

Strategies for Implementing Global Budgets

JOHN HOLAHAN, LINDA J. BLUMBERG,
and STEPHEN ZUCKERMAN

The Urban Institute

THE SEARCH FOR VIABLE COST CONTAINMENT policies has led some to consider implementing global budgets in one form or another. The basic goal of global budgets is to establish a desired level of spending through controls of medical providers and/or health plans. In our discussion, we view global budgets as spending limits that will be enforced rather than as targets that may or may not be achieved. They are consistent with various forms of insurance and provider payment, but may not necessarily apply to all health care services. Thus, global budgets as a strategy for containing costs may not be "global" in the literal sense of the word.

Any global budget strategy includes a mechanism (such as a negotiation arrangement or an agreement on an appropriate index or formula) by which the budget's growth over time is determined. The strategies also delineate a set of policies designed to keep spending within the budget, including a set of sanctions or penalties that are applied if excessive spending occurs. The idea of implementing global budgets in the United States, nationally or state by state, is being seriously considered by the Clinton administration. Several states have also independently enacted or proposed legislation that calls for global budgets.

The Milbank Quarterly, Vol. 72, No. 3, 1994
© 1994 Milbank Memorial Fund. Published by Blackwell Publishers,
238 Main Street, Cambridge, MA 02142, USA, and 108 Cowley Road,
Oxford OX4 1JF, UK.

Global budgets are mechanisms of particular interest to the states regardless of federal developments. In the absence of national reform, many states are likely to institute health care financing initiatives that focus primarily on the control of growth in spending over time. Global budgets are considered by many to be the most promising way to achieve such systemwide control. Alternatively, a national reform could give states some responsibility for controlling growth in spending within their borders. Under such a scenario, states would need to contain the health care costs of their residents or be faced with the consequences of financing the excess growth. Each state might be given the flexibility to choose a global budget mechanism that is best suited to it, resulting in considerable variation across the country.

We will focus on the policies that could be used to implement global budgets in the United States. We outline three broad alternative approaches for implementing global budgets: model 1—global budgets with all-payer rate setting; model 2—global budgets with premium regulation; model 3—global budgets with managed competition. We then consider a fourth model that would combine all-payer rate setting with models 2 or 3. Finally, we discuss the issue of a separate policy for controlling capital expenditures outside the global budget for operating costs. The issues of setting the appropriate level of spending and how fast it should grow are beyond the scope of this article (see Long and Marquis 1993).

Although there are many differences among the models that we consider, for simplicity we assume that several features are common to each one. First, we assume that issues of coverage and benefits have been resolved. That is, we assume that there is universal coverage of the population through employer and/or individual mandates, so that all individuals must be enrolled in either private insurance/managed care plans or public programs. All individuals are covered for a fairly comprehensive basic benefit package including, for example, hospital care, outpatient physician care, preventive care, and prescription drugs. Second, we assume that broad private insurance reform has been enacted. This includes open enrollment requirements, community rating of insurance premiums, and elimination of preexisting condition exclusions.

Third, we assume that global budgets cover all or most (for example, if Medicare remains outside the budget) people (Long and Marquis 1993; Altman and Cohen 1993). Long-term care would be outside the global budget. The extent to which cost sharing (deductibles and co-

insurance) can be included in the budgets depends on the model implemented. As a general principle, we assume that balance billing, if allowed, would not be required to stay within the global budgets.

Fourth, we assume that global budgets do not include uncovered services, although we recognize that extensive monitoring of expenditures on uncovered services may be necessary. For the time being, it seems impractical to include uncovered benefits in global budgets because fewer data will be available on those services than for covered benefits; it is also more difficult to design policies to control these expenditures. Uncovered services also account for a much smaller share of health care expenditures; therefore, their exclusion does not substantially affect the ability to control all expenditures through global budgets. We acknowledge that extension of global budgets to many of the uncovered services may ultimately be necessary. To date, of the countries that we know have global budgeting strategies, none include all services.

Fifth, we assume that, in any of the models, the federal government continues efforts to provide information on effectiveness, practice guidelines, and other matters of quality. Finally, for the purposes of this article, we assume that Medicare remains outside the global budget. Medicare will remain the responsibility of the federal government and will be required to grow at the same rate as the rest of the system—in other words, it essentially has its own budget. We believe it will be difficult for political reasons to integrate Medicare with the rest of the health system. Although it would not be difficult technically to combine Medicare with a rate-setting model, the premium regulation or managed competition models would present a challenge because the risk adjustment issues we discuss are exacerbated with the Medicare population.

We will discuss each of the four models. We describe their basic features, their advantages and disadvantages, and we focus on a set of six criteria: First, is there evidence that the model can achieve success in constraining costs? Second, how difficult would it be to implement the model? Third, would there need to be a large role for government, or could much of the administrative and monitoring functions be left to the market? Fourth, how extensive are the needs for data, for example, on patient characteristics and utilization, in order for the model to be successful? Fifth, what are the implications for clinical autonomy and practice styles of providers? And finally, what are the implications for beneficiaries? Will the model lead to a limited choice of providers? What are the implications for low-income and high-risk individuals?

