The Medical Care System under National Health Insurance: Four Models

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Abstract. This paper presents a critical evaluation of four national health insurance models in light of their ability to counteract incentives in the present system that are dysfunctional in terms of costs and quality of care. The feasible models are labelled as: major risk insurance, alternative delivery systems under universal coverage; the public utility allocation model (alias the British system); and the public utility hospital model. It is concluded that substantial changes in the existing structure of the medical care system will be very difficult to achieve politically. Further, those models most politically feasible, the present medical care system with universal third party financing, and public utility process controls with universal third party financing, are the ones most likely to aggravate present cost-quality difficulties. Therefore, the recommended procedure for implementing national health insurance is unabashedly incremental: i.e.; to experiment with cost-sharing, alternative delivery systems, other provider incentive mechanisms and public utility regulation-budget allocation approaches, before wholesale adoption of national health insurance is entertained.

I. Introduction and Overview

The burden of this analysis is that the American medical care system will require significant change under any foreseeable form of national health insurance (NHI). Indeed, the medical care system is so central to every issue now pressuring government to intervene in health care that significant change appears unavoidable even in the absence of NHI. With several options available and with such serious consequences for consumers, providers and especially payers of care riding on the decision, the issue of change in the medical care system has received surprisingly little attention in the public debate on NHI. Yet so tightly are the delivery and the financing of medical care interwoven that the fate of NHI and the

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medical care system are inextricably tied; decisions on either will determine the shape and success of both. Therefore, in asking what kind of NHI we want, Americans might best begin asking what kind of future medical care system we want. They are the same question.

The kind of medical care system we get will result from a complex interplay of both technical and political dynamics. This analysis will examine both to indicate why change seems inevitable, what choices we have and, more speculatively, where our present course may lead.

The issue of medical care system change can be put in the form of a dilemma. On the one hand our society has shifted substantially in the last decade to the idea that health care is a right. We increasingly believe that medical care use should be determined not by income and personal circumstance but by some standard of medical need, and that no one should be bankrupted by ruinous medical expense. We have already made—perhaps without wholly realizing all that was involved—significant, irreversible commitments to this idea through Medicare and Medicaid, and of course we are now contemplating national health insurance.

On the other hand, and here is the dilemma, we already know how to practice a style of medicine in the United States which, if we were to extend it equally to all, would be far more expensive than this nation would or should pay, and far more expensive than the meager improvement to the nation's health would justify. Moreover, the ability of inventive American science and technology to elaborate this style and make it more costly is almost endless. It appears that this costly elaboration is already occurring under Medicare, Medicaid and comprehensive private insurance, to such an extent that government has felt compelled to intervene more and more strongly in the medical care system.

It is our central contention, first, that this cost escalation is unlikely to abate. It is deeply rooted in the structure and incentives of the present medical care system and its financing, and on its own the system has no adequate mechanisms to cope with it. Second, while government may waver on its other health care goals—financial protection of patients, more equitable access, improved effectiveness—it can not afford to waver on cost containment. Caught in a troubled economy between a squeeze on public budgets from other pressing priorities, and footing 40 percent of the rapidly rising health care bill (presently in excess of $100 billion), government will do everything and anything it must to control health care costs. It will not succeed without significant change in the medical care system.

The deep-rooted nature of cost escalation and its seriousness in our present system can be illustrated by an argument and an example. The argument is as follows: As a nation we are increasingly shifting health care from a market to a merit good. Our principle mechanisms for doing

so—tax breaks for employment health benefits[1], Medicare, Medicaid—have resulted in the widespread provision of private and subsidized public health insurance. In effect we heavily reduce the effective price to the patient at the time of service, and commit a third party—the insurer or government—to reimburse the provider for the expense of covered services. This lowering of effective price raises demand.[2] With perhaps over half the population presently covered by good comprehensive insurance,[3] it can be argued the nation is in a state of unsatiated demand. This does not mean that insured consumers are knocking down physician doors; it does mean they would accept more elaborate care if providers recommend or provide it to them. With price and demand no longer the arbiter, the cost and quantity of services delivered becomes determined largely by the supply system, the medical care system. But as our later analysis will attempt to demonstrate, the quantity, quality, style, and therefore cost of medical care can be escalated almost indefinitely, and the present medical care system has every incentive—ethical, professional, financial, and legal—to escalate them. Moreover we as patients support them in this.

The following example shows the seriousness of the results. It is estimated by some medical experts that up to 4 million persons are potentially candidates for coronary bypass graft surgery, an expensive new procedure costing from $7000-$10,000.[4] No controlled clinical trials to test its efficacy have been performed; but for some patients it is thought to prolong life at least somewhat, for many it relieves pain (although less costly medical treatment may be equally effective in some cases) and for others the benefits have yet to be established.[5] The incidence of the procedure is growing rapidly, apparently constrained mainly by the number of surgeons trained in the operation. If insurance makes price no longer an issue, and the patient's physician recommends the procedure, the patient is unlikely to resist. Thus in the near future the nation could spend up to $20 billion, and thereafter incur annual expenditures of from $2–4 billion, on this one procedure alone if all patients had comprehensive coverage. Even under present coverage at least half that sum will be spent.

Now if one had $20 billion dollars to spend on the health and well-being of the American people, would he choose to spend it on a single procedure of unestablished efficacy? Would he choose to spend it on more medical care alone, even on procedures of established efficacy? Many other non-medical interventions—nutrition, environmental clean-up, traffic safety—improve health; it would seem to be a matter of priorities, of weighing the costs and benefits. The point is, that under present third party reimbursement insurance, one has no choice. If the medical care system elects to perform coronary bypass surgery, the third parties

are committed to reimbursing however much they do. And this example, while perhaps more dramatic than most, can be endlessly multiplied.[6]

Thus health care is no longer a benign issue. If we simply continue extending third party insurance coverage without attention to the response of the medical care system, we run the risk of our medical care system becoming a kind of vast vacuum cleaner, sucking uncontrollable amounts of GNP and scarce tax dollars—urgently needed for other equally pressing national priorities—and putting them to medical care. This would seem to be the principal danger facing national health insurance. Should NHI force us to overspend for medical care, the health and well-being of the nation may actually be reduced.

Providers of medical care cannot be blamed for this situation. It is society who changed the rules; it is we the people who are establishing health care as a right. Until the last decade or so, we were content with our medical care system and with health care as a market good. Our expectations have changed. But the structure and incentives of the medical care system have not changed, and cannot cope with health care as a merit good. Thus the problem is structural rather than conspiratorial. It is not that providers will try to do us ill; it is that they will try to do us too much good. And when someone else foots the bill, we will all want the very best. The system is therefore doing exactly what society rewards it to do. If we want health care as a right at a price the nation is willing to pay, we shall not only have to change our medical care system and provider attitudes but our attitudes and expectations as patients as well. We shall have to change from a philosophy of "everything for everybody at the lowest sound cost," which we can't afford, to "that which is most effective to all who will benefit within the means society is willing and able to provide."

What options are available to us? Certainly we do not wish to blindly restrain costs in ways that would jeopardize the health of the American people or impair the effectiveness of our medical care system. Rather, the objective is to contain cost in ways which at the same time improve the efficiency of the system—e.g., health produced per dollar expended—so that effectiveness is maintained or increased. Fortunately, this objective appears possible, though difficult. As suggested in Section III below, there is evidence of sufficient slack in the present medical care system that, by encouragement of more efficient organization and styles of practice, it seems quite possible that medical care costs can be significantly controlled without threat to the nation's health. Experience and research suggest three principal devices with at least the potential to reasonably control costs and encourage efficiency. These three devices, alone or in combination, have very different and significant implications for the future of the medical care system. The nation thus has very genuine

choices, representing a range of values and methods. The three devices distinguish themselves according to whether cost-control is exercised primarily through consumers, providers or government:

Consumer cost-sharing. The consumer is asked to pay a greater share of the price at the time of service (e.g., deductibles, coinsurance and co-payments). This involves the least change in the medical care system, but to achieve adequate financial protection for catastrophic expense, some change will be required. However, cost-sharing of the magnitude necessary to work effectively involves taking away existing benefits, which is extremely difficult politically.

Restructuring the private system. This would be done in such a way that providers would have improved organization and incentives to accomplish national goals; the encouragement of HMOs and other alternative delivery systems is an example. However, it will require considerable private initiative to create sufficient change to influence the entire medical care system behavior. Encouraging the necessary motivation and acceptance will be difficult.

Public utility controls. Experience suggests the controls must be extremely powerful to work. We shall argue that such controls are unlikely to work well until the government can fix the budget for regulated services in advance. Regulatory intervention is the simplest device to implement incrementally, but controls of the magnitude necessary to work effectively will also substantially change the medical care system and will be a long, difficult course politically.

These three devices can be combined in a number of ways to form various future models for the medical care system. Models emphasizing the first two devices may be termed "consumer market" oriented, for they seek to restore market discipline presently lacking in the private system while minimizing government intervention. Models emphasizing regulatory controls accept strong, continuing government intervention, and may be termed "public utility" oriented. In the analysis we shall examine two models of each kind which are likely to work (and one of each kind likely to fail). It will be seen that each medical care system model places different constraints on the design of a national health insurance plan, and conversely, the national health insurance plan influences the direction of change in the medical care system.

Thus national health insurance may offer an opportunity; it can provide the levers to move the medical care system where we want it to go. However, there is little public consensus presently where we want the system to go, indeed there is little awareness that significant change will be needed. In a recent television forum on NHI, only Congressman Ullman insistently recognized the point that the delivery system needs change; the other congressional and administration speakers

largely ignored it.[7] Given that all the workable choices appear difficult and will deeply affect all of us, surely the issue needs broad, informed, searching public debate. What kind of medical care system do we want that can provide adequate, effective health care to all at a price the nation can afford?

The analysis is laid out as follows: The next section looks at the goals and problems for national health insurance and the medical care system, and the pressure on the federal government to resolve them. Section III analyzes the underlying causes in the medical care system responsible for these problems. Section IV analyzes the general options available to address these underlying causes and the prospects to implement each option. Finally, Section V speculates where our present course may lead.

II. Problems and Goals for National Health Insurance

Most Americans would probably agree on the following four goals for NHI, if not necessarily on the means to get there. Indeed these are the problems and goals of health policy more generally.

Goal 1. Financial protection of people from undue medical expense

The United States remains one of the few industrialized countries where an individual can be bankrupted by medical expense. Presently approximately 10 percent of U.S. households spend directly (i.e., excluding employer or other contributions) in excess of 15 percent of their income annually for health insurance premiums and out-of-pocket medical bills.[8] Almost 4 percent spend more than 25 percent of income on such expenses. This burden falls most heavily on the sick and poor. The country must make a decision on whether, how and how much this burden should be shared more widely with the well and well-off.

Goal 2. More equitable distribution of health care among the population

Through Medicare and Medicaid the United States has made enormous strides in improving the distribution of health care by income. In 1963 the poorest third of the population received substantially less services than the highest third. By 1969 both groups used on average about the same amount of services.[9] The price paid in medical cost inflation to accomplish this was substantially more than anticipated. Nevertheless, substantial inequities, by income and area, appear disguised in these averages. Relative to health needs, which are higher among low income persons, the lowest income third of the population should probably be using more services than the rest of the population.[10] Further, the

great variation in availability of services creates considerable disparities in per capita use both regionally and locally.[11]

Goal 3. Improved effectiveness of health care

Except for certain underserved groups in the population, it is doubtful that at our present service levels more health care will make measurable improvement in national health levels. Western nations vary more than 200 percent in per capita expenditures for health care but by less than 5 percent in most health indices,[12] and health indices do not particularly correlate with expenditures.[13] Genetics, personal lifestyle, nutrition, environment all appear to play a more determinative role in health than does health care. Nevertheless, the rather meager research on actual patient outcomes of health care in practice suggests there is great variability in effectiveness.[14] Within the limits that health care can achieve, improved effectiveness would provide high health value per dollar of health care.

Goal 4. Control of health care costs

From 1965 to 1975 (fiscal year), per capita health care expenditures in the United States rose from $170 to $476, and total health care expenditures rose from 5.9 percent to 8.3 percent of GNP.[15] Health care is perhaps the largest sector of the economy to sustain such high contained cost escalation. This escalation is particularly troublesome because, although the use of services has increased and is more equitably distributed, it is difficult to find more than marginal improvement in health levels. (It should be noted that during the years 1972 to 1974, health care expenditures remained roughly constant at 7.7 percent of GNP. However, it should also be noted that the annual increase in health care expenditures did not slow down so much as the rest of the badly inflating economy caught up. The analysis of this paper suggests there are many pressures at work in the health care sector likely to continue this cost escalation, even as inflation in the rest of the economy slows down.) In addition to the above goals, there are two additional corollary constraints which NHI should observe:

Constraint 1. Minimal or at least evolutionary disruption of existing institutions

Congress tends to move in a cautious incremental way, building on previous actions. Not only is there considerable political inertia in attempting to drastically change large systems of people, such as the health care and health insurance systems, there is considerable danger of confusion and ineffectiveness in doing so. There are also often unfore-

seen side effects. For example, what might happen to the private financial investment structure of the country should the private health insurance industry be substantially altered? (This is not an argument that it should or should not be in time, only that in a sector as large as health care, drastic change should only be made if necessary, and then at a pace that the nation can politically and practically absorb.) Thus it is probably politically and practically unrealistic to expect enactment of an NHI proposal which goes too far too fast, irrespective of its merits.

