Managed care: Practice, pitfalls, and potential

by Stanley S. Wallack

The results of coordinating and changing patterns of health care using managed care activities and organizations are reviewed in this article. Although utilization review and high-cost case management programs reduce the use of expensive services, incentives for providers of care, placing them at risk, are important for managing the intensity of health care. Managed care appears capable of reducing health care costs substantially.

However, this increased efficiency has not translated to lower insurance premiums or modulated total health care expenditures because either purchasers are not aware or are not concerned about securing care at the least cost. To correct these deficiencies and deliver the potential of managed care, the author suggests the need to separate insurance into its three components parts (financing, risk spreading, and program management) and developed policies for each.

Introduction

The acceleration in health care costs in the late 1960s and the trend toward high technology medicine and away from primary care were the forces behind a radical change in Federal policy. In the early 1970s, the Federal Government embraced the concept of health maintenance organizations of (HMOs) as its major strategy to bring about an efficient and fair health care delivery system. Elliot Richardson, then the Secretary of the U.S. Department of Health, Education, and Welfare (DHEW), stated that the goal for the U.S. Government was to have close to 1,000 HMOs by 1980, making them an alternative form of health care delivery for 90 percent of U.S. citizens (U.S. Department of Health, Education, and Welfare, 1971).

Although the Federal goal was not accomplished, remarkable changes have occurred in the past two decades in the delivery system under the umbrella of managed-care systems, much of it based on the three principles and practices followed by HMOs: managing the care of patients, using a select group of providers, and placing the providers at some financial risk.

Enrollment in HMOs grew more than tenfold from 1970 to 1990, from 3.6 million to more than 35 million (Welch, 1990). During the same time period, new HMO models were started with different financial incentives. Still, current enrollees represent only 14 percent of all U.S. citizens. Although preferred provider organizations (PPOs) account for a similar number, the vast majority of managed care is now provided in fee-for-service plans provided through utilization review (UR) of various services, particularly hospital care and high-cost case management. More than three-quarters of the large private companies use UR, and about two-thirds use case management for high-cost cases (Jacobs and Laubrey, 1991; Berestall, 1991).

However, the continued escalation in health care expenditures since 1970, from about 6 percent of the gross national product (GNP) to almost 12 percent in 1990, alongside the growth in managed care and reduction in hospital days of care per capita, suggests that managed care alone will not contain the rise in health expenditures. Whereas efficiencies have emerged in the production of health services, inefficiency in resource use persists in the aggregate. Put another way, managed care has made it possible to do more, such as introduce new technologies, for a given level of total expenditures but has not impacted on the level of overall expenditures. The reason for this is that either the purchasers are unaware or are inadequately concerned about who are the efficient providers.

Interestingly, a number of countries that have controlled expenditures at the aggregate level (for example, the Netherlands, Germany, and Japan) are now feeling increased pressure on their aggregate spending cap. Accordingly, these countries are looking to alter their payment and delivery systems to encourage greater efficiency in the production of health services.

Successfully bridging the aggregate health system goal, such as a constant percent of GNP, with the goal of efficient provision of services is necessary both in a highly regulated system, such as Canada's, and in a competitive system, such as in the United States. If competing managed care organizations are to be a linchpin in making this bridge in the United States, then at least two separate market problems must be corrected: Competition among plans must be based on efficiency in patient care and not on selection of patients (Wallack, Tompkins, and Gruenberg, 1988), and consumers or purchasers must become price sensitive (Enthoven and Kronick, 1989). Moving from managed care to managed competition will require a change in how efficient costs are translated into efficient consumer prices, usually premiums.

Overview

This article discusses the role and value of managed care with regard to three cost-related health care system goals: efficient utilization of services, equitable distribution of costs and risks for providers and consumers, and acceptable aggregate expenditure levels. The first part of the article briefly assesses the performance or impact of managed-care practices on the efficient utilization of services. The second part describes why managed care alone does not necessarily lead to

Reprint requests: Stanley S. Wallack, Ph.D., Director, Bigel Institute for Health Policy, Heller Graduate School for Social Welfare at Brandeis University, P.O. Box 9110, 415 South Street, Waltham, Massachusetts 02254.

either equity or overall cost control. Seen in this larger context, it is hoped that both the utility and limitations of managed care can be better appreciated and that the importance of seeking multiple, complementary solutions will become clearer. The remainder of this overview provides a summary of many major points made in the article.

