of market competition, other market forces, and by physician consensus.

In the next era (the 1920s, '30s and '40s) there were all sorts of experiments with third party programs. The

Chart 2
Percentage of Visits to Office-Based Doctors
by Selected Visit Characteristic
and Doctor Specialty
U.S. 1975

Specialty	Percentage of All Office Visits						
	Number of Visits (in Thousands)	Mean M.D. Visit Contact (Minutes)	Special Conditions and Examinations Without Sickness	Old Patient Old Problem	Disposition- "Return at Specified Time"	Referred By Another M.D.	M.D. Referrals as Percentage of All New Visits
	A	B	C	D	E	F	G
General and Family Practice	234,660	12.6	12.9	56.8	51.3	1.0	7.9
Internal Medicine	62,117	18.2	7.0	66.0	68.4	2.6	19.8
Obstetrics and Gynecology	48,076	13.1	57.1	67.9	75.7	1.6	11.3
Pediatrics	46,684	12.1	32.4	49.3	44.5	.7	7.6
General Surgery	41,292	12.7	23.4	65.1	61.6	4.4	27.8
Ophthalmology	24,667	20.3	14.9	59.7	60.6	3.1	10.3
Orthopedic Surgery	19,316	14.5	16.0	70.3	65.1	8.0	35.4
Otolaryngology	16,355	13.6	10.4	60.1	49.7	6.5	20.6
Psychiatry	14,806	46.9	0.6	91.5	90.6	5.4	85.7
Dermatology	14,094	11.9	2.2	59.3	61.3	4.1	15.6
Urology	10,832	15.0	13.0	75.4	71.4	6.6	37.9
Cardiovascular Disease	7,556	21.3	6.0	76.7	78.2	7.5	64.1
All	567,600	15.0	17.8	61.7	59.1	2.8	18.8

Source: *Vital and Health Statistics Data From the National Health Survey*. Series 13-No. 33. U.S. Department of Health, Education, and Welfare, Public Health Service. Hyattsville, Maryland: National Center for Health Statistics, August 1978.

⁷ Davis, M. M. *Paying Your Sickness Bills*. Chicago: University of Chicago Press, 1931.

⁸ Sinai, Nathan. *A Survey of the Medical Facilities of San Joaquin County*. Chicago: University of Chicago Press, 1929.

first major source of third party payment for medical care came from Workmen's Compensation programs after the First World War. The medical and surgical fees for Workmen's Compensation cases were intended to be a fair price for traumatic surgery, but they systematically underpaid for office and home visits.⁹ The insurance carriers feared an excessive number of such visits. Later in the period, fees for welfare medical care were pegged to existing Workmen's Compensation fees by some county and state medical societies.

During this era, there were substantial negotiations on fee schedules between governmental third parties and the physician providers. However, these negotiations were on the conversion or discount factor rather than on relative values of different services. In the

Emergency Maternity and Infant Care Program ably described by Sinai and Anderson,¹⁰ the Children's Bureau relied on an average of existing fee schedules to establish its fees for doctors.

Fee schedules were fixed but discounts were possible. Each physician had to decide which of his patients were impecunious enough to warrant these discounts. However, discounts for poor patients were usually made across the board, thus leaving the relative values of these schedules intact.

In Era III (the 1950s until 1965) there were many changes highlighted by the growth of the Blue Shield program. California Physicians' Service, an early Blue Shield program, adopted a fee schedule based on Workmen's Compensation fees. The CPS bargained

Chart 3
Percentage of Office Visits with
Selected Services Ordered or Provided
by Specialty, U.S. 1975 or 1976^a

Specialty	<i>Type of Service Ordered or Provided</i>							
	<i>Clinical Lab Test</i>	<i>X-Ray</i>	<i>EKG</i>	<i>Endo- Scope</i>	<i>Injection</i>	<i>Immuni- zation</i>	<i>Office Surgery</i>	<i>Physio- Therapy</i>
General and Family Practice	21.6	6.2	2.3	0.6	21.5	3.7	5.2	3.3
Internal Medicine	38.5	13.1	14.0	1.6	11.6	2.6	1.5	1.1
Obstetrics and Gynecology	52.4	1.8	0.3	1.1	2.3	0.6	3.0	0.2
Pediatrics	22.4	4.1	0.2		9.3	22.9	3.2	0.1
General Surgery	11.8	7.3	2.1	1.1	14.6	0.9	16.6	1.1
Ophthalmology	2.5	.3					4.9	
Orthopedic Surgery ^b	1.6	36.3			6.4		14.3	9.5
Otolaryngology ^b	2.8	6.0			8.9	2.3	11.6	
Psychiatry ^b	2.5				2.7			
Dermatology ^b	4.9	0.9			5.9	2.5	6.5	
Urology ^b	66.8	8.8		8.3	2.7		18.9	
Cardiovascular Disease ^b	26.7	16.6	38.4		6.7			
All (M.D. and D.O.)	22.9	7.4	3.4	1.2	13.8	4.5	6.7	2.2
Osteopaths only	13.6	4.4	1.2	1.0	33.5	1.7	5.5	10.6

^a1975 except as noted

^b1975-1976

Missing data may indicate too few visits to report accurately.

Source: NAMCS in various Advance Data 1977 and 1978. Also, *Vital and Health Statistics Data from the National Health Survey*, Series 13-No. 33. U.S. Department of Health, Education and Welfare, Public Health Service. Hyattsville, Maryland: National Center for Health Statistics, August 1978.

⁹ Howsen, Carl R. "Some Problems in Medical Economics." *California and Western Medicine* 36, 18 (January 1932), and Reed, Louis S. *Medical Care Under the New York Workmen's Program*. 2nd ed. New York: Sloan Institute of Hospital Administration, Graduate School of Business and Public Administration, Cornell University, 1961.

¹⁰ Sinai, Nathan and Anderson, Odin W. *EMIC, A Study of Administrative Experience*. Bureau of Public Health Economics, Research Series No. 3. Ann Arbor, Michigan: School of Public Health, University of Michigan, 1948.

with doctors on the unit price (or conversion value). If there wasn't enough premium money in the kitty, the participating doctors were given a pro-rated amount. But there was little or no arguing about the relative values of the fee schedule. Many of the state Blue Shields used the extensive AMA collection of fee schedules for guidance.

I believe that there was a direct line from the relative values of the 1850s up to those of the 1950s even though relative value scales were not formally developed until the 1950s.

I think that the fourth era (1965 to the present) represents a substantial change. In this period, the so-

called usual, customary, and reasonable fees became widespread. I am by no means fully conversant with all its complex implications, but UCR did free the relationship between fees for various services. Because of this, the fee for one service can go up faster than the fee for another service.

I will only give a sentence or two on Chart 2. Column D gives the percentage of visits to office-based doctors which are comprised of "old patients with old problems." These are revisits. The great majority of visits for each specialty are revisits, and the doctor

Chart 4
1969 California Relative Value Units
Per 100 Minutes of Surgeon Care
by Specialty
for Selected Surgical Procedures

Specialty	Procedure	Estimated Minutes of Surgeon Time				1969 CRVs	CRVs Per 100 Minutes
		Average LOS in Days	Pre- and Post-op	"Skin to Skin"	Total		
General Surgery	Excision and ligation of varicose veins	6.5	88	125.8	213.8	12.0	5.61
	Hemorrhoidectomy	6.9	90	50.6	140.6	4.8	3.41
	Inguinal hernia repair	5.6	83	65.7	148.7	9.0	6.15
	Excision biopsy of breast	2.0 ^a	65 ^b	44.6	109.6	5.0	4.56
	Appendectomy	6.2	86	52.2	138.2	9.5	6.87
	Cholecystectomy	11.7	114	94.5	208.5	14.5	6.95
	Cholecystectomy with common duct exploration	11.7	114	145.8	259.8	17.0	6.54
Obstetrics/Gynecology	Diagnostic D&C	2.8	69	23.5	92.5	4.0	4.32
	Oophorectomy, unilateral	8.3	97	75.0	172.0	12.0	6.98
	Caesarian Section	7.0	90	59.3	149.3	10.0	6.70
	Abdominal hysterectomy, total	9.2	101	112.3	213.3	16.0	7.50
	Vaginal hysterectomy with A&P repair	8.6	98	101.8	199.8	18.0	9.01
Ophthalmology	Chalazion	3.2	71	33.2	104.2	1.2	1.15
	Strabismus correction	2.0	65	67.9	132.9	14.0	10.53
	Lens extraction, intracapsular	5.4	82	51.6	133.6	20.0	14.97
Orthopedics	Bunionectomy	6.1	86	71.7	157.7	7.0	4.43
	Meniscectomy	6.1	86	64.4	150.4	14.0	9.31
	Intertrochanteric fracture of hip with internal fixation	17.7 ^a	145 ^b	93.7	238.7	20.0	8.38
	Bankhart procedure	8.0 ^a	95 ^b	125.5	220.5	19.0	8.62
Urology	Lumbar laminectomy	15.0	130	119.3	249.3	26.0	10.43
	Cystoscopy, diagnostic	1.0 ^a	60 ^b	29.0	89.0	2.0	2.25
	Vasectomy	5.5 ^a	83 ^b	30.7	113.7	3.6	3.17
	Transurethral bladder surgery	7.5	93	50.5	143.5	6.0	4.18
	Suprapubic prostatectomy	15.6	133	84.3	217.3	20.0	9.20
	Transurethral resection of prostate	11.7	114	68.3	182.3	20.0	10.97

^aBased on National Hospital Discharge Survey, 1975 and other sources.

^bEstimated from Average LOS.

Source: Stason, W., and Hsiao, W., "Toward Developing a Relative Value Scale for Medical and Surgical Services Based on Resource Costs." Health Care Financing Administration, DHEW Research Contract SSA 600-76-0058. January 31, 1979.

controls the frequency of most revisits. Column E shows the percentage of visits that resulted in a formal doctor request to return. From such information, it is fair to say that the physician controls most of the visits to his own office. Other data indicates that a high percentage of M.D. requests for revisits for acute conditions are honored by patients.¹¹ The percentage must be higher for chronic conditions.

The 18.8 percent "all" figure at the bottom of Column G shows that less than one-fifth of new patients seeing a doctor are referred by another doctor. This drastically changes the concept of the source of primary care in this country. For all specialties, (except psychiatry and cardiovascular disease), the majority of new patients are self-referred. Since the majority of new patients for most specialists are self-referred, most specialists are providing primary care.

Chart 3 gives more data on the services provided by each office-based specialty. The numbers are the per-

centage of visits to a doctor in a given specialty which result in a particular service ordered or provided. Thus 13 percent of visits to internists resulted in a diagnostic x-ray being ordered or provided and 14 percent of visits to internists resulted in an electrocardiogram.

I was rather surprised to find a statement in a recent article that 75 percent of x-rays given to nonhospital patients are performed by nonradiologists.¹² This large volume of office radiology is concentrated among the orthopedic surgeons and internists (including cardiologists). The article was by a radiologist who does not mention the fact that diagnostic x-ray fees are winners.

Each specialty (except psychiatry) has one or more ancillary procedures that is a potentially important source of revenue from office practice. Simple measures of number of visits fail to include these ancillary services as an output. The range in net income of non-surgical specialties is not well related to the volume of visits provided by the doctor per week. For example,

Chart 5
Average Hours Per Week by Activity
and Average Net Practice Income
U.S. Office-based M.D.'s 1976
by Specialty

Specialty	Average Hours Per Week						Annual Average Net Income from Practice (\$ in Thousands) ^b	Subtotal Hospital Hours (B + C)
	Direct Patient Care			Other				
	Office	Hospital Rounds	Including Other ^a O.R.	Business Administration	All Other	Total		
	A	B	C	D	E	F	G	H
Pediatrics	36.0	8.5	0.4	3.8	1.1	49.8	\$44.3	8.9
Psychiatry	33.0	8.1	0.2	5.7	1.1	48.1	\$44.8	8.3
General Practice	34.9	10.6	1.0	4.5	0.4	51.4	\$45.4	11.6
Internal Medicine	29.9	17.0	2.4	5.4	1.0	55.7	\$57.0	19.4
Obstetrics-Gynecology	28.7	12.7	8.0	4.3	0.6	54.3	\$63.3	20.7
Surgery	23.7	15.7	8.5	5.3	1.2	54.4	\$68.2	24.2
Anesthesia	5.5	11.5	30.2	3.7	0.2	51.1	\$57.1	41.7
Radiology	30.0	4.2	10.3	3.7	0.2	48.4	\$75.2	14.5
Total	29.1	12.5	4.9	5.0	0.7	52.2	\$59.5	17.4

^aAlso includes home visits and nursing home visits.

^b1975

Source: Gaffney, J., ed., *1978 Profile of Medical Practice*. Chicago: American Medical Association, Center for Health Services Research and Development. 1979. Data used with the permission of the American Medical Association.

¹¹ National Center for Health Statistics (DHEW), "Medical Care of Acute Conditions." *Vital and Health Statistics*. February 1979. Series 10-Number 129, DHEW Publication (PHS 79-1557), Office of Health Research Statistics and Technical National Center for Health Statistics, Hyattsville, Maryland, February 1979.

¹² Abrams, Herbert L. "Sounding Board, the Overutilization of X-Rays." *The New England Journal of Medicine* 300, No. 21: 1213. May 24, 1979.

internists have higher net incomes than pediatricians or family practitioners although their volume of visits per week is less than these two specialties. The differences in net earnings by specialty must be attributed to something other than differences in volumes of office visits per week. The number of weeks worked per year and hours worked per week differ very little between specialties.

Many investigators have noted a positive relationship between specialties performing surgical procedures and net income, but volume of surgical procedures is not correlated with net income. Chart 4 gives surgeon time and California relative values (CRVs) for some specific operations. The right column presents California relative value units per hundred minutes of surgeon time. One component of this total is the "skin-to-skin" operating time. This is easy to measure accurately. The other component is the surgeon's pre- and post-operative time. These are estimates which need refinement. (I suspect that they are too high for

brief procedures).

The major finding is the wide range in relative value units per unit time of surgeon time. Look at the ophthalmology procedures. The highest CRV per 100 minutes in the list is for lens extraction (15 units per hundred minutes). That includes pre- and post-operative time. It happens that two-thirds of cataract surgery in the United States is paid for directly by Medicare. (Also note, however, the very low value of a chalazion.) I think there is little rationale in the wide range in CRVs per minute of surgeon time. It cannot be explained by complexity, social merit, or surgeon education.

Chart 5 shows the distribution of professional hours per week by specialty. The specialties are arranged in ascending order of 1975 annual net income (Column G) with pediatrics lowest and radiology highest. Column H gives the amount of time spent by each spe-

Chart 6
Average Annual U.S. Medical Care Expenditures
Per Active Office-based Physician
by Medical Care Component
Approximate Data - Circa 1975
(Assumes Hospital Gross Per Hour
Equals Office Gross Per Hour)

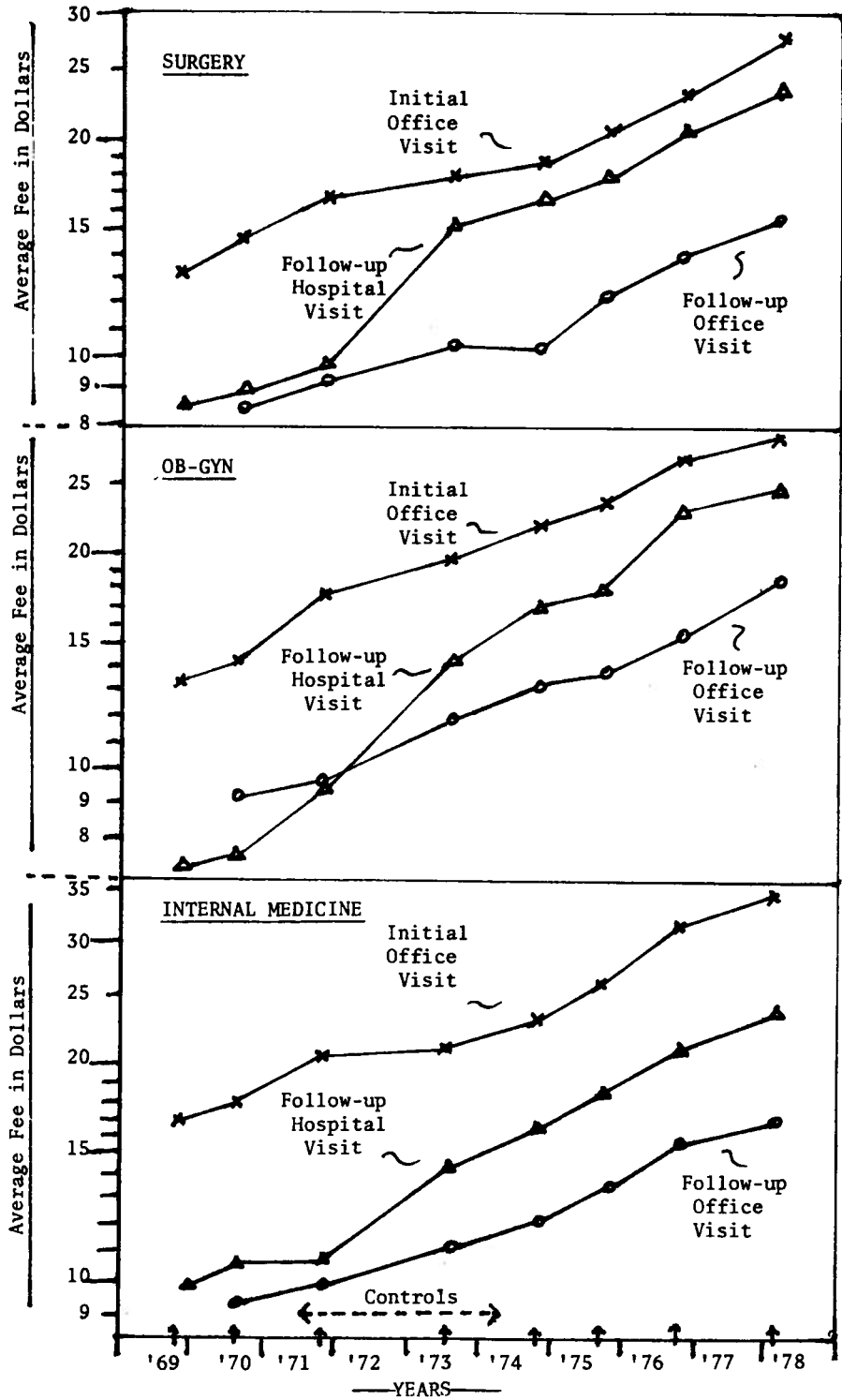
<i>Medical Care Component</i>	<i>Annual Dollars</i> <i>Per Active Office-based Physician</i>		
	<i>Office Services</i>	<i>Inpatient Hospital Services</i>	<i>Subtotal (Office and Inpatient)</i>
A. Physician Net Income	\$36,000	\$ 24,000	\$ 60,000
B. Physician Office Expense	24,000	6,000	40,000
C. Physician Gross Income	\$70,000	\$ 30,000	\$100,000
D. Hospital Gross Inpatient Income		200,000*	200,000*
E. Prescription Drugs, Appliances, & Independent Laboratory Services	25,000		25,000
F. Total Expenditures	\$95,000	\$230,000	\$325,000
G. Proportion of Physician Patient Care Time	.70	.30	1.00
H. Net Income Per Hour of Patient Care Time (A ÷ [G × 47.5 hours per week × 47.2 weeks per year])	\$ 22.94	\$ 35.68	\$ 26.76
I. Total Expenditures Per Dollar of Physician Net Income (F/A)	\$ 2.64	\$ 9.58	\$ 5.42‡
J. Physician Gross Income Per Dollar of Physician Net Income (C/A)	\$ 1.94	\$ 1.25	\$ 1.67

*Includes inpatient services provided by hospital-based physicians.

‡Total direct health care cost to society per dollar of physician net income.

Chart 7

Average Fees for Visits Reported by Office-based M.D.'s
 American Medical Association Periodic Surveys of Physicians 1969-1978
 by Specialty



Source: Various AMA P.S.P.'s. Data used with the permission of the American Medical Association.

cialty in the hospital for rounds and in the operating room. It is quite apparent that average annual net income is well correlated with hospital hours per week. This suggests that hospital services of office-based doctors yield higher net income per hour than office services.

I consider Chart 6 the most important in this presentation. These data pertain to all office-based doctors. Detailed supporting data for internists are in an unpublished report.¹³

The \$22.94 in line *H* under the Office Services column says that on the average in 1975 all U.S. office-based physicians netted \$23.00 an hour for their office practice. In the next column, the \$35.68 figure indicates that these same doctors netted almost \$36.00 an hour for services to hospital patients. This observation goes a long way in helping to explain some of the physician incentives to prefer hospital to office services. The average office-based doctor now earns fifty or sixty percent more per hour for hospital services than for office services. More refined studies may alter these numbers, but the higher net per hour for hospital care seems irrefutable.

The boxed numbers at the bottom of Chart 6 are the total direct health care costs to society per one dollar of doctor net income, depending on how he earns it. From the current mix of health services, it costs society \$5.42 per dollar of physician net income. If, however, we look only at hospital practice, it costs society \$9.58 for every dollar of doctor net earnings. Thus, doctors not only have incentives to hospitalize, but hospital care is also the most costly way for society to provide M.D.'s with a given net income.

I have mentioned above that relative fees have not been fixed since usual, customary, and reasonable fees became common in 1965. Chart 7 shows one effect of this development. The steepest slope (or most rapid rise) in fees is for the hospital revisits. The office revisit and the office initial visit slopes are less steep. These data are from the American Medical Association's Periodic Survey of Physicians.¹⁴ The Consumer Price Index (CPI) does not include fees for hospital visits. A dashed line at the bottom of Chart 7 shows the period of price controls. They had some effect on

Chart 8
Percentage of Gross Fee-for-Service Billings
by Insured and Collection Status
U.S. Office-based M.D.'s, 1970
by Specialty

Specialty	Percentage of Billings			Total	Not Collected as Percentage of Not Insured
	Insured Billed and Collected ^a	Not Insured			
		Collected	Not Collected		
General Practice	41.9	44.9	13.2	100.0	22.8
Internal Medicine	53.9	35.7	10.4	100.0	22.6
Surgery	67.9	19.9	12.3	100.0	38.2
Obstetrics and Gynecology	58.7	28.6	12.7	100.0	30.8
Pediatrics	20.3	69.3	10.3	100.0	12.9
Psychiatry	32.8	59.9	7.3	100.0	10.9
Radiology	74.6	14.6	10.7	100.0	42.3
Anesthesia	77.5	8.5	14.0	100.0	62.1
Total	51.7	36.6	11.7	100.0	24.2

^aAssumes all insured billings are collected.

Source: Vahovich, Steve G., ed., *1973 Profile of Medical Practice*. Chicago: American Medical Association, 1973. Data used with the permission of the American Medical Association.

¹³ Blumberg, M. S. "Office Based Physicians' Net Earnings From Office and Hospital Services." Oakland, California. (Processed). June 6, 1979.

¹⁴ Center for Health Services Research and Development, American Medical Association, *Profile of Medical Practice* (various annual editions).

the office visit fee, but hospital visit fees accelerated during this period.

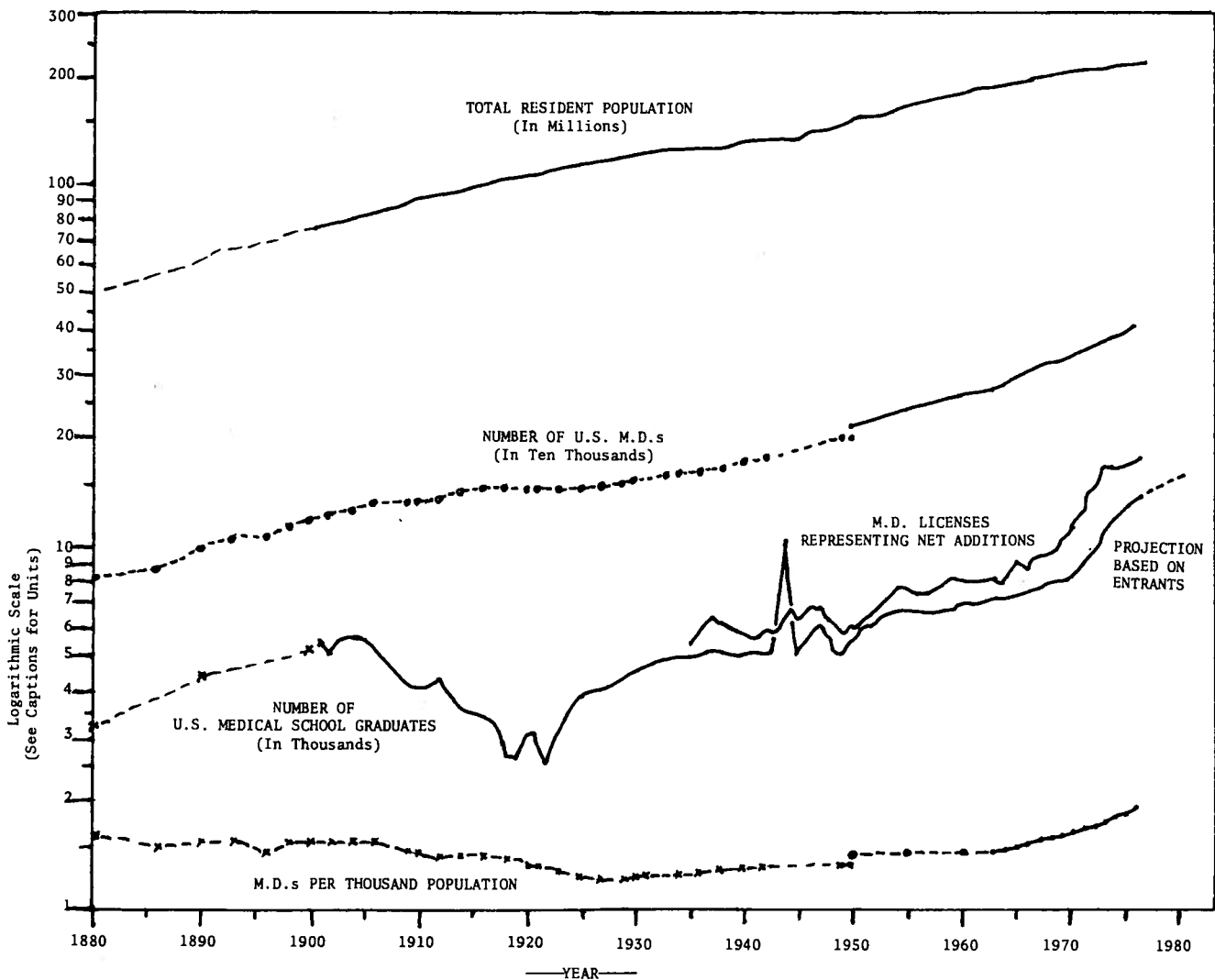
Chart 8 shows the variation in the percentage of billings which are insured and collected by specialty. It shows that the lower net income specialties are also low in the percentage of their gross revenue derived from insurance. The rapid growth of third party payments for hospital practice has increased the feasibility of raising fees for hospital and other services paid by third parties. In contrast, the growth of fees for services paid out-of-pocket is more moderate.

The key to Chart 9 is literally on the bottom line.

It shows the number of M.D.'s per thousand population in the United States from 1880 to 1975. During most of this period, the ratio was quite stable. Many believe that physicians were able to restrict entry into the field. Medical school entrants declined sharply between 1900 and 1920, but this had only a modest influence on total doctor supply per capita. In my opinion, we have had an excess number of M.D.'s in this country relative to civilian demand except during the last years of World War II.

