

# Altering the Tax Treatment of Employment-Based Health Plans

PAUL B. GINSBURG

*Congressional Budget Office,  
U.S. Congress*

**C**ONTAINMENT OF MEDICAL CARE COSTS HAS BECOME a central issue in public policy. The share of the gross national product (GNP) devoted to medical care has increased from 6.1 percent in 1965 to 9.0 percent in 1979. Such a shift in resources need not always be a problem in a dynamic economy where technological change coupled with consumer preferences often causes significant shifts in consumption patterns. But in medical care, many are concerned that an important part of the resource shift does not reflect the preferences of consumers, either individually or collectively. Interest in cost containment stems from a conviction that the medical care system induces us to devote more resources to it than we would really like to.

Concern with cost containment is much broader than a view that medical care prices are too high. A major part of the indictment of current medical care spending is that too many services of dubious value are delivered. People question the necessity of many hospital admissions and medical procedures. Viewing medical services as only one of many resources used to maintain health, one questions whether too many of these resources are used relative to others that affect health.

During the 1970s, many regulatory approaches to cost containment were initiated. A number of states began regulating hospital rates or revenues and requiring approval of major hospital capital expenditures. The Carter administration mounted a major, but unsuccessful, effort to regulate hospital revenues at the federal level, at least in states without their own programs to do this. Review of the appropriateness of hospital utilization is required for Medicare and Medicaid patients.

Recently, a number of scholars and members of Congress have proposed cost containment strategies which emphasize market forces instead of regulation. Consumers' increased sensitivity to medical care prices would replace regulatory controls as a method of inducing providers to be more judicious in their prescription of medical services and in the prices they charge. Such strategies are often labeled, somewhat incorrectly, as "procompetitive."

Two distinct strategies to make greater use of market forces have emerged. One calls for an increase in cost-sharing by consumers of medical care. According to this strategy, less extensive use of third-party financing would cause consumers to face out-of-pocket prices that are a larger fraction of the prices charged by providers. As a result, consumers would be induced to use fewer services and be more sensitive to price differences between providers.

The second strategy envisions greater use of prepaid health plans such as health maintenance organizations (HMOs). HMOs have lower costs than insured fee-for-service (FFS) medicine, mostly because of lower rates of hospital use; so shifts to HMOs may reduce health costs directly. Proponents of this strategy also argue that HMOs encourage price competition, since consumers are more willing to consider price in choosing a health plan for next year's services than in choosing a provider for a specialized service needed imminently.

The distinction between the two strategies is especially crucial in discussing the usefulness of policy options in pursuing cost containment. Some options are useful only for one strategy; and, in some cases, policies may promote one strategy at the expense of the other. For example, some proponents of the prepaid health plan strategy fear that the presence of a traditional insurance option with extensive cost-sharing would injure HMOs by causing the latter to be chosen disproportionately by high users of medical services.

Alteration of the tax treatment of employment-based health insurance is a major policy option that can be used to pursue either strategy.

Most private health insurance is obtained through employment, and all employer contributions to health benefit plans are excluded from employees' taxable income. With employer contributions of roughly 59 billion dollars in 1981 and average marginal tax rates of roughly 43 percent (31 percent individual income taxes and 12 percent for combined payroll taxes), this tax subsidy amounts to 25 billion dollars in federal revenues in the current fiscal year and some state income tax revenue as well.

Since employer-paid health insurance is a substitute for other forms of compensation such as taxable wages, its exclusion from taxes amounts to a substantial subsidy toward the purchase of health insurance. For an additional dollar of expenditure for compensation, an employer can give the average employee either 57 cents in take-home pay or a dollar of health insurance. This subsidy toward the purchase of health insurance is alleged to induce individuals (through employment-based groups) to purchase more health insurance and to be less interested in the economies offered by HMOs.

Two broad options have been suggested to limit the deleterious effects of this tax exclusion. One would treat employer contributions above a certain amount as ordinary income to the employee. A second option would require employers to offer a choice of plans with the same contribution for each plan. If a plan's premium were less than the employer's contribution, employees choosing this plan would receive a rebate for most of the difference. Such rebates are tax-free in some proposals but are taxed as income in others.

This paper assesses the potential of options that alter the tax treatment of health insurance to contain health care costs. It begins with a discussion of major analytical issues, such as the impact of tax subsidies on health insurance purchases and the impact of insurance on medical care costs. Then it discusses in detail the two main options and some of their variations. In addition to the impact on medical care costs, impacts on employers, federal revenues, and the distribution of after-tax income are considered.

## Major Analytical Issues

The case that either more cost-sharing or increased enrollment in prepaid plans would contain health care costs is an analytical one.

Logical arguments have been developed for each model, but most of the empirical evidence concerns steps in the argument rather than experiments or quasi experiments with the options. In other words, we have evidence that increasing the price of insurance will reduce the amount purchased and that reduced health insurance leads to lower medical spending, but we have no experimental evidence on actual removal of the tax subsidy. This section examines the analytical arguments for each model in some detail.

### *Cost-Sharing Strategy*

The analytical argument underpinning the cost-sharing strategy goes like this:

Reducing the tax subsidy to health insurance would reduce the amount of insurance purchased—in other words, induce more cost-sharing by the patient.

More cost-sharing would result in less utilization of medical services by individuals.

More cost-sharing would reduce medical care prices, both through a reduction in aggregate utilization and directly through greater sensitivity to prices on the part of patients.

This section reviews the evidence on the magnitude of these impacts.

*Reduced Insurance.* Economic theory suggests that the amount of health insurance people purchase should vary with its price, which is the difference between premiums and benefits. Since the amount of insurance reflects a decision on how one is to pay for medical care (not how much medical care is to be used), one might intuitively expect insurance purchases to be quite sensitive to the price of insurance. (Feldstein and Friedman [1977], working from a model of the rational risk adverse consumer, have deduced such a result.)

But the fact that health insurance is a highly complex service for consumers to make decisions about causes some analysts to question the usefulness of the economic model to explain its purchase. The insurance contract itself is complicated, with various deductible, coinsurance, and exclusion provisions. Objective information about the frequency distribution of annual medical expenses of different sizes is generally unavailable to individual purchasers. When this is added

to the results of laboratory research by psychologists (Slovic et al., 1976) which shows what a poor job people do at making "rational" decisions when small probabilities of large losses are involved, one has reason to doubt the usefulness of the economic model in explaining health insurance purchase. An alternative model, of a leading insurer (e.g., Blue Cross-Blue Shield) setting a standard and large numbers of purchasers demanding the standard benefit package, even when other insurers offer the option of a different package, is a possibility.

Empirical research, while quite limited, tends to indicate that insurance purchase is sensitive to price. The research has looked at group purchase of insurance by employers and/or unions. Since the loading charge for insurance (the difference between premiums and benefits) varies substantially with the number of participants in the group, examination of the relationship between group size and health insurance premiums yields, after appropriate transformations, an estimate of how sensitive insurance purchase is to the price of insurance.