Intuition would suggest that managed care can contribute to lower aggregate health care expenditures. Managed-care practices, which are intended to reduce excessive and unnecessary service utilization, ought to improve the efficiency of health care delivery. Managed-care practices can certainly influence the course of treatment provided to individuals. There are two problems that impede the translation of efficient delivery into overall cost control, however. First, the financial incentives and open-ended financing that characterize the fee-for-service system fail to provide economic discipline in the aggregate. Second, prices or premiums facing purchasers result from a confounding mixture of relative utilization efficiency and health status or underwriting risk.

Crafting a national plan that could simultaneously address these issues would be difficult. To be successful, it will be necessary to design distinct policies that address the three major elements of any insurance program: the financing or revenues, the risk spreading, and the management of care. The value of competition in the market place will be greatest when targeted to efficient utilization, whereas policies of a different nature would perhaps be most useful for addressing financing and risk spreading. The separation of these three program elements and appropriate programmatic responses to each requires an understanding of how the elements interact.

To be most effective, managed-care techniques must be accompanied by financial incentives that reward the conservative use of services. Once this is done, a problem arises, in that the incentives to efficiently manage care spill over into incentives to select less expensive (i.e., healthier) individuals. In addition, insurance premiums reflect both the efficiency of delivery as well as characteristics of the covered population, making it difficult or impossible for individuals or payers to identify efficient providers. The spreading of risk, which is carried out largely through insurance premiums, must be separated into selection (underwriting risk) and efficiency (risk related to clinical discretion).

Finally, even if variations in the premiums or prices charged to consumers better reflected efficiency, this would not yield an appropriate level of aggregate expenditures unless purchasers were price sensitive. That is, aggregate health expenditures are determined by the willingness to pay, which relates to financing mechanisms. Thus, the challenge of linking increased efficiency in service use to lower aggregate health expenditures is to translate efficient practice costs into appropriate supply prices (premiums charged) which, in turn, are confronted by price-sensitive purchasers.

The potential of managed care rests with establishing a payment system that rewards efficiency and greatly reduces the financial consequences of risk selection. This will require reducing the financial risks to providers associated with individuals' health status and maintaining provider risks associated with discretionary treatment decisions. One potential approach mentioned in the article would be to remove certain categories of service or types of clinical episodes from a capitation payment system—a "partial capitation" approach. Also discussed are mechanisms that might allow consumers to be price-sensitive when confronted with differences in costs among alternative managed care providers.

Practice of managed care

A driving force behind the system wide expansion of managed care was the high level of hospital days per capita. In particular, a number of studies were done in the 1970s showing that HMOs provided 20-50 percent lower hospital days per 1,000 population (Luft, 1978). Today, the rates in all types of HMOs appear to be about 350 days per 1,000 for persons under 65 years of age, and the rates for enrollees in fee-for-service plans are considerably higher, in the low 500s (Group Health Association of America, 1990). The disparity remains significant within Medicare, with the rates for HMOs being about 2,000 hospital days per 1,000 Medicare beneficiaries compared with about 3,000 per 1,000 beneficiaries for the total Medicare population.

The only controlled study found about a 20-percent difference in hospital admission rates and close to a 40-percent reduction in hospital days when populations were randomly assigned to a group HMO and a fee-for-service plan with 25-percent copayments (Manning, Leibowitz, Goldberg, et al., 1984). However, the HMO performance found in this study is probably at or close to the maximum because the study was done in a group model HMO that has very strict organization controls over use.

Fewer hospital days in HMOs do translate into lower total costs even though some other services such as office visits rise. Assuming hospital costs are 50 percent of total service costs, HMO efficiency could result in costs 10-20 percent below traditional indemnity carriers, once selection is taken into account.