Constraint 2. Feasibility, both of the NHI plan and its implementation strategy

Any NHI plan must be acceptable to the public and workable in practice. Further, there must be a feasible way to implement the plan, a change strategy to get there from here. These are not the same thing. The analysis of this paper suggests that the NHI proposals most likely to meet the above goals, could they be implemented, are the most difficult to implement. Conversely, the plans most easily implemented are the least likely to fulfill the goals.

To achieve the above goals, an NHI plan will have to specify five issues or "variables:"

Eligibility. Who will be covered? Will eligibility be universal or limited to special groups, will coverage be compulsory or voluntary?

Benefits. Will benefits be basic only, catastrophic only, or comprehensive? Will benefits be uniform or vary among those covered?

Financing. How will the cost of the plan be spread over consumers (via premiums and co-payments), dedicated taxes (payroll tax, surtax) and general revenue?

Administration. Shall the plan be publicly or privately administrated? In particular, will all private insurers participate or only a limited number, or none? Will they act as underwriters, or as intermediaries only?

Medical care system. What kind of medical care system do we want that can provide equitably distributed, effective health care to all within the means society wishes to pay? What kinds of incentives and controls will create such performance?

Now even superficial inspection shows that all the problems and the goals listed above, even how much financial protection we can afford,

crucially depend on the behavior of the medical care system "variable." In the next section we will show just how interrelated and deep-rooted this dependence is. Thus the medical care system is a central issue in the whole NHI question, and indeed of health policy generally.

More particularly, all these goals—and all our other social priorities: welfare, criminal justice, housing, jobs, etc.—depend on having dollars available. Thus the central goal that enables all the rest is cost containment. Yet medical care is the third largest (after debt and Social Security) and fastest growing uncontrollable cost item in the federal budget. This has become particularly critical lately. Before 1972 federal revenues regularly rose faster than committed program expenses because of the natural increase in personal and business incomes. New programs could be financed out of this natural increase in revenue. Since 1972 this situation has begun to reverse, so that commitments are rising faster than revenue[16] (inflation has provided a partial and unwelcome respite). The government has had to raise taxes just to honor present commitments, and cut back programs. Social programs and defense have been the chief casualties. Thus the achievement of a successful NHI program, which does not devour scarce dollars needed for other equally important national priorities, depends upon the achievement of a medical care system with reasonably controllable costs.

To make things more difficult, all the "variables" above are highly interrelated. The Congress cannot answer them independently one-by-one without getting highly contradictory, conflicting policy. If the desired medical care system of the future is specified, the remaining variables are to a large degree determined or at least constrained. Conversely, if the other variables—eligibility, benefits, financing and administration—are specified, they will largely determine, intentionally or unintentionally, the future medical care system. Thus the nation has an extremely complex decision-making process to go through. If it chooses the other "variables" unmindful of the medical care system, it may wind up with a system that won't hold costs. And it may find it difficult and expensive to undo and redo these unmindful decisions.

It is particularly disturbing, then, that the medical care system has received so little attention in the current debate on NHI. Few of the major NHI proposals seriously address the problem of a coherent medical care system strategy, and make token recognition of cost control with piecemeal measures for which there is little evidence of effectiveness, either in this or other countries.[17] In the absence of debate, the public appears to be under the illusion that through NHI they can achieve (1) complete financial protection and (2) controlled costs, and (3) still retain the present system and style of health care while (4) improving access to service into the bargain. This analysis will suggest at best we

can achieve any three of these desires but not the fourth: either we shall make substantial change in our health care system, or we shall suffer runaway costs, or we shall considerably lower our sights on the goals specified above. At worst, all of these events may occur.

III. An Analysis of Medical Care System Behavior

This section attempts to show that the major problems outlined in the previous section do not lend themselves to quick band-aid solutions but are deeply rooted in the structure and incentives of the present medical care system and its financing. We shall try to identify the basic structure and incentive elements determining system behavior, so that the policy and political analyst can understand what needs change and anticipate how the system will respond to various corrective strategies under NHI.

Ideally we would prefer a rigorous general theory of medical care system behavior, but such a theory is probably still some years off. However, recent research has uncovered many bits and pieces of the puzzle which, combined with plausible assumptions and arguments, can be woven into an analysis providing at least qualitative understanding of gross system behavior important to policy. With the caveat that conceptual analysis is not a substitute for a quantitative theory, we shall advance such an analysis.

The analysis is developed as follows. We start with a fundamental assumption, that the behavior of organized systems of people is determined by the structure and incentives of the system. We then set forth as further basic assumptions—generalizing from research, observation and experience—what we believe to be the key structural and incentive factors governing the behavior of the medical care system. While we shall attempt to make these generalizations plausible by explanation and example, we shall not primarily defend them directly. Rather we shall treat the assumptions as postulates, to be justified by their ability to rationally explain or predict system behavior confirmed or consistent with research findings. (If we are unable to plausibly deduce important known system behavior, this would indicate either error in the basic assumptions or that additional important structural and incentive factors have been overlooked. On the other hand, if most of the important behavior of the system can be accounted for, we gain confidence that the basic assumptions must be part of any eventual theory of the medical care system.) Once we have reasonably justified the basic assumptions in this manner, we shall use them in later sections to infer medical care system response to various policy proposals and NHI plans. Of course, our deductions will be based on rational argument rather than rigorous

derivation, and the farther we stray from confirmed behavior, the more speculative the analysis becomes. Nevertheless this type of structure-incentive analysis is believed a useful tool deserving wider application for the policy analyst working with social systems generally, and may serve as a source of hypotheses for an eventual, more rigorous theory.

A. *Basic assumptions*

1. *The medical care system behaves the way it is structured and rewarded to behave. Policy strategies will succeed or fail depending on how they address or alter the basic structure and incentives producing present system behavior.* This assumption is asserted as self-evident. By structure is meant the nature of the individuals and organizational elements in the system and the relationships among them. By incentives is meant all the positive and negative rewards and penalties—personal, social, professional, financial, legal—operating on individuals and organized elements in the system.

2. *The quality, quantity and style*[18] *of medical care are indefinitely expansible. The medical care system can legitimately absorb every dollar society will make available to it.* The nature of a system's product is one of the most important structural elements. In the case of the medical care system, the probabilistic and uncertain nature of both health and medical science implies that medical need is virtually inexhaustible. Providers can always try to provide ever greater safety margins for treatable patients, treat more and more hopeless patients, and screen for less and less probable diagnoses. For example, why perform $50 of laboratory tests to be 95 percent sure of a diagnosis, if $250 of tests will provide 97 percent certainty? Or, if a patient's condition is otherwise hopeless, why not perform an operation with a one in a thousand chance of success? Or, if an annual physical is good, why isn't a semi-annual physical better? Physicians already give themselves and their families 30 percent more care than the national average,[19] and inventive American science and technology can endlessly elaborate the possibilities. While the medical care system is too large and complex to respond instantaneously, eventually the final check on what gets done is the dollars available.

Elaborate medical care is not necessarily bad nor unnecessary (and consequently will not be curtailed by controls aimed at bad or unnecessary care), but it does rapidly run up against the law of diminishing marginal returns. The first few dollars invested in medical care—for immunizations, setting broken bones, etc.—are very effective in improving health. But it becomes increasingly more difficult and expensive to make similar health gains as we spend more. Beyond a certain point all the additional tests provide little extra safety margins, the heroic measures

only prolong the coma and postpone the inevitable, and medical care even begins to produce complications from its own complex interventions.[20]

3. *The incentives on providers in the present medical care system are powerfully skewed toward specialized, technological, high cost care.* The following examples illustrate some of these incentives. Peer reputation is a powerful motivator in most professions, and the physician gains far greater peer (and public) prestige practicing highly-specialized, technological care than practicing general primary medicine.[21] Financially, specialty work returns significantly greater income per hour than primary care,[22] and fee-for-service rewards the provision of more services and more expensive services.[23] Educationally, the physician is trained in medical centers engaging in highly specialized secondary and tertiary care, presenting role models he will be professionally socialized and rewarded to follow. Ethically the provider is bound to do all he can for each patient he accepts. Legally, physicians feel that malpractice doctrine seems to assert that, in event of an untoward result, the physician had better be able to demonstrate he performed all standard (whatever the court defines this to be) procedures even if he believes them excessive and unwarranted. Thus, unless altered or checked by limited financing, these incentives should lead physicians toward elaborate, specialized, high style practice which helps the few at great great expense rather than lower cost, lower style medicine which helps the many.

4. *The widespread extent of private and public third-party reimbursement health insurance, well over half of which appears quite comprehensive, provides almost open-ended financing to the medical care system.* The patient (first party) and provider (second party) control the cost and use of services, but the bill is paid by a third party—the insurer—who is committed to reimburse whatever covered services are done. The consumer, once his premium has been paid (and to the extent that he does not have to pay additional co-payments at the time of service), has every incentive to receive benefits that may help him, the provider has every incentive to render them. The insurer, public or private, risks the wrath of both the consumer and providers if he interferes. To control expenditures under third-party reimbursement health insurance, the insurer would have to intervene in virtually every individual medical transaction to judge its cost and appropriateness, a questionable role for a financial agent and a task which not even public insurers have succeeded at. (Thus Canada with universal public health insurance of the third-party reimbursement type has cost escalation comparable to the United States with its mixed public-private insurance system,[24] even though Canada has tried virtually every control proposed

for the United States.) With an estimated 80–90 percent of Americans having at least some public or private health insurance, and well over half rather comprehensively covered,[25] the medical care system has almost a blank check for its activities.

5. *The medical care system is fragmented into many small, independent units of production–predominantly solo physicians–inhibiting economies of scale and continuity, and creating strong externalities among the units.* By externalities is meant that costs and savings are not borne by the provider who creates them. For example, because physicians and hospitals are independent, the physician does not bear the cost of the hospital or its specialized facilities when he places a patient there. For example, the good family practitioner who detects and treats an illness early receives payment only for a few office calls; he receives none of the hundreds of dollars saved from the operation he may have prevented thereby. (These externalities tend to be reinforced by the consumer, who is far more motivated to seek care for late stage illness than for early stage, asymptomatic conditions.) Thus the present fragmented system, itself a product of historical structure and incentive forces, now acts to produce both structural inhibition and an absence of financial incentives to use the mix of health resources efficiently.

6. *The consumer is a poor judge of either the effectiveness or efficiency of his medical care nor is he able to get much information about them, giving the provider considerable latitude over the type and quantity of services demanded.* The consumer seeks health. He receives health services, about which he knows little and, under present professional controls, can obtain little objective information on cost or quality.[26] His information costs are therefore high and increase with the complexity of the episode, complicated by the presence of illness itself. He can of course judge expense (and may often, incorrectly, equate it with quality), and has several means to regulate his demand if he feels the benefit of health care unlikely to justify the expense: by not presenting himself for treatment, by non-compliance, by pressuring the provider for alternative cheaper treatment, or by seeking second opinions and alternative providers. The latter means are partially biased by professional control (as well as present malpractice doctrine) over standards of practice: for example, it is hard to imagine an American obstetrician recommending home delivery by a midwife, though the Dutch experience suggests that, properly organized, this can be quite as safe and much less expensive for uncomplicated deliveries as our specialized hospital delivery.[27] Were quality assured by other means and if objective information were available, price pressure could make consumers a more effective force for efficiency, but with the artificially low prices created

by insurance, consumer choice is a poor force for either effectiveness or efficiency.

7. *The medical care system has no ongoing mechanism to systematically monitor patient outcomes, nor is any provider accountable for the patient's health beyond the services that provider rendered.* The medical care system has little knowledge of nor accountability for its final product: health. For example, if a health survey found an excessive amount of uncontrolled high blood pressure in a community, what could it do with such information; no provider can be held accountable either for the problem or its correction. Each provider can choose the type of service he shall render, and is not responsible for other health problems in the population no matter how pressing. Moreover, once the provider has completed an episode of services, he tends to lose track of the patient. There is neither mechanism nor incentive to determine that the patient received all additional services of other providers to assure that his health was optimized. When a system is without feedback or accountability for goals, that system will tend to confuse means with ends. If the medical care system does not measure its productivity in terms of health, it will measure productivity in terms of services and dollars, even though these correlate only weakly with health.[28] Thus the system will tend to maximize on services rather than on health.