A study by Phelps (1976), using household survey data, indicates that a 10 percent increase in the loading charge would decrease the proportion of medical bills paid by insurance 6 to 8 percent. Goldstein and Pauly (1976) used establishment survey data and obtained generally consistent results.

Despite the consistency displayed by these studies, important caveats must be noted. The method is a highly indirect one and is dependent on information of limited accuracy on how loading charges vary with group size. I have estimated similar equations with more recent establishment data and different data on loading charges and obtained a smaller sensitivity of insurance to loading charges (Ginsburg, 1981). On the other hand, errors in the loading charge variable tend to bias the results of all of these studies toward zero. Another study by Phelps (1973) used aggregate time series data and avoids some of the problems of the cross-section studies (while encountering a different set of problems). Its results are consistent with Phelps's results noted above.

These results on the sensitivity of insurance purchase to its price can be used to predict the effects of removal of the tax subsidy toward the purchase of employment-related insurance. With average marginal tax rates at roughly 43 percent, a substantial decline in the proportion of expenses covered by insurance would be predicted, possibly about 25 percent. This is a long-term prediction, however, with the full change probably taking longer than five years.

Reduction in insurance coverage is unlikely to be uniform across medical services. Coverage for those services least frequently insured, such as dental care, vision care, and outpatient mental health services, might be cut the most, while coverage for inpatient hospital care might be cut the least. This would most likely be the case if the tax subsidy were removed only for premiums above a certain level, as seen in a number of proposals below. Reducing the tax subsidy would cause individuals to cut the least valuable types of coverage first. Those services covered least frequently are presumably those whose coverage would be dropped first. Coverage for hospital services, on the other hand, is found in all group policies and is very extensive in most, implying that it is less likely to be cut back.

*Utilization of Medical Services.* Reduced insurance coverage would reduce the use of medical services. In contrast to the sparse literature on insurance purchasing, the literature on the effect of insurance on medical care use is extensive. Three types of studies show that medical care is less when it is less insured—econometric studies, quasi-experiments, experiments.

Of the numerous econometric studies of the effects of insurance on hospital utilization, Newhouse and Phelps (1976) is, in my opinion, the most reliable. On the basis of my calculations from the study's estimates, going from full coverage to payment of 25 percent of the bill by the patient reduces expenditures for hospital care by 17 percent. Other econometric studies tend to have higher estimates of this response.

A study of a quasi experiment (Scitovsky and McCall, 1977) provides what are perhaps the most reliable results for physician services. Imposition of a 25 percent charge to the patient lowered physician visits by 24 percent, an effect which has persisted over time. Econometric studies tend to show larger effects of insurance (Fuchs and Kramer, 1972; Hixson, 1980), though Newhouse and Phelps (1976) show somewhat smaller effects.

The Rand Corporation is now well along in its processing of the results of its extensive national health insurance experiment. Randomly chosen families were given health insurance policies with different configurations of coinsurance, deductibles, and out-of-pocket maximums. The results are consistent with those from the more reliable econometric and quasi-experimental studies discussed above (personal communication from Joseph Newhouse).

Despite the relatively good information on impacts of insurance on aggregate amounts of use, little reliable information exists on types of care cutback and whether this has an impact on health status. The Rand experiment is attempting to measure this, but these results will not be available for some time.

*Medical Prices.* Reduced insurance appears to reduce medical prices. As in the case of insurance purchases, however, the relationship is difficult to estimate, and the results vary substantially among studies.

The relationship between insurance coverage and medical prices involves two aspects. First, reduced insurance causes patients to be more sensitive to price differences among providers, because out-of-pocket differences in payments are larger. Search activity is increased as the rewards for finding lower prices are increased (Frech and Ginsburg, 1978). Newhouse and Phelps (1976) present empirical evidence for this phenomenon, showing that persons with less insurance pay lower prices for hospital and physician services.

Second, lower rates of service use lead to lower prices through market mechanisms, although market effects differ in degree from those in standard competitive markets. Much of the price change associated with insurance coverage appears to be associated with product change, such as the number of tests and procedures per hospital day or per physician visit.

A number of studies of hospital costs show a strong relationship between costs per patient day and the level of insurance (Feldstein, 1971, 1977; Newhouse, 1978; Salkever, 1979). As an example, Salkever (1979:78) obtained results that show that a 10 percent decline in the proportion of persons *not* covered by insurance would ultimately increase per diem costs by 15 to 30 percent. Much less attention has been devoted to price-cost markups, but these are so small in relation to the variations in cost per day that the literature on insurance and hospital *costs* is applicable to the issue of insurance and hospital *prices*.

For physician services, both usual fees and average revenues per visit have been shown to be sensitive to insurance coverage. Sloan (1980) found that higher reimbursement schedules lead to higher usual fees by physicians. Most insurers reimburse physicians at less than their usual fees and permit additional billing of the patient; so the level of the insurer's fee schedule is a measure of the proportion

of the bill covered by insurance. For different specialties, Sloan found that a \$1.00 per visit increase in an index of insurers' reimbursement schedules increased usual fees by \$0.24 to \$0.38. An earlier study by Sloan (1976) could not find an effect of a much cruder variable on usual fees but did find a very substantial impact on average revenues per visit. While physician billing practices may account for some of this difference, part is probably explained by changes in the service intensity of a visit induced by insurance.

To recapitulate, reducing the tax subsidy toward the purchase of health insurance would decrease spending on medical care. It would reduce the purchase of health insurance, which in turn would reduce the use of medical services. Increased sensitivity to price on the part of patients and lower use of medical care would reduce prices. An important part of the price decline would reflect product changes, rather than price reductions, for a given service.

### *HMO Strategy*

The following analytical argument underlies the HMO strategy:

HMOs achieve lower medical spending for their enrollees through more judicious use of medical services, especially inpatient services.

Employers' offering to employees a choice of health plans with a fixed contribution would increase enrollment in HMOs. Reduction of tax subsidies would also increase enrollment.

Increased enrollments in HMOs also would reduce medical spending in the FFS sector through competition. Competition would also improve the performance of HMOs.

*Enrollee Costs.* In an exhaustive review of the literature on costs in HMOs, Luft concludes that prepaid group practice HMOs have lower costs; specifically,

the lower costs are clearest for enrollees in prepaid group practices, where total costs range from 10 to 40 percent below costs for conventional insurance enrollees. Although the evidence is scanty, costs for enrollees in individual practice associations appear no lower than for enrollees in conventional plans. (Luft, 1980:508)

The cost advantages of HMOs appear to be the result of lower utilization of hospital services rather than greater efficiencies in the production of services.

Lower costs are probably due to the presence of incentives for HMO physicians to keep costs down and the absence of FFS incentives to prescribe more services. Physician incentives to prescribe less care appear to dominate consumer incentives to use more care because of the absence of cost-sharing.