There have been dramatic changes since 1965 with the supply increasing much more rapidly than the

Chart 9
U.S. M.D. Supply Per Population
1880-1980



Source: Blumberg, M.S. "U.S. Physician Supply Trends." Oakland, California (Processed) May 1978.

population. Nationally, in 1979, there are over two doctors per thousand population whereas it was under 1.5 per thousand from 1910 to 1965.

This increase in supply per capita is far from leveling off. Most of the doctors graduating in the increased medical school classes are still in hospital residency programs and are not in office practice yet. It is inevitable that this supply per capita will continue on its upward trajectory for at least another ten years since these future practitioners are already in medical school. The only way that the U.S. M.D. supply can be altered is by changing the large number of foreign graduates entering the country each year.

The U.S. now faces a potentially explosive situation. Relative fees are now floating due to UCR at the same time that doctor supply is rapidly increasing. To make matters worse, data from a 1978 survey¹⁵ show that there is already substantial slack among office-based M.D.'s. Only fifty-seven percent of respondent doctors said that they were practicing at full capacity. The other forty-three percent said that they had some slack. Of these forty-three percent with slack, twenty-five percent said that they wanted to work at full capacity. Thus, one-fourth of all these office-based physicians had slack and wanted to increase their practice volume. This figure ranged from a low of only seven percent for cardiologists up to a high of thirty-one percent for urologists. In general, the surgical specialties wished to increase their volume more than physicians in other specialties. There was no relationship between the percentage of doctors in a given specialty who wished to increase their patient volume and the average net income of physicians within the specialty. From an economic viewpoint, one would expect that the specialties working at the highest level of their capacity would have the highest average net income.

The fact that a high percentage of office practitioners had slack in 1978 supports the current view that a substantial doctor glut exists which is certain to be intensified in future years.

I would like to draw some implications from my observations. Many economists believe that the increase of third party coverage for health care services has reduced market competition among providers.¹⁶

¹⁵ Owens, Arthur. "Working at Full Capacity? A Lot of Your Colleagues Aren't." *Medical Economics* 56, No. 7: 63-71. (April 2, 1979).

¹⁶ Newhouse, Joseph P. "Structure of Health Insurance and the Erosion of Competition in the Medical Marketplace." *Competition in the Health Care Sector: Past, Present, and Future*. Edited by

While I agree, I think it is ironic that the enormous potential market power of third parties has not been used to increase competition. In theory, third parties representing many consumers could be stronger in dealing with organized providers than individuals. However, the leading private third parties, the Blue Cross and Blue Shield, were created by and operated for the benefit of providers. Government third party programs seem to have been outwitted by providers.

Third parties, including the government, have sometimes negotiated the general level of medical prices. However, I find few modern examples of third parties seeking to change relative prices despite their great importance. Very little consideration has been given to the relative prices received by physicians for various services. Most discussions of M.D. fees are simplistic. ("Prices are too high.") Many relative prices reflect competitive conditions in the nineteenth century. Physicians have been quite well organized and have understandably sought to set prices at levels which favor them when competition has been limited.

Inappropriate prices should always be considered as possible explanations for the misallocation of health care services. I think excess surgery is less due to an excess of surgeons than to high surgical fees. Excess hospital use is not due to an excess of hospital beds but rather to higher net M.D. earnings per hour for hospitalized patients. A similar price explanation seems likely for excessive use of some ancillary tests such as x-rays, CAT scans, and other high technology services.

There are also some services wanted by consumers which are too scarce due to inadequate prices. Decades ago M.D.'s gave up home visits due to low fees. At present it is difficult to see one's personal physician at night or on weekends. The fees are too low to attract an adequate supply. Many patients prefer to talk to their doctor on the telephone than to visit his office, but third parties seldom pay fees for telephone visits. Thus, inappropriate prices can lead to excessive use of some services and an inadequate supply of others. Many inappropriate prices are the direct result of third party oversight.

As a remedy, I propose that prices be negotiated by

Warren Greenberg. Washington, D.C.: U.S. Government Printing Office, March 1978.

providers and buyers. The most powerful buyers are third parties. These negotiations should not only be concerned with the conversion factors but also with the relative values for various services. Of the two factors, the relative values are more immediately important. Total health care costs are much more sensitive to how the doctor earns his income than they are to how much he earns. The question of how much a doctor should earn is very difficult to decide, but my argument is independent of this thorny issue. Given any changes in relative value systems, M.D.'s could end up with having the same net, more net, or less net income by adjusting the conversion factors.

While some of my hypotheses are testable by economic studies, I think the easiest way to confirm them is by talking to doctors. Few practicing doctors will deny the knowledge of winners and losers in their practice. The internists know that their office fees are too low and have tried to raise them. The surgeons know that they can earn more money per hour operating than when they give important nonsurgical care. The average surgeon in this country grosses \$55 an hour. Can you think of buying surgery for \$55 an hour? Surgeons clearly subsidize their office practice with their operating room practice. Why not change prices so that a

surgeon's rate of return is the same in the office as it is in the operating room? This might be more agreeable to a larger array of specialists than might be evident at first thought.

I am frankly concerned by some of the more heavy-handed government regulatory approaches being proposed to limit the growth of our high health care costs, which are now one-eleventh of gross national product.

I have been very impressed with the great diversity of pricing of fee-for-medical-care used in the United States. Fee-for-service anesthesiologists and psychiatrists are paid by the hour while fee-for-service obstetricians are paid by the case. There is a fee for the first year of care for an infant (i.e., capitation). All of these services are listed in the *1974 Revision of the 1969 California Relative Value Studies*.¹⁷

We don't need to go to England or Europe to find a variety of ways to pay doctors. We have a wealth of experience in this country that has not been carefully considered or used.

Negotiated revisions in relative prices are not a panacea, but I do think they would be a major step in the right direction. Modifying the incentives for medical practice seems far wiser than subjecting physicians to increased police-like regulation.

¹⁷ Committee on Relative Value Studies, California Medical Association. *1974 Revision of the 1969 California Relative Value Studies*. Fifth Edition. San Francisco: Sutter Publications, January 1976.

The Physician Profile Method in Ontario

ALAN WOLFSON

CHAIRMAN ANDERSEN: We have heard about many of the problems of managing physicians in this country. There are some rumors afloat that the Canadians have found some solutions in the last few years.

Dr. Wolfson will give us some idea as to whether these rumors are true or not. He is professor in the Department of Health Administration, Faculty of Medicine, University of Toronto.

DR. ALAN WOLFSON: I think before I start, I will add just one item to Mark's historical survey of prices. The fee schedule in Ontario in the nineteenth century listed two interesting items. The fee for certifying that somebody had no mental health at all, in other words, was crazy, was twice as high as certifying he was healthy in all respects.

I am a little uncomfortable about being the sole representative of the international scene. Canadians have delusions of grandeur. Every time a federal election campaign rolls around, we are told the twenty-first century belongs to us. You may not know that.

Nevertheless, it seems to me that there have been some developments in Canada—the province I know best is the one I live in, Ontario—that may be of interest and relevance to people south of the border. In particular, Ontario is a province that resembles many industrialized states in the United States more closely than many of the other provinces. The other provinces are either French or they are small. That means it is difficult to extrapolate the Canadian experience from other provincial analyses to the American scene. This is unfortunate because the best data system and the best work has not, I think, been done in Ontario.

Saskatchewan has been a leader both in terms of innovation and analysis. The trouble is that Saskatchewan looks very little like anyplace except Nebraska.

Let me try and give you some background, just in case you are not familiar with the Ontario scene. I will spend a little bit of time telling you how our system works, and then I will address myself to the question of how we have managed to manage the physician.

Medical care in Ontario is delivered, and has been

delivered in the recent past, in a system that is not really very different from the American health care delivery system. It's a fee-for-service system. Generally, prior to the introduction of national health insurance in 1969, the system even more closely resembled its American counterpart, although there were relatively high rates of both hospital and medical care insurance.

Here are a few historical benchmarks in Ontario. In 1966, in an effort by a conservative provincial government to ward off a liberal federal intrusion into the health care insurance business, Ontario set up a Medicare-Medicaid kind of program. It was called OMSIP, Ontario Medical Services Insurance Plan, and it covered poor people and old people. That medical effort didn't work. The feds came in anyway, and basically bribed the provinces into the national health insurance program. It wasn't compulsory, but they were going to take your tax dollars whether you joined or not.

In 1969, Ontario entered the national health insurance program with a plan called the Ontario Health Services Insurance Plan, OHSIP. This was a curious, short-run feature of our history that I think may be instructive for American observers right now. There was participation in a national insurance plan, but OHSIP was the government-administered plan, along with a number of privately-administered plans. The provincial government tried to keep the administration of health services private. It retained the independent insurers in administering the federal plan, and it joined the game, but it did not monopsonize the administration of the plan. OHSIP was introduced in 1969. It collapsed by 1972. I am sorry, OHSIP didn't collapse. The private insurance administration collapsed.

The government simply put the private insurers out of business. The primary reason for that was an entire inability to manage, control, and collect information on what was going on in a national public system when it had a lot of independent carriers. So by 1972, the system was monopsonized both in terms of financing and administration in an outfit called the Ontario Health Service Plan, OHSP.

Those notions of control and monopoly sounded much more grandiose than they really were. There has

been no control-on-practice organization. Physicians can organize their practices any way they like. In either solo practice or group practice, they interact with the hospital in much the same way that has been described for the American scene.

There is a little bit of difference, at least by title, in the composition of the physician population that is important. Fifty-five percent of our physicians are general practitioners, and only forty-five percent are specialists. From what Mark is suggesting, that may not be far off what the American situation is, too, once you convert the general practitioners' rubric to primary care. But at least when you look down the list of specialists, it seems there are far more of them proportionally in the United States; so that is one feature of the system's general organization that is different from the U.S. system. Certainly the physician population is not controlled. It just grew out of the historical developments of our health care system.

When the 1972 consolidation of the system came into effect, a number of control mechanisms were developed. In particular, there was a semi-control mechanism over price, that is, the fee schedule that had been unilaterally set by the Ontario Medical Association became subject to negotiation with the monopolizing purchaser, the Ontario Health Insurance Plan (OHIP), and there have been continuous negotiations about that fee schedule over the last seven years. Actually, it was about 1974 before the negotiations really got going. So there was some modicum of control over the published fee schedule.

The published fee schedule was a controlling factor only for physicians who opted into the plan, in other words, those who agreed to take the insurance benefit, as payment in full. Ninety percent of the physicians accepted it. Ten percent of the physicians in 1972 decided to go it on their own, and charge whatever they wanted. Their patients recovered on an indemnity basis. They received ninety percent of the Ontario Medical Association fee, which was equivalent to the health insurance benefit. There was absolute control through negotiation over prices for ninety percent of the physician population, but there was always some slippage in the system, and a mechanism by which physicians could, if they wished, opt out and reassert control over price.

There was no control over physician output in terms of services or activities before 1972, but as part of the creation of the unified system, there was a mandate for

the College of Physicians and Surgeons to start controlling utilization. It is this mandate that I will talk about, and which has not been fully exploited up to the present. I think, as Odin correctly points out, although the enabling conditions have been present in Canada, nothing more than general surveillance and the identification of particularly rotten apples has been accomplished.

Let me give you some background about the data system that I feel provided the rationale for consolidating the health insurance system in 1972. The system is comprehensive. It applies to all services. It not only covers the traditional hospital and medical services; it is unlimited in terms of psychiatric services. It provides insurance benefits for the services of chiropractors, podiatrists, osteopaths, optometrists, and dental surgeons.

The data system is similarly comprehensive. All physicians, whether they are opted out or opted in must submit claims cards for each visit to the insurance plan. Each one submits a claims card so that his patient can get reimbursed, and he must do that by law. The claims card contains quite a bit of information that is relevant to paying bills. There is information about the physician, his specialty, his identification number, the service he performed, the amount he billed, and the amount that he should be paid. The amount billed is not a good piece of information for opted-out physicians, I should tell you. There is also some information about the patient, and the diagnosis.

There are two problems with the claims card information. One is that the patient information is not terribly reliable. It relates to families as contract holders rather than individuals. The diagnostic information is as good and as bad as the diagnostic information that comes out of this kind of plan anywhere. There is separation between the hospital and the medical information system so that the claims process is really restricted to medical services, irrespective of where they are offered. We do pick up the services provided by physicians in the hospital, but they are not integrated with other hospital services provided in that illness episode to that patient. That is a sketch of the data system.

It has been noted that we have had fairly successful experience with cost containment lately. This is true. In 1971, which was the first year in which all provinces came into the plan, our expenditures on health services were a little bit higher than yours. I recall that

it was around 7.3 percent of GNP in Canada, and 7.1 in the United States. Currently you are running around 8.9 percent. We are running around 6.9 percent, so all those doomsayers who suggested that the introduction of zero-price national health insurance was going to cause an explosive run-away cost inflation in the health sector in Canada have had trouble explaining our recent experience. I think in no small part the reason they have had trouble explaining it—the reason we have done so well—is that a mechanism to institute controls existed through a monopsonist purchaser of services.

Let me mention three ways in which provincial governments, who are the administrators of health insurance plans and who have health care provincial jurisdiction in Canada, have affected cost controls. The most important way is that they have slammed down the lid on hospital costs. Hospitals are not reimbursed on a cost basis. They are not paid on a per diem basis any longer, with some minor exceptions. They are not paid on a line-by-line basis. They are paid prospective global budgets, and those prospective global budgets have been shrinking quickly in real terms, so that for the last few years in Ontario the nominal increases in hospital budgets have been around four to five percent.

No similar success has been encountered on the medical side, and this gets us to our advertised topic of managing physicians. All that has been done, aside from negotiating fee schedules with the aforementioned loophole of opting out, is to work on the stock of physicians. Provincial governments have managed to do that in two ways. One is to restrict entry into the profession. There is anecdotal information about entry, but we don't need anecdotes to see the government restrictions on entry.

There is a restriction on the number of places for internships and residencies, as well as on medical school places. Much more effective in the Canadian context is restriction on entry into the country because our physician stock has always been much more influenced by immigration than by domestic production. As of 1975 or 1976, it basically has been impossible for a physician to emigrate into Canada except under very unusual circumstances. In collaboration with the federal government, the provinces have cut off the flow of doctors into the provinces. So the twin policies of containing the stock of physicians and putting a lid on hospital budgets have really produced a remarkable success in holding down total hospital costs.

Lately, as you can imagine, that success story has been tinged with squeals from the providers of health care. Those squeals, of course, are not necessarily couched in terms of inappropriate levels of income, but much more in terms of quality of care deteriorations and patients suffering.

The system has been contained. The fat has been cut out of the system, but there are two loopholes that still exist. Both control over prices through opting out and control over utilization of the existing stock of physicians now present some problems. They really can't get hospital costs any lower. We really can't do much to control the stock of physicians, and we have cut off the flow coming into the country. There is very little that can be done in terms of domestic production without generating enormous political problems, so the remaining leverage must act on the price of physician services and utilization rates.

Within the last year the price variable has again become troublesome to provincial governments across the country and in Ontario in particular. I mentioned that in 1972, ten percent of the physicians opted out of the plan for accepting payment in full from a negotiated price schedule. Within the last year that rate has doubled, so that twenty percent of the physicians have now opted out and are beginning to take control again over the price instrument.

The fee schedule which was negotiated in tandem with the schedule of benefits severed its relationship a year and a half ago and is now running at thirty percent higher than the schedule of benefits.

Opted-out physicians, by the way, are not restricted to the fee schedule. It is not a maximum schedule. It is not even a minimum schedule. It is just advisory.

Secondly, there is, I think, ample evidence that physicians have used and are continuing to use their discretion over utilization rates to increase real incomes in the face of constrained hospital budgets and constrained fees. That noncontrollable aspect of the system is the origin of the provincial government's interest in monitoring and managing physician practice behavior. There is concern about the cost effects of unmanaged, unsurveyed, unmonitored utilization increase.

In 1972 when OHSP was introduced, legislation established a Medical Review Committee of the College of Physicians and Surgeons. The College licenses

and provides self-regulation for the profession, and is entirely independent of both the association and the provincial government. The Medical Review Committee, serving as one enormous PSRO for the entire province, had a mandate to review the practice activities of all physicians in the province and determine whether billings were either fraudulent or did not conform to acceptable levels of care. Acceptable levels of professional standards and practice was the wording, I think.

Most importantly, the Medical Review Committee was charged with identifying medically unnecessary services and instructing the general manager of OHSP to cut back on payments to physicians with respect to those services. That is a sweeping mandate, and as you can imagine, one that generated precious little action.

What did they do? The first thing they did was to identify 208 practitioners in Ontario who were billing more than \$10,000 a month. Also, they found 48 physicians who had a ratio of general assessments to specific assessments of more than 2 to 1. The seven-man committee met monthly and worked on the 48 for four weeks. They realized quite quickly that it might take them the next four years to analyze the situation. In 1973 they attempted to streamline their workload. They introduced the quality service formula payment which was worked out on a normative basis and stipulated that no general practitioner could provide more than 300 units of service per week with acceptable levels of quality. A unit of service was one routine office visit and they used a relative value scale to convert total services into units of service. This applied only to personal services, by the way, not to procedures.

The formula was never really implemented, and it was a good thing, too. Had it been implemented, there would have been large incentives to shift from personal services to a windfall entry to the golf course. It did not work. It was challenged in court eight months after being introduced. The physicians won in court, and the formula was abandoned.

The utilization response of the profession as a whole to the introduction of the formula indicated, I think, the strong intimidation effects of monitoring, irrespective of the quality of the monitoring instrument. The physicians held down utilization until they won in court. Then utilization took off and went up ten percent in four months. The quality service payment for-

mula, which was an ad hoc normative response, was tried and it failed.

The next step was to introduce profiles, computer-produced analyses of practice patterns. Basically they just organize the data system for the Medical Review Committee. There are ways in which you can get a snapshot of what is going on, in fact, quite a detailed snapshot, but it provides no help in identifying deviant physicians or physicians with medically unnecessary services, with one exception. In every case, for every discrete type of service (using 3,000 different codes), the profile not only provides the number of services performed by each physician for each month for the last twelve months, but also for the most recent months. It compares that number to the average number of services provided by his specialty in his county, district, and province as a whole. Simple means are used, standard deviations, so that, if pressed, one could use the profile in practice screening as a guide to identify physicians whose rates of service performance were unusual in their deviation from peer group norms—peers established both geographically and in specialty terms.

Profile analysis has been unsatisfactory. All that the Medical Review Committee has managed to do over the last few years is to indicate the use of the profiles in working with the 208- and 48-physician groups they were already saddled with.

Within the last few years a need to improve the monitoring of physicians' practice behavior has been perceived. In particular, in light of the expansion of the opted-out physician sector and the general increase in utilization rates, there has been considerable political pressure to introduce a more sophisticated system of identifying deviant practices. Currently, a project is being undertaken jointly by the Ontario Ministry of Health and the Medical Review Committee to design a monitoring system which would do more than the profile base has done. It will not simply organize the data that are currently produced as a spin-off from the bill-paying procedures, it will estimate a statistical model of physician practice behavior. Then, it will identify physicians whose actual practice patterns deviate substantially from estimated or expected practice patterns, standardizing for characteristics of the physician in addition to geographic and specialty characteristics.

It is expected that that system will be in place about two years from now. A more sophisticated instrument for identifying physicians with unusual practices will

then be in the hands of an already-mandated body.

My sense from the experience in Ontario is that much more important than the technical ability to identify unusual or deviant physicians is the physicians' belief that the general system has the capability to do so. Right now, if you ask physicians in Ontario what the government is capable of doing to examine and evaluate their practice performance, they are a great deal more anxious about the capability of the government than is warranted. The Ontario Health Insurance Plan does not have the capability for any sophisticated analysis of physicians' practice patterns, but the doctors think it does. That belief in itself, one could argue, has had a powerful influence in adjusting their actual behavior.

The one case in which it has not had a powerful influence is very interesting. It is well known that OHSIP has no access to information about prices charged by opted-out physicians. In a context where the screws are being tightened down on analysis of utilization patterns, the option of using a price instrument which is not controlled or monitored becomes increasingly more attractive. The real challenge to the system now is its response to an increased rate of opting out which not only personalizes health care costs, but also makes them much more unmanageable by the authorities.

General Discussion

Chairman: RONALD ANDERSEN

CHAIRMAN RONALD ANDERSEN: The session is open for questions.

MR. L. PENN BERENS: Dr. Blumberg, I would like to take you back to your own chart 6 and ask you to explore a little further your conclusions with respect to the net income in the hospital versus the outpatient setting. I am not sure from your model what the influence of things like high malpractice costs might have on this, especially if one assumes that malpractice risk or exposure is greater for the physician in the hospital environment than the outpatient environment. Perhaps, in cases where the physician's time for work committees means kicking administrative butts around, doing chart work, and things like that, the net revenue for physicians' hours of patient contact time might be significantly altered.

DR. MARK BLUMBERG: The office expense, item B, is in fact, total practice expense, and that is \$40,000. I had a schedule of how that was spent which listed about twenty items from the American Medical Association. For example, I put about eighty percent of malpractice into the physician's hospital costs because I did not feel it was for his office practice. I split his automobile cost in half. Like the IRS, I figured that he has to come to the hospital and go back. I assigned his receptionist, for example, ninety percent to the office and ten percent to the hospital. Those data could be refined, but at least there was an honest attempt to split his total professional expenses according to the type of patient he was caring for.

In answer to your second question, I did not adjust for committee work because I allocated on the basis of direct patient care hours. I do know how many hours doctors spend on so-called administration. I don't know how much of that is for the office and how much of it is for hospital committees and so forth. It is a very small sum, only two or three hours a week compared to fifty hours of other business. It might slightly influence net revenue, and it should be in there. I agree with you, but I don't think it would change the final answer at all because the total sum

spent on such matters is quite small for almost all specialties.

MR. BERENS: I guess I was trying to relate that to Dr. Pauly's assumption that when doctors are more involved costs are lower, but I suspect that your conclusion about three hours out of fifty is the only difference.

DR. BLUMBERG: I was not quite right. Look at chart 5. I just glanced at it myself. The average doctor spends five hours on business administration out of a 52.2 hour week.

I have it there by specialty, and what you are asking me is to split the business administration into hospital and office components. I would be pleased to do it, but I didn't have the figures.

CHAIRMAN ANDERSEN: The rest of the panelists are fair game for questions as well. They are certainly encouraged to ask questions also.

DR. MARK PAULY: I just have one thing I want to ask Mark. When my roof was damaged by last winter's storm here, somebody came out. In fact, a number of people did, and spent considerable time climbing around the house and giving me estimates for which there was no charge.

If I had calculated the gross or net return for the hours they spent climbing around on the roof versus the time they spent roofing, I am sure I would have found that it was much lower in the former case than the latter. But I am not sure that I can conclude from that that they have a much stronger incentive or will ever provide roofing relative to roofing estimates.

The point is that, as you hinted at in the early part of your talk, physicians have loss leaders. Office practice as a whole may be a loss leader. If so, the financial return directly associated with it may not tell us very much about how really attractive it is to spend time there, as opposed to using the hospital.

DR. BLUMBERG: I have no question that they have

loss leaders, and I don't doubt that any physician would tell you the same. The point is that the surgeon doesn't get to go to the operating room unless he sees the patient first in his office, and the doctor balances that out when setting his fees. The difficulty is relative values of those fees were set during an era when they were all paid for by patients, and there was no third party. Now, the doctor is paid by a third party for his hospital practice. He is also escalating his hospital fees.

We have a system that instead of converging in a traditional economic equilibrium is diverging rapidly. The physician is getting more and more money. His revenues are rising much more rapidly and it is easier to raise hospital fees than office fees because there is still some patient resistance to high fees.

I don't know whether it answers your question, but your roofer is a smart man. He gave you free estimates and you went for that.

The doctors not only have freebies, they carry you with no-interest credit for a whole year. That was the standard doctor collection ratio before third party insurance.

Someone has pointed out that automobile insurance has some parallels to this, but cars get totaled and people do not, so there is a limit on the cars.

MR. TOM O'HARE: I would like to take Dr. Pauly's theory that revenue constraints have an impact in the hospital setting on physician behavior and ask Dr. Wolfson to evaluate that theory relative to the Canadian experience where there has been a very severe tightening of hospital budgets.

Although I know it is unfair to compare Canada and the United States all the time, have you noticed any change in physician behavior in the hospital vis-à-vis what Dr. Pauly indicates about length of stay, use of ancillary services, or changing the inputs in order to protect physician income?

DR. ALAN WOLFSON: The historical series on physician behavior is not really long enough, I think, to pick up significant trends nor has the analysis been done in that form, but let me give you some impressions. My impression is, that as Dr. Pauly indicated, there are three kinds of responses that you might expect once you put the lid on revenue either by transferring the risk to the physicians or through revenue con-

straints on the hospitals.

First, you get rid of the fat, and that has happened in Ontario. They are not washing the ceilings every month as they used to do. The revenue constraint program works directly on the administrator, and he responds, I think, quickly and effectively so that there is an impressionistic feeling among both administrators and policy analysts that the system is operating more efficiently than before.

The second level of response is quality deterioration, or at least getting rid of the frills that may be associated with high quality care.

The third, I think, is the substitution of physician time for other hospital inputs. Currently, some people feel frills have been reduced, and some feel that quality of care is now jeopardized, although nobody is claiming—particularly no hospital is claiming—that their particular institution is delivering bad care.

There has been no evidence, as far as I can tell, of increasing physician time as a substitute for reducing other kinds of resources. Physician behavior does not seem to have responded in that mode. As expected, what has happened is that the length of stay statistics have been more responsive to revenue restraints in coming down than admission rates. Again, that is impressionistic and no sophisticated analysis has been done.

There is a wealth of data up there for interested researchers. The real resource in Canada is neither money or data but human capital and research. I would urge American investigators to try and make use of that in exploring their own policy questions.

CHAIRMAN ANDERSEN: How about physician income?

DR. WOLFSON: Physician income has done very nicely, although the physicians won't tell you the same story, I suspect. The introduction of national health insurance, I think it can be said with some assurance, was an incredible windfall to physicians, and they would fight like hell if anybody tried to take it away from them. Their incomes doubled within five years. They have effectively caught up with their American counterparts, until a year and one-half ago when I think the figures began to diverge again. What has

happened is that their real income, their psychic income, has deteriorated, and the reason for that is the fees are too low. It is not just the loss leaders that are too low. Everything is too low. Surgical procedure fees are too low. The government used the only instrument it had in medical care aside from the stock, namely, negotiated fee schedules to try and bring the cost down by keeping fees fixed. In Quebec, for example, there was no change in nominal fees from 1971 to 1976. The physicians simply used their utilization instrument, their discretion, and generated demand for their own services to move their incomes up. They did that. The problem is they don't like doing it. They don't like distorting their practice in areas that may be nondiscretionary, as opposed to discretionary, and they don't like to work longer hours. They don't like to run a revolving door. My impression is that their purely financial status has not deteriorated, but in response to these policy initiatives their total well being and the psychic income they derive from medical practice has been influenced in a negative direction, at least within the last two or three years.

MR. GLEN MISEK: I would like to direct a question to Professor Pauly. In describing hospital cost containment, you described increasing risk to the seller of medical services, and you have left out, I think, someone who is an important part of the market in making medical decisions, namely, the consumer.

Clark Havighurst put forth increased competition and over-insurance as the main problems, with increases in medical costs. I wondered why you left that out.