Widespread support for HMOs was based on the belief that all three parties in the health service transaction—providers, payers, and individuals—would benefit. Individuals face lower out-of-pocket costs; employers pay lower health insurance premiums for their employees; and providers, by keeping costs down, expand their market share or earn surpluses. HMOs set premiums below the prevailing indemnity plans to induce individuals to switch providers and forgo freedom of choice. Whether this translates into lower costs for the employer or for the Government depends on who joins.

Utilization management

During the late 1970s, utilization review techniques were developed and refined. The techniques focused on preadmission and concurrent review of hospital admissions as well as second surgical opinion programs. The experience of these programs has shown that

reductions in hospital admission rates are possible relative to prevailing rates in the fee-for-service sector (Payne, 1987; Chassin et al., 1986; Restuccia et al., 1987). Utilization reviews are being conducted now by hundreds of companies using roughly similar approaches. The major cost-saving technique incorporated is the use of a lower, less expensive level of care.

High-cost case management focuses on the expensive episodes of care that predominantly fall under a handful of acute diagnoses (such as burns, organ failures, and premature birth) or in chronically ill conditions (such as multiple sclerosis, psychiatric conditions, or cardiac problems). The cases are often triggered by utilization review, but case managers get more involved in the delivery of care, seeking a lower intensity of care.

The effectiveness of utilization review and high-cost case management is usually depicted in a finding by the company providing the service that "X" dollars of care were diverted. If one assumes that other costs did not occur, either individuals did not seek other care or physicians did not provide alternative services or charge higher amounts for approved services, then these review services would reduce health care costs. In order to accurately assess the impact, one would need to compare the health services and administrative costs of groups using utilization review and high-cost case management to those not using them.

Independent investigator studies have used specific utilization review programs and particular services, e.g., second opinion to evaluate cost effectiveness (Ruchlin, Finkel, and McCarthy, 1982). However, these studies often look at a subset of costs, which does not provide a full, accurate assessment. In particular, offsets or other costs, such as increases in ambulatory care or the costs of second surgical opinion programs, need to be assessed.

One study looked at total cost using the insured group as the unit of analysis. Using one utilization review program covering more than 200 employers, Feldstein, Wickizer, and Wheeler (1988) concluded that the utilization review program—including preadmission, on-site, and concurrent review—lowered hospital expenditures by 11.9 percent and total expenditures by 8.3 percent. This reduction in hospital days is in the range of 10-15 percent that others previously suggested (Brian, 1972).

In addition to utilization review, high-cost case management programs can reduce costs further. Once again, little exists in the way of independent, objective studies, but program-specific estimates showing a 2-4 percent reduction in medical costs have been found (Henderson et al., 1988).

Given the potential overlaps in utilization review and high-cost case-management programs, as well as the biases in groups participating, these patient management techniques might yield a 10-percent reduction in medical expenditures, about one-half of the reduction that is believed to result within HMOs. Thus, one would expect managed fee-for-service plans to have hospital days per 1,000 in the mid-400s per 1,000 enrollees. The other two factors that could account for the still lower HMO utilization of hospitals are provider characteristics and financial incentives. Fee-for-service managed-care plans have moved in these directions as well.

Selective contracting with providers

PPOs evolved rapidly in the early 1980s, partly as a result of purchasers realizing that they were paying widely different amounts for similar tests, visits, procedures, and admissions in the same community. Preferred provider arrangements established prices, usually discounted in advance. To attract individuals to use these providers, prices or copayments are lower. Because the impact of lower prices is to increase the quantity of services demanded, PPOs must build in strong case management systems or be able to pinpoint those providers that operate more efficient practices. Without these controls, additional costs can more than offset the reduced prices (Diehr et al., 1990; Zwangiger and Auerbach, 1991).

Exclusive provider organizations (EPOs) move the PPO concept closer to an HMO structure. First, EPO programs usually make it much more expensive for those covered by the insurance program to use providers outside the network. Because this benefit design is likely to lead to volume increases for these participating providers, this gives the insurer or the third-party payer greater leverage in negotiating price discounts with providers. Secondly, EPOs established by private insurers have developed incentive systems such as shared savings with providers. Thus, EPOs use a combination of consumer and provider incentives to achieve savings. The much higher copayments for using providers outside the network bring obvious savings to the payer. Also, it is postulated that comparable plan savings will occur if individuals stay within the network because of lower payment and utilization controls.