B. *Inferences concerning medical care system behavior*

We shall now attempt to justify the above structure and incentive assumptions by showing they provide a rational explanation of gross medical care system behavior and in particular the problems outlined in Section II. We shall draw inferences on system behavior from the assumptions and document that the inference is confirmed or consistent with research findings.

1. *The medical care system will likely be subject to strong provider induced demand-pull cost escalation.* Because of the reduced out-of-pocket price, the heavily insured consumer will accept a more expensive level of care (assumption 4), which allows providers to follow their powerful incentives (assumption 3) to practice more elaborate styles of care (assumption 2). It is important to note that expenditures should escalate not because the cost of inputs pushes them up (cost-push), but because insurance permits providers to increase prices and services and put the dollars into more costly inputs (demand-pull). As noted in the overview, we emphasize that in medical care this "demand"-pull is not simple consumer demand (there are no patient queues to speak of), but includes substantial provider induced demand made possible by insurance; the consumer himself does not demand high style medical care,

but if insurance removes the restraining effect of price, the consumer will largely accept what his provider recommends. As we have shown, providers have powerful incentives to recommend high style. Expanded coverage under NHI would likely aggravate such cost escalation pressures.

Research findings. Cost escalation has already been documented in Section I.A.4. Recent economic research suggests this cost escalation is consistent with predominant demand-pull.[29] Thus a kind of Parkinson's Law of medical care obtains; standards of practice eventually rise to absorb the dollars available.

2. *The medical care system will likely be characterized by over-elaborate inefficient, cost-ineffective styles of practice. Such "high style" is not necessarily ineffective; it is simply more expensive and wasteful than more efficient, "lower style" practice patterns that are equally effective in producing health.* In other words we expect the system not only to be using increasingly more dollars, but to be using them inefficiently. This inference follows from the absence of incentives for efficiency and the strong incentives for inefficiency (assumptions 3,4,5,6,7). Expanded coverage under NHI could thus aggravate inefficiency.

Research findings. Upon this vital inference rests the case that this nation can contain medical costs without threat to the health of its people. Three types of evidence strongly confirm this inference. First, utilization studies among comparable populations with comparable health indices show utilization of common services, such as hospital days and common surgery, varies by as much as two-fold, indicating the prevalence of inefficient high style practice patterns. Second, controlled clinical trials and outcomes studies suggest that much medical care has little effect, and that lower style clinical methods are often as effective as higher style methods. Third, efficiency studies show that, even beyond inefficiently high utilization, medical resources are used inefficiently.

The most rigorous utilization studies of matched populations compare HMOs (which eliminate externalities and have strong incentives for efficiency, see Section IV, Model 4 below) with traditional fee-for-service providers. Even after adjusting for age, sex and other factors, HMOs use 30–50 percent less hospital days, fewer physicians and 10–30 percent less total cost, per capita.[30] The few comparative studies of patient end-results in matched populations indicate both styles more or less equally effective.[31] Less controlled studies within the traditional system itself show extreme variations in utilization rates by area and region. Lewis[32] found common surgical procedure rates per person varied two-fold across Kansas counties. Similarly, Wennberg et al.[33] found great variations in hospitalization per person across Vermont counties. The national health

survey[34] found great variations in hospital use per person among regions of the United States, even for the same procedures; for example, length of stay for uncomplicated delivery was five days in the East, but only three days in the West. These variations appear far too great to be attributed to population differences,[35] and are more likely accounted for by styles and patterns of practice. This is further supported by evidence from controlled clinical trials and outcomes studies.[36] The evidence suggests not only the common use of procedures of unproven efficacy, but also the tendency of the medical care system to move toward high style procedures, even before their efficacy is fully established, when equally effective but less costly lower style procedures are available. Finally, efficiency studies confirm excessive inefficient use of expensive resources. For example, hospitals operate at inefficient levels of occupancy,[37] suggesting a major surplus of beds and service facilities. In other words, the sytem not only has inefficiently high utilization, this utilization itself is produced inefficiently. Further studies demonstrating both inefficient styles and inefficient production of services within the traditional system come from pre-admission testing,[38] pre-admission screening,[39] pre-surgical referral,[40] subsitution of outpatient for inpatient care,[41] in-hospital review,[42] and others.[43]

This ample evidence of widespread inefficiency confirms our contention that, if we can successfully reduce inefficiency, we can contain medical costs without harm to people's health or the effectiveness of the medical care system. But we shall not accomplish improved efficiency until we alter the structure and incentives in the present medical care system and its financing (listing in Section A above) which have produced and now maintain existing inefficient styles of both medical practice and operation. Such change will be no simple task.

3. *The type and use of service in local populations will likely depend much more upon the organization of the medical care system serving that population than upon the characteristics of the population served.* From the great latitude in style of medical practice (assumption 2), it can be inferred that in any area with adequate income and insurance levels (assumption 4), providers can make an adequate income providing elaborate care to the few or basic care to the many (assumption 2); providers thus have considerable latitude to choose the type and quantity of service they will provide. Expanded coverage under NHI could give the medical care system even greater latitude over utilization of services.

Research findings. Evidence supporting this inference comes from the failure of theories of consumer demand to account for much of the variation in utilization,[44] from the large differences in service and resource use among comparable populations cited in point 2 above, particularly between those served respectively by fee-for-service and prepaid

group practice and from studies demonstrating supply appears to at least in part generate its own demand.[45]

4. *Physicians will tend to increasingly specialize in inefficiently excessive numbers.* This inference follows from the powerful incentives to specialize (assumption 3), coupled with the observation that physicians can always find things to do for patients (assumption 2) which patients will accept in the absence of any economic check (assumptions 4 and 6). Expanded coverage under NHI could thus aggravate over-specialization.

Research findings. The relative increase in specialists and decrease in primary care physicians both in practice and in training is well documented.[46] Evidence that the physician distribution is inefficiently over-specialized comes from comparison with the physician distribution in HMOs,[47] which have strong incentives for efficiency; HMOs produce apparently comparable health results with relatively fewer specialists and relatively more primary physicians than the U.S. average. This result also supports the previous inference, since more specialists will result in proportionately more specialty care.

5. *Physicians will tend to be maldistributed by area, with specialists concentrated in professionally attractive areas. Only general and family practitioners are likely to be geographically distributed more evenly.* If insurance and income levels are adequate, specialists can concentrate in professionally attractive areas by using their latitude to provide more elaborate services to fewer people. (Indeed the desire to locate in a professionally attractive but physician-rich area adds one more incentive for physicians to specialize.) There is sufficient flexibility and expansibility in the medical ecology (assumption 2) and enough financing available (assumption 4), that specialists can pretty much avoid competing with each other, even in areas of high specialist concentration, and still maintain incomes. Only general and family practitioners, whose services are not usually covered by insurance, will be under much market pressure to distribute more evenly.[48] Expanded coverage under NHI could thus aggravate geographic maldistribution.

Research findings. The geographic distribution of physicians is known to be uneven[49] with general practitioners showing a moderately even distribution[50] and specialists concentrated in certain metropolitan areas. There is also some evidence consistent with the above argument that in physician-rich areas on average each physician renders less but more expensive service, and each person receives in total more services, than in physician-scarce areas.[51]

6. *Catastrophic care episodes requiring large expenditures should be escalating in cost much more rapidly than all care, and consume an*

increasing percentage of the health care dollar. This follows from all the incentives for physicians to engage in ever more specialized technological care, coupled with the fact that more and more people are becoming covered by more comprehensive insurance. We can expect this to create a market for medical technology which American science and industry will attempt to fill. Expanded coverage under NHI could thus aggravate castastrophic care escalation.

Research findings. The best evidence available suggests that in 1970 the top 1 percent of the population with the most expensive episodes consumed roughly 25 percent of all health care dollars, and the expenses of this top 1 percent were escalating 13–18 percent annually compared with about 10 percent for all care.[52] It seems doubtful that this rise can be attributed to increased catastrophic illness; the above explanation seems more likely. Much more research on the incidence, cost and outcomes of catastrophic illness is vitally needed.

The examples above provide some confidence that the basic structure and incentive assumptions in Section A above can plausibly explain gross system performance and are likely to be an important part of any eventual theory of medical care system behavior. These assumptions shall now be applied more speculatively to conditions which may obtain under NHI proposals.

IV. Strategies and Prospects for the Medical Care System under NHI

In this section we shall ask three questions: What NHI strategies might successfully achieve health care goals, especially cost containment? What is the likely impact of each strategy on the future medical care system? What are the prospects for implementing each strategy?

While an NHI strategy should be capable of achieving each of the major health care goals (Section II), the discussion shall focus on the cost containment issue for three reasons. First, cost containment is central; without it the dollars for the remaining goals will not be there. Second, because of the intimate relation between the medical care system and its financing, cost containment will have the greatest impact on the system. Third, a strategy which does not sufficiently contain costs will be unstable; the nation will keep shifting strategies until cost escalation is held to a tolerable level. Though important in their own right, the other goals—financial protection, equity and effectiveness—would take the discussion too far beyond the scope of this paper, and will be considered only as they limit possible cost containment methods or additionally impact the medical care system.

A. *Methods for cost containment*

The key to medical care system performance apparently lies in its structure and incentives. To determine successful methods for cost containment, we must therefore look at the structure and incentive factors of Section III.A creating cost escalation and inquire what needs to be changed. Two factors appear crucial: first, third party reimbursement health insurance, which creates artificially low prices for the consumer, gives an open-ended commitment to the provider, and allows the third party little control; and second, the powerful cost-raising incentives intrinsic in the present medical care system. To contain costs then, we shall either have to shift much of the payment control function from the poorly positioned third party to other parties better able to control the price and quantity of service, or alter the misdirected incentives in the present medical care system either through internal reforms or external controls, or do both.

If the incentives in the medical care system are not altered, the controls on price and quantity—and the incentives on the controllers to effectively exercise these controls—will have to be correspondingly more powerful.

There are three parties with the potential to control the price and quantity of services: the consumer, the provider, and the government. The major methods for cost containment divide naturally according to which of these three parties assumes control of medical expenses. Strategies for the medical care system (and NHI) will generally combine consistent combinations of all three methods, but may be classified according to which methods are emphasized. The methods may be described as follows:

1. ***Consumer cost-sharing.*** This method shifts the risk and control of medical expense more to the consumer, who can presumably best judge the utility of medical care to himself compared to other things he might purchase. The method is based on altering insurance benefits. If insurance removes the direct cost of care from the consumer, he will have every incentive to use all the care offered him. The consumer can presumably be induced to use care more prudently if he is made to share directly some portion of the cost. (He would still be financially protected if his share could not exceed some maximum limit.) Cost-sharing approaches include making the deductible very large ("catastrophic" insurance), or having stiff coinsurance (say 25 percent). Also the consumer could share in the premium. Note that to work effectively, cost-sharing must be simple and uniform. Otherwise the consumer will not know in advance what his cost-share will be when he purchases services. It is doubtful that any consumer knows his cost-share under

the present plethora of varying deductibles, coinsurance rates, inside limits, maximum limits and exclusions.

2. ***Provider incentives approach.*** This method shifts the risk and control of medical expense more to the providers, who can presumably best decide the necessity and most efficient use of care. It is based on preserving but restructuring the private medical care system to alter the present cost-raising incentives. The best articulated examples of this approach are the so-called HMOs, embracing a wide variety of prepaid comprehensive care organizations competing with traditional providers. Other alternative delivery systems with prepaid comprehensive care arrangements also seem possible but are unproven. Consumers enroll in the organization of their choice and pay a fixed monthly amount for all their care. The amount is set by the HMO in competition with other plans. The combination of comprehensive prepayment directly to providers and competition for consumers reduces incentives for high style and eliminates externalities. Thus these providers must attract and care for their enrollees within a fixed total budget determined by the market, which presumably places upon them a powerful incentive to provide economical, effective care. Even greater savings are presumably possible if HMOs and other alternative systems become prevalent enough to put market pressure on fee-for-service providers. Note that for this approach to work effectively, consumers must bear directly some portion of the premium or be allowed to receive additional benefits out of savings. Otherwise there is no incentive to keep premiums down or choose efficient systems. Other incentive arrangements short of HMOs (such as prospective reimbursement) though still unproven, also seem possible, but appear to require greater public intervention and thus verge more toward the public utility approach below.

3. ***Public utility approach.*** This method shifts the control of medical expense more to the government, which presumably has the requisite power and expertise unavailable to consumers and third parties to control costs and improve efficiency. It is assumed that the government can eventually exercise regulatory controls over the inputs, the process and the outcomes of care in any combination and degree necessary until cost escalation is reduced to a tolerable level. Note that for this approach to work effectively, government control must extend universally over all medical care, not just public programs such as Medicare and Medicaid. Otherwise providers will use their latitude to concentrate on more elaborate care for the middle class, and the controls will simply squeeze the poor and the old or shift their costs to private patients.