DR. PAULY: I agree with you, but first of all, I said the particular topic I wanted to talk about here was changing incentives to physicians and not changing incentives to consumers. Obviously, there is a whole additional layer of bringing the two together.

Suppose you weren't constricted; you could always change signals to both sides. Then you might well want to begin some more rational structure, and relative fees—as Mark Blumberg talked about—are a way to transmit signals about which kinds of care cost more or less to consumers. Third party payment usually insulates them fully, so consumers need an incentive and reward for getting lower cost care rather than higher cost care. Sometimes it goes the other way.

MR. PAUL BARNEY: I would like to direct a ques-

tion to Professor Pauly also. It seems to me that there are three main assumptions on which you base your presentation. One is the effectiveness of revenue limits on policy. The second is the cohesiveness of the medical staff and its ability to coordinate its activities. You pointed out that that may be less true in large hospitals than in small hospitals. And third, you noted that there may be a greater ability of large hospitals to influence the political system and lobby for the things that are beneficial to them.

Based on this combination and pointing out that the large hospitals control the largest percentage of the resources used in the hospital industry, I would like to ask what that means and observe one other thing: state regulation anecdotal evidence tells us that the large hospitals have been the ones supporting state rate regulation.

What do all of those effects say for the effectiveness of revenue limits, and for the underlying process that causes that regulation to come into effect?

DR. PAULY: As far as effectiveness goes, I suppose the logical implication of what you are saying—since regulation doesn't come either from God or from benevolent economists but tends to come from the political process—is that insofar as larger hospitals, teaching hospitals especially, dominate, they may be treated more favorably, and there are rumblings of that from time to time. The objection to various cost containment proposals is that they don't recognize the different nature of hospitals which is usually a way for lots of different people to say, "my interest will be protected." I suspect you might be right. Those more adept at protecting their interest are those that have traditionally dominated the hospital trade associations. That answers the first question. What was the second one?

MR. BARNEY: I think there are two very basic questions. One is: are hospital revenue limits effective? The second question is: why do hospitals support their enactment if they are procedures that will limit hospital resources?

DR. PAULY: They didn't support the proposal by Carter. They supported the voluntary effort (VE). You can be cynical, but I think it is wrong to say that was smoke screen PR. I think it was more than that. There was some genuine concern for the inflation rate and

what that might mean in the strategy the hospitals are supporting. They would rather get it from themselves than Uncle Sam which may make a good deal of sense, particularly in your type of hospital which may be the most influential one doing that. I think it is a combination. I say this without having any strong evidence on the subject. A certain set of hospitals expects to do relatively better if they can come out in support of containment procedures. They have viewed their support as better than the federal regulation alternative, even if it is not what they would really like: hospitals alone directing the allocation of resources for health nationwide.

The hospital administrators I have talked to seem converted to VE, but I wonder how deep the conversion goes. Is it really a response to the threat of federal controls or does it represent a change in the view of what is good for the country? The national good ten years ago was more and better quality health care for everybody. Maybe what we need to do now is reduce quality. I am not sure.

The final point I want to make is that the kind of hospital I was thinking about was a medium-sized community hospital of 300 beds in a suburban area. Hospitals like that are really more important in total patient days delivered than the large medical center when viewing the total amount of medical care delivered in the country.

DR. JOHN COLOMBOTOS: I have a question or comment for Dr. Blumberg. I found your historical analysis of the use of fee schedules very, very interesting. It corrected my impression that fee schedules were fairly recent and the result of the development of third party payment. What you suggested was another source for fee schedules, namely, control of competition within the profession itself.

The reason for my impression, I believe, is because there was a period in the Twenties, Thirties, Forties, and Fifties—correct me if I am wrong—when fee schedules were not terribly much in use, and I would suspect a fair amount of ideological resistance by physicians to such schedules. Perhaps the Flexner Report on the supply of physicians curtailed competition, and following your reasoning, created less of a need for fee schedules.

Then the third party payers came in. You demonstrate broad historical brush strokes there. I think it is very useful.

If you were to do a finer analysis of the use of fee schedules in the Twenties, Thirties, Forties, and Fifties on one hand and on the other hand got some impression of how physicians actually felt, I suspect their ideology would lag behind their actual acceptance or use of schedules. I guess that ideology does not respond as quickly to competition as the actual use of the fee schedule. Do you have any comments on that?

DR. BLUMBERG: I appreciate your comments. Your view is well presented in most of the books. I realize I am slightly heretical. I spent a good deal of the weekend reading Milton Friedman et al.'s *History of Medical Practice in Chicago*. The Flexner Report didn't do anything. That trend was well on its way before, and the American Medical Association got the Flexner Report. They tried to do it themselves four years before Flexner, but it didn't have much clout, so Flexner was basically the AMA's fall guy.

If you look at my chart 9, you will see that the number of medical students was dropping rapidly before Flexner ever issued his report. The supply of doctors per capita changed imperceptibly because it took a long time for that drop to take effect. There was no doctor shortage until 1944. And the reason for that was that thirty-five percent of our doctors were in the military. It was the only year I know of that this country had a doctor shortage and things were really tight.

I have excellent evidence that doctors were still using fee schedules in the 1930s, and they were more formal than ever. I have been going back through material from the California State Medical Association in the Thirties. Fee schedules were all over the place. Nobody was coy about them. The FDA was not breathing down their necks. They weren't subtle about these things. They didn't feel apologetic, so they were there. The great difficulty with fee schedules was in the Thirties, but in the Sixties and Seventies a lot of guys believed in free enterprise and were objective, and any number of medical societies resolved to reconstitute the fee schedule issue.

They all ended up with fee schedules, I would say, but in California our early medical associations were really contentious about them. I don't say that they went down well with all doctors. There were doctors who didn't observe them, but the Thirties was not the time to abandon fee schedules. What they did was give

discounts, which were always condoned for people who could not pay. At the bottom of every fee schedule it says, "if the patient can't pay. . .," just as the current medical ethics say. The basis of payment is service rendered and the patient's ability to pay. Doctors didn't abandon the fee schedule. They liberalized the discounts.

MR. FRIEDE: I would like to challenge two assertions made by Dr. Blumberg and by Dr. Wolfson. First to Dr. Blumberg. In chart 6 you made a specific point about the discrepancy between payment for office services versus inpatient hospital services by physicians.

I would be more convinced that the dynamics of that situation have an impact on hospital services if it was placed in its historical perspective relative to the amount of physician income coming from inpatient services versus income from out-of-hospital or office services. I think that would make your case more persuasive because I am not won over by it, given the fact that the length of stay has been dropping, and the number of days of hospitalization per thousand population has also been dropping. Can you respond to that?

My second question is for Dr. Wolfson, and it is about your statement that the Canadian system has been effective in containing health care cost. We are obviously interested in that, but the only fact you cited as documenting it was the difference in the gross national product percentages—the United States at nine percent approximately and Canada below seven percent. The problem there is, I believe, that the Canadian gross national product has been increasing rather rapidly compared to the United States economy which is more or less stable, so your citation of gross national product percentages is not persuasive on Canada's ability to contain health care costs.

DR. BLUMBERG: Let me understand you. Do you feel that you would like to see a time series on the proportion of doctors' net and gross revenue coming from the hospital?

MR. FRIEDE: Yes, or your perception of whether this has been studied.

DR. BLUMBERG: Revenue has been increasing from the hospitals without any question. You pay it out. You ought to know where it is going.

MR. FRIEDE: We don't break it down by physician versus surgeon.

DR. BLUMBERG: The basis for this revenue information is the National Hospital Discharge Survey. I can get you all sorts of time series on what has been happening to the mix of patients. You are correct. The length of stay is going down. The surgeon fee today, on a relative value scale, is a total fee. That is, he gets one fee per hospital surgical case. Dr. Pauly already mentioned that he would expect the length of stay to go down faster than cases. That is what is going on.

I found another interesting development through the California Physician Service. The medical director acknowledged that during and after price controls, internists were seeing patients twice a day in the hospital. We can have a reduction in stay and no increase in cases, yet the revenue goes up. It is an acknowledged difficulty that is going on in California.

DR. WOLFSON: You are quite right that the Canadian economic performance has been a little better than its American counterpart over the period I cited, although it is not a big thing. The difference in the proportion of GNP rates is a big thing, but even if you do not look at it as a proportion of GNP but from the government's point of view, more importantly the proportion of the provincial government, it has decreased over the last four years, and it has decreased in real terms over the last three years. So that I think there are a number of indices that indicate that costs are well under control from the point of view of providers.

The one I used may overstate the difference between the American and Canadian experience a little bit. It may not be 2 percentage points different. I would guess it is 1.5.

MR. GERALD ADLER: Both Dr. Pauly and Dr. Wolfson referred to changes in quality as a result of the squeezes on costs. First of all, is there any evidence of this, or is it just invective? In general, what is quality when it comes to questions of cost?

DR. WOLFSON: There is no evidence in Canada of any deterioration in quality of care. The only way I can express it is in terms of the latest evidence from statistics in Canada which indicate that between 1961 and 1971 life expectancy for seventy-four-year-olds increased by over three years.

That may have nothing to do with medical care. I would guess it does not, but there is absolutely no hard evidence that the quality of either medical or hospital care has deteriorated.

MR. ADLER: Are there any mechanisms for monitoring quality at all?

DR. WOLFSON: No.

DR. PAULY: My answer is quite the reverse, an increase in the quality or style of care is usually measured by things like personnel per bed, lab test per patient population. These are things that use up resources. How much they benefit the patient, nobody knows.

I would, I think, be very careful about saying that quality is the only thing that improves health. There are social amenities and human factors involved in a

patient's hospital stay which seem to deteriorate when the amount of resources relative to the patient goes down. That matters to people and it matters to plant operation, but as far as any documentation goes, quality is something everybody talks about and nobody measures very well.

DR. WOLFSON: I would agree entirely with Mark that we have to look for non-health-specific related outcomes in measuring quality.

There is no evidence that the amenities have deteriorated in Canada with one exception. It is quite clear that physicians were not working longer hours in 1976 than they were in 1971. They were providing far more services. The calculation is quite explicit. They are spending less time per service. If that is a measure of quality of interest, then quality has deteriorated.

The Physician and the PSRO

ALLEN DOBSON

The second general session of the symposium convened on Friday afternoon, June 1, 1979, with Richard W. Foster, assistant professor and associate director-administration of the Center for Health Administration Studies in the Graduate School of Business at the University of Chicago, presiding as chairman.

CHAIRMAN RICHARD W. FOSTER: I think it is fair to conclude from the morning session that there is still a reasonable amount to learn about changing physician behavior, so I would like to start right away on this afternoon's program.

The first speaker is Allen Dobson, director of the Division of Beneficiary Analysis of the Health Care Financing Administration.

Dr. Dobson holds a Ph.D. in economics and has experience in consulting as well as in government. As director of HEW's two evaluations of PSROs, he qualifies as an expert in the unparalleled effort in this country to intervene directly in the physician's clinical decision-making process.

DR. ALLEN DOBSON: I will talk to you today about the Professional Standards Review Organization (PSRO) evaluation effort that we have conducted in HEW over the past few years. In an overview, I will first summarize the history of the program and its evaluation, the evaluation's objectives and how they were determined, and the relationships between the various component studies.

The PSRO Evaluation for 1978 was a large study that had many separate components. I will speak today, however, specifically about two studies which I think are most directly related to the topic today, that is, the management of physician behavior. I will also talk about the context of the evaluation and the debates that have been entertained over evaluation findings. I will conclude with comments relating the future of the PSRO program and physician behavior.

INITIAL PROGRAM AND EVALUATION DEVELOPMENT

Congress passed the PSRO program legislation in

1972 in order to insure appropriateness of care (both quality and utilization) for Federal beneficiaries. The law also required an annual report to Congress, which is the mandate for the PSRO Evaluation. The program was not implemented very rapidly, nor was its evaluation. Indeed, between 1972 and 1975 various HEW components were engaged in disputes over what both the program and its evaluation might look like. However, by September of 1975 the Department had an evaluation plan and the program was well formulated in terms of its primary review mechanisms.

The evaluation responsibility was assigned in 1976 to the Health Services Administration (HSA) which, at that time, was the administrative component of DHEW which managed the PSRO program. The preparation of the first PSRO evaluation went on through 1976 and the results were presented by HSA in the fall of 1977. In 1978 both the program and the evaluation was transferred to the Health Care Financing Administration (HCFA) which was newly organized at that time. Last fall (1978) HCFA produced the second National PSRO evaluation. I will talk today mostly about the latter report.

PROGRAM STRUCTURE AND DEFINITIONS

PSROs develop through three stages. There is a planning stage; a conditional stage where hospital review is conducted; and finally, full designation where all types of review are conducted.

During 1977, the year from which the evaluation data were drawn, there were 31 unfunded PSRO areas, 65 planning and 107 conditional PSROs, and none which were fully designated. The 107 PSROs which were reviewing patients had about 75 percent of their hospitals under review by mid 1977.

There are three major components of the review system in a typical PSRO: (1) current review; (2) medical care evaluation (MCE); and (3) profiling. Concurrent review, which is the most fully implemented aspect of the program, is composed of admissions review and continued stay review of federal beneficiaries¹ in acute care inpatient hospital settings.

¹ Medicare, Medicaid, and Maternal and Child Health patients.

It had been anticipated that the PSROs would also do pre-admission review. Review was to have been conducted before the patient came to the hospital to determine if admission was appropriate. However, court cases related to pre-admission review prevented the Department from actively pursuing this aspect of the program. As a result, admission review is now after the fact. Within the first day or so after admission, admissions are reviewed for medical necessity.

This is followed by continued stay review. After a patient is admitted, his (her) case is assigned an expected length of stay (LOS) based on a norm related to age, sex, and diagnostic condition. When this norm is reached (typically the fiftieth percentile of a given LOS distribution) a nurse coordinator will conduct a review of the case to determine if there are mitigating circumstances indicating that the stay should be extended. If there are none the case will go to the advising physician. The physician advisor will discuss the case with the attending physician if he feels this is necessary. If this discussion does not resolve the issue, the patient's continued stay may be determined medically unnecessary. The government's fiscal agent is then instructed not to pay for medically unnecessary days unless there are extenuating circumstances such as discharge planning difficulties. There is an appeal process. In any event, the patient's stay is continually monitored after the expected length of stay is reached. (Some PSROs monitor on a continual basis before LOS norms are achieved.)

The MCE quality review component is fairly well developed. However, a few PSROs are doing most MCEs, and most MCEs are done on the ten most frequent conditions. The idea of the MCE is to monitor the process and outcome of care. The physician is expected to comply with certain standards of care with respect to a diagnosis or procedure. The degree to which physicians deviate from these standards is called the variation rate. MCE impact is measured by comparing pre-audit variation rates to post-audit (re-audit) variation rates. Decreases in the variation rates indicate that care is improving, i.e., more closely approximating the ideal.

The final aspect and the least developed part of the PSRO program is called profile analysis. We have heard about it earlier today. Dr. Wolfson defined profile analysis as a review of statistical abstracts of physician and hospital behavior which identifies outliers and aids in focusing of the review process. This

is my basic understanding as well.

Another set of definitions have to do with delegated, partially delegated, and nondelegated review. Delegated review means the PSRO delegates the review process to the hospital though the PSRO remains responsible for monitoring review performance. With partially delegated review only certain aspects of the review (e.g., continued stay review) are delegated to the hospital. In nondelegated review, the PSRO conducts the review with its own staff. In 1977 delegated review was conducted 68.4 percent of the time; partially delegated review, 7.6 percent; and nondelegated review, 24 percent of the time.

The program's focus on delegated review was a strategic choice. Early program managers wanted to develop the PSRO very rapidly. As PSROs didn't have sufficient funds and staff to conduct the review themselves, they delegated review authority as quickly as they could. As you might guess, there was considerable pressure to implement the program, particularly since by 1977 only half of the PSROs in the country were conducting review.

THE PSRO AS A FORM OF CONTROL

The PSRO represents an explicit form of control. It is a direct form of peer review, but with an external set of rules. The program managers at the federal level designed the control procedures and then let physicians apply the rules to suit local conditions. While there was supposed to be a certain amount of flexibility in the models of review that could be implemented, most PSROs followed the model procedures and guidelines set forth by HEW. They used concurrent review, MCE activity, and the profile analysis as the basic PSRO activities.

I think the only other point to mention is that, as we have heard this morning, control relates to standardization. I think the notion of LOS norms has a great deal to do with standardization of the PSRO product. This is particularly true with PSRO attempts to control the number of days a person is in the hospital.

OBJECTIVES

In 1976 when we first started the evaluation, there was a great deal of controversy over the selection and choice of performance objectives. As we heard earlier this morning, choosing objectives for health care sector

activities is a very difficult process. The PSRO program is a case in point.

When we were hiring the evaluation staff we talked to some people who said, "What we should do is look at utilization." Others, particularly physicians, said, "What you want to do is look at quality. That is what the program is about." When we talked to economists they said, "What you want to do is look at cost, because that's what the program is about." We read the legislative history and it was equally ambivalent because some portions suggested quality while other portions suggested cost.

As it turned out, the pressures at that time were more clearly toward cost containment, and that is the direction we emphasized. We made that decision for one other reason as well: quality is extraordinarily difficult to measure. Utilization at least has the appearance of being much easier to measure.

For a couple of reasons then, we focused on utilization measures in the first and second years of the evaluation. We also looked at program costs, as they related to utilization benefits so we could calculate benefit costs for concurrent review. We also studied MCEs, which represented our primary attempt to measure PSRO impact on quality. These analyses were placed in the context of program implementation statistics.

STUDY COMPONENTS

Last year's evaluation had many components. I'll speak about all of them briefly and then I will focus on the two that are most relevant today.

We conducted several utilization studies, the most important of which I will call the 100 percent Medicare claims file study. I mention Medicare and not Medicaid because there were no Medicaid data available that we felt were accurate enough to support the kind of studies we wanted to undertake. We also had developmental utilization studies. In one of them we took the 20 percent sample of Medicare discharge data which had diagnostic and procedural information and tried to ascertain whether or not there was differential PSRO impact across diagnoses and procedures.

Because of the way Medicare data are processed, the 20 percent sample for which diagnosis and procedure are coded lags a year behind the 100 percent file data. This year we had 20 percent sample data for 1976, and 100 percent sample data for 1977.

In terms of program cost, this year for the first time,

we were able to use actual PSRO program cost data. We looked at unit cost, total cost, cost with respect to the MCEs, area-wide review costs and variation of these costs across PSROs. We also developed costs for use in a benefit-cost analysis of concurrent review.

With the MCE studies, we had two main thrusts. One was a report of descriptive statistics, i.e., frequency of MCEs, where they were taking place, and what they were looking at. Secondly, we conducted a pilot variation rate analysis in an attempt to quantify MCE impact.

Concerning the structure and process of PSRO programs, we looked at PSRO site assessment results (where PSRO managers visit PSROs in order to conduct on-site assessments of PSRO performance) and we conducted a project officer survey (where we asked federal project officers for 109 PSROs how well they thought their PSRO was doing in a variety of areas). Finally, we looked at program status and directions for future evaluation.

THE 100 PERCENT MEDICARE FILE ANALYSIS: DATA BASE DEVELOPMENT

I will concentrate now on the 100 percent Medicare file evaluation and the pilot MCE analysis. When one undertakes an evaluation the first thing one does after setting study objectives is to survey available data bases. When we started three years ago, the Medicare data base seemed like a natural starting place. It was the only data base that we knew of where we could link comprehensive inpatient utilization data with a given population, in this case the Medicare population.

At that time the Medicare data were not aggregated at the PSRO level, but they did represent a source of data which could link individuals to their own unique utilization characteristics. Thus, one of the first things we did was to construct a Medicare 100 percent claims file containing Medicare utilization rates aggregated at the PSRO level. This is a rather extensive file representing about 8 million discharges per year. (We had data from 1974 to 1976 for the first year and 1974 to 1977 for this past year.) In particular we developed measures for number of days of acute hospital care per thousand Medicare beneficiaries by PSRO.

We accounted for migration across PSROs and other idiosyncracies of the data base. When we were through we had a data base that would allow us to profile for each PSRO the number of admissions and days of acute hospital care per thousand Medicare beneficiaries

and the average length of stay. Among these variables, total days of care is equal to average length of stay times the admission rate.

The other sources of data we used were: the Area Resource File, which contains demographic and health care supply statistics across PSROs; the Master Facilities Inventory, which contains hospital data; audited average daily Medicare charge data, which gave us the charges associated with providing care to Medicare beneficiaries; PSRO program files and other data that had to do with the program itself. One data set we didn't have was Medicaid rate data. Thus, no analysis of the impact of the PSRO program on Medicaid beneficiaries was conducted.

MODEL DEVELOPMENT: IMPACT AND EXPLANATORY VARIABLES

Given our focus on utilization, the first thing we had to select was the dependent variable most related to PSRO impact on utilization. As I mentioned above, we decided that total 1977 days of acute hospital care per 1,000 Medicare beneficiaries (DOC) would be our primary measure. We used admission rates and average length of stay (ALOS) to interpret DOC findings. For this year, we added short stays (zero to three days), and long stays (over twenty-two days) as impact measures.

A variety of explanatory (independent) variables were used. First, we wanted to adjust for the fact that PSROs started review from very different base utilization levels. That is to say, a PSRO that initially had DOC=3,700 might act quite differently than one that had DOC=800. (We had one PSRO that was actually that low.) To accomplish this, we put in a base rate (the 1974 value) of the criterion variable under consideration. For DOC the first explanatory variable considered was thus DOC for 1974.

We also wanted to adjust for the fact that all manner of area population and supply characteristics impact on utilization (e.g., DOC). As you might guess, we used the variables that were available and had been demonstrated to impact on utilization. We used variables like proportion of population greater than 65, short stay beds per thousand, population density, proportion of hospital days due to Medicare, physicians per thousand, nursing home beds per thousand occupancy rates, and the proportion of families with income less than \$5,000 a year as our primary explanatory variables (covariates). A comparison of these variables

across active and inactive PSRO areas indicated fairly high uniformity. Only population density and physicians per thousand (which are highly correlated) were quite different across the PSRO and non-PSRO areas.

The next problem in the model building effort was to decide the form of the program impact variable. This is a critical explanatory variable because this variable indicates the degree to which PSROs have been successful in reducing utilization of federal beneficiaries. (DOC for 1977 in this case.)

We tried three PSRO impact variable forms. The first was a PSRO program dummy. This is a dichotomous variable, equal to one for PSRO areas and zero otherwise. This variable determines if active PSROs (n=96) had different levels of DOC than inactive PSRO areas (n=93). (An active PSRO area was defined as any PSRO area with at least one hospital under review by July 1977.)² The second variable used "PSRO intensity" which was defined as the proportion of Medicare discharges in an area which were under review. The third variable was PSRO longevity. This variable represents the number of months a PSRO has conducted review. After sensitivity tests we selected the PSRO longevity variable as the primary PSRO program variable.

To complete the model, interaction terms were added. We interacted the base, which was the 1974 DOC rate, with the PSRO program variable, and then we interacted adjustment terms with the PSRO program variable. Interaction terms indicate if PSROs impact differently under different situations. The interaction term, density* PSRO, for instance, suggests the degree to which PSROs have greater (lesser) impact in less (more) densely populated areas.

FINDINGS

Study results indicate that the PSRO program in 1977 reduced total days of care per thousand Medicare beneficiaries by approximately 1.5 percent, which was significant at the .05 level. I was rather surprised with these results because the prior year's evaluation had indicated that the PSRO program had no impact on DOC. This year, however, we found an impact that seemed to be not only statistically significant, but programatically significant as well.

² While numerous other definitions were tested none seemed to provide more sensible results.

A variety of regression specifications were estimated. All forms indicated about 1.5 percent decrease in DOC. To put this finding in perspective we reviewed the literature for estimates of the proportion of unnecessary days of care. We found numerous references which suggested that unnecessary care represents between 10 and 20 percent of DOC. If these estimates are reasonably correct, the 1.5 percent PSRO impact we found is a rather small proportion of care that could be reduced before quality is affected.

We also found a great deal of regional variation. In the East we found a program effect of minus 2.7 percent; for the North Central area a program effect of minus .5 percent; in the South, essentially no impact; and in the West, a minus 2.6 percent. These regional results are particularly interesting because the West with a very low initial DOC exhibited nearly as strong an effect as the East where DOC was considerably higher. (I should note in passing that the evaluation's active PSROs represented a fairly even distribution across the four regions.)

We examined several other issues this year. We looked at the extent to which maturity seems to impact on PSRO performance. We were not able to ascertain much there, because our data are essentially cross-sectional in nature rather than longitudinal. Thus, we really could not track PSROs over time to see if they improve as they mature. After much debate, we concluded that "maybe" there was a maturity factor, but we really were not firm on this issue in the report.

We also asked the question: what impact does state cost commission review activity have on DOC? We entered a dummy (dichotomous) variable in the regression model for state cost review activity. We found that state cost commission review activity was not correlated with PSRO impact, but had an independent effect in the opposite direction. Where the PSRO program was reducing days of care, the state monitoring systems appeared to be increasing days of care by approximately 3.5 percent. We thought this finding was very interesting. Analysts in the department familiar with state cost review activities did not find these results totally surprising. However, these results are by no means definitive as the purpose and design of our evaluation was not to determine state cost commission impact.

Another thing we looked at was the potential of certified skilled nursing facility supply to modify PSRO impact. In 1977 our critics suggested that we should

ascertain the potential of PSRO programs to reduce DOC. This potential was said to be related to the number of skilled nursing facility beds available in a PSRO area. The argument essentially claims that if PSROs could discharge patients from the hospital to skilled nursing facilities, then they would be able to show greater reductions in hospital days of care.

We asked PSROs to indicate the degree to which they felt this argument was valid. Only eighteen PSROs responded. I suppose those PSROs that responded knew the data the best. It was their contention that the number of days they had not certified as medically necessary, but had certified for funding because of nonavailability of skilled nursing facilities, was about 1.8 percent.

We argue in our report that this estimate, even if true, must be carefully interpreted. This kind of dynamic applies to non-PSRO areas as well as to PSRO areas. Any hospital has the option to discharge its patients to a skilled nursing facility if beds are available. Thus, we were not sure that this should be called a potential PSRO effect as this effect could be demonstrated in non-PSRO areas as well.

In terms of the benefit-cost analysis, we estimated benefits and costs for concurrent review at \$50 million and \$45 million respectively. These figures indicate a benefit/cost ratio slightly in excess of 1, that is, with respect to Medicare review, PSRO activities saved a bit more than they cost.

When we disaggregated the benefit-cost results we found that large urban areas were accounting for the overall favorable benefit-cost ratio. The top 5 or 6 PSROs are driving the benefit-cost ratio towards and above 1. This results from the fact that these areas have many very expensive hospital days. When they reduce their days by 3, 4, and 5 percent it drives the benefit-cost ratio over 1.

When the Department went to the Office of Management and Budget during this year's budget cycle, it argued with some conviction that the program was paying its own way. This contention was very important to the continuation of the program.

Many reviewers of the PSRO program budget were somewhat disappointed in the benefit-cost finding of approximately 1. They argued that when the program was initiated, it was "sold" on the notion that PSRO organizations would reduce utilization and hence expenditures by large magnitudes. They were thus not encouraged by findings suggesting that the program's

benefits are just slightly larger than its costs.

It is my feeling at this point that the PSRO program will pay its own way, but I do not think it is reasonable to expect the PSRO program in and of itself to control utilization to such an extent that it will reduce the current rates of hospital cost inflation.