Model 1: Global Budgets with All-Payer Rate Setting

In this model, we assume that the state or federal government establishes an overall budget. Under some systems, the state might be assigned a budget by the federal government. The key decisions in this model will be made at the level of government empowered to enforce the budget limits. This may be the state or federal government, depending on other aspects of health care reform. For expositions, we refer to the key decision maker as “the government” throughout the remainder of the article. This terminology conveys the expectation that the power to enforce global budgets, if created, will undoubtedly reside in the public sector.

The government allocates the budget, including cost-sharing obligations, among services and establishes policies for setting prices and controlling volume so that actual expenditures for each service remain within the budget. This approach is similar to that used in Canada and Germany, except that in the United States we must incorporate a policy for health maintenance organizations (HMOs). Over time, the system requires the government to make decisions about reallocating budgets across services. If it becomes clear that, say, provision of certain services in ambulatory settings can be substituted for inpatient stays, budgets available for ambulatory care can be gradually increased while those for hospitals are reduced. For some services, the government only sets volume or expenditure “targets” because of the difficulty in measuring and strictly limiting expenditures. For example, prescription drugs might only be subject to payment rate controls and expenditure “targets” because it is difficult to hold pharmacists accountable for increased prescribing of pharmaceuticals. For other services, the government might only establish a policy for setting rates of payment. Dental care or vision and hearing services, for example, which are a minor part of the budget, may not merit the effort of establishing both price and volume controls.

This model requires a separate budget for the “capitated” sector. That is, all group and staff model HMOs and independent practice associations (IPAs) would receive risk-adjusted capitation payments, which effectively become their budgets. The sum of all budgets for such plans must be no greater than the capitated sector’s budget. Group- and staff-model HMOs and IPAs are expected to provide services within the budgets established for them by the government. Risk adjustment of the allocation

set aside for the capitation sector obviously means that the fee-for-service (FFS) sector's allocation would also be risk adjusted in the aggregate.

Rate Setting

The government establishes systems and rates of payment for all FFS providers (see Zuckerman et al. [1993] for a detailed discussion of alternative approaches to all-payer system options). Alternatively, insurers or groups of insurers could be required to establish such a rate system. One alternative is to adopt some version of Medicare methods of payments for hospitals and physicians. In any event, the public/private sector group establishes a classification system for services or for some broader unit of payment. A regulating body might choose to use diagnosis related groups (DRGs) for hospitals or a resource-based relative value scale (RBRVS) for physicians. This choice is important if the body wishes to be consistent with the Medicare program. The body has to decide whether to accept current Medicare weights for hospital services or relative values for physician services. When considering hospital services, for example, it may wish to recalculate DRG weights based on cost or charge data from the entire population, rather than simply relying on Medicare data. For physician services, it may wish to incorporate work values or charges in a different way than Medicare has done or, alternatively, to establish relative values through negotiation.

The regulating body then has to establish payment rates per unit of service. This involves decisions on the absolute level of payment; in the aggregate, these are probably driven by the amount available in the budget. Potential adjustments in the rates must be considered to account, for example, for differences in the costs of practice across geographic areas, the justifiable costs of teaching hospitals, the excess costs of serving the poor, and the added value of board-certified specialists' services. In addition, a rate-setting policy might establish different payment rates across geographic areas as a tool to induce providers to locate in underserved areas.

Some observers raise the issue of whether a system of price controls distorts decision making, resulting in shortages of some services and surpluses of others. A system of price controls, it is argued, also distorts investment decisions of medical suppliers, drug manufacturers, and other producers of health care products. However, it is important to recognize that there is a difference between simple price controls, which essentially

freeze an existing set of prices in place with ad hoc adjustments for inflation and other factors, and a more rational system of rate setting. A true rate-setting approach begins with the premise that a competitive market does not exist and then attempts to replicate the prices that would have occurred in a market not dominated by third-party insurance, monopolistic power of providers, and considerable imperfections in the availability of information to consumers. Under a true rate-setting model, decision makers have information to respond to shortages and surpluses as they develop by altering prices.

Utilization Control

The government also needs to establish a policy for controlling utilization of services provided in the FFS sector. There are at least two alternatives: (1) a regulatory approach and (2) a competitive model. Under a regulatory approach, the state links increases in payment rates to an exogenous measure of inflation in input prices, plus a volume adjustment. That is, a target for allowable volume growth is established (in principle, the target could be negative). In the case of hospitals, if admissions grow faster than a target growth rate, the hospital price update might be reduced below inflation. Admission growth has not been a problem in the Medicare program, but it was a widely anticipated response to the introduction of Medicare's prospective payment system. Any prospective payment system that uses the admission, such as DRGs, as the unit of payment needs to be concerned with admission growth.