There is no evidence in the literature that physicians sought out by PPOs and EPOs are more efficient or that more efficient physicians or practices seek to participate in PPOs or EPOs. Rather, a review of provider performance within the plans is used in combination with medical audits to identify a small number of providers that are outliers. One could interpret the limited impact of PPOs on costs beyond those achieved by fee-for-service managed care indemnity plans as the inability to select efficient physicians, or it could be interpreted that differences in practice efficiency within a geographic area are small, compared with interregional differences in practice patterns. The latter may well be the case today.

Incentives for performance

The geographic variation in hospital use is much narrower for HMOs, although a similar pattern of regional variation to the fee-for-service system persists (Group Health Association of America, 1990). HMOs operate under a myriad of financial and organizational arrangements. Some HMOs establish very strong incentives for physicians to control utilization, and others control utilization through the structure of the plan. Plans with a fixed number of physicians and other resources structure and budget the plan to provide a number of visits, inpatient days, etc. These organizationally managed and budgeted plans, usually non-profit staff models, have been very effective in controlling utilization for enrollees. The organizationally budgeted plans often

pay physicians on a salary basis, removing the incentive of the physician to do more.

Most HMO plans, notably individual practice associations (IPAs), operate without provider resource limitations and, therefore, seek utilization management through physician incentives, such as per person capitation, revenue withholds, and shared savings from hospital cost reductions. These incentives, particularly among for-profit HMOs, seem to have a significant impact on explaining differences in hospital utilization among HMOs (Hillman, Pauly, and Kerstein, 1989; Pauly, Hillman, and Kerstein, 1990). Physician incentives account for about 10 percent fewer hospital days of care within HMOs.

The importance of provider incentives for utilization management has not been lost on fee-for-service plans. EPOs are trying to use profit sharing as a way to encourage efficiency. Physicians operating on a fee basis clearly have an incentive to do more at the time the patient is seen. A physician under a capitated basis has less incentive to take rapid action and is less likely to move from an uncertain diagnosis to treatment. Whereas utilization review deals with the level of care for someone determined to need a service, HMO physicians probably are less likely to make the determination that services are needed.

The next generation of utilization management techniques will undoubtedly proceed into the area of whether or not care is needed. That is, while current utilization review programs accept the need for treatment and focus on the level or intensity of care, the future systems will focus more on the decision as to whether or not treatment is needed. Although the payoff from this next generation of utilization management techniques is likely, many medical decisions will be difficult to second guess, short of making an independent assessment. The latter approach, face-to-face assessments, is being done for chronically ill patients, such as those needing long-term care or mental health services. The importance of the decision to treat and the difficulty of second guessing the decision made by the attending physician with paper records or telephone inquiries suggests that all managed care will have to move more into provider incentives to be price competitive.

Comments: Practices of managed care

The HMO findings and the available literature on utilization controls and high-cost case management in indemnity plans suggest that managed care yields savings from the reduced use of services. Through a combination of management and provider incentives, HMOs can reduce costs below unmanaged fee for service by perhaps 20 percent and below managed fee for service by about one-half that amount. Of course, the unmanaged fee-for-service sector is a moving target. With significant expansion of utilization management techniques, "spillovers" occur in the whole delivery system. Once the system responds, the savings from managed care are no longer observable, because they are imbedded in the overall performance of the system.

The levelling out of hospital days per capita in the last few years has made the growth in the intensity of care, or how much is done, more visible. It seems unlikely that utilization management, including provider selection, will be as effective in controlling intensity; rather, prospective payments and physician incentives appear to have a more significant impact on the intensity of care provided.

Pitfalls of managed care

Translating practice efficiencies to lower premiums

Competition among managed care organizations and insurers might be expected to pass the cost savings of managed care on to consumers in the form of lower prices. Purchasers of services are seeking efficient providers, but it is not evident that the "prices" charged reflect the efficiency of the plans. As a result, large self-insured employers who do the risk pooling are seeking to pay HMOs and other managed care organizations on the basis of experience rating or actual use (point of service payments), thereby eliminating the selection effect.