Some important caveats must be considered when generalizing from these research results to the costs likely to be incurred by additional enrollees in HMOs. First, the experience studied to date has been highly varied. Luft's reporting of costs as 10 to 40 percent lower rather than 25 percent lower (the mean of the range) emphasizes the extensive variation from one organization studied to another as well as the imprecision in each study's results. Will the enrollment growth tend to be in organizations closest to the 10 percent end of the range or closest to the 40 percent end? Second, most of the research has focused on the experience of large successful prepaid group practices such as the various Kaiser groups. Will the new wave of HMOs, which include a substantial proportion of independent practice associations (IPAs), have the same experience? Luft's findings are not encouraging on this issue. Finally, no studies have been published which have randomly assigned individuals to receive care in HMOs versus the FFS system. While many researchers have done a careful job of adjusting for population differences, self-selection will always cause some uncertainty in the interpretation of results.

*Increased Enrollment in HMOs.* Choice of health plan may increase enrollment in HMOs, but the impact would not be large. Choice can increase enrollment in two ways—by putting the option in front of more employees and by enhancing the financial attractiveness of choosing the HMO.

Many employees with employment-based health plans do not have a prepaid plan option currently, even in areas where prepaid plans are functioning. A recent survey of Santa Clara County (California) employers with health benefit plans showed that 36 percent with 500 or more employees and 73 percent of those with 25 to 500 employees did not offer a prepaid plan (Enthoven, 1980:75). A requirement that employers offer a choice of plan would give this option to more

employees, and some of the additional employees undoubtedly would choose a prepaid plan.

However, firms that offer health plans and have 25 or more employees are already required by federal law (Public Health Service Act, Section 1310) to offer enrollment in a federally qualified HMO if such an organization requests to be offered. Optimism about a multiple choice requirement would have to be based on potential alleviation of a possible enforcement problem. Under current law, the HMO must bring a reluctant employer to court. Under a multiple choice requirement tied to the tax code, the Internal Revenue Service could require employers to demonstrate that they are offering choices.

It is not clear that enforcement of the current choice requirement is a bottleneck to HMO development, however. Other problems, such as marketing expenses, unenthusiastic presentation by employers, and limited efficient growth rates of prepaid group practices, could also be significant bottlenecks. Marketing to small- and medium-sized employers is expensive, especially when the HMO is small and can expect only a small proportion of employees to join. The absence of strong support of the HMO by the employer is thought by many to discourage its selection. Many feel that enrollment in existing prepaid group practices cannot grow more than 10 percent per year without serious obstacles, although IPA plans can grow more rapidly.

A fixed contribution rule might increase HMO enrollment by improving their relative financial attractiveness. Many employers that pay the entire cost of their health benefit plan underwrite the entire premium on either their basic plan or an HMO option. Under a fixed contribution rule, the employer would, for example, make the same contribution to either plan and give employees a rebate if the premium of the plan they choose is lower than the contribution. So, when the HMO premium is lower, the fixed contribution rule would introduce an additional incentive to choose that plan.

Optimism concerning the magnitude of enrollment shifts spurred by fixed contributions is tempered by the fact that HMOs do not always have lower premiums than the basic plans that they compete with. (This is not inconsistent with lower medical costs in prepaid plans [discussed below]. HMOs can have higher premiums due to lower cost-sharing and a more extensive list of covered services.) Indeed, the average family premium for HMOs in 1979 was identical to that for the Blue Cross-Blue Shield high-option plan offered to

federal employees (Department of Health and Human Services, 1980; Office of Personnel Management, 1980). The Blue Cross-Blue Shield plan is a very comprehensive one—it includes outpatient mental health benefits—and many feel that its premium is especially high because of adverse selection (see below). Thus, requirement of a fixed contribution would not make all HMOs more attractive; it could even decrease the attractiveness of some.

The argument that reduced tax subsidies would increase enrollment in HMOs is subject to the same points made about fixed contributions. Reduced tax subsidies should shift enrollment toward those health benefit plans with lower premiums. When this is the HMO, reduced tax subsidies favor prepaid enrollment. But the opposite would occur when the HMO has the higher premium, as is often the case.

*Medical System Impacts.* Research on whether increased enrollment in HMOs reduces costs in the FFS sector of the medical care system is inconclusive at present. This does not indicate that costs in the FFS sector would not be reduced. Rather, the judgment reflects the difficulty of isolating the impact of HMO enrollment on medical costs in those few areas where potential competition exists.

According to the proponents of the prepaid health plan strategy, increased enrollment in HMOs would affect both insurers and providers, causing each to change their behavior. Insurers, when faced with decreased sales of policies, might develop more innovative plans. These might include limited provider plans or HMOs. Limited provider plans might involve offering the insured a lower premium in return for his agreeing to use relatively low-cost hospitals should the need for hospitalization arise or could involve limiting choice of physician to those identified by the insurer as relatively efficient providers. Alternatively, insurers might focus sales efforts on traditional plans with more cost-sharing.

Providers may respond to competition by practicing less costly medicine. Reduced demand for their services could cause prices to decline. Primary care physicians, whose services tend not to be completely paid for by insurance, might order fewer services to keep their patients' annual costs more in line with HMO premiums.

A number of factors would limit the magnitude of the competitive response, however. Consider first that, because of the free-rider problem, those providers which derive almost all of their revenues from insurance, such as hospitals and surgeons, would have few tools with

which to compete. When services are fully insured, individual providers do not gain by cutting prices or prescribing services more judiciously.

Competition from HMOs could actually increase per capita medical care spending for those remaining in the FFS sector. Surgeons and hospitals could react to the reduced demand for their services by inducing increased rates of use among their remaining patients. A 10 percent increase in the surgeon-to-population ratio in the FFS sector could increase surgery rates by 3 percent, for example (Fuchs, 1978). Such responses would tend to be self-limiting, however, as they would increase incentives for consumers to shift to HMOs.

Empirical studies of HMOs and competition include cross-sectional analyses of cost or utilization in areas both with and without extensive HMO market share and time series analyses of areas recently experiencing a rapid growth in HMO enrollment (for example, Minneapolis–St. Paul). In many of these studies, the authors conclude that HMOs had beneficial effects on medical care system costs. But a recent review of this literature by Luft (1980) suggests alternative explanations for the findings. While beneficial effects of competition may actually have been the case in the areas studied, the data are often too limited to permit firm conclusions.

To recapitulate, requiring a choice of plans or removing the tax subsidy may increase HMO enrollments, but the magnitude of such an increase may be limited by the fact that HMO premiums frequently are not substantially lower than those of the basic plans they compete with. HMOs have been effective in containing medical costs. Increased enrollment in these plans will probably lower medical care costs for those persons who switch, although important caveats must be considered in generalizing from the experience of those plans most frequently studied. Growth of HMOs may also contain costs in the FFS sector through competition, but the evidence is inconclusive at this time.