One way to limit aggregate hospital spending is to establish prospective budgets for individual hospitals. Aaron and Schwartz (1993) see hospital budgets as an integral element in successful cost containment. The obvious appeal of prospective hospital budgets is that they introduce far greater certainty than currently exists regarding outlays for acute hospital services. Moreover, if administrators understand that there is no mechanism for seeking additional revenues, they are forced to make tradeoffs among numbers of employees, services, wage and salary levels, technology acquisition, and so on. Given the wealth of data that exist on hospital costs, relative to what is available on other health care providers, establishing budgets is feasible. These budgets could be set for each hospital individually or by category of hospital. The major advantage of hospital-specific budgets linked to historical costs is that they remove the need for budget adjusters (e.g., adjusters based on wages) and are more

equitable to the facilities. Of course, if each hospital has a budget set according to its historical costs, then it can be argued that inefficiency is being “grandfathered” into the system. Although rewarding inefficiency is clearly undesirable, some may need to be tolerated if revenues from all payers are subject to the budget. The errors that can occur in developing budget adjusters can sometimes penalize the relatively efficient providers and create economic and political pressures that regulators want to avoid.

An expenditure control policy for physician spending could link physician fee increases to inflation in physician practice costs, plus or minus a volume-growth adjustment. This is similar to the current Medicare volume performance standard (MVPS) policy. If volume grows faster than a preestablished target, the allowable increases in fees within a period are reduced. Similarly, if volume grows more slowly than the target, fees might increase at a rate faster than inflation. Alternatively, some portion of the fee could be withheld until it is determined whether volume growth is within a preestablished target. Under the current MVPS policy, the default volume growth adjustment is based on historical growth rates. There is some debate now as to whether these historical growth rates are the proper base for a growth adjustment. The recent Clinton administration budget proposal has suggested reducing the volume growth allowance. There is also an issue of whether all services should have the same targets or whether there should be type-of-service or specialty-specific targets with penalties and rewards that vary across type of service or specialty (Holahan and Zuckerman 1993a; Marquis and Kominski 1992).

A competitive strategy for controlling volume would permit insurance companies and managed care organizations to compete by controlling volume. The idea is that the all-payer rate-setting system controls price. Competition is relied upon to control the growth in utilization, with successful plans able to expand their market share. A slight variation is to permit insurance companies to use alternative conversion factors to compete, for example, by paying fees slightly above the fee schedule if they are able to induce physicians to control volume.

Capitated Plans

Finally, the system needs an approach that controls expenditures within the capitation sector. A system for establishing risk-adjusted capitation rates for payment to HMOs and other forms of prepaid managed care

needs to be developed. Alternatively, the government could assume that managed care organizations that are accepting capitation payments have strong incentives to compete with the FFS market, making regulatory control over capitation rates unnecessary. Similar issues arise when considering the growth in capitation rates over time. Capitation rates can be limited to grow at the level of inflation plus some allowable growth factor or, again, the growth in capitation rates can be determined through the competitive process.

A related issue is whether rate setting should favor the capitation sector on the grounds that over time it is likely to force the system to become more efficient. Or should decisions be neutral regarding incentives between the two types of systems? Earlier we stated that if the budgets for the capitation and the FFS sector are risk adjusted, the payments set by the government would be neutral toward the two systems. If costs in the capitation sector grow more slowly than in the FFS sector, should the growth in aggregate budgets for both sectors grow at the same or at differential rates? If the former, the capitation sector becomes increasingly profitable and/or could lower premiums to expand market share. The budget available for the FFS sector becomes increasingly constraining. If budgets grow at differential rates because of slower (faster) growth in the costs of the capitated (FFS) sector, the capitated sector is penalized for its success and the FFS sector is not penalized for its failure.

Advantages of a Rate-Setting Model

A major advantage of this approach is that the technology for implementing it exists because of the major investments made by Medicare and the refinements added over several years by the Health Care Financing Administration (HCFA), the Prospective Payment Assessment Commission (ProPAC), and the Physician Payment Review Commission (PPRC). Although modifications may be required to make Medicare's hospital and physician payment systems suitable for the nonelderly population and to implement them within the context of a global budget, the research and analysis for designing the basic structures have been completed.

Another strength is that there is considerable evidence in the United States and in other nations that the strategy set forth in model 1 has worked. All-payer hospital rate-setting systems in Massachusetts, Maryland, New York, and New Jersey have proved to be successful in con-

trolling hospital costs relative to other states (Thorpe 1992; Zuckerman 1987a). Medicare's prospective payment system for setting hospital rates has been successful in controlling Medicare expenditures relative to where they otherwise would have been (Coulam and Gaumer 1991; Russell 1989). The Medicare rate-setting system for controlling physician payments that includes the RBRVS and the VPS policy also promises success despite still being in its transitional phase.

Some have suggested that rate setting by Medicare and Medicaid has been successful only because costs have been shifted to the private sector. Thus, total U.S. health care costs continue to rise despite the controls exercised by these programs. However, state rate-setting systems that apply to all payers show that rate setting can succeed without cost shifting (Zuckerman 1987b). The model proposed here is similar in most respects to the one used in other nations. Canada and Germany, for example, rely essentially on global budgets, rate setting, and control over technology diffusion and have achieved considerably more success than the United States in controlling costs. They typically use global budgets for hospitals. Physicians practicing outside of hospitals are typically paid on an FFS basis with some kind of expenditure cap/expenditure target mechanism that penalizes utilization beyond the target through provider fee adjustments.