Large self-insured firms understand the importance of employee health status on costs. Although managed care can save about 10 percent or so for those served by such plans, the characteristics of the enrollees in the managed care plan, particularly health status, can have a far greater impact on total health care costs. Moreover, as utilization control techniques become more universal, more and more of the premium differences established by managed plans may be attributed to enrollee characteristics. Conversely, when prices are established by a payer, such as in the Medicare program, winners or losers among participating HMO plans are more affected by who joins than by efficiency (Wallack, Tompkins, and Gruenberg, 1980).

Impact of selection on costs

HMOs have enjoyed favorable selection under the Medicare program as well as under private insurance plans (Wilensky and Rossiter, 1986; Brown, 1988). Individuals joining HMOs often have lower prior health care utilization, which is a good predictor of future expenditures. There are a number of reasons for HMO favorable selection, including the need for enrollees to break established provider relationships.

The importance of prior use is not lost on HMOs or other insurers because chronic physical conditons—such as diabetes and cardiac and pulmonary conditions as well as mental illness and substance abuse—account for a significant portion of health expenditures. Health expenditures are very skewed. Approximately 5 percent of the elderly account for 50 percent of Medicare expenditures. For employed groups, the distribution can be even more skewed.

The skewness of the distribution has two implications for a managed plan assuming full risk. First, size is important; and second, adverse selection (more high-cost cases) can have disastrous financial results. Table 1 describes the confidence intervals, by size of enrollment, for Medicare beneficiaries.

Table 1
95-percent confidence intervals for Medicare costs, by sample size

Sample size	Confidence interval as a percent of mean
20,000	5
10,000	7
4,000	10
2,000	15
1,000	21
500	30
100	66

SOURCE: Medicare History File.

With this distribution, if per capita Medicare costs were $4,000 and a plan enrolled 2,000 individuals on a capitation basis, then 2.5 percent of the plans would lose more than $1.2 million on $8 million in revenue, or 15 percent. As shown in Table 1, the loss from a random distribution of individuals will become relatively smaller for larger plans. This, however, is not the case with adverse selection. If a plan of 2,000 or 20,000 enrolled twice as many high-cost individuals, who would cost about 20 times the average, then the plan's costs would be increased by about 50 percent. That is, for each percentage point increase in such high-cost cases, total claims costs go up by 10 percent.

It has always been disconcerting that although the management of high-cost, chronically ill individuals by HMOs would have the greatest pay-off, HMOs seem to serve a healthier group of enrollees. Unless paid to care for a higher risk population, HMO managers must be aware of chronic care cases.

The key policy or payment issue for managed care is to include the incentives for efficient production, which means rewarding efficiency in caring for a population and, at the same time, control for the health status of enrollees. To do this requires distinguishing the boundaries between financing or risk spreading and payment for services. Whereas payment should be established to have incentives for efficient practices, it should not have incentives to attract healthier individuals. Still, the incentives of managed care need to go beyond the efficient delivery of a particular service. That is, resource-based physician fees and DRGs encourage efficiencies in the delivery of a hospital admission and a physician service. However, managed care deals with practice and patient management and, therefore, efficient payment must consequently incorporate incentives for managing patients between inpatient and outpatient settings as well as the amount of the services provided.

The appropriate payment reforms should be developed in the context of managed care, using HMOs as a starting point. The revised HMO payments then could become the model for other managed care organizations. The two financial challenges necessary to further the appropriate development of managed care are:

- To have payments to managed care organizations based on efficient practices, whether set by government or established in a more competitive market.
- To have the risk-spreading for health status protect consumers rather than providers.

These challenges are intertwined because once the payments to capitated plans are adjusted for the health status, the "adjusted amount" or that attributed to health status must still be set aside and eventually paid to providers. This can be done by a variety of risk-spreading organizations, insurance companies, governments, or employers.

Removing selection effect from HMO payments

The payer can adopt two strategies to alter HMO payment policies, thereby removing the selection or health status effect. The first would attempt to refine the payments to HMOs to take into account the varying health status of individuals. Although conceptually appealing, these results will fall far short of protecting plans from selection effects because only a small percent of future costs can be adequately predicted using population characteristics (Newhouse, 1986).