Even if these policies do not increase their enrollment by large amounts, HMOs will still play a larger role in the medical care system in the future. While HMO premiums are often not lower than premiums for traditional insurance, their costs usually are. Under current policies, HMO enrollment has been growing rapidly. From June 1976 to June 1979, enrollment grew at the rate of 11 percent per year (U.S. Department of Health and Human Services, 1980). Growth

induced by choice requirements or reduced tax subsidies would come on top of this current growth trend.

## The Employee Choice Option

A frequently discussed option would require those employers that offer health benefit plans to offer a choice of plans. Whatever contribution the employer makes towards health benefits would have to be roughly the same for all plans offered. Should the premium of a low-cost plan be less than the fixed contribution, the employee would receive a rebate.

Employee choice would not make major contributions to cost containment via the cost-sharing strategy unless rebates to employees choosing plans with premiums less than the employer's contribution were tax free. The adverse selection inevitable in such choices would cause some redistribution of income among employees of the firm and could increase employer outlays for health benefits in the short run.

Employee choice is a tool more integral to the HMO strategy. HMOs might be offered to a larger number of persons. Innovative plans which limit provider participation but are less structured than HMOs might develop more rapidly under a choice requirement.

### *Adverse Selection*

A major concern with the employee-choice option is adverse selection—the phenomenon of those persons most likely to be high users of medical services choosing the health plan with the more extensive benefits. Clearly, some adverse selection would result from employee choice of plans. The issue is how extensive would the adverse selection be and whether the consequences would be desirable or undesirable.

*Intragroup Transfers.* Adverse selection causes substantial transfers of income between those choosing the more expensive plan and those choosing the less expensive plan. When premiums of the two plans are set to reflect experience, adverse selection will tend to raise the premium of the more expensive plan and lower the premium of the less expensive plan.

To assess the desirability of such transfers, consider who the gainers

and losers are. Those choosing the less expensive plan are generally distinguished by one or more of the following characteristics:

They plan to economize on the use of medical services for a given state of health.

They expect to be healthy.

Their medical expenses are also covered under their spouse's employment-based policy.

They are more willing to take risks.

Many would consider the transfer to the economizers to be a desirable one—a reward for a laudable activity. The other transfers are subject to more controversy, however. Some would assert that transferring resources from those expecting to be ill to those expecting to be healthy defeats the purpose of health insurance, which is to pool risks. They would also consider transfers away from those likely to be ill as undesirable on social grounds because these people will be faced with high uncovered medical expenses and possible loss of earnings.

Others would applaud such a transfer as entirely consistent with insurance principles and as desirable on other grounds. Insurance is intended for low-probability risks, rather than for expenses considered highly likely. Requiring those who have very different expected losses to pay the same premium is a cross-subsidy. Many object to income redistribution through mechanisms other than the tax system. Since most expected high users are older and have higher incomes than expected low users, this cross-subsidy would make the distribution of income more uneven. On the other hand, these older persons paid these subsidies when they were younger.

The transfer of resources to those persons also covered under a spouse's policy is also subject to controversy. Essentially, such a transfer moves employers from the principle of equal coverage for all employees towards that of equal contributions for all employees. Persons with duplicate coverage currently draw very low contributions from employers because their claims are low—something akin to a marriage tax. Allowing them to select a low-option plan and collect a rebate would increase their compensation. The principle here is

similar to the one involved in relatively healthy persons gaining resources through adverse selection, but it is not subject to values concerning transfers from sick to healthy individuals.

*Extent of Adverse Selection.* Some degree of adverse selection is likely to occur in all multiple choice situations. Individuals usually have some idea of their expected use of medical services. But how extensive would the adverse selection be? Would it be so extensive that multiple choice cannot persist? The answer differs for choices between traditional insurance plans and choices between a traditional plan and an HMO.

Adverse selection appears to exist in current choices among traditional plans, but not in a severe form. The evidence is scanty, however, because experience with such choices is quite limited. Much attention has focused on the Federal Employees Health Benefits Program (FEHBP), which offers federal employees a choice among high- and low-option plans from both Blue Cross-Blue Shield and Aetna and plans from a number of unions and other employee organizations. The federal government makes a proportional rather than a fixed contribution; but, since its contribution is capped, it is effectively fixed for many of the major plans.

Many feel that the Blue Cross-Blue Shield high-option plan, which is one of the most comprehensive plans and the largest, has been adversely selected against. Part of the adverse selection results from its distinction of having the most extensive outpatient mental health benefits, a benefit unlikely to be a major factor in most employee choice situations. But mental health coverage does not account for the entire difference.

Hospital utilization rates for the Blue Cross-Blue Shield high-option plan are the highest of all the FEHBP plans (U.S. Office of Personnel Management, undated), with the differences in most cases too large to be explained by differences in cost-sharing. Of the national plans, the Blue Cross-Blue Shield high-option plan has the highest rate of maternity claims, by far. In 1978, 1.6 percent of enrollees in this plan had maternity claims, compared to 1.0 percent in the Blue Cross-Blue Shield low-option plan, and 0.5 and 0.4 percent in the Aetna high- and low-option plans respectively.

Congressional Budget Office (CBO) analyses of plan-switching within the FEHBP indicate adverse selection against the Blue Cross-Blue Shield high-option plan (Koretz, 1981). Those leaving the plan

to join another FEHBP plan at the end of 1977 had claims 39 percent lower than average during 1977. When mental health claims are excluded, the departers had claims 35 percent lower than average. Both effects are statistically significant. Adverse selection is not seen among joiners, however. Those transferring from other plans in late 1977 had 1978 utilization virtually identical to the mean.

While there is evidence of adverse selection in choices between traditional insurance plans, the extent of it does not appear to be a major problem. Despite adverse selection, the Blue Cross-Blue Shield high-option plan remains the dominant plan in the FEHBP. In 1979, this plan accounted for 69 percent of enrollment in government-wide plans and 50 percent of enrollment in all FEHBP plans other than HMOs. While those transferring to other plans had much lower use than those staying, they accounted for less than 2 percent of enrollment. The fact that a market for individual insurance policies exists may be testimony to the limited magnitude of adverse selection. Not only do buyers in that market have a particularly extensive array of choices, but they have an additional option not practically available to most participants in group plans—not buying insurance at all. On the other hand, insurers in this market often exclude pre-existing conditions, a practice less common in group insurance.

Adverse selection is more complex in a choice between a traditional plan and a prepaid group practice (PGP) type of HMO, but on balance probably smaller in magnitude. Often the PGP has the more extensive benefit package. Outpatient care is usually covered without deductibles or coinsurance; and preventive care, such as routine physicals, is usually covered in PGPs but not in traditional plans. The factor adding complexity is that people joining the PGP must change physicians to do so.