A second major advantage of a rate-setting model, compared with the premium regulation and managed competition models, is that it allows for considerably more clinical autonomy for providers. When physicians and hospitals have aggregate caps on revenues, there is less need for outside monitoring of individual physician and hospital decision making. Even in a rate-setting system, however, physicians who are high providers of services are nonetheless still subject to considerable peer review as occurs, for example, in Germany's profiling system (Reinhardt 1993a). This peer review would be limited to physicians whose service provision patterns exceed certain thresholds.

Finally, consumers would have a broader choice of physicians and hospitals. There would be some incentives to join HMOs or other forms of managed care, but there would not be intense competitive pressures to do so. Thus, a strong rate-setting system would make survival of FFS and open-panel network-type arrangements like preferred provider organizations (PPOs) more likely. Consumers would have considerably more choice of providers and, to the extent that FFS translates into higher-quality care, consumers would benefit. High-risk beneficiaries could still

have problems obtaining access to a choice of insurance arrangements at a reasonable cost. Because premiums would not be adjusted for risk in a pure rate-setting model, insurance firms and managed care organizations would have incentives to avoid them despite prohibitions on exclusionary practices.

Disadvantages of a Rate-Setting Model

There are a number of substantial disadvantages to a rate-setting model. Some argue that this approach would not be as successful in the United States as it has been in other countries because of the broad proliferation of procedures and the large supply of medical and surgical specialists who practice outside of hospitals. The utilization control incentives inherent in MVPS policies are essentially untested. We do not know if they can be successfully applied at the national level. The problems of implementing them within smaller geographic areas, or by type of service or specialty, are equally, if not more, serious.

The model also gives a heavy regulatory role to government in both setting prices and establishing the size of the budget. There are the difficult decisions about what to include and what to exclude from the rate-setting and budgetary controls. An equally difficult issue is how to set the initial level of the budget. Should it be current expenditures on basic services, or should the budget be set at a lower level? One could argue that a rate-setting model gives providers incentives to curtail service across the board, whereas a managed care approach can be more selective. Many physicians, however, seem to object to the detailed monitoring (e.g., utilization review and prior authorization) that accompanies managed care.

Other questions arise with respect to the allocation of budgets across areas. Should these allocations be equal, say, on a basis that adjusts for age, sex, and input price differences, or is this too disruptive to high-expenditure areas? Should current levels of spending be simply accepted and different areas of the country held to the same growth rates? If so, does this not unduly reward high-cost areas and penalize low-cost ones? If budgets are to be equalized over time, how fast should this occur? What would be the problems during the transition?

There is also a need to allocate shares of the budget between the FFS and capitated sectors and within the FFS sector to allocate budgets between sectors like hospitals, physicians, and other providers. Should

these budgets differ from the current allocation to reflect desirable policy initiatives? How should budgets change over time as technology and practice patterns change? It may be difficult to make adjustments that reallocate resources among sectors. The losing sectors are likely to fight hard to maintain their allocations successfully.

Some question whether a regulatory system in the United States can maintain its political strength over time. Is it, for example, able to reduce the rate of growth in physician incomes? Is it able to sustain rate controls as some hospitals close? Is it feasible to maintain low, or even negative, rates of real growth in physician fees over several years in order to keep expenditures on physician services within targets? Is the system able to enact and implement other strategies to control utilization? For example, is it possible to employ a system that profiles individual physicians, that is, to identify physicians whose service provision profiles exceed that of their peers by, say, 20 or 30 percent? This policy is now in place in Germany, where physicians who cannot justify such excess provision of services are subject to severe fee reductions. An alternative, now used in several Canadian provinces, is to reduce fees of individual high-earning physicians if their billings exceed certain targets (Katz, Zuckerman, and Welch 1992). These are all highly contentious political issues that have powerful consequences for the success or failure of rate-setting systems.

Another important issue is how budgets for referral services (e.g., radiology, pathology, or anesthesiology) should be established. Should they be part of physicians' budgets because they are responsible for referring services? For example, can physicians be held at least partly responsible for growth in hospital admission rates, increased utilization of prescription drugs, referrals to physical and speech therapists, and so forth?

A central issue in a rate-setting model is who would negotiate for each sector. Would providers negotiate with the government or an independent commission? Decisions made by negotiating parties would be binding on providers, who would be legally required to accept the negotiated rates of payment. Decisions would also be binding on employers and the Congress, who would agree to pay the health care costs that would result. We have virtually no experience in the United States with these types of negotiations.

Another thorny issue in a rate-setting model is that of geographic border crossing. We assume that a global budget is established to control the

level and rate of growth in expenditures on a beneficiary population—for example, those living in a specific state. In a rate-setting model, physician fees or hospital payment rates are reduced if targets are exceeded. Similarly, there is an increase in payment rates if expenditures are less than the allowed budget. But the payment adjustments are made for the services provided to beneficiaries living in that state, not for all services provided in a state. Payment adjustments also apply to providers living outside the state when they provide services to the state's beneficiaries. This may complicate how physicians in the budgeted state develop systems of utilization control if it is the service delivery patterns of physicians elsewhere that cause the state to exceed its target. This also implies that physicians or hospitals who serve patients from more than one state receive different rates for the same services, a potential drawback that could limit access to some providers for patients from states where spending is not being controlled.