THE MEDICAL CARE EVALUATION ANALYSIS

As I mentioned before, the medical care evaluation aspect of the PSRO program can modify physician behavior to the extent that it modifies the process of care. Last year we conducted a pilot study of an MCE impact analysis and gathered descriptive statistics.

The descriptive statistics indicated that MCEs are rising in frequency and PSROs are conducting more of them. Yet most MCEs are still done in a limited number of PSRO areas and on a limited number of topics. Most disturbing is the fact that very few re-audits were conducted. The medical care evaluation model calls for an audit, information dissemination, and a re-audit. If something is wrong initially, a re-audit is required to determine whether behavior has changed in response to information provided to physicians. Unfortunately, very few PSROs have conducted re-audits. Thus there is no effective feedback mechanism in operation.

To test for MCE impact we developed a variation rate analysis which measured the degree to which physicians departed from the standards used in the audits and re-audits. A reduction in the degree to which physicians were departing from expected behavior (i.e., a reduction in the variation rate) was taken as an indication of improvement in physician behavior.

During the pilot study (using data from 8 PSROs) 36 MCEs representing 6 topic categories and 52 common criteria were studied. The number of criteria is so large because each MCE can have numerous criteria, e.g., the number of x-rays taken or not taken on admission for pneumonia, drugs that should have been prescribed that were not, etc.

We found that variation rates seemed to be falling. We found this encouraging. In fact, it was a fairly strong result. However, because our pilot study sample was not statistically representative and rather small we cannot push this finding very far. In the next year's evaluation we will conduct a more powerful study in which we will look at a thousand MCEs. We expect that the sample will represent the whole country. Thus, next year we expect to get a much better notion of whether MCEs are having any impact on the way

physicians behave in the hospital.

EVALUATION CONTEXT

In terms of the context for the evaluation, there are a few points to note. The evaluation used 1977 data and this is already 1979. The program has changed quite a bit since then, so in one sense the data is already out of date. In another sense, ours was a national evaluation of a national program that had been implemented half-way by 1977, so I think our results on that account alone are very interesting. From a political stance, the argument will be made that we now have a different program, so these evaluation results no longer hold.

In terms of data availability, we focused on Medicare beneficiaries because only Medicare data are available. We are going to try this year to do a little bit with Medicaid data. In the long run we hope to develop a Medicaid data system that parallels the Medicare system. While we have great expectations in this area, people have tried to produce Medicaid research data for over a decade with little success. Thus, total optimism may be unwarranted.

A broader issue had to do with the focus of the benefit-cost analysis. Our benefit measures relate to the program's impact on Medicare reimbursements. We translate days of care reductions into the value of days saved from the perspective of the Medicare trust funds using a computational algorithm based on the Medicare reimbursement formula. Our "savings" include fixed-costs transferred to private pay patients.

An additional issue concerns the spill-over or substitution effect related to nonfederal beneficiaries. For example, if a day of care reduced for Medicare beneficiaries was absorbed by a nonfederal beneficiary, it could be netted out of the benefit-cost analysis. We did not do that because we had no real notion of the extent to which private pay patients absorb federal beneficiary days saved by the PSRO program.

We feel our assumptions are appropriate given the legislative mandate of the PSRO program. We realize, however, that quite different results can be obtained if a different perspective is taken. If a broader societal perspective is assumed our benefit-cost ratio is approximately halved. Yet in a very real sense the PSRO program has been designed to reduce federal expenditures. In the longer run, when PSRO activities lead to

a closing of beds and a subsequent reduction in associated fixed costs, Medicare beneficiary and societal benefits will be more congruent.

Our analysis was fairly limited with respect to the scope of the program. We did nothing with profiles because few were in existence. Ambulatory care and long-term care review were at a demonstration mode so we did not evaluate them either. We only conducted benefit-cost analysis for concurrent review and we have just started our impact analysis of MCEs.

A most important issue has to do with self-selection bias. During the period of the evaluation half the country was PSRO-active while the other half was inactive. Are the non-PSROs like the PSROs? When they are implemented, will they behave very much like the ones that are already operating? I do not know and I rather doubt if anybody does. Nevertheless, one really has to face that issue squarely when one looks at our results which show a contrast between those areas of the country that are PSRO-active and those that aren't.

We did attempt to adjust statistically in every way we could for the possibility of self-selection bias. Most of the variables we used as covariates were fairly uniform over active and nonactive PSROs. This suggests that self-selection was not large, at least in terms of the variables we could measure.

Be this as it may, there is still the possibility that the evaluation is flawed by self-selection bias. That is to say, the most highly motivated PSROs may have started first and those that are yet to begin review are going to be much more intransigent. If so, we will see fewer physicians change their behavior related to utilization reduction in these areas.

EVALUATION IMPACT

I have been in the evaluation business for some ten years and have become a bit cynical. Nevertheless I am very encouraged by the impact the PSRO evaluation has had on the bureaucratic establishment.

The first impact that I will note is that the notion of setting performance standards for the program has become accepted within the Department. The PSRO program has focused much more clearly on what it is supposed to do, especially with respect to utilization in terms of the explicit variable days of care per thousand. Accordingly, federal managers seem much more sharply focused on what the program should be doing. I would like to think that all of this has led to increased awareness of the PSRO program's character

and that the program has become more of a national program as a result.

In our first year of study, detractors of the evaluation told us that the program was too heterogeneous to be evaluated; each PSRO had its own unique objectives. This year we did not hear as much of this argument. Over the past year we have been sending out reams of Medicare data that relate to days of care per thousand, average length of stay, admission rates, etc. All of this has helped to solidify the program.

From a broader management perspective there has been considerable pressure applied directly by the Congress on program costs as a result of the first evaluation. This has led to a very sincere attempt on the program's part to focus review on areas of care that appear to be problematic. This in turn has led to an increased emphasis on good data in order that PSROs can determine what they should focus on.

Noting the lack of re-audits has caused some controversy, but I do not know if it has caused too much activity. Finally, in terms of program emphasis I have detected a marked reduction in the long-term care and ambulatory care aspects of the program. The program is limiting its attention to the acute care hospital aspects of review because the Department, the OMB, and the Congress wanted to see improvement in this area before encouraging program expansion into other endeavors.

THE PSRO AND PHYSICIAN BEHAVIOR

In terms of linking the PSRO program to physician behavior I think if one looks at what the program is all about the original intent was to cut costs and improve quality. That led to the notions of utilization review and MCE. I think the program's objectives in these areas have been met to a certain extent. We have found indications of impact on both utilization and quality aspects.

All of this may be having some impact on the "training loop" that we heard about earlier this morning, whereby institutionalization of control is initiated in professional training. More and more I hear that in medical school training there is an increasing awareness of the trade-offs between cost and quality and the notion of economically appropriate care as opposed to more care at any cost. These concepts seem to be emerging into the consciousness of young physicians as they come out into practice. Ten years ago I am not so sure one could have said those things. I may over-

state the case, but I certainly hear a lot about these issues as I talk to young doctors coming into the profession.

Conditions may be changing. PSROs may now be an appropriate and acceptable method of influencing physician behavior toward more cost-effective medical care, I think this is encouraging and expect that the program will have more impact as time goes by. If we

have learned nothing else in the last decade it is that social programs do not produce dramatic changes overnight. I hope that evaluations such as ours can be used to improve program performance and our understanding of how programs bring about the changes we expect of them.

The Managers and the Medical Staff

RICHARD L. JOHNSON

CHAIRMAN FOSTER: Thank you.

I would like to move right along to the next speaker. I have now what is always a special pleasure, namely, to introduce an alumnus of the Program in Hospital Administration as a speaker. Richard Johnson is president of the TriBrook Group of hospital consultants. He also has extensive experience as a hospital administrator himself, and for those of you out there who are not government monopsonists, you may be particularly interested in the topic of his discussion, "The Managers and the Medical Staff."

MR. RICHARD L. JOHNSON: When talking about quality, I am reminded of the interview with the warden of Cook County Hospital. They asked him what he thought about the prisoners. He said, "We don't have near the quality we used to."

One of the first surprises encountered by a neophyte in hospital administration is the attitude of the medical staff towards management. Like the public, the beginner believes that since both are striving in their respective ways toward the same goals, they are partners. It comes as a shock to learn that physicians see it differently. Some administrators never overcome the resultant hostilities that develop and they spend a career making sure that physicians lose as many organizational battles as possible. Others learn to cope with this set of mind and can keep it in perspective even though they appreciate the necessity for never taking the medical staff for granted. The mistrust that exists between medical staffs and hospital executives is so widespread there have to be underlying causes for it. Why physicians and administrators often fail to see eye to eye is the subject of our discussion.

When students enter medical school, they are confronted with an enormous amount of factual information to be assimilated, as well as a whole new technological vocabulary. They become immersed in the scientific method and quickly learn that a conclusion reached about a patient's condition must be based on amassing as much readily available quantitative information as possible, in order to justify their tentative

diagnosis. They are repeatedly reminded that $A+B+C+D$ is the route by which you make your determination. Inductive reasoning becomes a way of life in medical school. By the time residency training is completed, it often has become a way of approaching all of life's problems as they are encountered.

In contrast to physician career training, the hospital administrator has never become imbued with quantification or the scientific method. His undergraduate days may have been largely devoted to nonquantifiable subjects with only a passing acquaintance with the other approach. At the graduate level he is exposed to quantification, but he is taught that it is only one of the skills he will need in his career, and of more importance is his philosophical grounding in social and ethical considerations and in business management. Between his graduate education and his early years in the field observing senior executives, he comes to appreciate that the way you solve major problems is first to decide where the hospital should go and then figure out what steps are needed to get it to that point. Successful hospital executives most often use deductive reasoning in making their decisions. This approach to problem solving is alien to physicians, who tend to view it with suspicion because it seems not to be logical. On the other hand, administrators have difficulty relating to clinicians who put every subject through the filter of inductive reasoning. Hospital executives tend to get close to those physicians who have an appreciation of the deductive reasoning process. These medical staff members become the informal bridges between management and medical staff because they can easily relate between the two different schools of thought.

From another perspective, the administrator is the organization man and the physician is the entrepreneur. This difference has been recognized in terms of the organizational structure of the medical staff since early in this century. The Hospital Standardization Program established by the American College of Surgeons had model medical staff bylaws that referred to the medical staff as self-governing and stated that the hospital administrator was expected to cooperate with that

body. These bylaws were distributed to hospitals, and by the end of World War II, a verbatim version was found in nearly all hospitals. When this activity was taken over and expanded by the Joint Commission on the Accreditation of Hospitals, this element was retained. Whenever hospital disputes arise involving individual members of the medical staff, these key points are usually invoked as reasons why physicians cannot be treated administratively as part of the operating departmental structure of the institution. The phrase, "the medical staff shall be self-governing," is still found in bylaw language in many hospitals. Even where this phrase no longer exists, most medical staffs behave as if it were still there. Chester I. Barnard, writing in 1939 in his classic text on organization structure, *The Functions of an Executive*, deftly put his finger on the problem. He pointed out that an executive's authority can be exercised only to the extent that those over whom he is exercising it accept his right to do so. Medical staffs usually deny that this right exists for chief executives of hospitals. In fact, in many hospitals, they deny it exists for another physician who may be in an administrative position, such as a medical director.

The meaning of membership on a medical staff is seen differently by the two parties. Physicians see it as a process of presenting one's clinical abilities before a peer group to determine if they meet the minimum eligibility requirements of the hospital. Physicians accept, though sometimes grudgingly, that in the hospital they are part of a larger system of medical care, requiring them to abide by adopted professional standards. In their office practice they view themselves as individual entrepreneurs, responsible solely to themselves for the diagnosis and treatment of patients. They are aware that through the education and training they have acquired, there must be a continuing concern about a level of competence that must be adhered to in the office as well as the hospital. They believe the same degree of skill should be applied in either setting. Thus, when seeing patients in the hospital, they believe they should be left alone to do as they see fit, so long as their own personal standards of performance exceed those required by the institution. They do not view it as a control mechanism that decides for them their hours, work schedule, income, or professional direction. Any steps by the hospital that they interpret as even remotely in a controlling direction are usually met with sharp reminders about their independence.

These attitudes have been in place for many years and have remained relatively unchanged. Yet the hospital has undergone a profound change from a charitable, limited diagnostic and treatment capability, primarily oriented to nursing care, to a large, heavily capitalized, technological enterprise operating in an increasingly complex social setting. Many physicians think of the hospital as a support system for their own decision making. With the amount of long-term debt being carried by many hospitals to finance the facilities and equipment needed to support a wide range of specialists, the hospital executive has more and more difficulty reconciling these physician attitudes with the imperatives of meeting his debt service requirements, of coordinating a wide range of diverse talents, and of responding to a variety of external community pressures, while at the same time providing a future course for the institution.

His problems are not alleviated by the other caveat in the bylaws that the chief executive is expected to cooperate with the medical staff. As a result, the chief executive of a hospital lives with a great deal of organizational uncertainty because of the peculiar relationship of the medical staff in the organizational structure. He may find himself in a dilemma; the governing board expects him to be vigilant about the quality of patient care, but at the same time expects him to cooperate with the medical staff. If administrative steps need to be taken that affect physicians, the hospital CEO accepts the fact that he is creating a stressful situation for himself. He is aware that physicians feel his lack of clinical training prevents him from reaching valid conclusions about quality of care. Even though he does what senior executives in other industries do, operating on the basis of second- and third-hand information and statistical reports, these sources are often not regarded as valid by physicians. Because the hospital CEO can neither claim clinical competence nor direct authority over the medical staff, he is forced to undertake a series of maneuvers to bring about the needed results. If in the process he becomes suspect to some physicians, he can anticipate their scurrying around the hospital searching for evidence that he is not doing his job properly, or that departments are not operating satisfactorily. As any executive knows there are always examples that can be found. As the list of dirty linen is compiled, the CEO may find himself in-

creasingly boxed in, without any way out, because he has no end product measurements he can turn to that reflect the overall results of organizational performance. He may be tempted to believe that the medical staff is vindictive or that the board is indifferent. Once he comes to accept this as the case, he may begin to see all hospital problems from this perspective, which in the long run is disruptive to the organization.

Because a hospital lacks clear-cut end product measurements, there tends to be a lack of agreement when questions arise over quality of care issues. Hospital CEOs are aware of this and know that internal conflict is heightened when problems of this type surface that involve members of the medical staff. To tackle inadequacies of clinical performance is all too frequently a way of setting up a no-win situation for the CEO. A few rounds in this arena may lead the chief executive to conclude that he should get along by going along. In the past, he could do this knowing that he need only wrestle with his own set of values. But the option to ignore these problems may be foreclosed because the internal information reporting system now documents the work of the utilization committee and the findings of PSRO activities.

Because of both education and experience, a hospital chief executive often views the medical staff in a different light than do trustees. From long exposure he knows he has to deal with this component with caution and great sensitivity, even though he may really see the staff as part of the management responsibility. Though he would like to deal with it in a manner akin to which he handles all of the other operating departments, he recognizes that he has to treat them in a way that differs from management people. He may fail to understand why this is so, even though he appreciates that it must be so.

A governing board usually sees the medical staff as an anomaly not found in other forms of enterprises. They acknowledge that physicians have to meet certain standards for admission to the medical staff, but once the standards are met, they see physicians as surrogate customers who must be treated in a manner reflecting this kind of relationship. Consequently, when physicians express displeasure with administrators, governing boards listen carefully and are inclined to be responsive. If this dissatisfaction reaches the point where a collective position is adopted by staff members, such as requesting the board to terminate the chief executive, experience indicates the board is more often than

not going to accede to this request. In such situations, there is little likelihood that fairness, weighing administrative performance over time, or determining the validity of the medical staff's position is apt to occur. In many cases the board accepts the medical staff's recommendation without carefully and critically examining the issue. This occurs for several reasons, all intertwined in the thought process of trustees. They recognize a hospital as a medical care institution, as a community activity, as a place where minimum standards for professional performance are enforced, where physicians make a free choice of whether or not to use the facilities, and where the operating departments headed by the administrator provide the support systems that permit these other activities to occur. They do not typically see the hospital chief executive as the person who leads and inspires the medical staff in addition to providing leadership for hospital employees. In this sense, the chief executive in a hospital is different than his counterpart in industry. There the chief executive is clearly responsible and accountable for providing leadership, pushing towards higher and higher goals, and using corporate resources to attain them. He is expected to be out in front, challenging the organization to achieve increased performance. There are no boundary markers limiting his abilities, so long as he achieves results in an economically sound manner. Growth in assets, net profits, units produced, and share of market are applauded.

Not so in the voluntary nonprofit hospitals. The CEO is head of a system that is expected to do its job efficiently and respond to medical care interests. His role is to see that the adopted professional standards are enforced; he is not expected or permitted to raise these standards; he can only encourage adherence to them. He is free to consult with the medical staff and receive their advice, but he is not free to make a decision affecting them without their involvement and often their concurrence.

Even though the hospital executive may be every bit as accomplished as his industry counterpart and as versatile in his managerial skills, the role he finds himself in prevents him from exercising these skills to the same degree. He cannot get out too far in front of the medical staff. If he acquires too much influence in the community, if he controls the medical staff too directly, if he achieves too large a surplus on the bottom line, if, in other words, he behaves as an aggressive, brilliant, hard working executive, he runs the strong

risk of courting organizational disaster for himself. When the medical staff feels threatened by his performance, it often originates from their belief that he is not in charge of the entire hospital, and that their role of dispensing medical care is the one to be protected. They will act on this belief when threatened. Individually, this may take the form of reminding either board members or administrators that physicians are free to take their patients to other hospitals and may well do so if matters are not righted to their satisfaction. This kind of statement is often heard in trying situations. The administrator often views it as a threat that is akin to blackmail, while the physician sees it quite differently. To him it represents a right he has maintained as a customer: freedom to take his business elsewhere.

Physicians are apt to be a source of real difficulty in the next few years. By the very nature of their profession, they can be expected to be proponents of the status quo with respect to the role of the hospital. The fact that the health care system is under siege by HEW, reimbursement agencies, state rate review commissions, and HSAs is not of immediate concern to most physicians unless it directly affects the services and equipment they use in their clinical activities. They may have difficulty understanding why housekeeping, maintenance, personnel, public relations, etc., cannot continue to receive less and less funds in order to protect the clinical services of the hospital when overall reimbursement is being restricted. Lacking organizational exposure to the need for balance among operational activities, they may be prone to arrive at conclusions that experienced health care managers recognize as something less than desirable.

In addition, the frustration level of a physician increases with each passing year as he finds his life hemmed in, in ways over which he has little control. He is faced with higher rentals for office space, higher malpractice premiums, the necessity for providing fringe benefits for his office staff, more paper work on insurance forms, increased scrutiny of his fees, greater accountability for his clinical decisions in the hospital, and a public that doubts his services are worth the prices charged. He increasingly feels the need to return the compliment. Unable to counter the economic pressures and increased infringements on his own way of doing things, he may come to regard the hospital as the place where he will make his final stand to protect his professional rights. This means that the role of the

physician in the hospital and the organizational relationship of the medical staff to the governing board and administration are sacrosanct, and must remain in the future the way they were in the past. Even though the government is forcing the hospital to become the control point of the health delivery system, the typical physician finds himself increasingly threatened. He determines not to let it happen in the hospital where he views his role as being of considerable economic importance, thus providing him with the leverage to protect his interests and attitudes.

Given the disparity between a changing societal role for the hospital and an inflexibility in physician attitudes, tensions between administration and medical staffs will mount over the next decade. This will not be ameliorated by changing to a corporate structure with increased authority for the CEO, even though this would enhance his ability to deal with the external pressures.

While patient care has come to dominate the hospital, it is also true that coordination of administration, medical staff, and governing body is now a necessity. There is no neat and tidy organizational structure that will satisfactorily serve the interests of the three legs of the stool. Physicians can be expected to make increasing demands on their institution. Governing boards will continue to listen carefully to physicians, and administrators will be subject to increasing demands as they attempt to bridge diverse interests which heighten organizational pressures. Many experienced hospital executives describe their roles by saying that the fun has been taken out of their profession. They are caught in a pressure cooker where the heat keeps getting hotter and hotter.

Revamping the hospital organizational structure is not going to be accepted by physicians if it requires them to be accountable to the chief executive, even via a medical director or chief of staff. The concept of a single, unified structure, given the prevailing attitudes of the medical profession, is a workable idea only as long as the decisions reached by the hospital do not trample over strongly held concerns of the more vocal medical staff. In order to minimize this risk, policy development needs to involve appropriate physicians all along the way from the first steps up to final approval by the governing board. The result may be no better and might not be as sound as if the administrative staff

decided what to do, but by meaningfully including them in policy development, acceptance among the medical staff will be greater and the chance of successful implementation enhanced. This is of particular importance for the near future until the time physicians realize that the additional constraints being placed on them have come from external factors. Until then, internal tensions will increase. As tensions grow, the decision-making process dealing with shifts in programs, services, and organizational structure will have to be slowed down to the speed at which medical staff acquiescence can be gained. This will require the hospital to move in two directions at the same time. In response to outside influences, the hospital should streamline its decision-making apparatus so that it can rapidly respond to changing conditions; yet it must develop a more elaborate and cumbersome process that involves all the internal parties demanding a seat at the policy-making table.

This kind of dilemma faces many institutions. The need is not for increased authority for either the CEO or the medical staff's leadership, but rather for a position of parity between them. An imbalance that favors the physician now exists in most hospitals. It is not in the best interests of physicians or CEOs to further this imbalance. Running through a series of chief executives or emasculating their role in order to assuage a discontented staff leads only to a loss of organizational momentum and an institutional inability for response to swiftly changing conditions. Yet this kind of loss is not easily recognizable in the short run. Solving immediate problems and dealing with internal crises often blurs the vision of long term consequences. The need to win a battle, or to avoid one, usually has precedence. Under such circumstances, it is difficult to remember that tomorrow always has to be faced and it is likely to be more difficult and complex than today.

Parity of authority requires living with an uneasy organizational balance that will tilt from one side to the other from time to time. The governing board's role becomes crucial. It will need the very best information and analysis of hospital problems that it can obtain. This can be provided if two conditions are met, which are not usually found in today's hospital: (1) an

administrative staff that is knowledgeable, experienced, and not overextended in terms of workload, and (2) a medical staff that has continuity and stability of leadership.

Both are necessities but they need to be reinforced by a governing board that deals in an evenhanded way with all parties. This is, however, a pious hope that has little likelihood of coming about; it is an organizational appeal of the same kind as motherhood. Yet much can be accomplished if governing boards are exposed to measuring performance. New hospital trustees quickly learn that the ground rules of business don't directly apply to health care institutions because of the complexities of reimbursement, professionalism, non-profit status, and external requirements. Existing trustee programs don't help much either because they usually paint with a broad brush over the total health care field.

If the hospital field is successful in bringing about economic competition between institutions during the next decade, the role of the administrator will become pivotal since survival will be dependent upon managerial acumen. Under existing conditions, his role is that of a manipulator and power broker, but when it becomes important that he have a real and sustained interest in productivity, then he will be viewed in a different light by both trustees and physicians.

The development of free market conditions is an essential ingredient in maintaining the excellence that has been achieved over the last half century in our health delivery system. By striving to bring this about, the many issues now separating managers and medical staffs will fall into place. Parity of authority, accountability for quality of care, self-governance, and trustee education will lose their importance in an inverse ratio to the development of economic competition. When the dominant themes become market share, pricing policies, marginal costs, and performance, and when seminars and conferences highlight these subjects, hospitals will have completed the journey from social and religious agencies and joined the mainstream of American industry. The decade just ahead should be an exciting trip.

Capital Expenditures and the Physician

FRANK C. SUTTON

CHAIRMAN FOSTER: I know it's asking a lot, but I would like you to restrain your questions until we have time to get all the panelists up here, together.

Our next speaker is Frank Sutton. He is an M.D. as well as a hospital consultant. He also has extensive experience in administration, including twenty-five years as director of the Miami Valley Hospital. He is the recipient of numerous awards, the most prestigious of which, I am sure, is his honorary membership in the alumni association of University of Chicago Hospital Administrators.

DR. FRANK C. SUTTON: The management of capital expenditures is becoming increasingly difficult for hospital administration and governing boards. The growing amount and cost of the medical equipment involved in these capital expenditures makes some method of participation by representatives of the hospital medical staff highly desirable in the determination of their need.

Principles of Medicare reimbursement require the capitalization of expenditures in excess of \$200 which have useful lives longer than one year. In actual practice, much variation is found among institutions in the treatment of certain expenditures as capital investments or operating expenses.

The classification of capital assets is generally according to useful lives: a) land and leasehold improvements (non-depreciable), b) buildings and fixed equipment (depreciable up to forty years), and c) moveable equipment.

Recently, Health, Education, and Welfare Secretary Califano asked for a national limit of \$3 billion on capital expenditures in hospitals costing more than \$150,000—an amount immediately declared unrealistic when divided between states and metropolitan centers. He noted that capital expenditures for one year substantially affect annual operating expenses for many years thereafter, a problem that is particularly serious if the expenditures create excess capacity.

Karen Davis, HEW Deputy Assistant Secretary for Planning and Health Evaluation, has said that approx-

imately \$1.4 billion is spent annually for capital expenditures under \$150,000. She thinks Secretary Califano's proposed limit, although unenforceable, will enable Health Systems Agencies to make trade-offs. Others feel that it will force applicants to use political connections more, undermining the planning process.

The latest available figures on hospital capital expenditures from the American Hospital Association are \$6.5 to \$7 billion for 1977—most of this for construction. State and local Health Systems Agencies have begun decelerating health care capital expenditures. McGraw Hill's *Dodge Construction Potentials* predict that new health care construction physical volume in 1979 will remain near last year's depressed 52.5 million square foot level. The value of projects and equipment receiving certificate-of-need approval from HSAs declined in January 1979 to \$106 million from \$131 million, a reduction of nearly 20 percent, although national building construction costs will be up 9.8 percent from the first quarter of 1978 according to Turner Construction Company.

The greatest force allegedly holding down health care construction is pressure from government and from within the health care industry to contain costs. Nationally, Blue Shield (in cooperation with several medical associations and specialty groups) announced the start of a Medical Necessity Program in 1977. Its goal was discouraging outmoded or ineffective diagnostic or surgical procedures which add to the cost of health care without offering equivalent benefits to patients.

Various methods of involving physicians in the development and allocation of hospital capital expenditures are in use. In a recent survey of representative midwestern hospitals it was found that, generally, the medical executive committee is asked to rank medical equipment requested by clinical departments within the funds designated for each upcoming year and recommend it for governing board approval. In some instances, the medical equipment requests were allocated over a period of three or more years.

Generally, it was found that hospitals leave medical equipment sharing to the consideration of HSAs. According to an American Hospital Association survey

of 1978, one or more services were shared by eighty-four percent of community hospitals, an increase of more than twenty percent since 1975.

It is not infrequently observed that physician members of a joint conference committee choose that forum to plead their personal preferences for medical equipment items—sometimes with success—thus eroding credibility of established methods.

In the early 1960s at the 765-bed Miami Valley Hospital in Dayton, Ohio, the desirability of involving physicians in the allocation of medical equipment became apparent. At that time, we were confronted with over \$1,500,000 in requests, with only half that much budgeted. Our beginning efforts were made through informal discussions of the problem with medical staff officers. From this, two suggestions emerged: distribute the total requests over two to three years, and allocate first-year items within available funds. From this beginning evolved a continuous participation by physicians which developed into the Medical Advisory Committee for Equipment Purchases. It is important to note here that this committee was, and continues to be, advisory to management and the governing board.