Those persons willing to change physicians are likely to be low users for two reasons. First, low users are more likely not to have established relationships with physicians in the FFS sector. Healthy persons have either not sought out a physician in the recent past or have seen a physician only infrequently. Second, high users are more likely to be under continuing care for some condition and thus especially unwilling to change physicians. These tendencies become less important as the PGP matures and a large part of the membership establishes close relationships there (Luft, 1981).

Because of the conflicting tendencies from coverage differences and

the need to change physicians, one cannot predict the direction of adverse selection between a traditional plan and a PGP a priori. Instead, one must look to empirical studies to assess the direction and magnitude of these phenomena.

While empirical studies of selection involving PGPs are illuminating, they do not yield a "bottom line" concerning whether adverse selection is positive or negative. Indeed, on the surface, various studies seem conflicting. For example, some studies indicate that HMO enrollees tend to be young, married, and have young children; but others, usually focusing on different plans, show the reverse (Luft, 1981).

From what can be gleaned from the literature, selection is a complex, multivariate phenomenon. A particularly important variable is the differential in the required contribution by the employee, which is based not only on the extent of benefits in the plan but on each employer's contribution policy. When the HMO has the same employee contribution or a lower one, it tends to attract low users, all other things being equal. When it is higher, the reverse occurs.

Luft (1981) finds support for the notion that requiring a change in physician tends to favor enrollment by relatively healthy persons. Also, those who enroll in PGPs have in the past used relatively large amounts of ambulatory care and preventive services but relatively small amounts of hospital care.

While the literature does not permit an overall conclusion to be drawn, it does indicate that adverse selection can be a significant factor in any particular choice situation. For example, low-premium PGPs that have recently developed are likely to have a significantly favorable selection of risks. On the other hand, new IPAs with high premiums are likely to experience an unfavorable selection of risks. Many of these considerations will probably be muted for mature HMOs since new enrollees are a small portion of their enrollment.

*Reducing Adverse Selection.* Promising strategies are available to reduce the extent of adverse selection. They include:

Setting distinct premium differentials for different employees on the basis of demographic information and other actuarial factors.

Restricting allowed frequency of plan-switching or levying an extra charge for switching to a more expensive plan.

The first strategy would reduce the incentives to choose plans on the basis of expected medical care use. Consider a hypothetical example in which a low-option plan has additional cost-sharing. If participants in the low-option plan were randomly chosen from the employee group, the premium would be \$100 per month compared with \$150 per month for the high-option plan. While the average employee in the low-option plan would get \$50 less in benefits by choosing the low-option plan, young employees might on average get \$20 less in benefits while older employees might get \$80 less in benefits. Clearly, if the employer gave a flat \$50 rebate to all those who chose the low-option plan, it would be more attractive for younger employees to make this choice.

Such a tendency could be reduced substantially by varying rebates on the basis of age. The employer could give a \$20 per month rebate to all young employees choosing the low-option plan, and an \$80 per month rebate for older employees making this choice. As a result, incentives to choose the low-option plan would be equalized and adverse selection reduced.

Such a variable rebate device would not cause a departure from the standard practice of implicitly making larger contributions for older employees. Indeed, the practice would be adhered to more closely than under a policy giving a flat \$50 rebate to all choosing the low-option plan.

Variables besides age that could be used to reduce adverse selection include number and age of dependents, location (in geographically dispersed firms), and whether or not duplicate coverage is in place.

The CBO analysis of plan switching in FEHBP described above indicates that relatively simple rebate variations could reduce adverse selection substantially. When the age, sex, employment status (e.g., active or retired), family size, and region of the employee are held constant, those transferring to another plan had claims 22 percent lower than average. This contrasts with 39 percent prior to holding these variables constant. Information on characteristics of family members and duplicate coverage would probably lower the difference further.

The second strategy, limiting plan-switching, would not affect the phenomenon of people making long-term choices on the basis of expected use but would cut down on yearly switching based on short-

term variations in expected use. The price paid for such restrictions would be a general discouragement of choice. Placing the restrictions only on transfers to a plan with a higher premium might interfere least with a goal of inducing a substantial number of persons to choose lower-cost plans.

### *Ensuring That Choices Are Meaningful*

Employers may have little motivation to offer the array of choices that advocates of this model have in mind. Since choice is so infrequent today, one might infer that it is not attractive to the individual employer. Part of the reluctance to offer choice could stem from tax problems in giving rebates to employees choosing plans with premiums lower than the employer's maximum contribution. Apparently, under current law, such rebates endanger the tax-free status of part of the contribution to the high-option plan. But this does not explain the absence of choice in plans where the employee contributes part of the premium. Other factors are clearly at work in discouraging employers from offering choices.

Two methods are available to ensure that choices are meaningful. Characteristics of options could be specified, or a minimum number of plans could be set, possibly from different carriers.

The first method was employed in Congressman Ullman's Health Cost Restraint Act of 1979 (H.R. 5740). Employers would have had to offer a federally qualified HMO if one were available in the area. If none were available, then a plan would have had to be offered with a premium below a certain level (\$70 per month for family coverage in this bill).

Such a requirement would be effective in making sure federally qualified HMOs are offered. Since Title II of the bill would have liberalized the definition of an HMO, federal qualification would not have been as restrictive as at present.

A shortcoming of the uniform premium limit for low-option plans is that in high-cost areas this could require a "bare-bones" benefit package which might not have many takers. An alternative low-premium requirement would specify that the low-option plan have a premium at least 30 percent less than that of the basic plan. This would automatically reflect regional variations in medical costs but could require a plan that is unattractive to employees in firms where

the basic benefit package is already quite limited. The two approaches could be combined by specifying that low-option premiums could not exceed the higher of the percentage reduction or the uniform dollar amount.

Senator Durenberger's Health Incentives Reform Act of 1979 (S. 1968) would have required employers to offer a minimum of three different plans from three different carriers. The different-carrier requirement is the key to the bill's attempt to ensure significant differences in the plans. The reasoning is that, once employers make the effort of talking to a different carrier, they might just as soon purchase a different benefit package so as to satisfy more employees.

The different-carrier requirement may not result in a wide array of choices, however. Employers may fear that if they were to offer a low-option plan, adverse selection would raise the premium of their basic plan and require, in the short run at least, an increase in their contribution. So when contacting another carrier, employers might seek a plan with benefits similar to those of their basic plan, or even one with more extensive benefits. The different-carrier requirement could also discourage HMO development by making it less attractive for large insurers such as Blue Cross-Blue Shield to organize HMOs as they are currently doing. The requirement would effectively preclude these insurers from marketing their HMOs to their regular health insurance accounts, since the HMOs would not count toward the requirement of three plans.

The different-carrier requirement would add more to employer costs than the low-option requirement discussed above. In the latter option, an employer could ask its regular carrier to provide a low-option plan, presumably at less cost than bringing in an additional carrier since the economies of scale in group purchasing would not be lost.