In the remainder of this section we shall examine six models of

NHI which combine these cost control methods in different ways. We may classify these models into two kinds: those which emphasize the first two methods shall be termed "consumer market" oriented, for they emphasize a private approach to medical care delivery and minimize government intervention. Those which emphasize government regulation shall be termed "public utility" oriented. By examining the incentives on the various parties expected to exercise control, we may analyze how well the models are likely to contain costs.

B. *Two models likely to fail*

This section analyzes two models, one consumer market oriented and one public utility oriented, which are unlikely to work well.

Model 1. The present medical care system with universal third-party financing. This model would leave the present medical care system unchanged, and simply extend present third-party reimbursement insurance to all.

Prospects for cost containment. The analysis of Section III suggests this model would simply aggravate every existing problem in the medical care system, particularly cost escalation. Comprehensive, universal third-party insurance wipes out the last vestige of any market discipline in the present system.

Prospects for implementation. Because the model leaves existing institutions alone, it can be expected to gain much support. However, the model is unstable; it can't last. Runaway costs will force intervention, probably in the form of ever increasing government regulation since the government will be subsidizing much of the bill. This appears to be the lesson of Medicare and Medicaid, which essentially used this model for the poor and the old: if public financing of medical care is expanded without altering the structure and incentives of the delivery system, runaway cost will drag the government ever more deeply into regulation of the delivery system.[53] Nevertheless, since is doubtful that the present strong government entry into health care regulation would have occurred without cost escalation in Medicare and Medicaid, this model may represent one way, albeit a very expensive one, to create sufficient pressure to make the remaining models more palatable.

Model 2. Public utility process controls with universal third-party financing. Public utility cost controls in medical care may be divided into two kinds: process controls which try to directly limit the price and quantity of services (such as utilization review, the process medical audit, fee controls, etc.), and input controls which try to limit the

manpower, facilities, and total dollars available to provide medical care. This model would extend third party coverage, either private or public, to all and rely on public utility process controls to contain costs.

Prospects for cost containment. Our previous analysis (Section III) as well as experience suggest that public utility process controls are unlikely to work well. The great latitude in medical need, the ill-defined nature of health services, and the sheer volume of services rendered suggest the magnitude of the difficulties. Price controls alone will not work, because providers can always increase the quantity and the mix of services (toward higher style), or even redefine the content of services. But to judge the necessity and appropriateness of each service rendered requires not only huge administrative review apparatus (expensive in itself) but strong provider input. And providers have little incentive to make such review work, and great incentive not to make it work.[54] Indeed, process provider review of procedures is as likely to raise costs as lower them[55] since providers will likely equate high style with quality.[56] How will the bureaucracy counter such judgments? Under the best of circumstances public utility regulation is vulnerable to capture by the regulated,[57] to attempt regulation in an area so fraught with medical judgment and ambiguity is to virtually invite it.

Evidence to support the above argument is ambiguous but not inconsistent. Review of such research as exists provides little evidence that process controls make any difference, and some evidence that such effect as they do have may wear off rather quickly.[58] Under Phase II and III of the recent price controls, the experience was that annual service price increases declined from 8 percent to 4 percent,[59] whereas the annual increase in total expenditures only declined from 12 percent to 10 percent[60] (presumably because the quantity and style of services remained uncontrolled). Some of this decline was in evidence before the controls began, perhaps from the recession, so how much can be attributed to the controls is not known. Thus, for a creditable but considerable administrative effort, our most ambitious attempt at price controls, so far, made at most some decrease in the magnitude of the annual cost increase, and whether this could be sustained is problematic.

Prospects for implementation. The experience of Medicare and Medicaid suggests process controls are among the easier types of public utility regulation to enact. But like the previous model, this model seems unstable. When this model fails to contain costs, government will try successively stronger process controls and eventually move toward strong input controls. (It is already attempting weak input controls on facilities via Certificate of Need laws.) The danger of this incremental approach to strong public utility controls is that it is not only expensive (e.g., we endure cost escalation until this model is

supplanted), it may stifle the medical care system with a massive fragmented, bureaucratic, expensive, indifferently effective regulatory apparatus which is unlikely to go away when more effective regulation is found. There is little history of deregulation in this country.

C. *Four models that might work*

This section analyzes four models—two market oriented and two public utility oriented—that might achieve the NHI goals of Section II. The four models chosen were selected because each emphasizes primarily one of the cost control methods in Section IV.A above. We may thereby gain some insight into further models combining all three methods by extrapolating the analyses for these four.

Model 3. Major risk insurance. This model, articulated by Pauly and by Feldstein,[61] carries consumer cost-sharing to a fine art. The intent is to significantly reduce third-party financing by placing the consumer at substantial risk for the great majority of his care while still absolutely protecting him from bills large relative to his ability to pay. This is accomplished by totally insuring the consumer for all annual medical expenses, the threshold of complete coverage can be raised to say 20 percent or 15 percent. Below this threshold, he must pay all medical expenses out-of-pocket. Alternatively, to give the consumer a cost-share in even larger expenses, the threshold of complete coverage can be raised to say 20 percent of income and a coinsurance rate of 50 percent or 75 percent can be placed on expenses below the threshold, so that again the consumer is never at risk for more than 10 percent or 15 percent of income. Recognizing that for low income persons, even 10 percent of income is onerous, the coinsurance rate and threshold could be proportionately reduced (income related) on a sliding scale according to income in any way deemed equitable.

Prospects for cost containment. Evidence tends to support that heavy cost-sharing can effectively control costs. The more carefully price elasticity of medical care is measured, the more elastic it appears to be.[62] (The argument that the physician, not the patient, controls demand appears to be strictly true only in conditions of unsatiated demand created by third-party financing.) Certainly the huge increase in use of services by the poor and old under Medicare and Medicaid show that price has a substantial impact on demand. Thus in principle the degree of cost-sharing can be increased sufficiently to control costs to whatever degree society desires.

A greater concern is that MRI will contain costs at the expense of health, especially of the poor. A thorough discussion of this point is

beyond the scope of this paper, but briefly, it seems unlikely that MRI will threaten either health or equity. In principle at least, MRI can be income-related to any degree society desires, eliminating bias against the poor (although too many income-related variations raise questions of administrative feasibility). And if an adequate level of medical care is thereby placed within the ability to pay of every person, there is no reason to think that health should be greatly endangered at our present levels of health care use.[63] If beyond this basic standard, consumers elect to put their money to other things, rather than health care which medical experts deem important, it must be remembered that consumer decisions disturb experts in all fields. It is a question of values; individual choice vs. social concern. If after placing adequate medical care within individuals' ability to pay, society wishes to assure equity beyond what individuals would choose on their own, then the price of equity will be greater intervention in the medical care system.

Prospects for the medical care system. MRI affords very complete financial protection to individuals. It also appears able to contain cost, but only below its threshold. This is an extremely important limitation which MRI shares with any cost-sharing approach. If there is to be financial protection, then at some point cost-sharing must be reduced to where it becomes ineffectual. At this point other cost control methods must be used. In the absence of controls yet to be specified, MRI is likely to distort the amount of resources going to secondary and tertiary care routinely rendered above the threshold, precisely the area most vulnerable to cost escalation (see III.B.6).

This problem is significant, and characteristic of any insurance plan covering catastrophic illness. By Fieldstein's own estimate, medical care above the MRI threshold presently accounts for more than 30 percent of the health care dollar. But MRI, by offering complete catastrophic coverage, will greatly increase (consumer and provider-induced) demand for catastrophic care, which is only poorly covered now,[64] (and may freeze externalities for such care into the system) and create an excessive market for high cost/low benefit technology that American science and industry will rush to fill. Unless controlled, cost escalation of catastrophic care may significantly offset savings in basic care and continue the present maldistribution by specialty and geographic area (see III.B.5).

This objection is hardly fatal to MRI, and can be resolved by applying other cost control methods, most likely public utility allocation controls (see Models 3 and 4 below), to catastrophic care. The problems in doing this have been touched on elsewhere.[65] However, all these solutions involve important intervention in the medical care system, although rather less than in the models below simply because intervention is restricted to the catastrophic care area. In fact, the infrequent number

of episodes which reach catastrophic magnitude may make effective control in this area more feasible than models attempting across the board controls.

Prospects for implementation. MRI could be administered either publicly or by private insurers. However, in order for the cost containment rationale of MRI to work effectively, MRI must (1) be fairly universal and (2) not be supplemented by basic benefits below the threshold. If some people have comprehensive benefits and some have MRI, it is likely that accepted standards and style of medical practice will be determined under comprehensive coverage (see III.B.3), and MRI will be accused of forcing people to accept second class care. If MRI is supplemented by basic coverage, then the total spectrum of care is covered, and the cost containment rationale of MRI falls apart.

There thus arises considerable political difficulty in implementing MRI. Feldstein[66] believes that MRI would drive out comprehensive health insurance in a competitive situation because it offers complete financial protection at one third the cost of comprehensive insurance. If so, the government need only offer a federal MRI policy (or alternatively mandate that private insurers offer an MRI policy as a dual choice to conventional health insurance), and the market would solve the implementation problem. Such an implementation strategy would be a political godsend, for it requires almost no direct intervention in existing medical and insurance arrangements. Unfortunately there is little evidence that it would work. The evidence from Medicare and group insurance is that individuals will purchase supplementary insurance against deductibles and coinsurance even for very comprehensive policies;[67] and it is unlikely that labor, which bargains for much of the group health insurance market, will consent to give up basic benefits already won. In at least one instance, MRI in a dual choice situation with conventional benefits was almost totally rejected by a university faculty.[68] Further resistance may come from the insurance industry, whose revenues would be drastically reduced under MRI.

Thus the only recourse to implement MRI would appear to be requiring by legislation that no other kind of health insurance could be sold. This seems politically impossible at this time. It would require taking away the great bulk of existing benefits, and there is no example of a country which has been able to successfully remove even modest benefits more than temporarily.[69] Imagine the politician or labor leader who must report to his constituency that he has just given up all their basic health benefits!

In sum, MRI supplemented by catastrophic care controls appears to be a very promising option which creates the least interference in the medical care system, but there is no simple way to get from here to

there. A great deal of public information, debate and understanding would be necessary to make this option palatable.

Model 4. Alternative delivery systems competing under universal coverage. This model was first articulated by Ellwood et al.[70] as a general strategy for restructuring the private medical care system to contain cost and improve equity and effectiveness. Its application under various national health insurance plans has been discussed by McClure[71] (although national health insurance is not a prerequisite to implementing the strategy). This approach stresses the provider incentives cost containment method above, with the idea that if the structure and incentives of the private medical care system can be properly set, the system will work out the myriad details to achieve public goals on its own without the necessity of detailed government involvement. The model would stimulate a variety of directly prepaid comprehensive medical care organizations with improved structure and incentives, competing with each other and traditional providers. Under universal coverage, people are entitled to federally specified health care benefits and receive an income-related subsidy or voucher to purchase them. The voucher may be applied to any of several qualified plans—whether one of the new alternative systems or a conventional third party insurance plan (public or private) using traditional providers—which compete on price and extra benefits. The consumer pays the difference between the value of his voucher and the price of the plan he chooses, so that consumers and plans face market discipline.

Prospects for cost containment. Both analysis and research evidence suggest this model might contain costs and encourage efficiency if it can be implemented. In the new alternative systems consumer choice, direct prepayment to providers, and the elimination of externalities provide new incentives for efficient, effective care. Prepayment direct to the provider organization rather than a third party compels the provider to work from a fixed budget, so that he must be cost conscious. Because it is comprehensive, the provider organization can capture the savings from reduced use of hospital and specialty care and apply them to primary care. And because the consumer has a choice, the provider organization must continually strive to satisfy him, nor can it arbitarily raise its price (capitation). Consumer choice itself is strengthened because the consumer does not make decisions on individual services but rather on an entire comprehensive care organization, which is large enough that he can get information from several of his neighbors. (More objective information along the lines of "Truth in Health Care Coverage" could also be made available.) And he makes his decisions in advance, uncomplicated by the

presence of illness. The broadening of consumer choice to include new alternative systems further implies that traditional providers will now also have to offer more economical care in order to compete for consumers.