The 1979 capital expenditures budget at Miami Valley Hospital provided \$1,200,000 in funds for equipment of all types. Of all hospital equipment needs, medical equipment represents nearly three-fourths in this budget. A sum of \$1,800,000 is for building projects, for a total during the current year of \$3,000,000. This is exclusive of special high cost items such as a CT scanner. For perspective, the overall hospital operating budget for 1979 is slightly over \$62,000,000.

The involvement of physicians works as follows. Each October, the various clinical departments are requested to submit recommendations for priority equipment needs for the coming calendar year. This information is forwarded to and assembled in the hospital executive offices by the secretary of medical staff affairs. Assistance in this process is available from the department's administrative representative who responds to requests for additional information or cost estimates.

Once all medical equipment requests are identified, they are reviewed and evaluated in November by the Medical Staff Advisory Committee for Equipment Purchases. In this process, physician-to-physician discussion of specific needs with assigned committee members serves to provide background information.

The committee includes representatives of major clin-

ical departments. For maximum resistance to pressures, its chairman is a member of the Department of Family Medicine. Over the years it has been found best to provide for a gradual rotation of committee members with one-third changing each year, but with a longer tenure for the chairman.

The printed form used in submitting requests for medical and other equipment at Miami Valley Hospital is titled the "Equipment Justification and Planning Form." Certain aspects of this form receive special attention. The projected operating expenses and cost savings of the requested equipment are required, in addition to its general description and purpose, delivery time, maintenance needs, and estimate of useful life. In considering equipment expenses and cost savings, we are aiming for such analyses as cost effectiveness validation and life cycle accountability.

In terms of its qualitative benefit, we attempt to assess the value of the proposed equipment in its primary contribution to patient service in life saving or life support, in restorative benefits or rehabilitation therapy, preventive, diagnostic, and patient service or convenience. The number of patients benefiting (directly or indirectly) receives evaluation; also, how other departments of the medical staff or hospital will benefit from the investment in the proposed equipment.

The anticipated utilization of the requested equipment in hours per day and days per week with the resulting estimated percent utilization are requested. Additional information relating to this, and any other aspects of the request complete the written form. Where necessary, assistance from administrative staff and others such as the director of finance or the personnel director is provided.

The conclusions of the Medical Staff Advisory Committee for Equipment Purchases about the coming year are sent to the chief executive officer of the hospital. Without alteration he coordinates these ranked medical equipment items with other provisions of the hospital's capital expenditures budget for action by the governing board in December. To provide feedback to the clinical departments on the status of their requests, an equipment status report form is used, indicating that the desired equipment has been approved, deferred, disapproved, or is under consideration. Explanatory comment is added.

For major facilities, appropriate representatives of the medical staff are involved in developing and allocating building projects of the hospital. An example is

the request from surgeons to add more operating rooms. The claimed need may be based upon tenuous evidence, possibly amounting to a desire for reserve capacity. Since emergency or urgent surgery encountered during scheduled operating room hours is usually accommodated by deferral of booked elective surgery, if necessary, there is a questionable basis for developing costly surgical facilities to meet peak loads, unless waiting lists of elective surgery are extreme and continuous.

We have found that discussing the influence of the following factors on the amount and types of future surgery has been helpful:

1. Increased health care demands resulting from National Health Insurance.
2. A continuing excess of general surgeons and their gradual redistribution.
3. Development of new surgical procedures, not presently available on a broad scale. E.g., microvascular surgery making possible replantation of severed hands and fingers, even vasectomy reversal!
4. Advances in anesthesia technics and agents, making possible improved surgery and results.
5. Advances in chemotherapy and radiation making surgery more effective. For example, some oncologists are finding that overall results are more satisfactory when chemotherapy precedes rather than follows surgery for cancer. Hyperthermia now offers promise for some, in addition to radiation, surgery, chemotherapy, and immunotherapy.

On the other hand, factors possibly reducing future surgery are more numerous:

1. Professional Standards Review Organizations (PSROs) and peer review activities result in less surgery to some degree.
2. Increasing public attention to "unnecessary surgery," favoring conservative care.
3. Advances in fiberoptic endoscopy, introducing such alternatives to surgery as laparoscopy and colonoscopy.
4. Increasing requirements of second consultations before elective surgery is done.
5. "Selective credentialing," affecting the future scope of each surgeon's work.
6. Emphasis on "informed consent," with leading risks of surgery explained.
7. The malpractice hazard, with the possibility of

more frequent and higher claims.

8. More effective and wider range of pharmaceuticals and other nonsurgery therapies.
9. The trend toward preventive health care, with the aim of keeping people healthy.
10. The concept of "regionalization of health care," with certain major surgery referred more often to larger hospitals and medical centers.

The above factors were first developed in 1975. New figures show that the inpatient surgery rate per 1,000 population is down nationwide by three percent—the largest annual decline in the past decade. The American College of Surgeons confirms as reasons for the reduction:

1. Greater public awareness through the news media of "unnecessary surgery."
2. More peer review activities.
3. The growing cost of health care.
4. The negative effect of second-opinion programs.
5. The increasing popularity of ambulatory surgery.

Additionally, an evaluation of the need for more operating rooms found: (a) a gradual shift from predominantly inpatient to "shorter-span" outpatient surgery will increase the number of operations per operating room per day, and (b) a trend toward the use of operating rooms more hours each day, including Saturdays, will increase further the number of operations per operating room per day. All factors considered, it appears that less surgery may be done and fewer operating rooms will be required in the future.

As mentioned earlier, because of their unusually high purchase cost, CT scanners are dealt with separately from the usual medical equipment review. Most publicity on scanners highlights the cost. Only rarely are offsetting savings reported. When this is done, a potentially negative public attitude can become positive and supportive.

In this connection, physician participation in the documentation of savings resulting from the purchase in January 1977 of a CT head scanner at Miami Valley Hospital paid unexpected dividends through supporting editorials in both morning and evening Dayton newspapers. Two years after installation of the CT head scanner, the following information was developed and presented to the press and the local Health Systems Agency.

Diagnostic testing directly affected since the installa-

tion of the CT head scanner two years earlier was reduced as follows, with the savings indicated in Table 1.

Table 1

Test	Percent Decrease	Savings
Nuclear Brain Scans	43	\$125,000
Electroencephalograms	16	31,000
Cerebral Arteriograms*	50	102,000
Pneumoencephalograms**	94†	30,000
Pneumoventriculograms**	100	<u>10,000</u>
		\$298,000

*Cerebral Arteriograms require 3 days hospitalization.

**Pneumo studies require an average of 5 days hospitalization.

†None since 7/77.

During the period following installation of the head scanner, the average length of patient stay at Miami Valley Hospital for all admissions declined 0.6 days, while the neurosurgical patient length of stay declined 3.2 days per admission. There were 601 neurosurgical admissions in 1978 and the decline in their length of stay at the current per diem rate of \$231.52 resulted in a net savings of \$361,364. (The original purchase cost of the head scanner was \$384,000.)

An interesting finding appeared in the cost of transferring patients from other hospitals to Miami Valley Hospital for head scans. Such patients averaged a 1.43 day wait for the examinations. This delay, combined with the charge for ambulance transport service, resulted in costs typically in excess of the charge for the head scan. (The minimum charge for such ambulance service in the Dayton area is \$70.)

These facts gained from actual experience in the economics of CT scanner use favorably impressed the news media with the possible results of new technology in the health care field, and provided a new perspective to the local HSA.

From a relatively unstructured beginning, the participation of physicians in the development and assessment of medical equipment budgeting at Miami Valley Hospital steadily progressed to an integral part of the overall budget process. Along the way, the effect of internal politics and attempts at power plays and influ-

ence efforts have gradually diminished. A desirable balance has been achieved between constantly rotating and permanent participants from the medical staff.

Along the way, too, experience has shown that certain pitfalls must be avoided for success in such a joint effort. First, administration must share the conviction that medical staff leadership has a legitimate participatory role in various aspects of hospital management. Their inclusion only in an advisory role for medical equipment considerations but not in other medical-administrative matters will not produce desired results.

Second, the annual recommendations of the Medical Staff Advisory Committee for Equipment Purchases must have support. Its role is compromised if the chief executive officer dominates, or the governing board over-rides the committee's conclusions. Even if the committee's conclusions on priorities are believed unwise, it is best to work for an adjustment, if necessary, in the year ahead.

Third, don't allow the committee to be circumvented during the budget year after decisions are reached. Refuse any requests for change back to the committee for consideration—and only there!

Fourth, avoid an imbalance of glamour items. Seek a fair cross-section of medical equipment that will benefit the greatest number of patients and departments.

Fifth, to minimize the problems of medical executive committee internal politics, mis-assumed veto prerogative, and trade-offs between clinical departments, the role of the committee as a direct advisor to management should be preserved.

There appears to be a trend toward physician participation in developing and allocating medical capital expenditures by various methods. On the basis of many years' experience at Miami Valley Hospital, the conviction has developed that the Medical Staff Advisory Committee for Equipment Purchases provides invaluable assistance in the budget process. As hospitals head into an era of austerity in capital expenditures, the participation and understanding of the physician in medical equipment budgeting may well prove indispensable.

The Practicing Physician and the Manager

ALVIN TARLOV

CHAIRMAN FOSTER: Our next speaker is Dr. Alvin Tarlov, professor and chairman of the Department of Medicine at the University of Chicago. In addition to a distinguished record in clinical research, he is interested in a number of other areas, especially physician manpower. He is presently the chairman of the Graduate Medical Education National Advisory Committee. He has been a speaker at previous symposia, so with great confidence, I present Al Tarlov.

DR. ALVIN TARLOV: I have no qualifications for this talk, or as a matter of fact, for the one that I gave previously. It's just that I have such great admiration for Odin Anderson that I guess I would do almost anything for him. Four years ago, I gave a talk on morals, or something of that sort. In preparation for it I read the Bible and a few other books on philosophy and put together a talk that was absolutely terrible. The whole thing was printed up and it was a source of great embarrassment to me, although I did send it to my mother and she thought it was pretty good.

I didn't realize until this afternoon, when I walked into the center, what this talk was about. The title of this symposium is extraordinarily intimidating to me. It says, "Changing the Behavior of the Physician: A Management Perspective." Now, first of all, I didn't know that we were misbehaving. Secondly, I didn't appreciate that we are management problems, and thirdly, I got the sense from the last talk that there is some sort of love-in going on between the physicians and the manager.

Despite everything, I am nervous about this because Odin asked me to talk about the practicing physician and the manager. That's a broad term. I called him up a couple of times and asked him what he wanted me to speak about. He said, "Well, you know, there are some very serious problems, . . ." but he never defined them, and in characteristic Odin Anderson fashion, left it up to me. Now, I am up here suddenly with the knowledge that I am supposed to respond to physicians as a behavioral aberration in our health care system.

So, looking over the roster here, I find very few physicians on it, or on the program, for that matter. There are a few. You have your token physicians here.

Really I am not so different, I guess, from most other physicians. We have a great pride in our intelligence. Maybe it is inflated or exaggerated, but nonetheless, that is an important characteristic of physicians. I do have a difference from many other physicians that I know, and that is that I have a great reverence and respect for hospital administrators. Some of my colleagues look down on hospital administrators as sort of idiots and what-not, but not me. I have really never underestimated the craftiness of a hospital administrator.

It reminds me of the story between a professor—the smart one—and a farmer—the dumb one—which sort of parallels our topic here. They found themselves traveling together on an airplane, seated next to one another. It was a long flight. The professor got bored and he turned to the farmer and said, "You know, let's play a game of riddles. Let's think up some riddles, and I'll give you a riddle. If you guess it I will pay you a dollar, and then it's your turn. If I guess yours, then you give me a dollar."

The farmer thought about it and he said, "Well, you know, that seems a little unfair to me because you have had all this learning and you are probably very good at riddle solving. I have not had any learning at all, so I think you ought to give me two-to-one odds. If I win, you give me a dollar, and if you win, I give you half a dollar."

The professor said confidently, "Great, why don't you start?"

The farmer said, "What has three wings, four legs, flies, and has a purple underbelly?"

The professor thought about that one for a long time and he said, "I don't know." He said, "Here's your dollar. What is it?" And the farmer turned and said, "I don't know, either. Here's your fifty cents."

I sort of feel that way when I come out of meetings with hospital administrators. I feel that I go in there as the smart one but I come out broke.

Well, anyway, the topic today is an interesting one to me and it is, I think, a very appropriate one. I

would like to tell my story from the physician's point of view, which I hope is somewhat different from yours.

I see the profession in a beleaguered state on the one hand, but I also see it responding to that state positively, constructively, and imaginatively. I don't know when this particular era of destabilization began, but I have an idea that it was in the mid-1950s at about the time the country was formulating its philosophy relative to civil rights. At that time, I think the doctrine for health was equal access to health care for all Americans. Following that, I think the Medicare–Medicaid legislation, and a whole lot of things, somersaulted and led the country into a bind economically in regard to health care.

It led to an awakening that all Americans did not have access to health care. It led to an awareness that there were insufficient numbers of doctors, that they were not in the appropriate specialties, and that they were distributed around the country in ways that served individual physicians but didn't serve the health care needs of the country. The country began to respond to this with legislation and regulation, which extended far beyond medical school into the drug industry, regulating release of drugs, medical appliances, etc. Almost everything related to health care today is regulated in rather transparent fashion in the health care delivery system.

In the 1970s when all of this got rung up on the cash register, a new era relating to cost containment came into being. The profession is responding to this, I think, by looking inside itself very carefully and recharting its course. I think there is great hope because the young people who are in training—15,000 of them a year graduating from medical schools—are coming out with a new perspective indeed, with a new desire to participate in larger societal issues. I think, by and large, they will respond to the challenge most appropriately.

I'm not a learned person in health history, but I think that maybe every fifty years or so there is a turnover in our profession. I know that the Flexner Report in the early part of this century led to enormous reforms in medical education and subsequently in medical practice. I have an idea that that was the last time our profession took a serious look at itself. Now, again in this century, we are doing the same thing. It seems to me that never before has there been a greater opportunity for physicians and managers to work together,

to coordinate their efforts to solve some extremely difficult societal problems.

Yet my theme this afternoon is that the basic functions, responsibilities, and purposes of physicians and managers are sufficiently different to make conflict between the two inevitable.

I have been involved in some research related to what physicians actually do in their practices. This research is being conducted at the University of Southern California. Robert Mendenhall is the director of the project there. I've had the privilege of working with him for three years on it and have gained considerable insight into what the practice of medicine is like. I would like to describe it to you if I can.

You may know this, but I would like to refresh your minds about some of the more subtle things. I will describe the practice of a general internist. Let's just say this general internist is not a teacher, but his full-time activities are in the practice of general internal medicine. He has a hospital where his patients are hospitalized and his practice is not too far from there. His travel time in his automobile on any day is about forty minutes, he lives five miles from his practice and raises his children there. His family has invested in this particular city or town.

I am going to describe one day of the week. It makes no matter which one because the work load in internal medicine appears to be even. The myth, or fact, that doctors take Wednesday afternoon off to play golf applies to some fields and not to others. It doesn't apply to general internal medicine. The five days are rather similar.

This doctor arrives at the hospital about 8:00 in the morning and, in fact, stays there from 8:00 to 12:00. He makes rounds on about six patients a day and, depending upon the setting, sees two additional patients in consultations that are requested by surgeons, obstetricians, and family physicians—in that order of frequency.

This two and one-half hours in direct patient contact goes by pretty quickly, but during that period there are six or seven patients the internist has come to know extraordinarily well. The patient realizes during this hospitalization that he or she is in a rather precarious and dangerous environment, and that there are a lot of frightening experiences. New technology has made machines that are bigger, noisier, and potentially more harmful as well as providing benefits in diagnostic capability. Nonetheless, the patient is dependent upon

this physician, trusts the physician, and has been a patient of the physician for years. If there is any time in that relationship when the patient needs that doctor, it's during hospitalization when there are so many uncertainties, so many fearsome things happening all around.

Sometimes it's difficult for the doctor making rounds on his patients, particularly if they are in a two-bedded room. It's very hard to materialize the intimacy between a doctor and a patient that should characterize their relationship when there is a patient in the next bed and privacy is not allowed in that particular setting.

What we want essentially is that the setting be warm, congenial, quiet, clean, and good looking. We want it to be efficient. We want the patient to feel that the operation is well managed, that all 3,000 employees (or whatever the case is) have been well schooled in patient problems and are sensitive to the peculiar and fearsome setting in which the patient finds him or herself.

Often, in going through the hospital, little nuisances which most people would ignore assume a magnification in the patient's mind. After all, the patient is in that bed, or in that room, twenty-four hours a day. Little petty things assume greater and greater importance, so the patient would like the managers of the hospital to understand them. Patient behavior and some of the things that annoy them may be unrealistic or exaggerated. They may not be worth paying attention to, but in that setting, they assume a greater and greater importance.

At any rate, this whole process takes about two and one-half hours in the morning. Occasionally, there is a disruption for a telephone call, but by and large, the general internist's work with his patients is over by about 10:30 or so.

There will be another hour and one-half spent in the hospital setting. About half an hour of it is spent in various laboratories, getting results, looking at x-rays, checking up on things relating not only to the patients that are in the hospital, but to patients in the office who have come to the hospital for various diagnostic tests.

Then there is another hour—and sometimes this hour comes first and sometimes it comes later—but it is spent roughly half and half. One day it will be spent in the doctor's own education, and another day it will be in some kind of administrative role serving the hos-

pital on a committee.

The education part of it will be grand rounds or some sort of a continuing medical education program that the doctor wants, and needs, for licensure perhaps or recertification in some states.

The doctor with patients in a hospital like that wants a full range of diagnostic and therapeutic capability there, although a system seems to be emerging in which there are shared resources and developments, or certain things are forced through HSAs. The doctor wants to push that hospital to the limit in terms of the diagnostic and therapeutic capability of that particular institution.

Suppose the hospital is in a rural area. The patient is not likely to wish to go to a big city to have a procedure performed. The patient will tell the doctor, "If possible, I would like to stay right here in my hometown, close to my family and visitors, in this particular hospital." So it's natural for the doctor to continue to push for broadening the capability of that particular hospital.

The doctor will want that hospital to assume a rightful place in a health care system. He may be angling to have an alcohol rehabilitation center developed there, or some kind of a specialized center for the treatment of mental disease, or something of that sort. By all means, a doctor wants to develop pride in that institution and will continue to push hospital administration for cleaner, larger, more attractive, more efficiently operated care facilities.

The doctor will also insist that his continuing education at home be managed by hospital administration, or at least be provided for by hospital administration working through a medical committee, a medical staff, the president, or the director of medical education. The process is dependent on the hospital administration to provide the resources to make that happen.

The hospital administrator, being a wonderful fellow, wants to do all of those things, but there is a question of resource allocation. It means continual conflict between what the doctors want, what the patient expects, and what the hospital administrator has to give.

Now, above all, the physician practicing in that setting wants deft skills from the hospital administrators in minimizing the doctor's role in responding to regulatory realities. Every time a new form is developed

in a hospital, the doctors wonder why the hospital administration can't satisfy the regulatory requirements without involving the physician himself.

Most importantly, the doctor wants the hospital administrator to respond as an American citizen, as a patriot, to this whole business about cost containment, which is a bloody nuisance. The doctors want the hospital administration to respond aggressively, enthusiastically, and imaginatively to that problem on everybody else's patient.

Now, the doctor ordinarily will either lunch in the hospital or leave it around noon because office hours begin at 1:00, five days a week.

The practices of general internists are uniform. They will see thirteen patients in the afternoon. Two of them will be brand new to that practice. When we consider fifteen percent of our patient contacts are with new patients, it provides for a lively practice and a challenging one. By and large, the doctor will give fifteen to twenty minutes to a returning patient, double that for a new patient, and in the meantime will be answering six or seven telephone calls from patients seeking advice. There are other telephone calls from pharmacists and other individuals, but there are six or seven directly to the doctor from a patient regarding a management question.

Although right at the moment, sixty-seven percent of general internists are in solo practice, that's beginning to change very rapidly. Most people coming out of training programs now are going into either group or partnership practices, so they are clustering together. They have management teams, and what they want in their office is to have more control than they get in the hospital. Some of them are in very large group practices where there are professional managers, but the doctor has greater control over the ambulatory practice in the private sector than he or she does over the hospital.

Less economically satisfying, but professionally more satisfying, is the outpatient practice in the afternoon. There is one doctor, one patient, and that is where the longstanding relationship between the doctor and patient originated and is sustained. There are no intermediaries.

Even, under that picture, the ambulatory patient is dependent upon the hospital because many diagnostic procedures are done there. Almost all patients in the practice of a general internist for twenty-four months or longer will have at least one encounter with the hos-

pital during that two-year period.

I am not talking about hospitalization. I'm talking about going to the hospital for a procedure of one sort or another. Again, the doctor is very dependent upon the hospital. When the patient brings back information that his particular visit was not satisfying, this irritates the doctor no end and he is very likely to bring it to the medical board.

He packs it all up about 5:00 or 5:15 and stops once more at the hospital. This time it's a very brief visit. Some doctors don't see all their patients, just those that require a second visit. Others will drop in and see each patient for two or three minutes before going home at 6:30 in the evening.

Generally, the internist is on call for his practice about every third or fourth night, but that call can be handled increasingly by telephone at home.

Essentially, the interface between the doctor and the hospital administration is one in which the doctor continually asks for more and better and the hospital administrator tries to respond constructively to that, but is more intimately involved in the wider national health scene in which such problems as cost containment, quality assurance, and regional planning play a larger role. The doctor is more remote in his everyday thinking from large societal or public health issues.

The doctor is really focused on individual patients and not on public health statistics regarding the cost benefit of any particular way of doing business. Hospital administrators, on the other hand, bear the brunt of the current interest in cost containment. Every week they hear from the trustees of the American Hospital Association that if we don't contain costs somebody external to us is going to regulate our responses to costs and, therefore, it's up to hospital administrators to put the lid on. In order to do that, the hospital administrator has got to go back to his institution and make some very tough decisions of the sort we have been talking about this afternoon.

With the broad visibility and audibility given to such difficult problems as cost containment, cost benefit analysis, scarce resource allocation, medical malpractice, and regulations which attempt to assure public accountability, there is a danger that an individual physician's role as patient advocate may become subverted in favor of a physician's response to large societal problems, primarily related to the economics of the health care system in the United States.

The basic work of a physician is intensely personal.

The most important element of that work is the patient-physician relationship. That relationship, in and of itself, is therapeutic. Perhaps it is the most powerful therapeutic modality that exists.

Attempts to force physicians into judgement making related to broad considerations of the society's health tends, in my view, to be destructive of a physician's relationship with individual patients.

Collusion between physicians and hospital administrators or managers in responding to societal problems should be avoided by our profession because it may in-

terfere with the physician's performance as an advocate for each patient, and it may diminish the potency of the therapeutic relationship between the patient and the doctor.

The basic functions and responsibilities of physicians and managers are different. Conflict between the two is natural. It should be anticipated and, in my view, it's most welcome.

General Discussion

Chairman: RICHARD W. FOSTER

CHAIRMAN RICHARD W. FOSTER: Our previous speakers this afternoon are all here, so we will field questions for any and all of them at this stage.

MR. SAMUEL FRIEDE: I have a question for Dick Johnson. Dr. Sutton might want to answer it also. Could you comment on how the relationship between the medical staff and the CEO affects medical competence?

MR. RICHARD JOHNSON: That is one of the interesting questions I have watched over the years. It strikes me that when physicians get into administration, after two or three years the rest of the medical staff regard the physician who is a medical director or full-time chief of staff with considerable suspicion.

One of the things I have learned over the years is that you never want a physician in a full-time capacity like this because he loses his clinical skills along the way. Then he is held in low regard by the rest of the medical staff because they think he is the administrator's boy in the organization.

I think you have to be very careful on that one. Something that has always struck me is that physicians are far better off doing their managing functions on a half-time basis, and spending the other half as clinicians.

If the group over whom you have been trying to exercise authority has no regard for the way you are doing it, they will not acknowledge that you have that authority, and therefore, they are going to ignore you, and that is exactly what they do. I guess you could probably say that most medical staffs are organized anarchies as well.

DR. FRANK SUTTON: It has been my experience that if you take an M.D. and put him into an administrative capacity full time, rather quickly he is considered by the medical staff of the hospital as the administration's boy and it becomes an adversary relationship. I feel that he should retain a clinical practice where he can continue in a relationship with the other doctors on the medical staff. That will be much more helpful.

MR. FRIEDE: Dick, do you say the same thing?

MR. JOHNSON: Yes, the physician becomes an administrator, and he does retain certain sensitivities which work in favor of the administrative relationship. The minute you step in and make a clinical judgement, boy, are you on thin ice. You are nothing but an administrator at that point.

How many clinical judgements have you made in the last thirty years?

DR. SUTTON: I scrupulously avoid them.

DR. EVERETT JOHNSON: This is for Al Tarlov.

This morning, Odin made a statement that the group didn't pick up. Yet I have believed it for a long time. Odin said, in essence, that physicians will fight more in the future over clinical freedom than they ever will over fees. I think that in your opinions this afternoon you really expressed the same point of view. Is that right?

DR. ALVIN TARLOV: Absolutely. I have no doubt about that, and I think physicians are going to become much more aggressive in that regard. Medicine is in a growth phase. There are 15,000 doctors coming out per year. Soon it will be 17,000, and then almost 18,000 coming out per year.

If you look at the age distribution of physicians in the U.S.A., it is continually moving over toward the left. That will be even more true in the next ten years. These are individuals whose ideals are somewhat different from those of the past. I think that you can expect a great deal more fight from them in regard to their right to exercise clinical decision making and judgment than you will get from them about fees.

MR. R. JOHNSON: I have an example, Everett, of what you are talking about. If you sit down at U-Med at U.S. Navy Headquarters, and go through the ranks, you only find one regulation dealing with the clinical practice of medicine. That has to do with high forceps on an OB delivery. That was the only regulation I

could find about doing a clinical practice, and that is in a pretty structured system.

CHAIRMAN FOSTER: Ron, did you have a question?

DR. RONALD ANDERSEN: I would like to ask you, Al, if you really believed in the dichotomy between the administrator and the physician, to the extent you said you believed it in your talk. More particularly, would you comment on the role of the physician in terms of the allocation process that Dr. Sutton was discussing earlier? Are you in favor of physicians being involved, and if so, does that coincide with the theme that you were talking about?

DR. TARLOV: I heard Dr. Sutton's talk. He has gone to great lengths to create an organizational framework around the principle of involving the doctors in priority setting. This involvement is absolutely essential.

What I attempted to say was that it must be done, but one ought never to expect that hospital administration and medical staff are going to collaborate happily in such difficult problems as cost containment, quality care assurance, and other things that are a reality today. The most effective physicians in the hospital, the ones that I would like to see as president of the medical staff, chief of the executive committee, or whatever, are the people who, for their own satisfaction, do not need to have a happy collaborative arrangement with hospital administration.

The medical staff ought to push and push and push, even to the point where they are somewhat obnoxious in obtaining for their patients a full-range capability in their hospital, in as pleasant surroundings, and with as efficient an operation as possible. I think the purchase of medical equipment has to involve the doctors, but in keeping the hospital clean and performing the management functions of the hospital, I think the doctor has certain expectations but he needn't be involved.

DR. E. JOHNSON: I would like to follow up with this point. The positions being stated are confounding to economists because they are always working on the assumption that the physician is going to maximize the profit dollar.

This isn't so, and you see it in one study after another that HEW or somebody else has funded. They look at the physician, they look at hospital behavior,

and in economic terms they can't explain it. The results are generally inconclusive.