The greater the degree of border crossing, the more difficult these problems become. They are more serious in states where people tend more often to cross geographic borders to receive services. These include states that export medical services, like Massachusetts, the District of Columbia, and Minnesota. It is also a problem for states whose residents receive services elsewhere, like Alaska, Wyoming, Maryland, and Virginia (Holahan and Zuckerman 1993b).

More than models 2 and 3, this model also requires data that are ultimately compiled at a central location. Because payments are at the level of the individual transaction, a large amount of data on individual services must be collected for both payment and monitoring purposes. Data must be available to determine if expenditure targets have been exceeded. The data must be available in a timely manner so that penalties and rewards can be allocated in a way that not only keeps expenditures within a budget, but also creates strong incentives for appropriate changes in the provision of services. Data systems that provide information on patient and provider identification, diagnoses, and procedures must be developed for all payers; they also should have the capability of being linked with information on the characteristics of both patients and providers. Nothing short of a massive investment in a state or national data system will suffice if a rate-setting model is to operate effectively. This is not an insurmountable problem, given today's technology, but it does require a commitment of resources to develop and maintain the system.

Model 2: Global Budgets with Premium Setting

The central idea of this model is to establish a level of spending by setting the premiums charged by individual insurers or managed care organizations. The argument is that the market cannot be expected to determine efficient premiums because the inherent complexity of the health insurance market makes it costly for consumers to become well-informed and discriminating purchasers. Furthermore, tax subsidies weaken their incentives to be effective consumers. Because consumers are not efficient purchasers of insurance, insurers have no incentive to become effective purchasers of physician and hospital services. The result is high expenditures, necessitating some type of outside discipline on the premium market.

This model allows the government to set a top-down global budget for basic premiums. Unlike rate setting, it does not require allocating the budget across services and directly controlling payment rates and utilization. Instead, the government simply allocates the budget to insurers, depending on the risks of their insured populations. This strategy works as follows: First, the state expenditure board determines community-rated premiums for covered individuals/families (the Medicare population is excluded) in the state. These community rates are set at the targeted cost of providing a predetermined set of benefits to each population. The target depends on how much the nation or state is willing to spend on average-risk beneficiaries. Next, individuals, families, and/or employers pay that community rate into a central fund. (Presumably, the state government would supplement the community-rated premium into the fund on behalf of poor individuals/families. Revenue for such payments could be collected in any number of ways, from general state income tax levies to a premium tax on the fixed state fund payments of the nonpoor.) This fund is responsible for paying premiums to private insurance companies based upon the relative risks of a company's enrollees.

A board can be used to determine a set of payments to be made to insurers on behalf of individuals of varying risks. For example, assume that the cost of caring for an average individual for a predetermined benefit package is found to be \$2,000 (another rate would be determined for the cost of an average family). If an insurance company enrolls a person whose health care risk puts her 20 percent above the average risk cat-

egory (for example because of a history of cardiovascular problems), that company would be entitled to a payment from the publicly administered fund of \$2,400, or 20 percent above the average payment. On the other hand, an insurance company that enrolls a young, healthy individual with no history of medical problems might receive a payment 20 percent below average (\$1,600) on behalf of that person. Individuals and families can enroll in any approved insurance plan, and all premiums are paid through the fund.

In general, this model does not require the degree of structure envisioned in managed competition (discussed in detail in the following section). That is, the government does not necessarily have health insurance purchasing cooperatives (HIPCs) or alliances, nor does it limit employer contributions to employee health plans. States, moreover, obviously cannot change the federal tax exemption of employer contributions to health insurance plans. Use of such features, however, might make a premium-setting model more successful. The same is true for improved information on quality and consumer satisfaction across different plans.

In this model, insurance plans compete not on premium price but by offering different levels of cost sharing (coinsurance and deductibles), rules on balance billing, and benefits in excess of the basic package (e.g., dental and eye care). Cost sharing would be an important area for competition, but to maintain some control on total spending, cost sharing beyond certain limits would not be permitted. For example, if an HMO plan provides care more efficiently than other plans, it can offer first dollar coverage and extra benefits, such as dental care or vision and hearing services. On the other hand, an open-ended insurance plan might offer higher levels of cost sharing but a longer or more expensive list of covered providers. Individuals and families weigh the advantages and disadvantages of different plan features and choose the insurer most suitable for their needs.

Because this model allows levels of cost sharing to differ across plans, the global budget is somewhat "soft." In other words, it is not possible to predict at the beginning of the year what total premiums plus out-of-pocket spending by individuals/families for cost sharing will be. Premiums, comprising the majority of the annual costs, will be set at the beginning of the year. Although cost sharing can be estimated with a reasonable degree of accuracy, actual spending will be a function of actual behavior: plan choice, utilization, and provider responses to incentives in the new system.