### *Impact on Medical Care Costs*

Employee choice would reduce medical costs, but not by a large amount. The above discussion of the HMO strategy indicates that employee choice would encourage those plans by putting the option in front of more employees, but the increase would not be very large because current law already requires choices. The fixed contribution rule would have limited impact because HMO premiums on average are roughly equivalent to premiums in traditional insurance plans.

Finally, HMO enrollment is growing rapidly under current policies, limiting the scope of additional growth in response to greater frequency of employee choice.

Under employee choice, some employees would choose traditional insurance plans with more cost-sharing than their current plan, but the net change in cost-sharing would be limited for a number of reasons. First, many employers would not offer plans with extensive cost-sharing for fear that adverse selection would force an increase in their contribution to the basic plan. Under S. 1968, employers would not have had to offer such a plan; while under H.R. 5740, only those employers not offering an HMO would have been required to do so. Unless regulations prevented the practice, employers could make their low-option plan unattractive by setting its premium so as to cross-subsidize the high-option plan.

Second, since most employee-choice proposals would permit employers to retain a proportion of the difference between the low-option premium and the employer's contribution and would also subject the rebate received by the employee to individual income taxes, few employees might opt for plans with high cost-sharing. The tax subsidy toward the purchase of health insurance would be effectively maintained in employee-choice proposals when rebates are taxable. An employee might be willing to buy a less expensive health plan if he gained a dollar in cash for each dollar reduction in premium but not if he gained 60 cents on the dollar.

The fact that employee choice usually does not alter the tax subsidy to health insurance raises the possibility of no net impact on the average extent of cost-sharing. While in any employment-related group there will be individuals who would prefer a less extensive health plan, there also will be individuals desiring a more extensive health plan. An employee choice arrangement could permit satisfaction of both preferences. Either a "super-high" option could be developed, or benefits in the basic plan could be increased now that those employees interested in less coverage have a low-option plan to turn to.

Empirical studies relevant to choices involving plans with extensive cost-sharing are difficult to come by. The econometric literature on health insurance demand reviewed above is not relevant. It focuses on choices of health plans by groups rather than on variations in preferences among individual employees within a group. The limited experience with employee choice is difficult to analyze because of the

important variations from the options before the Congress and the importance of variables like marketing which are difficult to quantify.

In FEHBP, low-option plans are offered by Blue Cross-Blue Shield and Aetna; and in 1978, 17 percent of enrollees in these government-wide plans chose low options. But the federal government does not pay the full cost of health insurance, so choosing a low-option plan is more attractive in FEHBP than it would be in situations where the employer paid the full cost of a basic plan and paid a taxable rebate to those choosing the low-option plan. Also, the FEHBP low-option plans do not have as much cost-sharing as some of the proponents of this strategy envision. TRW Inc. offers its California employees a wide choice of plans, but it reports that only 5 percent of the employees have chosen a low-option plan with extensive cost-sharing. In contrast to the lack of popularity of that plan, the Mendocino County (California) school teachers have, through collective bargaining, shifted from a uniform plan with full coverage to one which in effect has a large deductible. The school district purchases a Blue Cross-Blue Shield plan with a high deductible and pays an additional amount equal to the deductible into a savings account for each participant. Funds in this account can be used to pay the deductible for covered medical expenses, but what is left over can be taken in cash by the employee upon termination of employment. While this is a single plan rather than an option, the experience indicates that high cost-sharing plans can be attractive if packaged in a certain way. The importance of such packaging makes inferences from case studies particularly risky.

### *Impacts on Employers and Employees*

Employee choice could have some negative impacts on employers, but most would be relatively short run. As indicated above, adverse selection could raise contributions to the basic health plan. Many employers follow a policy of contributing all or a fixed percentage of the health plan premium. Should adverse selection raise this premium, the contribution would increase automatically. This is mostly a short-run problem, however. Over time, the firm could either change its policy, increase the extensiveness of benefits less rapidly than would otherwise have been the case, or reduce the rate of increase in cash wages to compensate.

The fixed contribution rule could cause firms to lose out on savings that they currently enjoy from offering HMOs. Some firms offer an HMO with a lower premium than their basic plan but do not rebate the savings to the employee. Employers have options to compensate in the long run for this loss of savings.

Employers might gain from any medical system impacts of shifts to HMOs or increased cost-sharing. Should these shifts lead to reductions in medical prices, the cost of the employer's basic plan could fall. But gains to employers because of increased competition would be less important in the long run for the same reasons that losses from adverse selection are less important.

Small employers might be hurt by the administrative burdens of employee choice. A requirement to seek out different carriers would increase loading charges since it would diminish group sizes. Such costs could hurt small employers in the long run as well as the short run since it would increase their disadvantages relative to large employers. Increased use of multiemployer plans might reduce the magnitude of such adverse effects.

Employees as a group would probably benefit from the employee-choice option, but some individual employees would lose. Some employees would clearly benefit from the additional options offered—plans with high cost-sharing and/or HMOs. The fixed contribution rule would ensure that employees choosing the alternative plans would gain an important portion of the savings. Employees as a group would gain in the short run as a result of adverse selection driving up the employer contribution (discussed above). When contributions do not compensate for adverse selection, as would be the case in the long run, transfers would be made from those employees remaining in the basic plan to those choosing plans with lower premiums.

### *Impact on the Federal Budget*

The major budgetary impact of the employee-choice option would be on the revenue side, but the net impact is unclear. Taxation of rebates paid to employees choosing less expensive plans would increase federal revenues. On the other hand, employer contribution increases induced by adverse selection would reduce revenues. Revenues would also be reduced by firms increasing their contributions to health plans in light of the opportunities to pay rebates to those employees desiring

less extensive benefits. Employers could increase the attractiveness of their compensation package by increasing benefits in the basic plan and financing their increased contribution by reducing wage increases. Those employees who want more cash and less health insurance would choose a low-option plan and get a cash rebate. Since the increased contribution would be tax free but the reduced cash wages taxable, federal revenues should fall.

The response of the medical care system to increased cost-sharing or HMO use would determine the impact of employee choice on Medicare and Medicaid, but the impact would probably be small. Any declines in medical prices would reduce Medicare and Medicaid outlays. On the other hand, reductions in surgical workloads and hospital occupancy rates could lead to increased medical care use among program beneficiaries and recipients, increasing outlays.

### *The Tax-Free Rebate Variation*

Some proposals, such as Senator Schweiker's Comprehensive Health Care Reform Act (S. 1590) and Congressmen Gephardt and Stockman's National Health Care Reform Act of 1980 (H.R. 7527), seek to make low-cost health plans more attractive by not taxing cash rebates. This would effectively remove the tax subsidy for small increases in health insurance benefits. Employees choosing a plan with a lower premium would find their paychecks increased by the premium difference. Making rebates tax free would encourage substantially more shifting toward plans with more cost-sharing.