Evidence tending to confirm the above arguments is of three kinds. First, existing mature HMOs show savings averaging 10–30 percent over traditional providers while achieving equally effective results.[72] Second, while more careful research using matched populations is needed, preliminary figures suggest that new HMOs perform much like mature HMOs;[73] this implies that HMOs are apparently a structural solution independent of the particular physicians and managers involved. Third, virtually all existing prepaid medical care foundations have formed in response to competition from HMOs, implying that competition by alternative systems can impact the behavior of traditional providers. If these findings are generalizeable—and it seems highly probable that they are[74]—this model should effectively reduce cost escalation, maintain effectiveness, and improve efficiency if alternative systems become sufficiently numerous. Indeed if efficient alternative systems become sufficiently numerous, it can be argued that greater savings become possible because they will begin to affect the price of inputs. Present savings in alternative systems are achieved by controlling the use and mix of resources, but the price of resources—the price of a surgeon, for example—is determined by the larger traditional system. If alternative systems become numerous enough to reduce the demand for high style resources, the price of such resources should fall.

Financial protection and equity should be improved in a pluralistic medical care system of competing, comprehensive alternative and traditional provider plans and universal coverage. Perhaps the greatest concern is that the incentives for economy may lead prepaid medical care organizations to underserve members to the point of jeopardizing health. It should be noted that peer review (inherent in organized medical care systems) and consumer choice act as incentives to maintain quality, and that the meager research on quality in mature HMOs does not substantiate this charge.[75] But the troubles with the new directly prepaid Medicaid plans in California (which are not strictly HMOs because the consumer market is limited to Medicaid recipients) suggest some alternative organizations may try to underserve.[76] Although even there the market seems to be working—Medicaid recipients by disenrolling seem to be shaking out the bad actors rather faster than the state has been able to disqualify them—some form of enabling regulation to prevent bad actors from getting into the business seems desirable, as well as on-going quality assurance controls. (Parenthetically, we wish there were equal concern that fee-for-service providers may be overserving to the point of jeopardizing health. The omission of necessary

services appears no less dangerous than the over-provision of unnecessary services.[77] The same small minority of lax professionals who would presumably deliberately underserve in new alternative systems are with equal probability now overserving in the present system. Quality assurance needs attention right now in both systems, and the means to do it are within reach if we have the will.)[78]

Prospects for the medical care system. Under this model the private medical care system would be preserved but significantly restructured. At least half of medical professionals would be providing service through more or less integrated prepaid medical care organizations. Probably the majority of these would be hospital-based multispecialty group practice situations, since they are likely to be more efficient and attract more consumers. The majority would also be provider sponsored, since this is likely to appeal most to providers. Quality assurance regulation is also likely to be present in both the traditional and alternative systems.

Prospects for implementation. Like MRI, this model is a most promising option with severe difficulties in implementation. In its favor, this model can be incrementally approached (see Section II constraints 1 and 2). The government can try to stimulate alternative systems by removing existing market, legal, administrative and reimbursement barriers to their development in private and public benefit programs.[79] Under such a "fair market" climate, efficient alternative systems would be expected to compete well and grow. Some effort is being made in this direction now.[80]

But the creation of alternative systems requires private initiative, particularly by physicians (pressure from large group buyers would also help). But physicians are quite comfortable in the present system, and have little motivation to change. Hence they are content with resisting change rather than proposing credible change strategies of their own. Alternative systems also must win acceptance from consumers (especially large group buyers); but there is little public understanding of them presently, and in an uncertain economy comprehensive coverage is hard to sell.

Alternative systems also face difficulties in that public utility regulation largely ignores the fact that their structures and incentives, and therefore their performances and their needs, are different from traditional providers. Thus alternative systems find themselves regulated for the sins of others. This not only destroys any incentive for professionals to enter alternative systems to escape cost controls in the traditional fee-for-service system, it can directly inhibit alternative systems. As just one example, HMOs use half as many beds per capita as the national average, yet they are all subject to Certificate of Need bed controls. They must go through the lengthy, uncertain application process just the same

as the worst offending traditional hospital. Not only may they find themselves without beds for a growing enrollment, they may find the bed control agency captured by their traditional system competition and used to keep them from even getting into the market.[81] Thus present public utility controls, especially market entry controls, are at best a hindrance and at worst a danger to alternative systems.

These inhibiting factors combine to suggest that without greater understanding by both public and private decision-makers, there will be too few alternative delivery systems in the next few years for private restructuring to constitute a major force in a cost containment strategy, even though it would probably work.

Model 5. The public utility allocation model (alias the British model). The essential feature defining this model is that it places a publicly specified "lid" on the total health care budget. That is, the government decides in advance how much shall be spent each year for health care, and has some mechanism to allocate this amount, and no more, to the medical care system. A number of variants are possible depending on the allocation mechanism, ranging from a national health service[82] (somewhat analogous to the education system) in which all providers are employed by the government, to a tight public utility arrangement in which all private inputs—manpower, facilities and money—are to some degree controlled by the government. Common to all these variants will be a division of the country into health care districts headed by a district health care board which allocates resources to district providers from a fixed district budget. People in the district are entitled to comprehensive health care from providers in the district. There may be nominal cost-sharing by patients, but the majority of provider payments comes from the district board. Private third parties, if present, serve only as intermediaries.

Prospects for cost containment. Both analysis and experience suggest this model might contain costs. The point of the analysis is that unless the budget is fixed in advance, public utility controls are unlikely to work well. Conversely, unless there are quite strong public utility controls on inputs, it will be difficult to keep within the fixed budget. With both a fixed budget and controls, cost containment is likely to be successful.

The reasoning is as follows. In Model 2 it was shown that process controls (e.g., controls on individual services) are unlikely to work well. A far less demanding way to control the volume of procedures is to limit the number of professionals performing them. A less demanding way to control style is to limit the number of specialists and the number of facilities and technological equipment available. On the other hand, what these limits should be is a matter of medical as well as economic

judgment. How is the district board to limit the demands of the medical care system for more manpower, facilities, and equipment, when all such demands will be defended as improvements in health care? The only response government can finally make is that funds are limited. The government will therefore have to use its limited funds as an incentive and control on providers by fixing the district health care budget. When providers recognize that the demands of one provider for more means that the others get less, there will be a powerful incentive for all providers to agree on a defensible set of priorities and a method of allocating resources. There will also have to be strong controls so that providers can not individually ignore the priorities and wangle more resources than agreed on. Given a fixed budget, providers themselves are likely to help the district board make the controls work, so the controls are likely to succeed.

Two kinds of evidence suggest that this model will contain costs: the experience of England, and of HMOs. The British use an allocated fixed budget, and have had the least cost escalation of all the western nations. This is to be contrasted with Canada, which has a multitude of public utility controls but an open-ended budget based on reimbursement of whatever is done. In 1971 Canada spent an estimated 7.1 percent of its GNP for health care[83] and its annual increase in expenditures averaged an estimated 12 percent over the previous decade.[84] The comparable figures for England were 5.3 percent of a much smaller GNP in 1973 and 9.2 percent average annual expenditure increases. This evidence suggests not only that a fixed allocated budget can contain costs, but that without it public utility controls do not work well. While complaints are often voiced about the British system, such complaints seem due more to the fact that England is not a rich country than to the organization of its medical care system; if it spent as much per capita as the U.S., these complaints would likely diminish. The point is that they have control. If they stand in long queues for elective hospital care, it is because they have decided to spend the money for other national priorities. They can decide and the United States presently cannot. With their health statistics equal to ours and their expenditures far less, it appears that their system, whatever its shortcomings, has given them a tremendous bang for the pound.

A less direct kind of evidence comes from HMOs. In effect, HMOs are privately operated mini-Englands with consumer choice. Each HMO works under a fixed budget (although specified by the market rather than the government) and allocates its resources according to priorities. Again the results show cost containment and a bigger bang for the buck (see references under Model 4).

This model provides excellent financial protection. Further, if district budgets are apportioned on a per capita basis, equity should be reason-

ably good. There will always be a tendency of the well-off to seek private services at a standard higher than the public system supports, possibly a more troublesome problem in the United States than England because of the larger number of high incomes. Nevertheless, government has means to discourage this practice if there is social consensus that its prevalence threatens the basic equity of the majority. The school system provides one analogy of how this equity issue might work out.

There are two other concerns about this model: efficiency and responsiveness to consumers. Unlike the previous consumer market oriented models, which emphasize installing efficient, responsive market mechanisms which then determine overall resource use on the basis of consumer preferences, this model fixes overall resource use directly and has no automatic internal incentives to maximize efficiency and responsiveness. The model makes the implicit value assumption or pragmatic judgment that national health care goals will be better achieved by expert direction than individual consumer decisions. Efficient allocation and use of resources must therefore arise from a political and administrative decision-making apparatus, and there is neither a market nor any a priori "right" rules to guide these decisions. Two kinds of efficiency considerations figure in such decisions: are we devoting the right amount of resources to health care *vis à vis* other health and non-health priorities (e.g., what should the "lid" be); and are we getting maximum health and consumer satisfaction from these resources (e.g., are we using our given health care resources efficiently)? The difficulty and ambiguity of these decisions can be exemplified by analogies from experience. For example, are we overfinancing or underfinancing our court system; is the court system dispensing maximum and speedy justice with the resource it has? Health care resource questions will not be much easier.

The gross decisions, such as the overall "lid" itself, may be the most satisfactory, but there may be increased problems as the decisions work down to detailed medical activities and areas. Even on the gross decisions there is the well-known vulnerability of politicians to capitulate to determined, well-organized interest groups, which providers certainly are and will become more so under this model. (England's continued parsimony—underfinancing?—in health care may be more the result of its poverty than the resoluteness of its politicians in the face of provider demands.) As decisions come down to the detailed level and require increasing medical input, the vulnerability of the system to run more for the providers than for the consumers increases. Similarly with responsiveness, while the consumer will have at least some choice of provider he will have little choice of system. The large bureaucracy entailed then implies a fair danger of rigidity and impersonality. (The political im-

plications of the large new bureaucracy required have been treated by Flash.)[85] As decisions and actions descend to the detailed level the spirit may tend more toward "we're working for Uncle Sam who has lots of bucks" than "we're in a tough competition for consumers."

Nevertheless the experience of England shows that it is possible to arrive at a system with which most consumers and providers are reasonably satisfied on the whole if not in every detail. If we establish good feedback mechanisms on patient outcomes and consumer satisfaction, and if we make district boards responsive to consumers, we can perhaps minimize problems with efficiency and responsiveness. Making allowances for the size, traditions, and wealth of the United States compared with England, we should be able to achieve reasonable cost control, equity, efficiency and responsiveness with this model. Our school system provides perhaps the best analogy of what to expect.

Prospects for the medical care system. Again, careful analogies drawn from the school system, making allowances that providers will likely be politically stronger than teachers, may offer the best foresight into this model. Thus providers will probably not make their own opportunities so much as be presented them by the district boards. The district boards in negotiation with providers will likely determine the numbers and location of positions open in each specialty, and the size and type of service to be offered at each facility. Professionals will be much more bound by the actions of their peers, and professional "unions" or their equivalents are likely to appear to bargain with the boards. Innovations will likely have to come through consensus rather than individual action, and meet the approval of established providers.

Prospects for implementation. The prospects for implementing this proposal all at once are very slim, as experience with the Kennedy-Corman bill, a fixed budget public approach, indicates. The degree of public control of the medical care system required to make this model work is unprecedented in this country. It will have to be incrementally approached, and each step is likely to be strenuously resisted by providers and probably by insurors. Moreover, if consumers are given no cost-share under this model, only government will be interested in cost containment; government will then muster little public support to implement successively stronger controls. Since cost-sharing is extremely difficult to restore once it has been removed,[86] government should not be too generous at first. It can then trade reduced cost-sharing for public support or more stringent controls. In sum, it is likely that this model might work, but the strength of the controls needed suggest the nation will take a long time getting there if it tries to go this way. However, the possibility to incrementally implement the model greatly improves its eventual political prospects. The danger is that the nation may

try to approach this model through Model 2 (piecemeal public utility controls) first. Model 6, presented next, may offer the more advantageous approach.

Model 6. The public utility hospital model. This model is the least articulated of the four that might work. It starts with the observation that the most substantial and rapidly inflating portion of the personal health care dollar goes for hospital care, presently about 45 percent of personal health care expenditures.[87] Comparatively, the amount going to physician services (21 percent), and especially just to inpatient physician services (an estimated 9 percent), is small relative to the hospital expense induced by physicians' activity. Moreover, the number of hospitals (less than 7000) seems far more manageable than the number of practicing physicians (almost 300,000), and physicians seem to have the professional and political power to maintain their incomes in all western countries no matter what their medical system. This suggests that controlling the physician portion of the health care dollar may be very difficult. On the other hand it may be possible to contain the more substantial induced hospital costs that physicians cause by concentrating public utility controls mainly on the hospitals rather than on the entire system as in the previous model.