They are inconclusive because people are professional, and until the managers of the managers in Washington understand that, we are going to be in constant turmoil.

CHAIRMAN FOSTER: Would any of the panelists like to respond to that?

MR. R. JOHNSON: I think that is right. I go one step further on what Alvin is saying here.

One of the things that is readily apparent is that as you watch a medical staff, you realize that it likes to have everything in-house. That is why the tables showed that large hospitals have the highest costs. They have the highest costs because they have the greatest range of services, which is exactly what the physician wants. He wants to be able to walk down to the lab, or walk into the dining room, and talk with a specialist who was just on a consult to a patient of his. He doesn't want to look him up in the afternoon and get him on the telephone when he has a busy office practice going. He wants to be able to do it at his convenience. That is human nature. The pressure is always on expanding the system.

DR. SUTTON: I believe in the relationship between the hospital administrator and the medical staff. It is important, particularly for those newly arrived in the field, to realize that there are certain goals and objectives which the medical profession has that are opposed to those which hospital administrations have. I think it is important to recognize this fact and not constantly attempt to butt horns, but to accept that there are some things on which you are not going to agree. On the other hand, there are a great many things that you can agree to, and therefore, you can work harmoniously. Even with those things that you don't agree on, you can disagree without being disagreeable. But if you don't accept the realities of that situation, then you are in an increasing position of conflict.

MR. R. JOHNSON: If you take American industry in any corporation, you have marketing and you have

production. They are natural antagonists and it will always be so.

The production manager always wants to standardize to get the highest volume with the most limited range of services, and the salesmen always want to sell the most of whatever meets the peculiar interest of each one of his customers. General management in American industry has the problem of always reconciling these competing forces. That is what Dr. Sutton is describing in the health care system.

CHAIRMAN FOSTER: There are a number of other questions.

MR. MIKE MCKEE: One of the things I think we are seeing in the academic health center probably indicates another level of struggle between other administrative positions. Pharmacy, psychology, and all the other allied health professions are eager to exert professional prerogatives, eager to say that they have a role in influencing health care costs, and just as eager to say that they have a part of what the physician has traditionally felt was originally his or her prerogative.

I wonder if you would like to comment on that because I think we are seeing professions—clinical pharmacy, respiratory therapy, as examples—that didn't exist fifteen years ago. Lots of these things are not only at various role levels, but I think they also have a relationship to cost containment.

DR. TARLOV: I sense that within the profession, in internal medicine particularly, a greater respect for nurse practitioners is developing, as well as a disdain for the other nonphysician health care providers that you have enumerated. In the doctor-patient relationship, the doctor is learning that the more professionals who get involved, the more complicated and out of control that relationship becomes. Doctors who have lived long enough to experience a growth of nonphysician health care providers over the past ten years and have used them, are beginning to draw in a little in using nonphysician professionals. So I don't know how far the pharmacist, or the respiratory therapist, is going to get into hospital work.

For example, I know that pulmonary physicians in the U.S.A. are beginning to demonstrate disillusionment with the utility of respiratory therapy. Part of that has to do, I am sure, with some studies that demonstrate utility or lack of utility of procedures, but some

of it is conditioned, I think, by the physicians' bewilderment—the sense that they are losing control. The more professionals that get involved in a hospitalization, the more complicated it gets and the poorer communication becomes between the physician and the patient. One thing a doctor hates to do is go into the hospital in the morning and be confronted by a patient who has had something done to him or her that that doctor doesn't understand or wasn't a part of.

The more professional some of these individuals become, the more independent they want to be in the treatment of the patient. Their intentions are excellent, but it complicates the role of the physician, and I do believe that the most potent therapeutic modality is the doctor-patient relationship. I think that means more than anything else in terms of the patient's well being, and I think that the profession can be counted upon to protect it and to fight like a dog against intrusion on that particular relationship.

I think that that philosophy hasn't been publicly articulated yet, but bits of it are coming out. It won't be long before the profession grabs hold of that idea and begins to play a more active role in determining who is involved in the doctor-patient relationship.

DR. JOHN COLOMBOTOS: I want to respond to Everett Johnson's remarks, especially his dismissal of economic incentives as influencing the physician's practice behavior. I think it would be naive to ignore those incentives and say professional behavior is not motivated by economic incentives. I would include among professionals physicians, professors, attorneys, and so forth.

I would like to respond by reminding the group of the data that I am sure everyone in this room has heard. There was an analysis of surgical rates by Bunker in the *New England Journal of Medicine* some four or five years ago where he showed that the rate of surgery per capita in the U.S. was roughly twice what it was in the U.K. As I recall, the proportion of surgeons in this country is roughly twice as many here as there.

Now, I don't see how you can easily dismiss economic incentives as influences on the physician's behavior in the face of that data.

DR. E. JOHNSON: I didn't mean entirely to dismiss economic motivations, but what I am saying is on a day-to-day, patient-to-patient basis, the basic judg-

ments of a physician are going to be on a medical basis and not on an economic basis. We create errors and twist our systems when we try to put too much emphasis on explaining behavior on an economic basis. That is all I am trying to say.

DR. COLOMBOTOS: You would not omit it, however, as a possible influence?

DR. E. JOHNSON: Of course not. Can I pull this together by asking Dr. Dobson to comment. When you reviewed PSROs, you said that you left profile analysis almost untouched.

DR. ALAN DOBSON: It was our impression that profile analysis seldom takes place in the PSROs and we could find few examples of it.

DR. E. JOHNSON: Do you think it is going to occur? If so, is it going to be focused on quality or cost? What penalties would you attach to it?

DR. DOBSON: I get the impression personally that the program is very serious about doing profile analysis. The program has demonstrations taking place with respect to profile analyses, but I think the motivation for the profile analyses is really twofold. It is both cost and quality because that is the basic sort of dilemma in the program. On one hand, you use the profiles to focus concurrent review, and on the other hand, it also helps you to focus and determine where you ought to do your MCEs. The same sets of data which are profiles on physicians and hospitals can be used for both purposes. I would have to say the answer is, both, to the first part of your question.

In terms of penalties with respect to the profiles, I don't see that penalties will be the result, rather there is an implicit threat to PSROs that if their performance isn't particularly noticeable or beneficial, they may be defunded. There is sort of a movement towards the defunding of PSROs that really aren't doing anything, and profile analysis might have some bearing on that decision, although I suspect that it is a very minimal one. Otherwise, I can't think of any sanctions that would be directly linked to the profile analysis.

MR. R. JOHNSON: I think that penalizing the PSRO is a strange answer. I can understand, in the political sense, what you said, but the whole point is to change

physician behavior. What you are aiming at is changing PSRO behavior.

DR. DOBSON: This assumption is that if the behavior of the institution doesn't change, the PSROs aren't doing much. It may or may not be a correct assumption, but clearly if we look at days per thousand as the variable and we find a PSRO where care per thousand is rising, and we also have a suspicion that the management of the PSRO is terribly good, and nothing else seems to be going on, the presumption is that the PSRO isn't changing physician behavior. Hence, it is the PSRO that catches hell in that instance. That is just the political reality of it, and in the department, there is much talk about defunding the people who aren't doing anything, I guess, because you can't defund the doctors, you know.

QUESTION: Dr. Tarlov, coming from a medical school, you make me a little bit nervous about describing the relationship between the physician and the hospital administrator in the sense that the administrator is sort of a bad guy.

Maybe I misunderstood you, but it appeared to me that maybe in the medical school curriculum some understanding of social pressures, economics, and so forth could be introduced which might be slightly helpful in fitting the physician into the hospital setting. Is this being done or is there some consideration of it in medical school at the University of Chicago?

DR. TARLOV: Yes, I think it is done. I think there is a greater awareness at the medical school level of large societal issues related to health at the University of Chicago.

There is a program—I think it is very imaginative in this regard—called the arts and sciences of human medicine or something of that sort, but which has a large public policy input into it. I think the students get a reasonable exposure, but it is not generalizable at the present time to the whole medical school class. I think that I must answer your question by saying that there has been a response, but it is inadequate.

I really believe that a doctor's responsibility is to his patient. If the medical profession wants voluntarily to respond to national needs in regarding cost containment and all the other things discussed today, I think

that would be destructive of the doctor-patient relationship.

I think that I, as a citizen of the United States, have no argument with the nation, its government, and the hospital administration field doing what is necessary for what is perceived to be the public good. I have no quarrel with that as a citizen. As a physician, however, I believe that those considerations ought not to interfere with the doctor's judgment on an individual patient.

For example, I really believe in the idea of a regular physical examination. There is no question that if you look at it from the cost-benefit point of view, there is serious reason to doubt whether such examinations ought to be applied to the population of the nation. But those cost-benefit analyses have very little relationship to what a doctor does for an individual patient with whom he has a great investment and a great trust.

Patients want the doctor to do whatever is necessary, at whatever price, to assure that no disease that can be treated effectively goes undetected. I believe that in a doctor's day-to-day practice, if there has to be regulation of what he does for a patient, it should come from the outside and not from within the profession.

MR. THOR ANDERSON: I would like to direct this to Dick Johnson. You said you expect economic competition to increase in the health sector in the next decade.

MR. R. JOHNSON: Right.

MR. ANDERSON: What structures do you see that taking, what forms?

MR. R. JOHNSON: I think we have two routes. I think the health field has to take some leadership. Either we will go the route of increasing regulation which we have been on for ten years, or we will have to introduce serious economic competition which we do not now have.

We have competition, but it is noneconomic. That means that we are talking about capitation plans where large bloc purchasers go into the market place.

If you look at the numbers, what you will find is that there are now about 206 HMOs in this country. Over 8,000,000 people are enrolled in them, and the rate of enrollment has been going up in the last twelve months at about twenty percent a year.

If you take that twenty percent growth over the next ten years—I think this is conservative—it means 31,300,000 people in HMOs ten years from now. At a twenty percent growth rate that will be seventeen percent of the total population of 239 million.

I foresee that as the alternative which is likely to happen because of some conversations I began hearing on the Saturday night cocktail circuit. Presidents and executive vice presidents of large corporations in the area where I live were talking fairly intelligently about HMOs and they were not just words to them any more. HMOs were meaningful things. In their discussions they were plotting how to get employees to look seriously at HMOs. In this day and age, labor and management are both concerned over the fact that they can't get on to other subjects at collective bargaining time. Health care premium costs have risen so dramatically that management sits at the bargaining table and says: "We want to have it recognized that we are going to spend X percent more per year in fringe benefits." Because it has been included as a service in the fringe benefit package, the labor representatives sit there and say: "No, that is already in the package. It is not negotiable." Management says: "Yes, but we are spending more dollars."

Both of them see it as a sticky wicket, and they need to resolve it. Both sides recognize that, so I think we are going to see labor and management, along with government, much more interested in HMOs. We have created a climate where HMOs will become much more successful in the next ten years.

MR. GLEN MISEK: You also suggested that economic competition will somehow result in a parity relationship between the hospital administration and the medical staff. How will that work?

MR. R. JOHNSON: Right now the life blood of the administrator depends on his manipulative skills. The fact that as costs go up you get more bucks out of cost reimbursement is no answer. As we get into economic competition, the value of the guy with the sharp pencil who can drop a unit cost or can make a price tag more attractive to the large bloc purchaser will be recognized. Those skills will be appreciated in a way that they are not now appreciated. So I think we are in for a drastic change in the health field. I think ten years from now we will be talking quite differently in this room.

MR. MCKEE: I want to get back to the original question because some things that came up hit the issue.

What I am trying to say is simply this. Does not professionalism as expressed by M.D.'s or administrators have both an economic and a "philosophical" dimension? Even though we say on one hand that something is a professional issue, it can just as easily be explained as the penetration of one's turf or market, if you will. That is, many of the health professions have come into areas in which physicians normally were very active. Now we see that there are other professions that are increasing or that want to safeguard that particular area.

In fact, this is the same type of growth behavior that executives have in corporations and not simply on the marginal cost revenue issue, but also the market share issue.

I wonder if you would agree with that statement. We are seeing a professionalism that is economically based on growth more than on market cost revenue. This contrasts to a professionalism that is simply quality assurance.

I think the concept is there. It is reflected in what we say the administrator should be doing, and our decision making expresses what doctors are saying today relative to clinical practice. I think that they are parallel objectives, but they have economic as well as philosophical bases.

DR. TARLOV: I don't have an interesting response to that one. Certainly the nurse practitioner, in some areas, may represent an economic threat to the doctor's market. In some states they are allowed to write prescriptions and charge professional fees. But there aren't that many. There are about 13,000, I think, in the United States.

There are 2,000 registered nurse midwives. It is a small number relative to the number of obstetricians and gynecologists in the United States, and it seems to me that the nurse midwife and the American College of Obstetrics and Gynecology, for example, have a very good relationship.

It doesn't seem to me that those numbers are excessive. The two groups I mentioned are growing and there are likely to be 25,000 of them by the mid-1990s, but by that time there will be 500,000 or 600,000 doctors, too.

MR. MCKEE: There will be an increase in the

population then.

DR. TARLOV: Yes, but I don't see the pharmacists and respiratory therapists, the two examples that you cited, as being a threat to the doctors' turf. Maybe I am wrong.

MR. MCKEE: I don't know. I have seen a lot of threatened behavior appear in the academic setting, but fields such as clinical pharmacology do raise a lot of questions regarding what the pharmacist is going to do in his station. Physicians are raising questions about respiratory therapists assuming roles in that therapy and asking whether the internal medicine physician should be there. They suggest the time would be more productively spent if the resident were involved in that therapy rather than a technician.

DR. TARLOV: I think that your experience and my experience may be skewed the same way in the academic setting because I agree with you. In the academic medical center nonphysician roles are a big problem, but the funding of an academic department is very different than the funding of a person's practice.

The academic medical center and its departments are in a terrible financial situation in which the academic activities are being perverted by economic reality. Some things are being done by doctors in the academic medical center that the doctors would like not to do.

The heart station is more active than it needs to be. There is more cardiac surgery than there needs to be for teaching and research. There is more dialysis going on than they need for teaching and research, but this is their adaptation to dwindling financial support from the federal government and from the university.

It is true, not in my place because the internists don't run respiratory therapy, but there are academic centers where that represents a large source of income to the department of medicine, and they are going to fight like hell to keep it in there. It represents a conflict, but for the large mass of internists who are out there in practice, I think there are only a handful who run respiratory therapy.

MR. CRAIG SCHWARBERG: Dr. Tarlov, you have indicated that a physician, in many respects, should insulate himself from the overriding concerns of cost

containment and what-not and concentrate on the physician-patient relationship.

What struck me a little funny was that you should push management to provide as many services as possible. The atmosphere is to be as pleasant as possible for your individual patients.

I think that by doing so you are involved in projects, e.g., capital expenditures for CAT scanners, that have a greater societal implication than just one individual patient. All these increased technological advances have not achieved any significant increase in health outcomes, i.e., people have not lived significantly longer in the last ten years due to technological innovation. How can physicians continue to be so insulated when everything they do has such far-reaching effects, with no significant health outcome?

DR. TARLOV: Let me respond in two parts. Let's take the CAT scan because you mentioned it. The CAT scan, for practical purposes, has made the lumbar puncture obsolete as a first-line diagnostic tool. Lumbar puncture is much less expensive to perform. The CAT scanner is \$300,000, or \$600,000. It costs \$300 each time it's used. Here in Chicago, for example, there is a CAT scanner at Rush Presbyterian-St. Luke's Hospital, but not one at the Cook County Hospital. Cook County Hospital patients are taken across the boulevard to the Rush Presbyterian-St. Luke's Hospital. You could only get away with that at County Hospital. A hospital that size wants to have its own CAT scanner, but what happens is that the doctor caring for a patient who comes in at 11 o'clock with a headache is likely to go ahead and do the lumbar puncture rather than go through the hassle of bundling a patient into an ambulance, and going over and talking to the doctors in the other place, getting their consent, etc.

Now, given that the lumbar puncture is billed, what is the bill? Maybe it is \$40 and the CAT scan is \$340. I am going to order the CAT scan every time because I can assure patients that there is no danger associated with it. They don't have to lie in bed for twelve hours. It is accurate. There is no possibility of developing a headache related to the procedure, and it is absolutely safe. It amplifies diagnostic capability ten times over that of a lumbar puncture.

I don't know if the CAT scanner saves lives, or prolongs life, but my own view is that it contributes positively to making the hospitalization less treacherous,

less offensive, and less dangerous. I am going to order it every time for my patient. Somebody else is going to have to tell me that it costs too much.

I am not as cynical as you may want to be in regard to the effectiveness of the advancements of the science of medicine in promoting health. There are obvious advancements we all know about: antibiotics, the cure of infection, immunization and prevention of poliomyelitis, and things like that.

Just this afternoon I had a fascinating twelve minutes. I will bet it wasn't any more than that. A faculty member had just come back from a conference in Copenhagen on diabetes. This faculty member has been working fifteen years on diabetes. He is a very significant contributor to the field. He told me that in three or four more years the riddle of diabetes will be solved.

Then he went ahead and talked about how close medical science is to a complete understanding of the etiology of diabetes mellitus, and I said to him, "What does that mean for the patient?" He proceeded to tell me how simplified the treatment of diabetes is likely to become in the next ten years.

It is true that among heart disease, cancer, and stroke, diabetes is a relatively simpler challenge than the others because it is inherited. The science of inherited disease is sharper than the science related to acquired disease because the environmental influences on heart disease, cancer, and stroke are so great and enormously complicated. Nonetheless, I have no hesitation in advising you that, one by one, these big ones are going to be picked off. The more you know about their etiology, the simpler the therapy.

You can't overlook antibiotics and the development of immune therapy, including immunization for poliomyelitis. Science is a continuum. Just as infectious and bacterial diseases and those susceptible to immunization have been conquered, just as surely the viral diseases, respiratory infections, and the common cold will be conquered. Diabetes will be finished within a decade, and heart disease, cancer, and stroke are around the corner.

I am not saying it will happen tomorrow, but it is very close, and I wouldn't interfere with the momentum that biological science has. I wouldn't be cynical about the effectiveness of these developments in improving the health status of the American people.

MR. SCHWARBERG: I think you misunderstood me a

little bit. I am not saying that science does not advance the human health status. I am not being cynical about it at all. But is it necessary that every hospital on the block has a CAT scanner? Should a physician push management to buy equipment so that he doesn't have to go across the street to give a CAT scan?

I think that in terms of cost to society, it would be a great advantage if physicians could not only take a more societal perspective, but also educate their patients in not always having everything at their fingertips.

DR. TARLOV: Yes. I am saying that preaching isn't going to do much good because we doctors are going to use the full range of capability, and we are going to depend upon you to do some interesting planning.

Make it easier to share facilities. Maybe it wouldn't be a bad idea to have two hospitals in different locations using some of these expensive diagnostic things

somewhere in the middle and connected by a tunnel or thoroughfare. The equipment may not be the proprietary investment of one institution or another, and it may be jointly owned and available to all the patients and all the doctors practicing in both places.

MR. L. PENN BERENS: Radiologists are already beating us out on that. They install the equipment in their own offices, Dr. Tarlov, and get around everybody.

DR. TARLOV: Yes, all I am saying is that I would like to hear your suggestions for a solution, but as an individual physician, I am going to fight to have ready access to those facilities for my patients; and I am not going to listen to a hospital administration which talks about national interests when it comes to my patients.

The Physician and Manager in Group Practice and HMOs

FREDERICK J. WENZEL

The third general session of the symposium convened on Saturday morning, June 2, 1979, with Odin Anderson, professor and director of the Graduate Program in Health Administration and the Center for Health Administration Studies in the Graduate School of Business at the University of Chicago, presiding as chairman.

CHAIRMAN ODIN W. ANDERSON: Good morning. This is the usual Saturday morning symposium hard core: a highly intelligent, self-selected, dedicated audience.

I'm pleased this morning to present a man I've known now for ten or twelve years, since I first started to visit the Marshfield Clinic. At that time he was not executive director of the clinic, but director of the Marshfield Clinic Foundation which does research. Even at that time I felt that he was a gray eminence and a pervasive influence. He became so pervasive that he finally inherited the whole works. He is now executive director of the Marshfield Clinic and I don't know what direct affiliation it has with the Marshfield Foundation, but I am sure it is close.

If continuity in a setting and institutional memory is of value for an institution, or health services delivery system, then certainly Fritz Wenzel's career clearly demonstrates that fact. One thing that intrigues me about Fritz's background is that he went to the University of Wisconsin and got a degree there and then went to Marshfield, where he is from originally. It's no wonder the doctors trust him.

Usually you go to school, then you take a job and get experience. Well, he went to school and then got a job and has had fifteen or twenty years of experience, but now he is reversing the process. He decided that he had so much experience he needed to be exposed to the academic side of health services administration, so he enrolled as a student in the Executive Program at the Graduate School of Business. It meets one day a week all day, and people in the Executive Program have full-time jobs as well, so I think it's quite an endurance contest and an achievement to go through the Executive Program.

Perhaps now he is finding out whether the theory he is learning has anything to do with experience. I would like to quote George Bugbee on this matter. Some years ago, we were changing our program from a one-year academic to a two-year academic program. By that time—this was sixteen years ago—it was felt there was enough content to warrant a two-year program. George, I guess, got some of the flak from graduates who had had the one-year program that students should have some experience when they are still within the academic orbit. George said, "Well, better to have them get the two-year academic exposure right at the beginning because you will have experience the rest of your life."

Fritz has had experience a great deal of his life. Now he is in the academic fold and will be graduating next week. I'll be very pleased to meet him when he comes out of the line and congratulate him. With that combined introduction, I present Fritz Wenzel and his view of managing the doctor in various practice situations.

MR. FREDERICK J. WENZEL: Thank you, Odin, that was a most generous introduction.

The applause reminds me of one of my favorite television personalities of the 1950s—Bishop Fulton Sheen. One evening I was watching his program when the subject was the theological virtues of faith, hope, and charity.

This happened to be one of the shows televised live with an audience. There was a young man sitting in the front row looking rather puzzled. The Bishop said to him, "Son, I don't think that I am getting through to you with my explanation of faith, hope, and charity, and perhaps I ought to make it a bit more clear." And the boy said, "That sure would be fine, Bishop. I just don't get this stuff at all."

And the Bishop said, "Well, let me draw an example." "Now," he said, "you noticed when I came out to speak tonight, the people applauded." And he said, "I can explain that best by saying that that was faith. And the people had faith that I would have something enlightening to say this evening."

And he said, "You noticed that about half-way through my presentation, the people applauded again." He said, "Now, that is hope. And I suspect that they were hoping that I would be finished very soon."

And the Bishop paused for a minute and the boy said, "Oh, now I understand it." He said, "I suppose if they applaud at the end, that will be charity."

I suppose that may happen to me this morning as well.

Last evening I had an opportunity to call my wife. I wanted to call her because about two weeks ago my daughter, who is in law school at the University of Wisconsin, my wife, and myself, talked about implicit and explicit contracts. I learned a great deal from Selwyn Becker's talk yesterday about that subject and I thought I would report that new knowledge to my wife.

At the conclusion of the conversation, my wife said, "By the way, dear, where are you?" And I said, "I'm at the University of Chicago attending a symposium and tomorrow morning I am going to make a presentation." She said, "Well, that's nice. What is your topic?"

I said, "My topic will be the manager and the physician," and she said, "Are you going to be pro or con?" I said, "Well, I really hadn't thought a great deal about that, but I know now that I will have to take one side or the other. After hearing Dick Johnson yesterday, I thought in order to balance out the program, I would take the pro side."

She continued, "By the way, what is the name of the seminar?" I replied that the title was "Changing the Behavior of the Physician." She thought about that for a moment and she said, "Perhaps you might give Dr. Anderson a recommendation. I don't know if he will take it or not." You have to remember my wife has been a professional nurse for about twenty-five years.

She said, "That title just doesn't really ring true, or it just is not quite catchy enough." She said, "How about something like 'Changing the Behavior of Physicians and Other Fairy Tales'?"

A rather erudite professor from this university made a comment in a paper he wrote. I don't know how many of you have seen it, but the title of the paper is "Good Managers Don't Make Policy Decisions." In it, he had a statement which I would like to read to you because I think it's quite appropriate:

A manager cannot be expected to describe his

methods even if he understands them. They border on manipulation and the stigma associated with manipulation can be fatal. If the organization ever identifies him as a manipulator, his job becomes more difficult. No one willingly submits to manipulation and those around him organize to protect themselves and yet every good manager does have to manipulate.

So, I will have to be very careful in my presentation to you.

This morning I would like to talk to you about a variety of topics, most of which come from my experience. I am going to talk from that experience about the perspective of managers and physicians and the relationship between the two.

Obviously, if these relationships are important, we need to address them. Yesterday we heard them addressed in one kind of environment. Today I am going to talk to you about these relationships in another kind of environment. I am also going to tell you about my background, because I believe that is important when you are talking about your own experience. People need to know where you are coming from and it's important that the group has the proper perspective.

I am also going to talk briefly about our institution, the Marshfield Clinic, how it developed, and how some very paradoxical situations exist there, but seem to work very well.

I will discuss the idiosyncrasies and peculiarities of physicians and managers, as I know them, and how understanding those idiosyncrasies and peculiarities can help develop a strong relationship between physicians and managers.

The real question is: what implications does this have for managers in the real world? Dick Johnson took a rather pessimistic view of the relationship between the hospital president and the medical staff. I am going to take a more optimistic view. You must recognize that we are managing in two different environments, a clinic versus a hospital. We are working under different circumstances perhaps, but maybe there is something the hospital administrator can take from these comments.

Certainly we both deal with problems in management. We deal with problems with physicians and patients. We deal with problems of policy, (both health

and corporate) medical care costs, and fee-for-service versus other financing mechanisms. We need to balance the budget. It has always been said, and I believe that it is true, that you have not really managed until you have been responsible for a payroll. This is the area where a manager gains real experience.

Interpersonal relationships also pose tough problems for the manager, not only with his physician staff but with his administrative staff and all of the people who work in the institution as well.

Public regulation has come on the scene rather recently in the health care industry. It poses a variety of difficult problems, perhaps more in the hospitals at this point in time, but as I see it, more in the clinic and HMO setting in the future, as well.

Against this introduction, allow me to review my background in management. I was a graduate in science at the University of Wisconsin. Early on, I was asked to join the Marshfield Clinic with the principal purpose of establishing a clinic laboratory. That was in 1953, when the Clinic was looking ahead to more intensive ambulatory care and the kind of care that would reduce hospital utilization.

It had been decided in the early 1950s to build both an expanded x-ray facility and a clinical laboratory unit, within the clinic, so that those patients who ordinarily went to the hospital for those services could be served as outpatients. That was a very successful venture, and I remained in that position until 1964.

One of the reasons that I went to the clinic was that I would be allowed to pursue my research interests along with developing the laboratory. With the laboratory completed, I was asked to begin the development of a then paper organization, the Marshfield Clinic Foundation. The job was to assemble a staff of basic researchers, promote projects, and secure money, as of course everyone tried to do in those days, from the federal government.

That was a very interesting point in my career. I had the opportunity to work with physicians, on a different basis, which stressed daily contact with a team approach, an experience few administrators have had. I remained in that position until 1976.

Along about 1971, again looking towards the future, the clinic was interested in the development of a pre-paid program, and with that was born the Greater Marshfield Community Health Plan. I was not involved in the early stages of the program's development because it fell into the area of operations rather

than experimental study.