Controlling Provider Payments

To be successful, insurers and managed care organizations must control the costs of the care for their enrollees. They must control both prices (or salaries) paid providers as well as utilization. Failure to do so could mean that the insurer goes out of business. The state has to permit insurers/managed care organizations that cannot control their costs to fail. Insurers compete for market share in this model. They will be successful competitors to the extent that they keep spending within the premiums they receive from the publicly administered fund while also providing expanded benefits, limiting cost sharing, and/or offering better selections of providers. In order to keep cost sharing down and contain growth over time, however, insurers probably have to develop fairly tight controls on providers, probably by establishing networks of providers with reasonable prices and strong control over utilization. Traditional FFS plans in particular may have a difficult time surviving in this environment.

Advantages of a Premium-Setting Model

The main advantage of this approach is that it is relatively simple and easy to understand and implement. It provides a clear framework for controlling the premiums and, by setting limits on cost sharing, should permit generally accurate estimates of the remaining spending. If premiums are truly risk adjusted, insurance companies have strong incentives to compete on their ability to control provider payment rates and volume. Border-crossing problems and enforcement of the global budget are also less severe in this model. Insurers' revenues are limited by the risk-adjusted rates for individuals living in a state. To the extent that they operate across state lines, they are simply subject to another state's rates.

The premium regulation model also has substantially less need for central processing of data. Although insurance companies must have good data to monitor their own systems, there is not a need either to provide data centrally to profile physicians or to track total expenditures relative to a target. Policy makers could monitor access and quality through periodic surveys rather than through analysis of claims data. There is a need, however, for good data on health status and utilization, both to develop methodologies for making risk adjustments to premiums and to implement these methods to adjust payment rates in order to compensate plans for risk differentials.

Another advantage of this system is that the role of government is smaller than in the rate-setting model. The government sets premiums, but allows insuring firms to compete for patients by offering better service and access. The competition that occurs under the set premiums might also be more successful than a rate-setting model in reducing incomes of specialists, duplication of hospital services, and number of hospitals. This could occur because market forces, rather than politically driven decisions, would determine the outcomes.

Disadvantages of a Premium-Setting Model

Some of these advantages could become disadvantages. For example, if the state does not have access to the risk adjusters necessary to adjust premiums fairly for risk, the system could become one of competing for the best risks. Insurers would then be less likely to be aggressive in controlling provider behavior. In addition, if a specific plan (or plans) tends to enroll a disproportionately high-risk population, these plans are likely to fail financially under strict control of premium growth, with the state unable to determine if a plan fails because of selection problems or because it operates inefficiently.

The premium regulation model still represents a considerable improvement over the current system in that the various insurance reforms discussed in the introduction, such as open enrollment and elimination of preexisting condition exclusions, make it more difficult for insurers to "cream skim" and "dump." The ability to avoid bad risks is not eliminated, however. Clearly, this model is less effective to the extent that risk selection remains an important element of the insurance competition. Such plans would be financially vulnerable if particular insurance plans that tend to attract high risks are not compensated for their high-cost enrollees because of poor risk adjusters.

A second disadvantage of premium regulation is that there is no evidence that such a model can be successfully implemented. Because insurers/managed care organizations do not compete on price, but rather on access and quality, cost-containment incentives may be weak. Efficient insurers cannot charge a rate lower than the established premium schedule; consequently, some potential system savings might be missed. But if the level of premiums is or becomes increasingly constraining, this

may be a relatively minor issue. That is, premiums can be set at a level that would squeeze most or all of the inefficiency out of the system.

A related problem is that once insurance reforms have been enacted and premiums are risk adjusted, a relatively limited number of insurers/managed care organizations may survive. That is, some will not be able to control provider payments sufficiently to contain their total costs within the regulated premium. If some fail, the government may become increasingly unwilling to allow any of those remaining to fail; essentially, if too few plans remain, they would have a powerful bargaining position vis-à-vis the state. In other words, the few remaining plans could go from being regulated to being able to negotiate or even dictate terms to the government. This weakens the ability to control the growth in premiums over time. In principle, the government should not view its role as one of guaranteeing solvency of insurance companies or managed care organizations. This would require, however, that the government permit a large number of insurers to compete, which may be at odds with the goal of setting rigid insurance rates.

Additionally, the clinical autonomy that some physicians still have in the current FFS world is lost to the extent that the competing insurance companies need to develop strong controls over providers. In order to keep costs within the premium constraints as well as to compete aggressively on the basis of access and quality, it may be essential for competing plans to integrate vertically with providers. In this case, physicians and hospitals will be closely linked with managed care organizations and will forgo both some clinical autonomy and income.

Consumers should benefit from controls over premiums and competition on access and quality. Assuming that premiums are sufficient to permit insuring organizations to provide adequate access and good quality care, insurance firms and managed care organizations have strong incentives to provide them. One related problem might be that the open-panel HMO and FFS plans preferred by many people because of the greater access they offer to physicians, hospitals, and new technologies are precisely the high-cost plans that would have to struggle to survive. If these plans fail, their enrollees may strenuously object to the nature of the choices that remain. Lower-income individuals should have access to a variety of plans for the same premiums. However, they are unlikely to be able to afford the combination of premiums and cost sharing that more open-ended plans would offer, nor would they benefit

from the lower premiums that might be available under arrangements that allowed insurance firms to compete on price.