Not taxing rebates would be more important to the cost-sharing strategy than the HMO strategy, since HMO premiums, in some geographic areas, do not differ greatly from high-option traditional health insurance plans (see above). The option also would not affect those employees who contribute significant amounts to their employment-related coverage, since choosing a lower-premium plan would involve their making a smaller contribution rather than receiving a rebate.

Tax-free rebate plans would require provisions to prevent employment-based health plans from being used as tax shelters. Employers might be tempted to set up a plan with benefits so rich that no employees would take it, set the contribution at the premium for that plan, and permit employees to choose lower-cost plans and receive

tax-free rebates. The net effect would be a transfer of compensation from money wages to tax-free rebates.

The problem could be addressed in two ways:

Placing a limit on the amount of an employers' contribution that is tax free.

Placing a limit on the amount of a rebate that is tax free.

Limits on the contribution can take the form of uniform or non-uniform dollar limits or be based on the premium of the highest-priced plan that a substantial proportion of the firm's employees elect. The virtues of different types of contribution limits are discussed below in the section on ceilings.

Limiting the amount of the rebate that would be tax free only partly solves the problem, however. Employers could still use the scheme to shelter compensation from taxes, but the extent to which they could do it would be limited. For example, if the limit on tax-free rebates were \$50 per month, an employer could expand the benefit package of the basic plan so as to increase the premium and contribution by that amount. Most employees would probably elect either the original basic plan or an even less expensive one; and, as a result, an additional \$50 per month of compensation would be sheltered from taxes. An additional problem would be that employees choosing a plan costing less than the original basic plan would have to pay taxes on the amount of their rebate in excess of \$50.

Tax revenues would decline under a tax-free rebate scheme. Even if the tax shelter opportunities discussed above could be eliminated, employers would still have incentives to alter compensation packages so that health insurance contributions were increased at the expense of money wages, thereby lowering revenues. Employers with plans that require a contribution from the employee would have an incentive to make them noncontributory, since employees who desire a less comprehensive plan than the basic plan could select a low-option plan and get a tax-free rebate. Employers' contributions to health plans would be worth more to employees, so employees would support a shift in compensation from cash wages to health benefit contributions by the employer.

## Limiting the Tax Exclusion

A second major option involves limiting the amount of employer contributions to health benefit plans when such contributions are not taxable to the employee. Such a limitation can be combined with a requirement for a choice of plan, which is the case in H.R. 5740 (Ullman), S. 1968 (Durenberger), and H.R. 7527 (Gephardt-Stockman), or can stand on its own.

Limitations on the tax exclusion, when they affect significant numbers of people, would reduce expenditures on medical care appreciably. Most of the impact would come from increased cost-sharing rather than increased enrollment in HMOs, however. Substantial amounts of revenue would be raised from some of the limitations proposed, although many of the proposals incorporating such a provision give up the revenue through tax-free rebates or subsidies to low-income persons to purchase health insurance.

A ceiling on the tax exclusion would influence medical care spending by eliminating the tax subsidy on the last dollars of spending for health insurance. Take, for example, a firm with a fully paid health benefits plan with a contribution of \$140 per month for families, compensation that would otherwise have been paid in cash. If the ceiling were \$120 per month (as in H.R. 5740), the last \$20 per month in contributions would be taxable to the employee. This means that the last \$20 per month in health insurance would cost the employee a full \$20 per month in after-tax income. The tax subsidy would be maintained on health insurance contributions up to \$120 per month but eliminated for all further contributions.

Earlier discussion of analytical issues in the cost-sharing strategy indicated how elimination of the tax subsidy would reduce spending on medical care. Employees would switch to insurance plans with lower premiums and more cost-sharing. This could be accomplished either by altering the basic plan or by a process of employee choice. The employer could lower his contribution to the maximum tax-free amount (substituting cash compensation) and develop a basic plan with a lower premium. Alternatively, the employer could leave the contribution at \$140 and set up a low-option plan with a premium of \$120 per month, which many employees would choose. Since the employees would pay tax on \$20 per month regardless of which plan

they chose, switching to the \$120 per month low-option plan would net them \$20 per month in cash. The increased cost-sharing would lead to reduced use of medical care and lower medical care prices.

Ceilings would increase federal revenues. For example, the \$120 per month ceiling in H.R. 5740 would increase federal revenues by \$3 billion in 1982 (Ginsburg, 1981).

### *Uniform Ceilings*

The simplest form of limitation would be a uniform ceiling, such as \$120 per month for family coverage and a comparable amount for individual coverage.

*Distributional Effects.* A uniform ceiling would reduce unevenly tax benefits currently enjoyed by individuals. Those persons enjoying the largest tax benefits under current law would lose the most. Those persons enjoying relatively small tax benefits would be unaffected. CBO has estimated that the ceiling in H.R. 5740 initially would affect 34 percent of the employees currently benefiting from the tax exclusion (Congressional Budget Office, 1981).

The following types of persons would lose relatively more of their current tax benefits from the exclusion:

- employees with high earnings,
- persons with high family incomes,
- union members, and
- residents of the north-central region.

Employees with high earnings would lose disproportionately because they tend to receive larger employer contributions for health benefits. While contributions are often uniform within a firm, firms paying higher wages tend to have higher contributions. Using establishment level data from the Bureau of Labor Statistics' Survey of Expenditures for Employee Compensation, a simple regression of contributions per employee on average wage rates showed an increase of 10 percent in the average wage rate to be associated with an increase in per employee contributions to health insurance of 18 percent (Ginsburg, 1981).

Persons with high family incomes would lose disproportionately because of their higher marginal tax brackets. For example, an exclusion from taxable income of one dollar is worth 20 cents to a family in

the 20 percent tax bracket but 50 cents to a family in the 50 percent tax bracket.

Union members would lose disproportionately because union-negotiated health plans tend to have larger employer contributions. CBO analyses of data from a recent U.S. Department of Labor survey conducted by Battelle Human Affairs Research Center indicates that 55 percent of employees in firms with union-negotiated health plans with family coverage would exceed the \$120 per month ceiling in H.R. 5740 compared with 34 percent of all employees in firms with plans (Ginsburg, 1981). The same analysis shows that employees in the north-central and western regions would lose disproportionately, with 40 and 42 percent of employees in firms with health plans in the respective regions exceeding the \$120 per month ceiling.

*Premiums versus Extent of Coverage.* Some have criticized uniform ceilings because premiums are not highly correlated with the extent of coverage in health plans. As a result, the uniform ceiling is not accurately directed at those persons with the most extensive health insurance coverage.

Factors other than extensiveness of coverage which determine premiums include:

- demographics of covered persons,
- size of health benefit group,
- local medical care prices, and
- local medical resource availability.

Together, these factors could account for a significant proportion of the firm-to-firm variation in premiums for health benefit plans. The result is that some persons with health benefit plans that are not very extensive would be affected by the ceiling while some with very extensive coverage would not be.