Once the plan was in operation, there was concern among the physicians that while the Health Maintenance Organization was providing services and making these services available to those who could pay, there was little available for the low income non-Medicaid population. Because there were demonstration funds available at that time, I was asked to look into the matter. We were successful in obtaining a grant from the Bureau of Community Health Services to provide for those individuals through a Community Health Center. That was my real first exposure to working directly with the plan, and since that time, I have become quite involved and I will talk about that later after a brief description of the Marshfield Clinic.

The Marshfield Clinic is a multispecialty group practice with 170 physicians now and soon to be 175 this summer when our complement of new physicians comes on board. Our nonphysician staff numbers 1,200. We practice in a town of 17,000 and I haven't divided that out, but I think that is more than the 2 physicians per 1,000 population that was mentioned yesterday. The main clinic is located in Marshfield, and we have five satellites up to 140 miles away. The clinic is a very interesting organization because it is quite democratic. There are currently 128 members of the board of directors, and it's one man, one vote.

We have had a unique salary plan in which all physicians receive the same salary, be they cardiovascular surgeons or pediatricians. That is unique enough for economists and sociologists to have told us that it will never work. There are also members of our own group who have said over the years that it will never work. Even at this time an intensive study is being made of the compensation system, not only in our own setting but in other major clinics as well. That compensation system may well change dramatically in the near future. I am going to talk later about the management of conflict which centers around compensation and how I think that conflict ought to be handled. Certainly in any physician group, and the physicians in the audience will attest to that, compensation can be a source of great conflict.

Another anomaly of the clinic is related to the previously mentioned Greater Marshfield Community Health Plan. We have two systems under which the clinic is compensated. One is a capitation basis, which rewards low volume, and the other is fee-for-service, which rewards high volume.

perspectives and deals with them in an appropriate fashion, life becomes much easier.

Dr. Tarlov mentioned yesterday his profession of service to the patient and I agree with him one hundred percent. That has been the philosophy of our physician group. That has also been the philosophy of my administration. "The Patient Is Indeed Number One," and we need to do whatever we can to continue to keep the patient in that number one position.

Other issues that should be considered are the elements of a physician's psyche and prestige. Certainly economics, as the symbol of appreciation and status, is important to physicians just as it is to most of us. They value independence and autonomy, even in a group as large as 170. That is why I believe that the democracy of the Marshfield Clinic will continue for the foreseeable future.

There is a generally accepted concept in medicine which states that physicians are licensed to control their own work. I suspect some of the difficulties between hospital administrators and physicians which we heard Dick Johnson talk about stem from having too many people licensed to control physicians' work. I believe that there must be a meeting of the minds in the hospital setting that will make things look a bit better. Dick did not give us very much encouragement that there is a light at the end of the tunnel, but I am much more optimistic about the ability of hospital administrators to manage and work with the medical staff.

Now, the manager in the clinic setting is a different sort of a cat. Unlike the physician, no personality seems to prevail, at least not in the clinic managers that I know. Their educational backgrounds are as varied as you will find in any profession. Most of them have come up through accounting or finance and there are more and more individuals with M.B.A.'s moving into the field. We do not see many hospital administrators in the clinic field, although that, too, may change. The orientation of the clinic manager is based generally on long experience. To illustrate that I will go back to some of the things that my experience has taught me. Some of these examples relate to behavior and that is what this conference is all about. It will also allow me to add to remarks which were made by yesterday's speakers.

If we are to influence the behavior of physicians, how should that best be done? Dr. Sutton talked yesterday about capital budgeting, an interesting topic. I thought that the methods he described were some-

thing that everyone used. You have a physician group in a hospital. Why not use them as experts in the priority setting for medical capital equipment? Administrators generally do not have it within their ken to make proper selections and allocations of capital equipment in the clinical area. We recognized that a number of years ago and in our own institution, as well as in our companion hospital, capital equipment priority decisions are made by physician committees. The total dollars available for allocation is decided by the administration when it puts the budget together, but the final decision on the priorities of capital equipment is made by the physicians themselves. The manager must work with and through the physician group. This is an approach which takes you off the firing line of making decisions in an area where you may not be well grounded. If the administration makes those decisions, it will get everything that it deserves.

We encountered one minor problem area (and the things that kill you are the small things really, not the big things) in medical records a few years back. I got to talking with a librarian friend of mine. I said, "You know, we send records out to our physicians, but some never return them in a reasonable time. One of the problems in this clinic is that some doctors' offices seem to be record rooms." He said, "Well, in the public library, we have an easy solution to that. If you don't bring your book back on time, you have to pay for it." I recollected that there had been a similar policy on the books for some years at the Marshfield Clinic, although it hadn't been implemented. I suggested to the Executive Committee which governs the clinic on a daily basis that perhaps the library trick might work, and the policy was resurrected. At that time it was not unusual for overdue records to number around 500 to 700. Today, if we have one or two records reported delinquent in a period of two weeks, that is a lot. So the behavior did change, and it changed using the method of the librarian. If you don't return the record, you must pay.

CHAIRMAN ANDERSON: How much do you charge?

MR. WENZEL: The charge is minimal and that's the interesting part. It only costs \$5 a week. But it is deducted from your paycheck, a fool-proof method of collection.

QUESTION: Is that \$5 per record?

MR. WENZEL: Yes, \$5 per record per week. Doctors are allowed to have them out for five days in their office.

We encountered another problem discovered when I was reviewing the business office, trying to learn more and more about their charge methods and the ways in which we swap information with the hospital. I found that our charge system for hospital patients was appalling. While we had a fairly good charge sheet format, the system through which it was handled was not working at all. The charge sheets were placed on the record by the hospital. Theoretically, the physician was to fill in the charges as he saw the patient on a daily basis. At the point of discharge, he was supposed to sign the charge sheet out.

Well, that wasn't happening in very many cases. What was really being done, I found to my dismay, was that the people in our charge control department were reviewing the record and making up the charge sheets themselves. We had three bright young ladies, who had not attended medical school, reading the records and interpreting the charges from those records.

I saw that as a problem from several perspectives. One is that we may commit grave errors, and the other is that the patient may be overcharged using that approach. While it's a good check system to be sure that all procedures and daily care are entered, that should not be the primary information source.

I discussed the matter with the Executive Committee members and told them that I had been looking at our charge system in the hospital and would like to change the format of the charge sheet. That's really not what I had in mind, but on the other hand, I was looking for discussion and interest because I wanted a physician to become involved and help us change his colleagues' behavior.

I suggested that while we were at it, it might be well to look at our system of daily charges. Perhaps the Department of Internal Medicine might be interested in using the charge sheet as an instrument to evaluate their work schedules.

One of the physicians said, "You know, that is an area that I am interested in. We are looking for ways to evaluate our work loads, and perhaps the methods that you suggest might be worked into some ideas that I and my colleagues have." I said, "That's really great. There are about four or five people I would like you to talk to about the charge system. They can give you a better feel for it." He said he would do that and

about a week later he came back and said, "The way these charges are being made is terrible. We, as physicians, are abrogating our responsibilities." I said, "Funny you should mention that."

The doctor took over the project and it is now nearing completion. I am certain that the methodology that he and his colleagues, along with the administration, are establishing will change the behavior of the physician. Their handling of those charge sheets in the hospital is without doubt going to be of great help to us in the administration.

I am sure that if I had gone before the board of directors with a broad policy and said, "You better do this or else," I might not even be on this stage today. Who knows?

Another area in which we were interested for some time was the problem of professional liability. Our malpractice premium, as others in the country, had escalated to nearly \$800,000 a year, and we had installed a risk control program which was not very effective. The president of the clinic, at the time, was interested in developing a self-insurance program. Because in Wisconsin we have a mandatory state-sponsored umbrella program, the first layer can be self-insured without worry about having to go to Lloyds of London for reinsurance.

We thought about the problem and considered that if we were going to establish an effective risk control program, how better to do it than develop a situation where the physician retains a vested interest in the professional liability fund. Malpractice premiums are sunk costs and once they are gone they never return. There is a feeling that it's a spent fund and there is little incentive for being interested in incident reporting and risk control.

We moved ahead and with the approval of the insurance commissioner of Wisconsin we were able to set up a professional liability program of our own. We are now fully self-insured for the first layer. The physicians know that while the ownership of the fund is not directly within the Marshfield Clinic because it is in a trust, by building the fund, in about four years we should be able to end our payments to the trust. They have taken a great deal of pride in the program. Now our risk control program operates not by physicians filling out lengthy forms, but a note or call to our general counsel or his office.

Incidents need to be reported at the time they occur, not two weeks later. The reporting system which our general counsel's office has developed, along with the physicians, is probably unique. I am certain that in the future it will help us avoid a great number of problems. I am told that there is going to be a resurgence in malpractice suits over the next three to five years, but I think we are in a good position for handling those events.

One of the other areas we were interested in for a long time and which the clinic had done work with was long-range planning. On two previous occasions long-range plans had been developed, but the process lacked something and we weren't sure exactly what had happened. The clinic group was expanding very rapidly, and growth was of real concern to many of the physicians. We believed that one of the ways in which we might influence behavior was by sponsoring more stimulating and intellectual discussions about the growth pattern in the clinic. We really wanted to take a look at whether or not our corporation had a strategy. When we brought up that issue about six months ago, one of the physicians said, "Is that what you're learning about at the University of Chicago?" and I said, "Well, I guess perhaps that is part of it."

We started the process with a plan that the principal officers gave us a commitment to pursue. When we first discussed the matter with the Executive Committee, they said, "Good, let's write our strategy for the future." We said, "No, we ought to step back and take a look at what our strategy is now," and one of the fellows said, "What do you mean? We don't even have a strategy." We said, "Well, you had better take a look at it again. We are doing many things. We are growing and we are moving. Whether we have stated it or written it, we must have some sort of strategy." There were some strong objections to looking at current affairs because the Executive Committee was anxious to proceed with the future. I think it is typical of the physician to try and work in the future instead of taking a look at the present, or sometimes even the past, which can be very helpful.

The planning process is now moving into the second stage. The Executive Committee wrote a corporate strategy and it was very interesting. Although each of the nine men wrote his own strategy, the consensus was really quite astounding.

We asked them to raise questions about their strategy, and we re-presented the information to the

group. Now they are on their way to formulating strategy for the future on how the growth of the clinic should be managed.

Recruiting new physicians is one strategy example. Previously, it was a simple matter for a department to come to the Executive Committee and say, "We would like another staff member." In most instances, the Executive Committee said, "If you think you need a new physician, we should have one."

We are aware of today's expanding medical practices, particularly in rural Wisconsin, and believe that unplanned recruiting and growth cannot continue. It must be done carefully and judiciously. I am certain that in the corporate strategy planning process, now in progress, we can air these problems and deal with the conflicts that are certain to come through our discussions.

I am going to dwell briefly on production. Production can also be a problem which involves the behavior of physicians. Joe Newhouse wrote a paper a few years back that was rather depressing. He stated that regardless of the type of compensation system you use in a growing clinic, production will go down, and there is little that can be done about it.

We and other clinics are concerned about that problem. One very large institution that I know has taken steps to modify that behavior. As far as I can tell, they have done a pretty good job. Their Department of Internal Medicine is divided into sections of six men each. Each section is given three new patients per physician per day. If someone is absent, or is slipping back, the remainder of the physicians in the section must pick up the slack. With six members in a group, peer pressure, as you might well expect, can be very strong. Each week the list of patients seen by each individual is posted in that section. Bringing this information to the physicians, I am certain, has had considerable impact on their behavior.

We have taken a look at the problem of production. The administration, through the medical director of the clinic, has proposed a plan for monitoring and evaluating the production of all physicians within the group. Counseling sessions are part of the program, and in cases where counseling does not have an appropriate effect, the matter is moved on to the Executive Committee for adjudication. We are just beginning that program, and we will be interested to evaluate its impact on behavioral modification.

Now, I would like to change back to some personal

comments relative to the strategy of the manager and some of the things which I believe are important from the manager's perspective.

The thing that you really need in your organization is a network for information. A manager of a clinic of any size at all has no way that he can be directly involved in many of the clinic operations. Therefore, his information system must be highly developed, and that doesn't mean only in his management group. That means within the physician group as well.

You need to develop a rapport that encourages physicians to come and tell you things. Oftentimes, you can avoid surprises at a board of directors meeting by keeping your ear to the ground before that meeting.

I consider information the real seat of power in any group and a way that you can effectively work with and through the people on your staff. The manager must serve as a translator to the physicians. He translates the conditions in the environment. He must serve as a translator of competition and new developments to his physician group.

Credibility is probably one of the most important attributes of the manager. The chief of the Department of Administration of the Mayo Clinic has said that a clinic manager must reaffirm his credibility with the physician group every thirty days, at least. I agree strongly that that is the real entree to a group. It is not only important that the manager works to establish his credibility; he must work to establish the credibility of his staff as well.

A coalition of the management and the physician managers of the clinic is important. This suggests a political process and, indeed it is. I believe it is an important process in larger clinic groups in particular.

Another issue we need to look at is the debate process. The debate should be held principally on your grounds and not on the grounds of the physician. I suppose this gets back to my interest in more quantitative expertise, and it's one of the reasons I am here at the University of Chicago increasing my skills in inductive reasoning.

I also see the problem of facing conflict. Conflict should be managed. I believe conflict, in certain cases, should be encouraged. When the matter of compensation came to the principal officers in the management of the clinic, we could have tried to resolve the matter by saying it will probably go away (which it has in the past), but we chose not to do that. We chose to face

the conflict and control it by having a variety of groups develop plans and have continuing all-day discussions on that topic. We are trying to get conflict out in the open, where we can see it, and where we can manage it.

There are several things which a manager can use to be successful. He needs to use the physicians' thought process and arrive occasionally at a tentative diagnosis after ruling out certain possibilities. A manager should never deal from a position of weakness. Better not to deal at all. A good manager should never get caught in a medical decision, nor should he even be found in a quasi-medical decision, because that is where he can really get himself in trouble. The manager must avoid surprises for himself, and he must be alert and help avoid surprises for the principal officers and the physician managers of the clinic, as well.

By staying out of medical decisions, I don't mean to indicate that I believe a clinic manager should know nothing of medical care. That is not the case at all. As a matter of fact, knowledge of this area has been neglected. I suppose that if I had to fault hospital administrators for anything, I would fault them oftentimes for their lack of clinical knowledge. One thing that is important, however, is that you must not let this knowledge show.

There are three skills that should be remembered. First, the manager of a clinic or of a health maintenance organization should have a high degree of technical skills, particularly in finance.

The second factor is human skills because we deal with interpersonal relationships on a daily basis both with the members of the physician and nonphysician staff. Oftentimes, one consciously, or unconsciously, becomes an arbitrator between two differing factions or individuals, who are not able to resolve their differences.

The third element is conceptual skills. If one is to lead, rather than direct, an organization conceptual skills are needed in determining the potential for future development, the control of growth, and the utilization of the scarce resources we talked about in the continued development of a medical or health care system. This is one of the greatest skills that a manager of a health care institution needs to develop.

General Discussion

Chairman: EVERETT A. JOHNSON

CHAIRMAN EVERETT A. JOHNSON: One of the features at the symposium is having free rein to take as many swings at the speakers as you like. We have got them up here, caged and ready for whatever you want to throw at them.

When Fritz Wenzel was talking—you should know that he is in a class that I teach—it finally dawned on me that all quarter he's been calling me bishop and talking about faith, hope, and charity. How would you like to have students like that? There are six of them just like Fritz and they are an awful lot of fun. The students teach the teacher, so it's a great experience.

MR. FRIEDE: Two questions: first, do physicians constitute the board and, second, what is the compensation for the M.D.'s and how is it determined?

CHAIRMAN JOHNSON: You ought to know, Fritz; you're involved in HMO thinking.

MR. FREDERICK WENZEL: The board of the HMO is a very interesting question because our HMO has no structure. It's an extra-legal entity and only exists in the minds of people. It's a loose partnership between the Marshfield Clinic, St. Joseph's Hospital, and Blue Cross Surgical-Blue Shield of Wisconsin. We have no strict rules or regulations. We have general policies that are in the form of a management agreement between the partners. The plan developed that way. There have been some efforts to formalize the structure, but so far I think all three of us have resisted that impulse.

I heard a talk about three or four years ago by Fred Wasserman that evaluated a lot of HMOs. He was looking at the failure rates and it seems as though the highest failure rates were in those HMOs that were the most highly organized. Maybe that is why we have elected to take this route. I'm not sure.

In the clinic setting, because there is no differential between fee-for-service and HMO patients, the physicians don't know who they are. There are no compensation differences. All of the physicians are compensated at the same level, as I suggested before. The cardiovascular surgeon and the pediatrician are treated

the same. Their salary level is achieved in no greater than five years and no less than three years, depending on what we call fondly "Brownie points," or the background and experience with which the physician comes to us.

Again, as I mentioned, that system is thought not to work. It's been in existence now for a little over twenty-five years, but it's in question. We are looking at it very seriously. We are not a traditional HMO. There are just no two ways about it, and I don't want to leave the impression that we are typical.

CHAIRMAN JOHNSON: I'd like to ask the panel to comment on this observation. When I looked through my notes, I found contradictions from one speaker to another. I didn't find that it was all in one focus.

Then I looked back at the title of the program, and it's "Changing the Behavior of the Physician: A Management Perspective." I come to this kind of question: Which behaviors should we and have we been talking about? Why should we talk about them? And are these behaviors good or bad? And by what criteria do we know that?

I would like to ask you fellows to take a swing at that, because I think by talking about that question, we can try and coalesce the different kinds of remarks and viewpoints that have been made. Does someone want to start?

DR. MARK BLUMBERG: I will take a whirl at it. In regard to my view that it is important to reform crisis, my basic contention is that the physicians should be the ones to determine the course of care for their patients, and when making up this course of care, they should not be subjected to financial incentives for or against a certain type of care. In other words, I want the price system to be neutral. One way to do that is to put a fellow on a salary so that he earns the same no matter what he is doing.

What I tried to illustrate in my presentation is the potential for doing this in the fee-for-service world. That is, you could reward productivity but leave the regimen decision on the part of a doctor neutral. I do not see why a surgeon gets more money if he performs

an operation, than when he uses, say, conservative care in orthopedics, or urology, or something.

I believe that you can influence the physicians' practice in this fashion. I just want it to be based on professional judgment rather than financial incentives.

CHAIRMAN JOHNSON: You are not talking about changing the behavior of the physician. You are talking about insulating the system so it doesn't affect his behavior.

DR. BLUMBERG: I think the current system does influence the physician. Something has got to influence him, and I want that influence to be his medical opinion about what the patient needs rather than some financial incentives. Something has got to influence him. He doesn't make it up as he goes.

CHAIRMAN JOHNSON: Would you wholeheartedly support Al Tarlov's position of yesterday? Or weren't you here?

DR. BLUMBERG: I was not here.

CHAIRMAN JOHNSON: He stated your position in the extreme. He doesn't even want to mix with administrators because it can contaminate his kind of philosophy and approach. Now, that was an overstatement, too, but he overstated it almost that strongly.

MR. WENZEL: I think that Dr. Tarlov made a good point. All physicians ought to hold out in front that their first concern is the patient.

I think that if the physician expresses his concern as first and foremost the patient, and the hell with the fee systems, the hell with everything else, including the hospital administrators, then so be it.

I think on the other hand, Everett, that physicians' behavior can be modified. I don't think, however, that it can be modified by overt methods such as a fee system and all that sort of thing, at least not in the long haul.

But I think certain methods, some of which I suggested, although they are in rather mundane areas perhaps, are the kinds of things that are going to affect physicians' behavior in the long haul.

I think Dr. Tarlov also mentioned yesterday that there will be a resurgence of physicians' independence in the next five to ten years, and indeed that may be the case. I think we as managers, then, need to recog-

nize that, and we need to deal with the obvious conflicts that are going to come out of it.

CHAIRMAN JOHNSON: Aren't we then talking about changing the behavior of the manager: a physician perspective?

MR. WENZEL: Sure, I think a manager's behavior has to change all the time. I think he has to be a very versatile fellow. And I think if he has management skills, he has to use those skills. Some would call it manipulating. Maybe it is. I don't know, but if that is the case, then that is what it is.

DR. ALAN WOLFSON: It seems to me there are two different kinds of behavior that one might want to differentiate. One relates to total levels of activity. How much work are physicians going to do? And more importantly, how much are they going to cost us? A second question is: What kind of work are they going to do?

I like to think about that in terms of first, the levels, and second, the mix of services offered. Now most of the managerial questions we have been addressing seem to be related to the first question. They are questions about aggregate costs and what kinds of management instruments and policies can be devised to get a handle on the total level of physician activities.

The second question was the one I think Mark was addressing. His strategies—and there other strategies that might be suggested—are directed much more at changing the mix of activities, or at least not interfering with the medical determination of the mix of activities. The remuneration system is neutral with respect to influencing clinical judgment.

My sense, at least from the Canadian experience, is that physicians are much more willing to negotiate with managers on questions of levels of activity than mixes of activity. They are loath to give up professional independence in determining what they can do. But they have now acknowledged the public interest and the public responsibility for concerns about total levels of activity.

CHAIRMAN JOHNSON: Bob, I am going to ask you to lead into this question because of your experience with the Health Care Financing Administration. From what

Alan said, we are going to worry about the quality of things, but we are not going to face the demand questions. Of course, that is the charge that administrators repeatedly throw at the administration in Washington. Is that ever going to change? What are your thoughts?

MR. ROBERT DERZON: I'd like to go back, before I get to that, Ev, just to comment on Dr. Tarlov's belief that there is going to be a resurgence of independence among physicians. I don't agree with that.

I don't agree with it, first, because of numbers. We have about 380,000 practicing physicians in the United States today. In 1990 we are supposed to have 600,000. Physicians aren't going to have opportunities for the kinds of independence that they probably have had up until now. They are going to have to work together, with other physicians; they are going to have to band together to market their services. They are going to have to group together for a whole lot of purposes, and in the process of grouping, my view is that you lose a certain level of independence in your life.

They will also have to meet the limitations of available dollars for health. In the process of doing that, they can maintain their independence collectively by more intelligently grappling with the question, what do we do in medicine that is truly useful to patients?

I don't know whether medical efficacies have been raised at this conference. No one, other than physicians, can deal with that question in my view, but there are increasing numbers of physicians who are concerned about that. I think that is going to add another dimension as the medical efficacy question comes up. It's going to be sorted out and weaken physician independence because the physician is no longer going to be the master over what he thinks is right for patients. There are going to be other values imposed on him.

The question whether physicians do everything they can for a patient, and whether that is all they think about, is an oversimplification. Physicians do a lot of things to enhance their own security in the treatment of patients. The whole issue around defensive medicine is really an argument for not necessarily doing everything they think is necessary for the patients, but rather what they think is a way of hardening their own security in the care of a patient. Physicians argue they might not do as many things if it weren't for this external factor.

On the question of demand, if one believes that de-

mand is caused by the availability of dollars, one could look at whether there are going to be more dollars really, or in terms of inflation, not as many dollars to go around. And are there more ways to use those dollars in health care?

My own view is that no one can safely predict the course of events in that regard, because it's largely a political issue as to how much more public financing comes in. It's anybody's guess on how willing employees, employers, and average citizens are going to be to put more into this piece of society, particularly with competing demands that are now taking place.

Medicine and health took a larger and larger share of family consumer dollars for probably the last decade or two, while other things like food, housing, fuel, and so forth stayed very stable or dropped. I think that you will now see some trend lines that tend to reverse that a little bit because of the tremendous inflationary pressures on other basic necessities.

The demand pressure may not be there, at least from the financial point of view, so where else can the demand come from? It comes from consumer tastes, that is, the public wanting the latest and the best of everything, but I do see some opposite trends there.

Consumers, or let's say patients and their families, are taking a different view of terminal illness, for example. The market is adjusting itself. Families are beginning to sort things out. The real test is whether physicians' attitudes, for example, are going to help or hurt consumer decision making.

One of the most important things that could happen is that physicians change their attitudes about the kinds of information they give to patients in the course of managing their illnesses. To the extent that patients demand more information, patients will eventually make more decisions about their care than has been customary in the past.

Another influence, I think, on the independence of physicians, is that they are going to have other people helping to make decisions for them. The public will make, over time, economic decisions as well as moral, ethical, and medical care decisions. I have a lot of confidence that an informed public will do very well at this, and that it will help moderate some of the demand pressures that one might foresee if one looks back over time and sees the most recent experience.

CHAIRMAN JOHNSON: Mark, do you think he is

overly optimistic?

DR. BLUMBERG: The wrinkles on my brow were for some other matter. Bob has been talking about demand that is created by the population of sick people. It's my own view that about three-fourths of the dollar value of demand is strictly governed by physicians. The patient does make the decision to initiate care for a particular condition and selects his doctor. From that point on, it's pretty much up to the doctor in terms of the revisits, the special tests, and the hospitalization—certainly I am not aware that very many patients are beating down the doors to be hospitalized. Whereas I agree for that twenty-five percent that is strictly determined by the patient, I am more worried about the seventy-five percent that is governed by the doctor.

From 1973 to the present, according to the National Health Survey, there was practically no evidence that people were either postponing, or not getting, medical attention due to the price that they had to pay for it. That's a remarkable statement, but the order of magnitude of those people not getting care for acute conditions in this country, in 1973, was about eight to ten percent at the most, including the aged, the poor, and all the rest.

It obviously is subject to income. I am not saying that for certain segments of the population price is not a barrier, but over all in the country we are seeing very little lack of use of care because of its cost. I really doubt that increasing third party coverage much more will increase the patient demand. What I think it will do is facilitate the physician-induced demand, and I do think that is the more serious issue that we face.

Here is another statistic. In the same National Health Survey, of those patients who were requested by the physician to return for another visit or test, only eighteen percent did it, and that was totally neutral by income. In fact, it seemed to be influenced by education. The more educated the respondent was, the less likely he was to follow up on the physician's advice. But eighty-two percent of the patients who were requested to return for some acute condition did, in fact, go back, so I think patients follow their physician's advice.

I am certainly going to hang tough on physicians deciding the volume of services rendered to the patient, at least three-quarters of it. It is the physicians' attitudes and their incentives that we have got to be con-

cerned about in the future.

CHAIRMAN JOHNSON: Ron Andersen, you are an expert on this stuff. Where do you come down on it?

DR. RONALD ANDERSEN: I think that we have been talking for a long time about derived demand and physician-influencing behavior subsequent to initial visit. I agree with Mark there, but I also agree with Bob, I think.

On the interest in self care, patients having more say over the treatment and medical regimen that they will follow, and their efforts to do some things on their own which traditionally have been in the physician's sphere of influence, will have an impact on demand, and I agree with Bob. I think that this will become a greater determinant of services in the future than it has been in the past.

CHAIRMAN JOHNSON: What will be a greater determinant, Ron?

DR. ANDERSEN: People making their own decisions and opting for other types of services provided by themselves, or their family.

CHAIRMAN JOHNSON: Does that mean lower cost?

DR. ANDERSEN: It means less demand for formal medical services, yes. That is not lower in terms of cost per unit, but it is lower for the total expenditures in an episode.

The other point I would like to make in terms of hospital care is that we may be swinging back a bit. I think, in some cases, patients and families will have more say in the future about whether institutionalization actually takes place.

We haven't seen it so much in terms of admissions, but we have some data which suggests that patients' and families' concerns may be influencing length of stay at the margin.

CHAIRMAN JOHNSON: Shortening or lengthening?

DR. ANDERSEN: Shortening the stay. Whether shortening or lengthening, the point I want to empha-

size is that when we talk about derived demand and automatically assume that all hospital care is determined by the discretion of the physician, I would like to step back and take a second look at that. I think that to some extent in the past, and it may be more in the future, we see patients playing a bigger role in determining the kind and amount of institutional care that they receive.