Model 3: Global Budgets with Managed Competition

The managed competition model assumes a health insurance purchasing cooperative (HIPC), or, in the jargon of the proposed Clinton health plan, an alliance structure. We use the term HIPC in this article as essentially synonymous with alliance. HIPCs contract with a variety of plans, including HMOs, PPOs, and FFS plans; the plans are all required to offer the basic benefit package and compete for patients, for the most part, on premium price. Some or all firms or individuals purchase coverage through the HIPC. Under this strategy, the federal government requires equal employer contributions to all plans and limits the tax exclusion of these payments. A state acting on its own, however, is unable to affect federal tax policy, so this option would not be available without national reform. There is some debate about the importance of this tax exclusion because people disagree regarding the magnitude of the price elasticity of demand for health insurance. If it is relatively high, then eliminating the tax subsidy is important for the creation of strong incentives to select lower-cost health plans and so that plans can compete for patients. If this elasticity is low, the elimination of the federal tax subsidy of insurance will not affect individuals' insurance choices substantially.

The HIPCs also provide information on consumer satisfaction and quality of plans. The HIPCs are expected to use risk adjusters to vary contributions to plans and eliminate incentives for selecting favorable risks. It is important to establish these risk adjusters in ways that do not reward inefficient plans. The HIPCs also monitor disenrollment patterns to ensure that plans are not attempting to encourage disenrollment of people who are bad risks.

The basic idea behind a global budget is that it controls the total amount of money spent in the health care system. Although "pure" managed competition (see Ellwood, Enthoven, and Etheredge 1992) is presented as a model that will accomplish this goal through the marketplace, Altman and Cohen (1993) point out that policy makers may turn to global budgets as a way to provide "more of an assurance (of effective cost containment) than that afforded by the theoretical construct of

managed competition.” Global budgets provide “top down” spending limits. Some argue that managed competition in its pure form, relying on the assumption that spending will be controlled following changes in tax law and other structural changes, is inconsistent with global budgets. If individuals exercise the freedom to spend their money and choose higher-cost plans, there is no mechanism for setting global budgets. Others suggest, however, that the two approaches can indeed be combined (Starr and Zelman 1993; Garamendi 1992). The variant of managed competition we consider here assumes that global budgets are enacted as part of the HIPC structure.

Within the managed competition framework, two basic mechanisms have been proposed for limiting the amount of money available to the plans in an HIPC. It is clearly easier to enforce spending controls with a global budget when a greater share of the population is expected to buy its insurance through the HIPC. One approach has plans submitting bids on the basic benefit package to the HIPC and the HIPC selecting a “benchmark” plan. This plan may or may not be the low-cost plan, depending on the HIPC’s assessment of the low-cost plan’s quality of care and enrollment capacity. In fact, the benchmark plan could be the weighted average cost of a number of plans offered within an HIPC. The “benchmark budget” is set at a level equal to the cost of the benchmark plan times the number of enrollees covered by the HIPC. Over time, the benchmark budget is allowed to grow at some rate consistent with policy objectives, as, for example, the rate of growth in the gross domestic product. The HIPC uses its market power to negotiate with plans to ensure a sufficient level of enrollment at the benchmark rate. The HIPC also can couple the controlled benchmark budget with a target for after-tax premiums paid by individuals for more expensive plans (Starr and Zelman 1993). It could prohibit enrollment increases in plans that proposed a large premium increase, as CalPers has recently done. It could also *exclude* plans entirely if their premiums were deemed to be unreasonable.

A second approach was suggested in a proposal by Garamendi (1992). Instead of relying on premium negotiation around a benchmark plan, Garamendi’s plan imposes a regulatory cap on the additional premiums a plan can charge within the HIPC above the premium for the low-cost plan. The cap applies to coverage for benefits included in the basic package, not to supplemental benefits beyond the state or national mandate. The maximum global budget for the basic package of services in a

Garamendi model is the top premium times the number of enrollees in the HIPC and does not involve a flexible target for out-of-pocket spending. To the extent that people choose the low-cost plan, the budget will be substantially lower; if enough people do so, overall premiums could be lower than the Starr and Zelman benchmark budget.

By setting a cap on the premium differentials, the Garamendi approach is more consistent with a top-down view of global budgeting than that of Starr and Zelman. However, both approaches imply relatively "soft" or less rigid budgets than could be established through rate setting. They control neither the amount of premium payments nor patients' cost-sharing obligations because total outlays for the basic benefit packages and cost sharing are not known until after consumers choose their plans. Controlling the costs of the benchmark plan (Starr and Zelman) does little to keep expenditures within the budget if people consistently increase their after-tax payments to enroll in more expensive plans. For this reason, the Garamendi approach also uses a target on after-tax spending to establish a basis for negotiating premiums for plans other than the benchmark.

Advantages of Global Budgets with Managed Competition

The global budgets with managed competition model has several advantages. First, it does not limit price competition among providers or insurers to the extent that rate setting or premium regulation would and could result in greater cost containment. The system could result in substantial cost savings *if* people seek low-cost plans given the change in tax incentives. Unfortunately, there is little evidence from past experience that individuals will respond to these incentives. A major strength of this approach is that the difficult decisions involved—reducing provider payment rates, closing hospitals, limiting capital expenditures, and increasing the amount of primary care relative to specialist services—would occur in response to market demands rather than through government dictates.