Alternatively, rather than trying to estimate all the provider costs at the outset, some of the costs can be paid prospectively and some retrospectively, based on the actual experience of the managed-care organizations. These mixed-payment models can be referred to as partial capitation or reinsurance. The reinsured amount, or retrospective payments, are intended to pay for the costs attributed to selection. How well this is done will determine whether adequate incentives remain for efficient practice.

Reinsurance usually takes the form of an individual or aggregate stop loss or risk corridor (Wallack, Tompkins, and Gruenberg, 1988). One way of translating the aggregate stop-loss principle into a partial capitation payment would be to pay physicians prospectively and share risk for hospitalization with the managed care organization. The hospital risk portion could be a "profit" sharing or a split of profits and losses. Such an approach would substantially remove the selection effect.

With the individual stop-loss approach, the cutoff level would have to be placed at a low level to impact on selection risk because a major determinant of costs is whether an individuals has a hospital admission. Risk-sharing formulas for costs above the cutoff could be established.

Because both of these payment programs delete payments that are not the result of selection, the incentive to manage care efficiently will be reduced. Because the risk spreader is still assuming some utilization risk, hospital utilization oversight will be appropriate.

Partial capitation would be a fairer payment system, basing payment more on efficiency and not enrollment characteristics. By still paying providers on a prospective basis, incentives to control costs would be encouraged and the rewards for enrolling a healthier population reduced. Moreover, by taking some costs out of the payment system, the risk of who enrolls would not be assumed by the provider or managed-care organization.

Risk-spreading function

Managed-care firms could be compared on the basis of their costs under the partial-capitation approach. Buyers would use such comparisons in deciding which plan to purchase. Risk spreading would be split between providers, who are responsible for utilization, intensity, and duration and the payer, who is responsible for much of the incidence or likelihood of needing treatment. Such a system corresponds to the insurance risks that we want the different entities to absorb.

The incidence risk is the major reason for insurance—a small chance of a large claim. The incidence risk-spreading function falls between the financing of care and the payment of services. Risk spreading can occur in a number of ways, such as for the entire population or by age, location, profession, or employment. In all cases, there is some risk spreading as high-cost and low-cost users of services are pooled. The segmentation of the market by populations, to the extent this is done on the basis of likely health utilization (underwriting), reduces the level of risk spreading from the population perspective.

How we finance health care today drives the amount of risk spreading. Alternatively, we could decide that we want a desired level of risk spreading and have this decision drive financing. Maximum risk spreading would have risk-spreading entities operate with a community rate and open enrollment. Under such a system, the financing system would have to compensate the risk-spreading entities for difference in enrolled populations.

Distinguishing financing from risk spreading

Separating the risk-spreading function from the payment to providers for efficient delivery does not limit the increases in the premium level. It is more likely to result in more health services being provided. Premium increases will not be restrained without much greater price sensitivity from the buyers of insurance or more direct budget controls.

The cost of care is ultimately borne by the consumer in an individual plan or by the employee in a group plan. Whereas the risk spreader (insurer and employer) is sensitive to the price and costs of spreading risk, it is the ultimate financier of care who must be concerned with price (the premium) itself. Thus, even with an efficient delivery system, the risk spreader can pass along cost increases to a price-insensitive payer, even an employee.

Those in the business of risk spreading may not be strongly motivated to hold down costs. This has been asserted about insurers, but one can make a similar case for employers as well because wages can be held down to pay for higher fringe benefits. The ultimate financier for care, the consumer in the case of premiums or the government when taxes are used, needs to explicitly determine what the health expenditures will be.

The current private health insurance market makes this difficult for consumers. First, it is employers making the buying decision and second, the tax treatment shelters the consumer from the true price. When consumers have to pay for care out of pocket, such as with high copayments, the demand for health care is reduced. With consumers being knowledgeable about the different health plan premiums and having to pay some part of the premium without a tax subsidy, perhaps that portion above the premium of the efficient managed-care plan, the impact on premium levels could be significant over time.

Controlling health expenditures

Three observations emerge from the history of HMOs and utilization management programs during the past decade:

- The ability of utilization management and incentives to control service use.
- The increased importance of the health characteristics of the enrollees in driving costs and premiums.
- The inability of managed care to control system costs, as health care expenditures have continued to rise rapidly with the widespread adoption of managed care.