Under the impetus of Medicare, the Cost of Living Council, and some of the states, considerable work on hospital reimbursement and regulation has been initiated.[88] But little work has been published which looks down the road to coherent models of where such regulation might or should lead. Somers[89] has conceptually pioneered a model of the hospital as the integrating structure for the medical care system, but so far analysts have given little attention to the incentives and controls to make this structure perform any differently than the present system. The following analysis offers some considerations as to the necessary structure and incentive changes that may be required before such a public utility hospital model might realistically be expected to work.

The analysis starts with the basic structure and incentive assumptions of Section III.A, to which we now add two additional incentive assumptions particularly relevant to hospitals. The first is that *hospitals are dependent on physicians for patients, and therefore compete for physicians rather than for patients directly.* Financial viability, and the stability afforded by financial growth, is a basic incentive of most organizations. For hospitals, revenues come primarily from patient care. The hospital is dependent on its medical staff for both patients and the supervision of care. But the physician medical staff is actually independent of the hospital. Thus hospitals appear to basically compete for doctors, and can be expected to do whatever is necessary to attract them. If the physician wants a bed, the hospital will do its best to have one

available; if the physician wants to do cobalt therapy, the hospital will try to have a unit for him.

The second assumption is that *there are additional strong incentives for hospitals to increase bed capacity and the style of services offered.*[90] Prestige and peer reputation are powerful incentives to hospital administrators and boards. Prestige and reputation apparently accrue from size of the hospital, reputation of the medical staff, and the elaborateness of services offered. Hospitals appear to compete with each other over all these aspects. Additionally, administrators find building their hospital program professionally rewarding, and size can add financial stability if it can be financed. The community, represented by the boards, tends to want high quality services, all immediately available near home, and is less aware of costs, which are passed on to insurers. In the absence of patient outcome monitoring, all these incentives are reinforced by the tendency of physicians, hospitals, and the public to equate quality with high style. With these additional assumptions, a number of inferences can be drawn concerning present and future hospital behavior:

1. *Hospitals will tend to overbuild and overuse bed capacity and specialized service units.* The above incentives on hospitals all point toward overbuilding in their efforts to cater to physicians and increase financial strength and prestige. The costs will be passed on to third parties (assumption 4, Section III.A). (Evidence shows this is already the case, see III.B.2). Demand-based planning as opposed to population-based planning, used by Hill-Burton and most states will aggravate this overbuilding and overuse of beds.

2. *The provision of ambulatory facilities and ambulatory health insurance benefits will likely add to, rather than substitute for, hospital services under the present medical care system.* Both physicians and hospitals have powerful incentives to increase hospitalization, and few incentives not to. In the presence of excess capacity, hospitals are likely to move strongly into outpatient care as a source rather than a substitute for inpatient admissions. (Existing evidence is consistent with both points, showing little substitution under ambulatory benefits[91] and an increasing growth of hospital outpatient units.)[92]

3. *In the presence of simultaneous excess capacity and growing government cost control pressure, hospitals are likely (a) to accept regulation which limits competition (Certificate of Need is an example) and (b) to seek strength through bigness via affiliations and multi-hospital firms.* As government tries to slow the growth of the medical care pie, hospitals recognize that if any one of them tries to expand too rapidly it may mean a smaller slice for the others, as well as increased pressure on all. Regulation of new investments has frequently been accepted by producers in such situations[93] as the best way to keep out new

competitors and force existing producers to respect the present division of the market. On the other hand, the growth of larger and fewer third parties, in particular the government, should also lead hospitals to start affiliating and merging into larger multi-hospital firms to gain greater financial strength, market rationalization and political counter-muscle.[94] Since strength rather than efficiency may be the more powerful motive—economies of scale at large hospital and multi-hospital sizes are unproven and may be outweighed by diseconomies[95]—such alliances may result in hospitals growing to uneconomic sizes if the costs can be passed on to third parties. (Certificate of Need laws are present in two-thirds of the states[96] and are required under the new federal planning law, PL 93-641. Cooperative ventures and multi-hospital affiliations are in their infancy but seem to be spreading.)[97]

4. *Weak third party payers, rather than cost reimbursement appears responsible for the cost pass-through to third parties. Incentive-reimbursement of fee-for-service hospitals is unlikely to change things unless all such hospitals and all third parties are required to participate.* It makes little difference whether hospitals are reimbursed for costs or for charges if the third party is too weakly positioned (III.A.4) to control the rise in either.[98] Voluntary incentive reimbursement and rate review schemes are likely to fail in the presence of competing hospitals, since no hospital will intentionally jeopardize its financial stability and ability to compete for physicians. If the reimbursement scheme is not mandatory, the hospitals will use their latitude to concentrate on elaborate service to fewer patients, to refuse subscribers of unfavorable third parties (including Medicare and Medicaid beneficiaries) or to pass costs to weaker third parties.

Any public utility regulation of hospitals is unlikely to succeed unless it can overcome the powerful structure and incentive pressures above. The arguments advanced under Model 2 and Model 5 seem equally convincing here: successful direct regulation of the quantity and style of individual hospital services appears unfeasible, and regulation of inputs also seems unlikely to work in the absence of a fixed total budget. Thus a public authority or board with a fixed total budget for all hospital expenditures in its area will be assumed a minimum ingredient in any public utility hospital model. Second, this District Board must have sufficient powers to assure that the hospitals in its district do not exceed this budget, taking into account that the medical staff is a principle determinant of what hospitals do. In particular, it must be able to severely dampen or redirect the competition of hospitals for physician staff, and the demands of the physician staff for more elaborately equipped institutions. Thus it is highly probable that any effective

public utility hospital model must give the Board at least some regulatory power over hospital medical staffs as well.

For discussion, one potentially effective model will be suggested here. There may be other effective models less stringent, but present evidence leaves doubt that controls a great deal less powerful will be effective. Thus this model may indicate the nature of what is involved to make the public utility hospital concept work:

1. *The nation would be divided into hospital districts.* In each district a Board would be established with control of all hospital payment dollars in its district, including both hospital services and inpatient physician services. If private insurers are retained, they will pay a stipulated capitation for each subscriber to the District Board (insurers thus function as intermediaries and bear no risk for hospital care). If private insurers are eliminated, the District Board would receive the capitation from whatever federal, state or local tax mechanism was established. All hospitals in the district would be paid directly by the Board.

In this way the third party effect is reduced to a single Board which, because it has only a fixed sum of capitation money, has an imperative incentive to control cost. From experience, this would appear to be the only incentive powerful enough to make the Board not yield to the intense pressures of its hospitals for more money. Clearly there must be checks on the Boards' arbitrarily raising the capitation amount; for example, the capitation could be stipulated by the federal, state or local government.

2. *The Board would have power to fix the budget, the size, the type of service offered, and the number of medical staff positions in each specialty in all hospitals in the district.* The Board would annually negotiate each of these items with each hospital, subject of course to the Board not exceeding its own budget. Each hospital would have to cover its service costs and pay its medical staff for inpatient services from its annual budget, but could do so in any manner it desired. If a hospital is unable to stay within its budget or maintain acceptable quality, the Board shall have the power to reorganize that hospital's management. These controls set severe limits on the hospital's ability to compete for doctors, services and beds, and give hospital management a powerful incentive (threat of reorganization) to stay within its budget. In turn, the hospital is given much greater control over its medical staff, since it now decides how they shall be paid for inpatient services, and medical staff positions are limited. The medical staff will know that requests for elaborate equipment, convenient operating room hours, etc., will come out of the same budget from which they are paid, and can be expected to moderate their demands. The Board has general control over the

number and distribution of services performed in any hospital by virtue of controlling the numbers of specialty positions, service mix and size of the hospital. The Board can thus distribute hospital services and medical staffing throughout the community as it deems best. It can reward efficient hospitals by granting them additional resources, and penalize inefficient hospitals by taking them away. The Board may also choose to buy tertiary care from other districts rather than maintain its own. (Some federal or state control may be necessary to prevent districts in professionally attractive areas from augmenting their budget from such sales to the point where they monopolize specialty care. Physicians could be expected to hospitalize less since their fees for non-inpatient care would not be controlled in this model; presumably ambulatory care would be subject to stiff consumer cost-sharing for all but low income consumers, exerting a market control on ambulatory care fees.)

Prospects for cost control. In the absence of experience, it is of course conjecture that such powerful controls will be necessary before cost escalation and maldistribution are held to acceptable amounts. It may be possible and more desirable, for example, to use an incentive reimbursement scheme rather than negotiation to allocate the fixed budget. But even with such variants, given the strong incentives for hospitals and the failure of existing regulation to work well, good arguments can be made that without a fixed budget and at least some regulatory power over hospital budget, size, service mix, and especially medical staff, it will be possible for physicians and hospitals to get around the Board, causing costs to rise excessively. With these controls, it seems quite possible that the public utility hospital model could be successful. There will be the same concerns about efficiency and responsiveness as in the previous model. It may succumb to the usual problems of public utility regulation—less than optimal efficiency, protection of existing firms, administrative rigidity and impersonality, and inhibitions toward innovation—but cost should be contained and distribution should be reasonably equitable. Thus, should the nation elect this path, this analysis suggests one down-the-road look at where we may end up.

Prospects for implementation. Although less sweeping than the previous model, the controls necessary for this model to work effectively are sufficiently strong that they face formidable political obstacles. On the other hand, this model appears to have the best eventual political chance of any of the four models above because it can be staged incrementally. (This does not mean this model is better or worse than

the other models, only that proponents of other models will have to work harder to get there.)

The question is one of time, how long it will take before the necessary controls can be enacted and given sufficient clout to be effective. Before the District Boards can be given a fixed budget, there will have to be an NHI plan giving universal hospital benefits to all persons in the district. Thus the control most indispensable to the model must await the enactment of NHI. The remaining controls can be started on now. The first step would be to divide the country into districts and begin building an administrative structure in each that would eventually become the District Boards. The next steps would be to successively give these agencies more control over hospital size, reimbursement, service mix, quality, and eventually (and most politically difficult) hospital medical staffing. While it may be necessary for the controls to be initially very weak in order to get enactment, the strategy would be to set precedents and then tighten them with subsequent legislation. Presumably this strategy could proceed swiftly enough so that by the time NHI were enacted, the structure and necessary precedents would be sufficiently in place for NHI to simply supply the capstone. If it proceeds too slowly for this, NHI could prove very inflationary, but this very pressure might speed implementation of the model under NHI.

The nation appears well along the road on this agenda. At least some supporters of the new HSAs apparently envision them as the eventual District Boards.[99] Precedents for control of hospital size and service mix already exist in the federal planning law creating the HSAs. Precedent to shift PSRO regulation from the local medical societies to other organizations (the HSAs?) exists in the PSRO law should the medical societies falter. (Conflict of interest difficulties make it not improbable that many of them will falter.) Regulation of specialty positions has only been raised so far in medical education bills, and has so far been defeated; the issue seems unlikely to die, and will be back again. Certainly precedents in these areas will be over the solid opposition of organized medicine, but cost pressures are eroding their strength.

The ease of implementation of this model thus rests on incrementally building on previous regulation. At each point the regulation is minimally disruptive; the government, bearing uncontrollable Medicare and Medicaid costs, has a powerful incentive to act; and the people, paying ever higher prices and premiums, will support the action. As in the previous model, perhaps the greatest danger to this strategy would be the too rapid elimination of private insurance and consumer cost-sharing. Once people were not faced with the high cost of care, they might be less likely to support firm government action.

V. Where are We Headed: Some Conclusions

Perhaps the general conclusion to be drawn from the above analysis is that the structure and incentives producing the problems in our present medical care system are very strong and deep-rooted, and that adequate stragegies to alter or counteract these incentives require substantial change that will be politically difficult to achieve. Of the four models examined that might work, our analysis has come up with the following suggestions.

The major risk insurance model. This would make the least overt change in the medical care system, requiring stringent controls only in specialized secondary and tertiary care. However, benefits must be legislated away to implement the model. But the political tendency in this and other countries is to erode cost-sharing. Thus it seems politically very difficult to obtain the kind of cost-sharing MRI requires, and equally difficult to sustain it if we ever did.

The alternative delivery systems model. This would preserve a pluralistic private medical care system, but involves substantial restructuring from the present system. The restructuring could occur in an evolutionary, incremental way, but there are presently few signs of the necessary public or private initiative, or understanding, to bring it about on the scale needed to make it effective generally.

The public utility model. This would involve the greatest public intervention into the medical care system, most likely requiring fixed total budgets and public control over at least hospital size, service mix, reimbursement and medical staffing before it would work well. Although such controls can be approached incrementally, and government is strongly motivated to contain cost, it seems improbable that this magnitude of public intervention can be politically countenanced in the next few years.

A second conclusion is that the models politically most easy to fall into —generous financing with few or inadequate controls on the existing medical care system (Models 1 and 2)—are the most likely to aggravate and even rigidify all our present health care difficulties. While cost and equity pressures will eventually force us to more successful models, it will simply be longer, harder and more expensive to work our way out, and we may not come out as well.