This problem could reduce the effectiveness of the uniform ceiling in curbing health spending, but our knowledge of health insurance demand is too sketchy to really know. If persons with very extensive coverage are more sensitive to the degree of coverage than those with less extensive coverage, then the uniform ceiling could be less effective at reducing insurance coverage than ceilings more highly correlated with the extensiveness of coverage.

Whether the uniform ceiling has equity problems is a matter of perspective. It all comes down to whether those in more expensive areas or in smaller firms should get larger tax subsidies than others. If one believes that they should, then the uniform ceiling causes problems. If one believes that they should not, then the uniform ceiling corrects a problem in the current tax treatment of employer contributions to health benefit plans.

### *Nonuniform Ceilings*

A number of alternatives to the uniform ceiling have been proposed. These include setting the ceiling on the basis of the cost of a standard benefit package and setting the ceiling on the basis of premiums paid in a geographic area. Each of these options causes the ceiling to more closely reflect extent of coverage but increases the difficulty of administration. Some object to them because of the precedent of introducing regional differences in the cost of living into the tax code.

In the first alternative, the Internal Revenue Service would make use of insurance company rate books or their equivalent to determine a premium for a legislatively determined standard health insurance plan. This premium would constitute the ceiling. Such an option would focus the ceiling relatively accurately on those employees who obtain the most extensive coverage. While administratively tedious, it appears feasible. Insurance companies do this routinely in quoting rates for new accounts.

The second alternative is included in the Gephardt-Stockman proposal (H.R. 7527). Data would be collected on the insurance premiums paid in different areas by persons in different age groups. The outcome would be similar to the first alternative, with one major difference—regional variations in the extensiveness of insurance coverage would determine variations in ceilings. Thus, areas with less extensive insurance coverage would have lower ceilings.

Under these alternatives, individuals with the most extensive insurance coverage would be the losers. These persons probably have the same broad characteristics as the losers under the uniform ceiling proposals—high earnings, high family income, union members. The major difference would be that those in expensive areas would continue to receive large tax subsidies.

A major obstacle to these proposals is the precedent they would

set for tax policy. Currently the tax code does not explicitly recognize regional differences in living costs or other factors. Many are concerned that a nonuniform ceiling for the tax exclusion would open a Pandora's box of additional complexity for the tax code.

## A Concluding Remark

An issue seldom considered in policy analyses is the consequences of failure. Whether or not an initiative will achieve its goals is often highly uncertain. Whether to go ahead with the option depends upon the consequences of failure as well as the probability of success.

With one important exception, the consequences of failure for these options appear to be limited. If employers offer choices and employees do not make changes, few would be injured. If removing the tax subsidy to health insurance does not induce employees to change policies, the main consequence would be the income redistribution caused by this. Some would consider it a desirable change, while others would disagree.

The exception is the policy options that might be forgone should the competitive approach fail. Many advocates of competition oppose regulatory options, such as hospital rate-setting, planning, and utilization review. Should a procompetition approach be pursued in the absence of the regulatory alternatives, its failure could mean a sizeable delay in developing and refining regulatory alternatives. Assessing the cost of forgoing regulatory alternatives is beyond the scope of this paper, however.

## References

- Congressional Budget Office. 1981. *Reducing the Federal Budget: Strategies and Examples, FY 1982-1986*. Washington, D.C.: Government Printing Office.
- Enthoven, A.C. 1980. *Health Plan: The Only Practical Solution to the Soaring Cost of Medical Care*. Reading, Mass.: Addison-Wesley.
- Feldstein, M., and Friedman, B. 1977. Tax Subsidies, the Rational Demand for Insurance, and the Health Care Crisis. *Journal of Public Economics* 7:155-178.
- Frech, H.E., and Ginsburg, P.B. 1978. *Public Insurance in Private*

- Medical Markets: Some Problems of National Health Insurance*. Washington, D.C.: American Enterprise Institute.
- Fuchs, V.R., and Kramer, M.J. 1972. *Determinants of Expenditures for Physicians Services in the United States, 1948–1968*. New York: National Bureau of Economic Research.
- Ginsburg, P.B. 1981. Internal Congressional Budget Office memorandum.
- Goldstein, G.S., and Pauly, M.V. 1976. Group Health Insurance as a Local Public Good. In Rosett, R.N., ed., *The Role of Health Insurance in the Health Services Sector*. New York: National Bureau of Economic Research.
- Hixson, J. 1980. The Aggregate Supplies and Demands of Physician and Dental Services. In Hixson, J., ed., *The Target Income Hypothesis*. DHEW Pub. No. (HRA) 80–27. Washington, D.C.: Government Printing Office.
- Koretz, D. 1981. Internal Congressional Budget Office memorandum.
- Luft, H.S. 1980. Assessing the Evidence on HMO Performance. *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall):501–536.
- . 1981. *Health Maintenance Organizations: Dimensions of Performance*. New York: Wiley-Interscience. In press.
- Newhouse, J.E., and Phelps, C.E. 1976. New Estimates of Price and Income Elasticities of Medical Care Services. In Rosett, R.N., ed., *The Role of Health Insurance in the Health Services Sector*. New York: National Bureau of Economic Research.
- Phelps, C.E. 1973. *The Demand for Health Insurance: A Theoretical and Empirical Investigation*. R-1054-OED. Santa Monica, Calif.: Rand Corporation.
- . 1976. Demand for Reimbursement Insurance. In Rosett, R.N., ed., *The Role of Health Insurance in the Health Services Sector*. New York: National Bureau of Economic Research.
- Scitovsky, A.E., and McCall, N. 1977. Coinsurance and the Demand for Physician Services: Four Years Later. *Social Security Bulletin* 40:19–27.
- Sloan, F.A. 1976. Physician Fee Inflation: Evidence from the Late 1960's. In Rosett, R.N., ed., *The Role of Health Insurance in the Health Services Sector*. New York: National Bureau of Economic Research.
- . 1980. Effects of Health Insurance on Physicians' Fees. Paper presented at the Annual Meeting of the Southern Economic Association, Washington, D.C., November 6.
- Slovic, P., et al. 1976. Cognitive Processes and Societal Risk Taking. In Carroll, J.S., and Payne, J.W., eds., *Cognition and Social Behavior*. New York: Halstead Press.

U.S. Department of Health and Human Services. 1980. *National HMO Census of Prepaid Plans 1979*. Washington, D.C.: Government Printing Office.

U.S. Office of Personnel Management. Undated. *Federal Fringe Benefit Facts 1979*. Washington, D.C.: Retirement and Insurance Programs.

---

*Acknowledgments:* The author is grateful to Brian Biles, Judith Lave, Harold Luft, and Louise Russell for helpful suggestions.

*Address correspondence to:* Paul B. Ginsburg, Congressional Budget Office, U.S. Congress, Washington, D.C. 20515.