Thus, there are grounds for encouraging and fostering the expansion of managed care while other aspects of health financing are addressed. Understanding and developing solutions will require pulling apart the three components of a social or private insurance program: financing, risk spreading, and program management.

The joining together of financing and risk spreading and incidence and utilization risk under one insurance program has a number of consequences. By financing a number of risk pools, it reduces the amount of redistribution across high- and low-cost populations. Perhaps, more importantly, it reduces the incentives to control total costs. The concern of the risk spreader is the cost and benefits for taking the risk and not the level of the risk itself. Thus, a separation of financing from risk spreading will allow the appropriate focus to be placed on the premium level itself. The German sickness funds provide one example of how to successfully separate risk spreading from financing and have it provide the bridge between financing and provider payments. The payments in the German system, however, do not encourage efficient use of services because the incidence and utilization risks are not distinguished.

Partitioning the risk into incidence and utilization and establishing appropriate provider payments will address the efficiency and access issues. To the extent that selection practices contribute to pushing up premiums overall, the increase in total health care costs could be ameliorated.

Financing

Financing determines total cost as well as the distribution of costs. Although individuals understand their health benefits, the premium costs are more obscured. The ability to raise premiums and thus the "richness" of health care then is facilitated by the favorable tax treatment. Experience and community rating determine how the costs are borne.

The market works to control individual expenditures once relative prices and budget constraints take hold. A number of national financing options that create a national budget constraint are possible. The government spreads the risk of care across the population under these systems and is the party responsible for being sensitive to the price of health care versus other programs. The method of taxation—wages, income, wealth—determines how the costs of the program are borne.

In a private program where premiums are used to finance care, the redistribution of costs is, in part, a result of the tax treatment. Those with more expensive plans are being subsidized. Thus, changing the tax treatment of premiums to allow only a specific dollar limit to be non-taxable would reduce the redistribution as well as have individuals become more price sensitive.

Risk spreading

The decision to include or exclude certain individuals in the financing program determines the extent of risk spreading. That is, HMOs may use community rating, which implies spreading risk across the entire population, but by excluding certain high-cost groups or individuals, total community risk spreading does not occur. In fact, the principle of community rating (or standard pricing) could give way to greater individual underwriting in order to limit the risk pool and provide lower premiums in the marketplace. HMOs, whether by design or as a result of self-selection, have gained by the limited risk pool, seemingly starting a new wave of underwriting practices. This is dangerous because HMOs have more information than indemnity insurers on health status and use, which, in turn, can be used to do more aggressive underwriting of individuals.

Risk spreading needs to be in the interest of consumers, protecting them from high costs and, at the same time, protecting providers from adverse risk selection if access is to be maintained. Restrictions on health underwriting by risk spreaders would be in the public interest.

Program management

Given that managed care and provider risk sharing are important for developing an efficient delivery system, the payment policy for managed care plans needs to be revised, removing the impact of the characteristics of the enrollees. Price competition or rates based on some form of partial-capitation payment seems possible. Under such a system, a number of managed care organizations could compete. Competition on the basis of efficiency would be the result. This, in turn, would foster economies of scale and scope of services. Whereas selection leads to fragmentation in plans, efficiency gains should produce consolidation.

Conclusion

The problems in the health care system include inefficiencies in service programs, access to care, and high expenditure. By separating insurance into financing risk spreading and health care management, the efficiencies in the management of care can be translated into societal reductions in the rate of growth of health expenditures. This separation would allow a payment system that specifically encourages efficient care.

The risk-spreading entity, such as a large employer, insurer, or Medicare, would take the incidence risk and pay managed care plans to take the utilization risk. The employer or government agency could make a separate decision to pass both these risks to the provider and pay accordingly, as long as all employees or all individuals in an area (or a large, assured cross-section) were included. This is similar to the managed-competition model suggested by Enthoven and Kronick (1989). Whereas such managed competition requires a restructuring of the health care system and extensive oversight, payments based on efficient utilization alone would allow for greater competition among providers and the potential for more cost-conscious purchasing of care.