A third conclusion is that there seems no reason not to incrementally proceed on all the potentially successful fronts at once—cost-sharing, alternative delivery systems and other provider incentive mechanisms, and public utility regulation aiming toward an allocated budget approach —before we attempt NHI. Thereby we could develop experience and explore models combining all three cost containment methods. If feasible,

an eventual model marrying both consumer market and public utility cost containment methods may be more effective and even more politically acceptable in the long run than the more single-minded approaches advanced in the models above. It would appear from the analysis that the health care dollar spectrum can be divided into regimes where each method might work most optimally: Cost-sharing would seem to work best on "first" dollars (e.g., ambulatory care) where health care is very elective and the consumer's decisions less difficult. Provider incentives might work best on first dollars and "middle" dollars (e.g., common hospital episodes) where consumer knowledge is inadequate and the volume of service makes regulation difficult. Public utility regulation might work best on middle and "last" dollars (e.g., specialized secondary and tertiary care) where financial protection precludes cost-sharing and heavy but equitable constraints on very expensive technology are needed.

On cost-sharing, at a minimum the Congress could use its insurance regulatory powers to make cost-sharing simple and understandable to the consumer, so that when he purchased health care he would know exactly what his liability would be. For example, every insurance policy could be required to have only one deductible, one coinsurance rate, one maximum limit, and no inside limits, which apply to all benefits covered in the policy and are clearly stated on the cover. This might be one part of a larger "Truth in Health Insurance" Act. (More ambitiously, the Congress might additionally consider mandating that every insurer offer a federally specified non-income related Major Risk Insurance policy (say, threshold $2000, coinsurance 50 percent) as a dual choice to all group policies currently sold. No insurer would be permitted legally to sell a supplemental policy to a holder of MRI. Any employee electing MRI would receive the dollar difference between the MRI premium and his present group benefits as tax free income. Since such benefits are now tax free, this would cost the country nothing, the individual would not be coerced, and bargained benefits would not be disturbed. It could then be determined whether consumers would choose MRI voluntarily. While cost-sharing might never be prevalent enough to contain costs by itself, it will help. And if there is no cost-sharing, government will find poor public support for its efforts to contain costs.

With respect to alternative delivery systems, Congress could make the HMO Act more flexible to encourage a greater variety of directly prepaid medical care organizations, improve the reimbursement formula for qualified alternative systems under Medicare and Medicaid, and remove inappropriate regulation, such as Certificate of Need, from qualified alternative systems. Even if such alternative systems never become

prevalent enough to contain all medical care costs by themselves, they will help.

With respect to public utility regulation, the Congress through its legislative authority over insurance could give the HSAs power to set fee-for-service hospital reimbursement rates uniformly for all insurers in its area. This would convert the country into a massive set of non-voluntary incentive reimbursement[100] experiments. Reimbursement authority is an appropriate precedent, should HSAs eventually control total district health care budgets. In the absence of fixed budgets, the Congress will have to devise an effective carrot or stick to motivate the HSAs to effectively exercise their authority—not an easy task. Even if the HSAs do not succeed in containing hospital costs without a fixed budget, reimbursement controls will at least set a precedent for the day when fixed area-wide budgets are possible.

In practice such a multi-model approach may be difficult to keep consistent. The greatest administrative effort will necessarily be devoted to public utility regulation of the fee-for-service system, which may tend to build a large constituency in the bureaucracy sympathetic to this approach, so that the other approaches are neglected. And in general, interest groups have found it easier to live with regulation than true competition.

A final consideration in where we may be headed is the political line-up itself. The Administration and three of the four congressional committees which handle health legislation are normally characterized as moderate to conservative. The recent passage of strong regulatory health legislation (PSRO, HSAs) in the public uility vein—especially at a time when conservatives are considering deregulation in other industries—may therefore come as a surprise, and requires some explanation.

One explanation may lie in the perceptions of the various contending forces. One group, primarily liberals, have long been convinced that change is necessary. They see health care as a merit good in which price and market competition have little place; government must step in strongly and guarantee equitable access. A second group are practical, action-minded non-idealogues who see problems in the programs for which they are responsible. They are looking for the fastest way to get on top of their programs, and regulation appears the most immediate way to move. The last group, the conservatives, are still fighting the battle between change and no change.[101] Consequently, the conservatives are not writing much legislation for the health care system, whereas the other two groups, although not always in step with each other, are constantly coming forward with regulation-oriented bills. But even the conservatives must face the problems, which do not go away, especially the cost escalation problem. Having no strategy of their own

for the medical care system, they must use whatever legislation is on the table, which is regulation-oriented. Thus the regulation-oriented bills may pass or fail depending on the pressures of the moment, but they keep coming back. They are the only credible ideas managing to reach the legislative table.

Considering the time and difficulty consumer market-oriented approaches will have in mustering sufficient private initiative to actually begin bringing the problems under control, and that conservatives are still hung up on whether change is necessary, the public utility-oriented approaches seem more likely to prevail, that is, unless the conservatives have a rather quick change of heart and convince the non-idealogues that a reformed consumer market does have a place in the future medical care system. Perhaps the major question now is whether the regulation will be coherent and unified, or fragmented and inconsistent. This depends on whether all the proponents of regulation understand how powerful the regulation will likely have to be before it becomes effective, and whether they agree on where the system is headed down the road. Even so, acquiring the necessary control will take much time and effort despite the fact that it can be approached incrementally.

A final question is whether the American public understands and accepts the change that will be required in its medical care system. The difficulty of implementing any workable approach is likely to require reasonable public consensus. As demonstrated by the illustrative models presented here, Americans have very genuine options, representing very different values, methods and consequences. If the public is divided on what should be done and what the future medical care system should be, this may frustrate a rational approach.

Thus it is hoped that public understanding and consensus might be built by having public figures and the media hold up the different alternatives for the future medical care system to public scrutiny and debate. Should we enact a generous national health insurance plan with only inadequate, inconsistent controls instead of a rational strategy for the medical care system—be it market-oriented, utility-oriented, or both —the nation could take a fairly expensive bath.

Notes

1. M. Feldstein and B. Friedman, "Tax Subsidies, the Rational Demand for Insurance and the Health Care Crisis," Discussion Paper No. 382, Harvard Institute of Economic Research, Sept. 1974.
2. R. Rosett and L. Huang, "The Effect of Health Insurance on the Demand for Medical Care," *Journal of Political Economy* 81 (March 1973): 281 and M. Feldstein, "The Welfare Loss of Excess Health Insurance," *J. Pol. Econ.* 81 (Mar. 1973): 251.
3. M. Mueller, "Private Health Insurance in 1973," *Social Security Bulletin* (Feb. 1975): 21.

4. *Report of the Catastrophic Illness Conference* (Rockville, Md.: National Center for Health Services Research, HEW, Dec. 1, 1974).
5. N. Kouchoukos et al., "An Appraisal of Coronary Bypass Grafting," *Circulation* 50 (July 1974): 11 and E. Corday, "Status of Coronary Bypass Surgery," *Journal of the American Medical Association* 231 (Mar. 24, 1975): 1245.
6. H. Hiatt, "Protecting the Medical Commons," *New England Journal of Medicine* 293 (July 31, 1975): 235.
7. Center for Health Policy Research, *Health Insurance: What Should Be the Federal Role?* (Washington: American Enterprise Institute, Jan. 22, 1975).
8. R. Anderson, Testimony in Hearings on National Health Insurance before the Subcommittee on Public Health and Environment of the House Committee on Interstate and Foreign Commerce, 93rd U.S. Congress, Dec. 14, 1973.
9. K. Davis, "Health Insurance," in C. Schultze, et al., *Setting National Priorities: the 1973 Budget* (Washington: Brookings Institution, 1973), p. 213.
10. L. Aday and R. Anderson, *Access to Medical Care* (Ann Arbor, Michigan: Health Administration Press, 1975) and D. Kessner, "Myths Revisited: National Health Insurance Improves the Health of the Poor," 102nd Annual Meeting of A.P.H.A. Oct. 22, 1974. See also, R. Wilson and E. White, "Changes in Morbidity, Disability and Utilization . . . 1964 and 1973," ibid.
11. "Utilization of Short-Stay Hospitals in 1971," National Health Survey Series 13, No. 7, HEW, 1974. See also, "Surgical Operations in Short-Stay Hospitals," Series 13, No. 18, ibid and J. Wennberg and A. Gittelsohn, "Small Area Variations in Health Care Delivery," *Science* 182 (Dec. 14, 1973): 1102.
12. R. Maxwell, *Health Care, the Growing Dilemma* (N.Y.: McKinsey & Co., 1974).
13. R. Auster et al., "The Production of Health," *Journal of Human Resources* 4 (Fall 1969): 411. See also, for example: N. Glazer, "Parodoxes of Health Care," *Public Interest* 22 (Winter 1971): 62; W. Barton, "Infant Mortality and Health Insurance Coverage," *Inquiry* 9 (Sept. 1972): 16; and "Regional Variations in Mortality from Heart Disease," *Statistical Bulletin of the Metropolitan Life Insurance Co.* (Nov. 1972): 3.
14. P. Ellwood, et al., *Assuring the Quality of Health Care* (Minneapolis, Minn.: InterStudy, 1973), Chap 3 and R. Brook, "Critical Issues in the Assessment of Quality of Care," *Journal of Medical Education* 48, Part 2 (April 1973): 114.
15. M. Mueller and R. Gibson, "National Health Expenditures," *Social Security Bulletin* (Feb. 1976).
16. C. Schultze et al., *Setting National Priorities, the 1973 Budget.*
17. B. Stuart and R. Stockton, "Control over the Utilization of Medical Services," *Milbank Memorial Fund Quarterly* 51 (Summer 1973): 341. See also *Rising Medical Costs in Michigan* (Report of the Technical Work Group on Health Care Costs, Michigan Dept. of Social Services, Lansing, July 1973) and P. O'Donoghue et al., *An Evaluation of Policy Related Research on the Effects of Health Care Regulation* (Denver: Policy Center, Inc., 1975).
18. Several terms are used in the analysis which are defined here. By "effectiveness" is meant the degree of improved health levels in the population cared for, within the limits that health care can improve health. "Quality" of health care is defined synonymously with effectiveness. By "efficiency" is meant effectiveness divided by cost; i.e., we understand efficiency as health manpower per dollar expended, not number of services per dollar expended. By "style" of practice is meant the degree of use of costly, technological inputs. "High style" means a high level of costly inputs; high style health care can be effective or ineffective, but it is always high cost. "Low style" practice makes less use of costly inputs; it can be effective or ineffective, just as with high style care, but it always costs less per service. Of course, ineffective low style care could eventually cost more than effective high style care. Conversely, equally effective low style care is more efficient than high style care.
19. J. Bunker and B. Brown, "The Physician Patient as an Informed Consumer of Surgical Services," *New England Journal of Medicine* 290 (May 9, 1974): 1051.

20. J. McLamb and R. Huntley, "Hazards of Hospitalization," *Southern Medical Journal* 60 (1967): 469-72. See also, E. Schimmel, "Hazards of Hospitalization," *Annual of Internal Medicine* 60 (1964): 100-110; and note 32.
21. C. Aring, "The Place of the Physician in Modern Society," *Journal of the American Medical Association* 228 (Apr. 8, 1974): 177.
22. *Profile of Medical Practice in 1974* (Chicago: American Medical Association, 1974) Tables 50, 52 64. See also note 51.
23. J. Maloney, "A Report on the Role of Economic Motivation in the Performance of Medical School Faculty," *Surgery* 68 (July 1970): 1. See also, M. Roemer, "On Paying the Doctor and the Implications of Different Methods," *Journal of Health and Human Behavior* 3 (Spring 1962): 4.
24. J. Simanis, "International Health Expenditures," *Social Security Bulletin* (Dec. 1970): 18. See also notes 12 and 68.
25. See note 3.
26. C. Havighurst, "Statement . . . on HMO's," Testimony in Hearings before the Senate Subcommittee on Monopoly and Antitrust, U.S. Congress (May 15, 1974). See also R. Trussel, et al., *The Quality, Quality and Costs of Medical and Hospital Care Secured by a Sample of Teamster Families in New York City* (New York: School of Public Health, Columbia University, 1972).
27. M. Bennett, "Health Insurance, Medical Need and Hospital Consumption," *Inquiry* 12 (March, 1975): 69–66.
28. See note 14.
29. M. Feldstein, "Hospital Cost Inflation," *American Economic Review* 61 (Dec. 1971): 853. See also K. Davis, "An Empirical Investigation of Alternative Models of the Hospital Industry," Annual Meeting of American Economic Association, Toronto, Dec. 30, 1972.
30. A Donabedian, "An Evaluation of Prepaid Group Practice," *Inquiry* 6 (Sept. 1969): 3; M. Roemer and W. Shonick, "HMO Performance," *Milbank Memorial Fund Quarterly* 51, (Summer 1973): 271 and M. Corbin and A. Krute, "Some Aspects of Medicare Experience with Group Practice Prepayment Plans," *Social Security Bulletin* (March 1973): 3.
31. See notes 14, 30 and C. Snow, "Do the Poor Receive Poor Quality Medical Care?" 102nd Annual Meeting of American Public Health Association, New Orleans, Oct. 24, 1972.
32. C. Lewis, "Variations in the Incidence of Surgery," *New England Journal of Medicine* 281 (Oct. 16, 1969): 880. See also E. Vayda, "A Comparison of Surgical Rates in Canada and in England and Wales," *New England Journal of Medicine* 289 (Dec. 6, 1973): 1224 and J. Bunker and J. Wennberg, ibid, 1249.
33. See note 11.
34. Ibid.
35. See notes 13, 34, and A. Cochrane, *Effectiveness and Efficiency* (England: Nuffield Provincial Hospitals Trust, 1971).
36. See notes 6, 14, 27, 34, and D. Spodick, "Numerators without Denominators," *Journal of American Medical Association* 232 (April 7, 1975): 35.
37. F. Sattler and M. Bennett, *A Statistical Profile of Short Term Hospitals in the United States in 1973* (Minneapolis: InterStudy, 1975); B. Ensminger, *The $8 Billion Hospital Bed Overrun* (Washington: Public Citizen's Health Research Group, 1975) and Report to the Congress by the Comptroller General, *Study of Health Facilities Construction Costs* (Washington: U.S. Government Printing Office, 1972).
38. Report to the Congress.
39. E. Brian, *Government Control of Hospital Utilization* (Sacramento, California: Dept. of Health Services, 1971).
40. E. McCarthy and G. Widmer, "Effects of Screening by Consultants on Recommended Surgical Procedures," *New England Journal of Medicine* 291 (Dec. 19, 1974): 1331.