CHAIRMAN JOHNSON: John, did you have a question?

DR. JOHN ROURKE: I am a hospital consultant and physician by training. My question is what do you want to modify a physician's behavior for? What are your goals?

I tried to listen during the conference for the answer to that. I heard perhaps six different questions. I think our debate is because some speakers addressed one thing, some another.

I think one question was: can we reduce society's cost for medical care? Another one is: can we find more cost effective therapy for the same patient? A third would be: from a hospital or institutional viewpoint, can we reduce the competition for turf? A fourth might be: can we protect or foster the institution by some coalition between physicians and institutions? Fifth, there was some talk of how we can eliminate the bad actors. Perhaps there is an undercurrent that flows through occasionally and asks, can we control them all because they are all bad actors? I hope there isn't too much of that, but let me go back and make some observations on a couple of those questions.

How about reducing society's costs? Dr. Tarlov talked about the freedom of clinical decision and he had a lot of support for that. He made a suggestion that he would rather substitute a \$350 CAT scan for an LP. There are appropriate conditions where that is right, but he didn't seem to deal with the overall system as he talked. Yet, his concluding remark was an example of two institutions that ought to get together and allow equal access to expensive support equipment. It seemed to me that he must have been making the first remark tongue-in-cheek, or to make the following point: Separate clinical decision making from the price or cost mechanism. Don't distort it with what the system will pay for.

It reminded me of the State of New York and the example of the cataract procedure. If you go into the

hospital, the hospital gets paid for the cataract operation. If you don't get admitted, the hospital doesn't get paid for it. If you are going through the cycle of multiplication, you have to have a special throwaway gadget to put in the eye. This cuts down hospitalization and cuts down morbidity. It's a much better procedure (at least many ophthalmologists believe it's so), but you can't get paid for it in New York because the system hasn't caught up. From where I sit as a hospital consultant, I have heard serious boards of trustees suggest that they should get out of that form of care because they can't pay for it. Things are that tight.

I think it's an extreme example. It does emphasize, however, that clinical decision making and the cost mechanism should be kept separated.

I didn't hear an answer to where we are going to make those alternative choices of therapy decisions. Where appropriately in medicine will we bring to bear cost as one of the barriers? I don't have an answer for it because I don't see it. We did address that issue at one of these conferences, and I am hoping we will hear more about that as time goes on.

If I may, one last comment about reducing the competition for turf. Dr. Blumberg mentioned that each specialty has a money-maker. It's a procedure. It's something that they do.

As I said, I see more contention between medical staffs and administrators as the physicians move more of the traditional hospital procedures into their offices. For example, the internist is now doing stress testing in his office. The orthopedist decides he is going to pull the practice out of the emergency room, or at least pull the follow-up visits out of outpatient clinics and have his own x-ray and his own physical therapist. The hospitals cease functioning in those areas.

There are a number of others that I could list. I think the CAT scanner taught physicians with administrative support to pull out of the hospital for major technological bases for their practice. Many of them have learned that "there is gold in them thar hills." The administrator and the board say, "But that is what we used to live on." There is an item of contention there that we will have to resolve somehow. The best answer that I heard was the fellow who said, "My daddy taught me something, everybody has got to make a little money on any deal."

I think the coalition has got to be between the physicians and their economic practices, and institutions and their survival. The course for modification of behavior,

if you will, lies down that coalition. It comes back to Dr. Tarlov's remark that administrators and management are responsible for putting the system together, but let us physicians make clinical decisions. The only thing I would add to it is that we make clinically and economically responsible decisions.

CHAIRMAN JOHNSON: Bill Holiday.

MR. WILLIAM HOLIDAY: I think the answer lies both in what Dr. Sutton has said and Dr. Tarlov has said.

I feel it will take about thirty-five years before we get where we want to be. There is a combination of two things. We are starting with kindergarten programs in the School of Health, right now, to develop better health consumers, but it will be a generation before you feel the impact of changing the consumer's behavior through our school system.

At the same time we have got to take the approach Dr. Tarlov is taking. We have got to start gearing the academic curriculum of physicians during training so they become good managers of health care resources. That training is necessary until medical schools get physicians who come through the educational system as better health consumers. Then they will be better health allocators as they become trained in their academic program. The consumers need a training process, too, so I think the education has to come both ways.

We are talking about making the change eventually at the top, but the whole system has to start changing at the bottom. It will take a generation.

CHAIRMAN JOHNSON: Do you think it's going to happen?

MR. HOLIDAY: It will happen but I'm just saying the two approaches are both right. We have to look at training physicians from the time we put pabulum in them and making them health consumers. We will have to pick up on the graduate curriculum of physicians so we can make better health allocators out of them, too.

DR. RICHARD FOSTER: I would like to pose a question to the panel, very close to what Dr. Rourke was saying. He posed the position which takes for granted that somehow or other this decision making has to take cost into account.

Yet the suggestions I have heard this morning don't say that. Mark Blumberg suggests that by reforming the fee system so that physicians are neutral with respect to the course of practice, things will be much improved, if not all solved. Bob Derzon suggests that by making the patient more active in the decision, a similar kind of improvement will take place.

I would like to ask the panelists if they agree that making financial incentives neutral would result in appropriate decision making?

CHAIRMAN JOHNSON: Frank, do you want to try and answer that?

DR. FRANK SUTTON: One of the ways I think managers can influence physician behavior is in this all-important area of cost containment. As Mark has just said, some seventy-five percent of total health care is determined or influenced by the physician.

In the hospital setting, it has been said that around seventy percent of the typical patient's final bill can be traceable to the physician's order sheet, beginning with the fact of admission and tracing through all the things that are ordered by him during the stay and leading up to medical discharge.

If you accept that as the analysis of the typical hospital bill—and you can test it out in your own hospitals to see if it comes reasonably close—then when the administrator turns to those things over which he has literally no control in reducing cost, such as minimum wage and its implications, social security increases, workman's compensation, and malpractice to a degree, there is very little for him to work on.

We come back to the thought, how do we address the seventy percent that is determined by the physician? In my understanding, studies show that when you provide the physician with ready accessibility to the costs of alternative methods of diagnosis and therapy, including generic versus trade pharmaceuticals, and if you do this, let's say at the nurse's station or other points of order-taking, it acts in a subtle, almost subconscious, educational way. There is a demonstrable reduction in cost that occurs through his leaning toward certain alternatives. If teaching hospitals show medical students and residents the art, if you will, of selecting acceptable diagnostic pathways that are less costly than others, I believe that we can influence,

over time, the economic behavior of physicians in this way.

MR. WENZEL: I talked with Frank about this issue last evening, and I always like to hear people mention things that we are already doing.

We initiated this program about a year ago on a random selected basis, sending hospital bills to all of the physicians. Each month, each physician gets a bill on the patients he was discharged from the hospital. The surgeons get all of the bills. I am not sure they are always the big chargers.

Nevertheless, although I don't have any numbers to show it, we think this, too, will have an effect, just as Frank suggests. When they see the magnitude of the bill, I think the judiciousness of what they have ordered and what all of their colleagues and consultants have ordered is going to have and has had some effect on them.

DR. WOLFSON: I think that nobody would want to suggest that costs ought not be taken into account. Nobody but a physician would want to suggest that the cost ought not be taken into account in making decisions about the allocation of scarce resources, including physicians' time.

I think the point, with respect to the fee schedule, is that a neutral fee schedule, or a salaried scheme of remuneration, would not introduce the cost dimension into the decision making. That is true, a neutral fee schedule is better than a perverse one.

Right now costs are taken into account all right, but they are taken into account in a perverse way. There is an incentive for physicians to do certain kinds of procedures or services as opposed to others, which may have no relation to medical efficacies. At least it would be a step in the right direction to have the fee schedule made neutral. It wouldn't do the whole job. Whether you want to move from a neutral form of remuneration which takes costs into account by providing information, or by more direct regulatory action, is a matter of some debate.

My sense is that simply providing information would go a long way. But I think the first step is to get us off the perverse incentive situation that now pertains.

If I might just make one other comment with respect to the question of demand and consumerism, although I am not sure that it isn't a red herring.

Whether physicians control seventy percent of services, or fifty percent, or thirty percent is something that economists and statisticians will debate, but I am not sure that has much import for public policies.

The issue is that they control something, and they control enough to make a difference. Now, in a situation where the medical stock is growing fast, if costs are to be contained, either physician real incomes have to fall or they have to get an increased share of a limited pie.

Now, I have not seen many observers heroic enough to suggest we are going to be successful in containing physician income. Demand won't do it. Consumerism won't do it. Tests of medical efficacies won't do it. Regulation won't do it, so long as there is enough discretion that will allow physicians to maintain their incomes in some areas, even if we nail down others. That leads me to worry about Dr. Rourke's suggestion that what is called for is a coalition between physicians and the institutional sector.

I would have thought that if physicians are going to increase their share of the total pie, the place they are going to look first is the institutional sector. Moving services out of the hospital and into their offices may reflect their very keen awareness of that phenomenon. I don't know how much potential there is for forming and maintaining that coalition.

CHAIRMAN JOHNSON: Mark.

DR. BLUMBERG: Now, in response to Dr. Rourke, he made a good point, but I will stick to my perverse fees again. Just as I discussed the fact that there are winners and losers in the doctor's practice, there are an enormous number of winners and losers in hospital charging and billing.

Despite the reforms that Medicare has introduced in this (and I think one of their singular improvements has been trying to get hospitals to have honest book-keeping), there are winners and losers. The doctors in the hospitals are battling over who should do the winners and who should do the losers.

The hospitals feel the doctors have dumped emergency care on them, and now the doctors are trying to snatch away x-ray. Hospitals want to dump their losers and grab their winners. If the prices were reformed for these things, there would be fewer of these jurisdictional disputes.

Bob did mention a subject where consumer discre-

is less of it being done now, and I think there will be less of it done in the future, despite the increase in numbers of general surgeons.

The other area where I see consumerism exerting a stronger voice is whether patients are to be hospitalized or treated on an ambulatory basis. I see consumers influencing the decision in that regard, whereas they once simply accepted the physician's word and went into the hospital if he said so.

In those two areas, consumerism is beginning to exert an effect.

CHAIRMAN JOHNSON: Fritz, would you want to get into this?

MR. WENZEL: I believe, too, in the consumerism element. Consumerism is very obvious to me because I am the guy they call when they want to give someone the business about their bill, and I am happy that they do.

It's very interesting, as we look at complaints about services (and I think this carries through in most clinic institutions), oftentimes the basis for complaint is the fee. When you talk to consumers a little bit more, it comes down to some of the stuff that Ron Andersen has been looking at. The patient finally says, "But the doctor didn't spend enough time with me."

In other words, he is trying to relate some satisfaction between time spent and fee charged. I think we are going to see more and more of that, particularly in physician groups throughout the country.

Another issue that hasn't been addressed, although I think that it was alluded to yesterday, is something managers need to deal with. It's a problem I don't know how many years old, but it relates to the distorted reimbursement of the third-party carriers.

If I were running a conventional firm, I would exact costs for every piece and every service that was provided for the final product, and I would price it accordingly.

Unfortunately, third-party carriers over the years have gotten used to paying exorbitant fees for radiology procedures and for laboratory procedures, but when we charge \$15 for an intermediate visit with a pediatrician, they go bananas.

Where is the equity in taking a good look at holding any kind of cost level, when the cost part of the whole package is really distorted? And there is no way, at least at this point in time that I can see, that we can

get around third parties.

I think the Congress probably has some ideas about that, particularly with pathology and radiology services, but I think we need to grapple with it as managers. If you are going to start taking costs apart and seeing what they are made of, it may not have an immediate effect on the bottom line. It will, at least, give you an opportunity to look at your total cost structure and see where efficiencies and economies probably should not be added, and where costs can be more clearly indentified so that they can be controlled. These are some of the things that I think are going to be important in the future.

DR. BLUMBERG: I am from the Kaiser Foundation Health Plan, and I have a little to contribute about that. Approximately forty percent of our major surgery is done on an outpatient basis. I am just gathering statistics on that. They were taken as a matter of course, and we haven't really been assiduous in compiling such data. They include matters such as hernias. The patient goes to the hospital operating room, arrives at 7:00 in the morning, gets general anesthesia, recovers in the hospital recovery room, and is discharged at 5:00, 6:00, or 7:00 at night, in a wheelchair.

Naturally, he has somebody to take care of him at home. The patients like this in general, and there is a substantial cost saving with no degradation, we feel, in either the quality of care or the acceptability on the part of the patient.

This is a major innovation. If you get the system rigged right, this sort of thing will take place, but there have been some barriers to this, given the constraints in insurance and so forth.

MR. L. PENN BERENS: Mr. Wenzel characterized some of Dick Johnson's remarks yesterday as pessimistic or disparaging. As I was listening, I challenged that until Ev Johnson rearranged the title of the program this morning to read: "Changing the Behavior of the Manager: the Physicians' Perspective."

I'm not sure that there isn't an aspect of a very selfish sort of trade unionism in what we are talking about that might warrant reaction from the panel or other members of the audience. That aspect is the survival instinct of institutions or private practitioners. Given an increasing supply they will find some way to survive and one of the ways to survive is by doing our jobs. We call it a coalition.

Five or six years ago here we were just beginning to challenge the validity of the three-legged stool and talk about putting physicians on our boards. I am not sure that it isn't much more than a coalition. I am not sure that physicians haven't been managing our institutions all along and managing health care in this country. When they are looking for income with more colleagues in the field, they are going to be doing our job. Even in the best of situations, where you have been at Marshfield Clinic for years, you are reporting to physicians. Even in the best of situations, where a trained M.D. works as an administrator, to some of us, the Frank Suttons of the world are physicians doing our jobs. Any comments or reactions?

MR. WENZEL: I don't really have the first hangup in the world about reporting to a physician. While I suppose that may be an insult to the ego of some, it certainly is not to me. My primary motive and my primary goal is an efficient and effective institution.

Thinking about part of that coalition that I mentioned, not only the physician and the manager are in it, the patient is, too. I really don't have any hang-ups about that, and I think it's an ego trip for anyone to feel that reporting to a physician somehow, somehow lowers your status.

CHAIRMAN JOHNSON: I don't think that is what Ken is talking about.

MR. WENZEL: That is the gist of what I got out of it, Everett.

CHAIRMAN JOHNSON: Is that right?

MR. BERENS: There was a certain trade unionism or egotistical involvement, no doubt about it, but I think my main concern was that we recognize that physicians are spending more time in management. We are asking them to do it in capital budgeting processes, and they resented it in utilization review six or eight years ago, and maybe they still do. We tried to bribe them with dollars for services.

Dollars for services on utilization review committees or some other aspect of institutional involvement are likely to become more attractive. I think that has some implications for how we work with physicians and how we organize. It's one of the successes of group practices and HMOs.

The focus of the presentations in the last two days has been physicians as patient managers, but inevitably we have talked about them as participants in institutional or health care or national policy development and factors like that. I just wanted to ring that little bell because that's the job we were trained for and we have got some pretty tough competition ourselves.

MR. WENZEL: But if they are the owners of the business, in a sense shareholders in it, at least as in some major clinics (though not all), why shouldn't they have an interest in the management of it?

MR. BERENS: Then we have the responsibility to train them better than Jimmy Carter was trained to be a trustee of a hospital years ago.

MR. WENZEL: The corporate strategy thing I talked about is an effort to train the physician managers to really manage, and I've challenged that group on more than one occasion that it's their institution. They have some responsibilities for its management.

CHAIRMAN JOHNSON: The point is that they are managers because they are owners in a clinic. You can't get around that. The trustees can be managers in hospitals because they are vested with the title in the corporation.

DR. BLUMBERG: I think good fee-for-service physicians are pretty good entrepreneurs from all that I can tell. Whether they went to your management school or not, they stepped right into the marketplace for chronic renal dialysis and they filled that up.

They have been noticing that it's hard to staff hospital emergency rooms. A number of them have formed themselves into group practices that do nothing else but staff hospital emergency rooms because there is a public need for this.

I think in Ron Andersen's surveys, the outstanding problem of the public with respect to health care is obtaining it on nights and weekends. As I was driving to the airport the other day, I heard that a group of New York doctors has started something called Mediphone. They will guarantee you a telephone, with a real live doctor, on nights and weekends. I don't know how you subscribe to this service.

DR. SUTTON: Twenty-five dollars a month.

DR. BLUMBERG: All right. That is filling a need. I think the marketplace is working, strangely enough, if we can get rid of some of the other perversities that are in it.

I disagree with Newhouse that the marketplace is gone. There are just all sorts of new marketplaces around.

CHAIRMAN JOHNSON: Underlying this whole discussion right now is a question of the appropriate organizational structure and the role that the administrator has in it. If the administrator is faced with a lot of tough decisions, as we have seen in the last few years, how can he maintain stability in a job in that environment? And we know guys are getting zonked left and right as a practical matter because of the organizational structure, I think.

We could change this topic and ask another kind of question. When we talked about changing the behavior of the physician, I found a couple of interesting comments. Alan stated that the opting out had gone from, I think, ten to twenty percent, and Bob Derzon, I think, was the one who said fifty percent of the physicians are no longer involved in Medicare on a direct billing basis.

Do we need to change the physician's behavior to get back into those programs? From a bureaucratic point of view, I assume that is so. Or is that unrealistic, Bob?

MR. DERZON: You have to examine the reasons why physicians don't accept assignments of the Medicare program. I thought Fritz did a good job of explaining what happened in his group, and the interesting facet of that was that he had a group of concerned physicians who were deeply troubled by that decision.

Unfortunately, we don't have enough physicians in the country who are troubled by that issue. And of course, the lack of acceptance of the assignments, in effect, disenfranchises a large hunk of the population who thought they were entitled to reasonable benefit, namely, eighty percent of their doctor bills.

I think few people realize the extent of the concern about that problem in the Congress. Last year at the congressional committee debates on cost containment, a Connecticut congressman introduced an amendment to the cost payment bill that would have mandated

assignments. In effect, it said if a hospital wanted to participate in Medicare, all physician services in the hospital would have to be accepted in assignment. In other words, it had a compulsory participating physician principle.

I was opposed to that suggestion, and I might add that the congressional committee had no jurisdiction over that question, and it was out of order, but they voted on it anyway.

CHAIRMAN JOHNSON: It's probably important that they did it.

MR. DERZON: The point is that there is concern because the problems of the aged are very dear to the hearts of Congress. The aged vote in high proportion compared to their group size and we are going to have a lot more of them in the country. They will become increasingly strong as a local political force.

Many of the problems of assignment have to do with usual, customary, and prevailing charges. In a nutshell, that little principle that was put into legislation in 1966 has been the most perverse of all the reimbursement principles for payment that are in the Medicare program. Basically, it froze the relationships between procedural medicine and time medicine in a most unfortunate fashion.

In order to get out from under that, we have to get out of usual, customary, and prevailing charges. One of the preferred solutions is to go to a fee schedule. One of the reasons that physicians don't accept assignments, in my view, is the fact they don't know what the program is going to pay for each physician encounter, nor does the patient. Of the four million inquiries that Medicare gets each year from its subscribers and beneficiaries, about one million have to do with problems of what the program is paying for an individual physician encounter. We have not only an administrative nightmare, but a perversity that we ought to get rid of.

Fee schedules are not, you know, the whole solution. They would have to be negotiated at the outset at levels relatively the same as the prevailing rates now used in various parts of the country. At least, a fee schedule would get the information out front so that people could see the unfortunate relationships that have developed in payments to physicians for various kinds of services and the fact that they make no sense whatsoever. There is a six to tenfold difference, for exam-

ple, in surgical fees around the country for the exact same procedure, and no one can defend that range of difference. One could hardly defend a one thousand percent range for the same service, and eventually the public would demand some correction in that, and eventually it might demand a substantial improvement in primary care reimbursement. You can only get to that demand by getting information out. Fee schedules would be one way to accomplish that.

If we could get out of usual, customary, and prevailing charges into some kind of negotiated fee arrangement, then we might be able to move toward the participating physicians concept. With enough physicians assuring access to at least public beneficiaries, it would seem to me that we would make some progress on the problem.

CHAIRMAN JOHNSON: Let me just follow up for one second, Alan. I have found something interesting in two clients I have been working with in the last several months. One, a laboratory, and the other, an x-ray department, both debundled their charges from the hospital to usual and customary charges for the pathology and for the radiology.

When you look into this, the figures are very hard to come by, but at least you get the impression that there is a substantial movement in this direction across the country which can only push up the cost. In this particular institution, radiology fees went from \$350,000 to \$800,000 in one crack. When I looked into it, I found this is not unusual.

MR. DERZON: I think one of the most unfortunate aspects of regulation comes about in the way 223 regulations have been formed. It also comes about with respect to regulation over hospitals and not over physicians. You get movements to the nonregulated arena, and the nonregulated arena at the present time is out of the hospital service factor. I don't have any answer for that, Ev. I think it is an extremely sordid public problem. The only way to get action on it, like so many of these kinds of problems, is to expose it.

Two years ago, the Department finally began really to research physician fees. This was a no-no area. Nobody ever talked about physician fees publicly in HEW; for that matter, in any other place, except for a few radical congressmen who got on their high horses.

But today that's a legitimate area of investigation. Last year, the Department really researched for in-

formation about the payment levels for hospital-based physicians. It didn't get a lot of publicity, but it showed, of course, what you would expect. The salaried physicians in the hospital-based specialties have more reasonable, although very high, earning levels, by the way, than the astronomic levels for people in percentage arrangements and individual entrepreneurs in the institution.

I think we have to have faith that, if the information finally gets exposed and enough people get troubled about it, not only will the profession start to do something about the problems, but the public will do something about those problems, too. It will not allow payment mechanisms to flourish that continue unfairly or unreasonably to enrich certain elements of our society.

I think the only solution to these problems is essentially a longer term patience and a determination to get information into the public trough.

CHAIRMAN JOHNSON: Alan, how about Canada?

DR. WOLFSON: Canadian experience supports much of what Bob has been suggesting. Some provinces, in fact, just eliminated the nonparticipating option. Quebec, for example, makes it almost impossible for any physician not to accept the insurance benefit as payment in full.

In the provinces where some physicians are allowed to opt out, what is remarkable is that until very recently so few did. That relates to Bob's second point about fee schedules and the certainty of both full payment and knowing what you are going to get paid. This is involved in a negotiated and enforced fee schedule.

In Ontario, for example, when the plan was started, the Ontario Medical Association encouraged vociferously all its members to opt out. Ninety percent of the membership ignored them. The attraction of having certain regular fees was sufficient to get those physicians to participate.

It has taken eight years of a fee schedule that is muzzled down and has grown at approximately half the rate of inflation before there has been any response on the part of physicians to start opting out and setting their fees unilaterally.

I guess the only thing I would add to what Bob has suggested is that, in the first place, mandated full participation is politically difficult to do and can be done

only under particular circumstances. You have got to be prepared for a hell of a fight.

The fee schedule route has been much more successful, but if you go that route, you have to be prepared to increment the fee schedule at regular intervals and fair amounts. In the Canadian experience that has done the trick.

CHAIRMAN JOHNSON: Mark.

DR. BLUMBERG: Oversimplified, we've got three or four major sources of payment for physician services. We have Blue Shield; we have a modest amount of commercial indemnity and service plans. We have a huge volume of Medicare and a variable amount of Medicaid that differs considerably by state, I would say.

They have all got different bases for paying the doctors, and the doctors are busy crossroughing. That is, they pick the leader, which almost always is the Blue Shield current payment, and point out that the others are terrible pikers. Although I hate to suggest it, in the negotiating process, it might be very difficult, I believe, for even a powerful agency like Medicare to do this unilaterally.

I'm afraid it's going to take what some economists might call collusion between the principal third parties because the doctors are going to hang in pretty tough. They will be unified and if they are facing fragmented third-party payers, I don't quite know what will happen with it, but at least some people will have to give this some thought. I don't know that anyone has the power to do it unilaterally.

CHAIRMAN JOHNSON: Stan Ferguson.

MR. STANLEY FERGUSON: I have been hearing a lot about how the government proposes or forces proposals. If it changes the behavior of the physician, then apparently the health care system will have a beneficial change.

I'm not opposed to that at all, but looking at it from the manager's perspective, I am going to walk away from what Fritz Wenzel was talking about because that obviously is not within the purview of the hospital. That's ambulatory services. What the physician does outside of the hospital, I think, is a matter that concerns the hospital from the standpoint of the competition we have been hearing about, the entrepreneurship,

but that is nothing new. Physicians have always been known to be entrepreneurs.

I would like to suggest that in the management perspective, the hospital has a social purpose, as well as an economic purpose, otherwise it would not have developed in all nations, and in this one particularly, as a not-for-profit organization. Its purpose is very singular. It is to provide patient care.

For many years this was presumed not to be its responsibility until the courts made the decision in Illinois and held the board of trustees responsible for the quality of patient care in the hospital. The court asked: Were the services appropriate? Were the proper persons doing them? Were they properly controlled?

I suggest that we should probably pose these questions in our discussion of physicians managing patient care in the hospital. I submit that physicians always have managed, and they always will manage patient care.

Physicians manage individual patients. The next question is how do you manage the care of groups of patients? How should the physicians on the hospital staff be formally organized within the management structure of the hospital in order to carry out the patient care purpose of the hospital?

What I have been hearing is that the physician manages patient care in the hospital within an informal management structure. The physician, I think, prefers the informal management system. I don't think he prefers that system when it comes down to a physician managing a department of medicine and the responsibility that carries.

Unfortunately, if you are going to have management, either in an ambulatory setting with physician groups, or in the hospital, you cannot involve every physician. You know what Fritz said this morning. He has an executive committee. Certainly any board of 35, 135, or 150 members can make policies and decisions. Hospitals could have 200 members of the board (if you could find a group that wasn't so democratic that you would never get anything accomplished). But when the chips are down, you go to the executive committee.

I think what we must learn—and this doesn't come easy for physicians—is that some physicians are going to have responsibilities in the hospital management structure. They will not act solely as managers one hundred percent of the time, but they will make policy decisions relating to the care of patients in their hospital.

We should find out how to organize the physicians, or how the physicians should organize themselves to manage patient care collectively in the hospital so that it isn't entirely the sole responsibility of each physician to do this.

I think the hospital could stand this situation fifty years ago when there was relatively little patient care, but the hospital was expected to supply services for the physician on behalf of his patients. Today, however, this is what the whole hospital is all about. It provides a multitude of services that the physician himself does not provide to the patient.

Our present understanding of the medical staff in a hospital, and the way it is described in the standards of the Joint Commission on Accreditation, does not indicate that the staff is within the management structure of the hospital in any formal way that holds an individual physician responsible for the quality of care in a particular area.

How do you hold the medical staff responsible? How do you control a committee that is responsible for the quality of care? We need some managers, for ex-

ample, who can be held responsible through a management structure to the board of trustees. The managers are responsible if something is less than it should be, and they also participate in establishing the goals. That was one of the other things I heard from Dr. Becker. He made the statement that he assumed there was agreement among the physicians, the board, and the administration on the goals of the hospital.

I wonder whether it isn't important in the planning process that all sides talk about the hospital's goals. Consensus is one of the things that should be achieved, and in most hospitals is seldom achieved, until there is a serious problem. Then they say, "Let's find out what we are all about," and that isn't a consensus. It's a form of concern about the purpose of the institution rather than the purposes of every individual who is part of the institution.

CHAIRMAN JOHNSON: Stanley, I think that's a good summary and a place to end our discussion.

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