Acknowledgments

The author wishes to thank his colleague, Christopher Tompkins, Ph.D., of Brandeis University, for his comments and suggestions, as well as the reviewers of this article for their comments.

References

Berestall, L.: Cracking the big case. *Business and Health* 9(5):39-53, May 1991.

Brian, E.W.: Government control of hospital utilization: A California experience. *New England Journal of Medicine* 286:1340-1344, 1972.

Brown, R.: *Biased Selection in the Medicare Competition Demonstration.* Contract No. 500-83-0047. Prepared for Health Care Financing Administration. Princeton, N.J. Mathematica Policy Research, 1988.

Chassin, M.R., Brook, R.H., Park, R.E., et al.: Variations in the use of medical and surgical services by the Medicare population. *New England Journal of Medicine* 314(5):285-290, 1986.

Diehr, P., Silberg, N., Martin, D.P., et al.: Use of a preferred provider plan by employees of the City of Seattle. *Medical Care* 28(11):1073-1088, Nov. 1990.

Enthoven, A., and Kronick, R.: Consumer choice plan for the 1990s: Universal health insurance in a system designed to promote quality and economy. *New England Journal of Medicine* 320(1):29-37, 1989.

Feldstein, P.J., Wickizer, T.M., and Wheeler, J.R.C.: Private cost containment: The effects of utilization review programs on health care use and expenditures. *New England Journal of Medicine* 318(20):1310-1314, May 19, 1988.

Group Health Association of America: *HMO Industry Profile, Volume 2: Utilization Patterns in 1988.* Washington, D.C., Group Health Association of America. Oct. 1990.

Henderson, M.G., Souder, B.A., Bergman, S., and Collard, A.F.: Private sector initiatives in case management. *Health Care Financing Review* 1988 Annual Supplement: 89-95. HCFA Pub. No. 03275. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Dec. 1988.

Hillman, A.L., Pauly, M.V., and Kerstein, J.J.: How do financial incentives affect physicians' clinical decisions and the financial performance of health maintenance organization? *New England Journal of Medicine* 321(2):86-92, July 13, 1989.

Jacobs, C.M., and Laubrey, J.: Emerging trends in utilization review and management. American Association of Preferred Provider Organization *AAPPO Journal* 15-21, Apr.-May 1991.

Luft, H.: How do health maintenance organizations achieve their savings? Rhetoric and evidence. *New England Journal of Medicine* 298: 1336-1337, 1978.

Manning, W.G., Leibowitz, A., Goldberg, G., et al.: A controlled trial of the effect of a prepaid group practice on use of services. *New England Journal of Medicine* 310(23):1505-1510, June 7, 1984.

Newhouse, J.: Rate adjusters for under capitation. *Health Care Financing Review* 1986 Annual Supplement: 45-55. HCFA Pub. No. 03225. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Dec. 1986.

Pauly, M., Hillman, A., and Kerstein, J.J.: Managing physician incentives in managed care. *Medical Care* 28(11):1013-1024, Nov. 1990.

Payne, S.: Identifying and managing inappropriate hospital utilization: A policy synthesis. *Health Services Research* 22(5):710-769, 1987.

Restuccia, J.D., et al.: Assessing the appropriateness of hospital utilization to improve efficiency and competitive position. *Health Care Management Review* 12(3):17-28, Summer 1987.

Ruchlin, H., Finkel, M., and McCarthy, E.: The efficacy of second opinion consultation program: a cost benefit perspective. *Medical Care* 20(1):3-20, 1982.

U.S. Department of Health, Education, and Welfare: Toward a Comprehensive Health Policy for the 1970s. May 1971.

Wallack, S., Tompkins, C., and Gruenberg, L.: A plan for rewarding efficient HMOs. *Health Affairs* 7(3):80-96, 1988.

Welch, W.P., Hillman, A.L., and Pauly, M.V.: Toward new typologies for HMOs. *The Milbank Quarterly* 68(2):221-243, 1990.

Wilensky, G., and Rossiter, L.F.: Patient self-selection in HMOs. *Health Affairs* 5(1):66-80, 1986.

Zwangiger, J., and Auerbach, R.R.: Evaluating PPO performance using prior expenditure data. *Medical Care* 29(2):142-151, 1991.