41. S. Bellin et al., "Impact of Ambulatory Health Care Services on the Demand for Hospital Beds," *New England Journal of Medicine* 15 (April 10, 1969): 808.
42. P. Gertman and B. Bucher, "Inappropriate Bed Days and the Relationship to Length of Stay Parameters," Paper presented at the 99th Meeting of the American Public Health Association, Minneapolis, Oct. 11, 1971.
43. See note 17.
44. T. Kelly and G. Schieber, *Factors Affecting Medical Services Utilization* (Washington: Urban Institute, Dec. 1972).
45. D. Harris, "An Elaboration of the Relationship Between General Hospital Bed Supply and General Hospital Utilization," *Journal of Social Behavior* 15 (June 1975): 163. See also note 51.
46. R. Stevens, "Trends in Medical Specialization," *Inquiry* 8 (Mar. 1971): 9.
47. J. Chamberlain, "Selected Data on Group Practice Prepayment Plan Services," *Group Health and Welfare News,* Special Supplement, June 1967.
48. Although the cost and distribution problems (Section II) are mainly due to the insulation of specialists from market pressures, perhaps the largest voice in the AMA is the general and family practitioners, who live in a rather more competitive environment. This may play some role in the AMA's failure to perceive the real problems or to come up with a credible strategy for the medical care system.
49. *Distribution of Physicians and Hospitals* (Chicago: American Medical Association, 1970). However, see also, J. Sparks, "Physician Maldistribution?" *Private Practice* (Sept. 1972).
50. "Availability and Use of Health Services," *Agricultural Economic Report No. 139* (Washington: U.S. Dept. of Agriculture, July 1968).
51. V. Fuchs and M. Kramer, *Determinants of Expenditures for Physicians Services* (Rockville, Md.: National Center for Health Services Research, Dec. 1972).
52. J. Kasper et al, *The Financial Impact of Catastrophic Illness as Measured in the CHAS-NORC National Survey* (Chicago: Center for Health Admin. Studies, Univ. of Chicago, 1975).
53. The NHI proposals of the American Medical Association suggest that they missed this lesson. Because they expand financing with no credible strategy to contain costs, these proposals are the most likely to hasten the draconian regulation they fear.
54. We stress how powerful these incentives are. For example, given existing excess hospital capacity in the nation, if these controls were to work they would force many hospitals into financial jeopardy if not outright bankruptcy (see note 37). Again, the amount of specialty work would have to decline substantially. Hospitals and specialists both will work to circumvent the controls.
55. The evidence suggests good clinicians may ignore up to half or more of the procedural steps usually included in explicit procedure-based standards. In other words, they use experience and judgment to adjust the procedural mix to the individual patient in ways impossible to formulate into a standard, which must include every step that might be relevant. See R. Brook, "Quality of Care Assessment, Policy Relevant Issues," *Policy Sciences* 5 (Sept. 1974): 317. Outcome studies support their skill in this. Poor end results seem far more often the result of idiosyncratic system linkage failures (between provider and patient, provider and provider, provider and appointment desk, etc.) which seldom appear in standards, and only infrequently are due to omitted or poorly done medical procedures (see note 14). On the other hand, if cost control begins to pinch, it can easily be imagined that providers will follow all procedural standards to the letter, and there will be no objective way to fault them medically. Cost will be forced up with no improvement in health.
56. R. Brook, "Quality Of Care Assessment, Policy Relevant Issues."
57. R. Noll, *Reforming Regulation* (Brookings Institution, Washington, D.C., 1971). See also, W. Jordan, "Procedure Protection, Prior Market Structure, and the Effects of Government Regulation," *Journal of Law and Economics* 15 (1972): 151.
58. See note 17.
59. "Monthly Statistical Report: Summary of Selected Price, Costs, and Utilization Data

for the Health Care Market in the United States," Social Security Administration Office of Research and Statistics, Dec. 1972.

60. See note 15.
61. M. Feldstein, "A New Approach to National Health Insurance," *Public Interest (Spring 1971) and M. Pauly, National Health Insurance: An Analysis* (Washington: American Enterprise Institute, 1971).
62. C. Phelps and J. Newhouse, *Coinsurance and the Demand for Medical Services* (Santa Monica, Cal.: Rand, Report R-964-1-OEO, Oct. 1974).
63. There are no research studies comparing health outcomes in matched populations with and without heavy income-related cost-sharing, and further research is needed. The studies looking at service use under non-income-related copayments did not look at health outcomes, but the service variations found did not seem a priori threatening to health. See A. Scitovsky and N. Snyder, "Effect of Coinsurance on the Use of Physicians Services," *Social Security Bulletin* (June 1972): 3 and R. Beck, "An Analysis of the Demand for Physician Services in Saskatchewan," Ph.D. Thesis, University of Alberta, Edmonton, Spring 1971. Some preventive services were foregone by some persons, but society could subsidize such services if it wished.
64. Although data on catastrophic benefits are sketchy, it appears that a substantial number of the population presently have inadequate or no catastrophic protection. One piece of evidence is the number of persons without major medical or comprehensive benefits, roughly estimated at somewhere less than half the population. See M. Mueller, "Private Health Insurance in 1970," *Social Security Bulletin* (Feb. 1972): 3; *Sourcebook of Health Insurance, 1973-74* (N.Y.: Health Insurance Institute, 1974); and *A Current Profile of Group Medical Expense Insurance in Force in the U.S.* (N.Y.: Health Insurance Association of America, Feb. 1974). The other evidence is that persons incurring large medical expenditures have unrepresentatively high incomes relative to the U.S. average (see R. Anderson), implying that lower income persons are inhibited by lack of coverage or stiff cost-sharing at the catastrophic end. (See F. Sloan and B. Steinwald, "Role of Health Insurance," *Inquiry* 12 [Dec. 1974]: 275.) This disagrees with the conclusion of J. Newhouse et al. (see J. Newhouse et al., "Policy Options and the Impact of National Health Insurance," *New England Journal of Medicine* 290 [June 13, 1974]: 1345), that catastrophic care is well covered presently. But Newhouse et al. do agree that technology could make catastrophic care very inflationary.
65. See note 4 and W. McClure, Testimony in Hearings on National Health Insurance before the House Committee on Ways and Means, 93rd U.S. Congress, May 10, 1974.
66. "A New Approach."
67. M. Mueller, "Private Health Insurance in 1970."
68. R. Eilers (dec.), Leonard Davis, Inst. Health Economics, University of Pennsylvania, personal communication.
69. R. Evans, "Health Care Costs and Expenditures in Canada," Proceedings of the International Conference on Health Costs and Expenditures, Fogarty International Center, National Institute of Health, Washington, D.C., 1975, (to be published); also in *National Health Insurance: Can We Learn From Canada?,* ed: S. Andreopolos, (John Wiley, New York, 1975). Saskatchewan instituted modest copayments in their previously full coverage plan in 1969, which were discontinued after a couple of years. California instituted copayments in Medicaid in 1973, which have been discontinued presently.
70. P. Ellwood, et al., "The Health Maintenance Strategy," *Medical Care* 9 (May 1971): 291.
71. See note 65.
72. Brook, "Critical Issues," Donabedian, "An Evaluation," and C. Snow, "Do the Poor Receive Poor Quality Medical Care?"
73. J. Iglehart, "HMO Act Changes Advanced to Bolster Troubled Program," *National Journal Reports* (August 16, 1975): 1161.
74. For a more skeptical view, see U. Reinhardt, "Proposed Changes in the Organiza-

tion of Health-Care Delivery: An Overview and Critique," *Milbank Memorial Fund Quarterly* (Spring 1973): 169–222.

75. See note 72.
76. "A Review of the Regulation of Prepaid Health Plans by the State Department of Health," Legislative Analyst Report, State Capitol, Sacramento, Cal., Nov. 15, 1973.
77. See note 32.
78. See Ellwood, et al., "Assuring the Quality" and Brooks, "Quality of Care Assessment."
79. Ellwood, et al., "Health Maintenance Strategy" and McClure, "Testimony."
80. Iglehart, "HMO Act."
81. , R. Noll, "Public Utility Regulation of Hospitals," mimeograph, Dept. of Econ., Cal. Inst. of Technology, Oct. 3, 1973. See also C. Havighurst, "Certificate of Need Laws and Franchising Proposals," mimeograph, School of Law, Duke University, Oct. 31, 1972; and note 57.
82. G. Silver, "Fair Shares, the U.S.A. is Ready for a National Health Service," *Pharos* (July 1973): 95.
83. Maxwell, "Health Care."
84. Simanis, "International Health Expenditures."
85. W. Flash, *Political Implications of National Health Insurance Proposals* (Indiana Public Health Foundation, Fall 1970), p. 13.
86. See note 69.
87. Mueller and Gibson, "National Health Expenditures."
88. O'Donoghue, et al., "An Evaluation;" Stuart and Stocton, "Control;" and F. Sattler, *Hospital Prospective Rate Setting* (Minneapolis: InterStudy, Mar. 1975).
89. A. Somers, *Health Care in Transition* (Chicago: The Hospital Research and Educational Trust, 1971).
90. R. Schulz and J. Rose, "Can Hospitals Be Expected to Contain Costs? "*Inquiry* 10 (June 1973): 3.
91. C. Lewis and H. Kairnes, "Controlling Costs of Medical Care by Expanding Insurance Coverage," *New England Journal of Medicine* 282 (June 18, 1970): 1405.
92. "Hospital Guide Issue," *Hospitals: Journal of the American Hospital Association* (Aug. 1974).
93. See note 81.
94. This should spur a new interest in shared services but for very different motives: by government helping to encourage efficiency, and by hospitals hoping to initiate alliances.
95. U. Reinhardt, "Proposed Changes."
96. G. Clarke, "Health Programs in the States," (Eagleton Inst. of Politics, Rutgers University, Mar. 1975).
97. M. Doody, "Status of Multi-Hospital Systems," *Hospitals* 48 (June 1, 1974): 61. See also M. Brown, "Current Trends in Cooperative Ventures," ibid.
98. For an opposite view, see H. Klarman, "Major Public Initiatives in Health Care," *Public Interest* 34 (Winter 1974): 106-23.
99. D. Greenberg, "Preparing for National Health Insurance and Other matters," *New England Journal of Medicine* 291 (Nov. 28, 1974): 1205.
100. The stringency of incentive reimbursement should not be tied to superficial efficiency criteria such as occupancy; clearly, if the HSAs are successful at reducing hospital days per capita, existing hospitals will be running at lower occupancy unless we close beds. Reimbursement formulae might better become more stringent based on keeping average hospital days per capita in the area, and average hospital days per staff physician in each hospital, within desired tolerances.
101. The AMA, for example, spent great effort fighting the HMO Act which is an effort to reform and maintain a pluralistic, private system of medicine, whereas they gave rather token opposition to PSRO (perhaps because they believe doctors will run it), which creates an administrative structure with powerful regulatory potential where nothing existed before.