Second, the role of government would be relatively limited. The government would neither set rates for provider payment nor limit premiums. Rather, it would structure a set of rules under which competition would take place. Structuring the process by which individuals make choices would limit the competition to prices of relatively standardized

benefit packages. With the government “managing” the competition, consumers would be more effective purchasers and private market forces would control expenditures.

Third, the data requirements would be less than under the rate-setting model and possibly the premium-regulation model. The government would need good data for monitoring access and quality and for establishing a risk-adjustment methodology as well as for implementing the risk-adjustment procedures. However, it would not need an extensive claims-level data system.

Disadvantages of Global Budgets with Managed Competition

The primary disadvantages lie in implementation and uncertainty about its ability to control costs. Managed competition requires a large amount of institutional change, thereby creating new and untried organizations. For example, creating and operating a system of HIPCs is a complex undertaking. It includes enrolling individuals, collecting premiums, monitoring quality and consumer satisfaction, and preventing favorable risk selection by health care plans. We have little experience in building a structure of HIPCs, nor do we know how long it will take to make them fully operational or how much it will cost to operate them. There is no experience with HIPCs’ collecting and providing the necessary information to allow consumers to decide among plans on factors other than price. We also do not have enough experience with effective competition (that is, on any basis other than risk selection) to know how many plans a market requires in order to offer the necessary array of services and remain efficient.

Second, although cost containment is a possible outcome, it is by no means assured. It appears that closed-panel HMOs (group- and staff-model HMOs) offer the greatest cost-saving potential. They will therefore have the lowest premiums and should, in principle, have the fastest increase in market share. However, closed-panel HMOs, that is, those that restrict coverage to services delivered by HMO providers or providers under contract with that HMO, have not been particularly popular with enrollees. Neither consumers nor physicians appear to want to join closed-panel HMOs in large numbers. In the past decade, real health care premiums rose by 34 percent while average real wages increased by

4.5 percent (Congressional Budget Office 1992). During the same period, only 16 percent of the growth in HMO enrollment occurred in closed-panel HMOs (InterStudy 1985; Porter and Hamer 1993). Individuals accepted reductions in benefits, absorbed large increases in deductibles and coinsurance, and joined PPOs in large numbers. Thus, it is not clear whether closed-panel HMOs can make serious inroads into the health care market. If the more open-panel type HMOs flourish, the system may have problems keeping cost growth at an acceptable level. In addition, Glaser (1993) delineates the legal barriers to refusing plan access to certain providers. Without the legal capacity to select providers by their ability to practice in a cost-effective/high-quality manner, the competitive capacity of closed-panel plans is substantially reduced.

A basic premise of managed competition is that, with the elimination of tax subsidies, individuals will face higher out-of-pocket costs and will choose less costly plans. As noted above, however, individuals have not always responded to higher health care premiums by choosing lower-cost plans. They have been willing to accept higher cost-sharing responsibilities as well as higher premiums, but little in the way of restrictions on their access to specialists, hospitals, and new technologies. Proponents of managed competition argue that as long as people are making decisions with their own after-tax dollars, these higher costs should not be controlled. However, at some point consumers will seek relief from the out-of-pocket costs either through a more generous benchmark plan (and higher budget) or through regulatory control.

There are several other potential drawbacks of the managed competition model. First, consumers may lose access to the plans they want and are willing to pay for with their own out-of-pocket funds. (Similar problems could arise under the premium regulation model.) If the global budget is enforced by establishing a cap on premiums relative to the benchmark plan, many of those who prefer to be in more expensive open-panel plans, even if they have to expend their own monies, will be affected. If these plans have costs that eventually exceed the cap, the HIPC could no longer offer them. If consumer dissatisfaction leads to relaxation of the cap, the budget becomes more difficult to control. Raising the cap ultimately could result in considerable income segmentation in enrollment between high- and low-cost plans and could lead to pressure from advocates for the poor and near-poor for more equity in the system.

Second, the managed competition model relies on insurance firms or

managed care organizations having substantial control over providers. It is necessary both to obtain discounts or rate reductions from doctors and hospitals, and to supervise closely the provision of care. Failure to do so will mean higher costs and inability to compete, leading to a loss of autonomy for physicians and hospitals.

Third, in the Starr and Zelman benchmark budgeting approach, the plan that initially serves as the benchmark could be allowed to change over time. An HIPC may decide that the benchmark plan is not successfully controlling its costs or is no longer providing an acceptable quality of care. Although changing the benchmark may make sense, it creates problems with respect to the HIPCs' ability to keep expenditures within the global budget. If changes take place too often, HIPCs may find it difficult to anticipate enrollment patterns, impeding their ability effectively to "jawbone" nonbenchmark premiums to meet after-tax spending targets.

Fourth, if HIPCs do not do a credible job in adjusting for differential risks, they will not be able to prevent insurance plans from competing on the basis of risk selection. This issue is extremely important for some segments of the population, such as the poor and the chronically physically and mentally disabled. Unless these risk adjusters are well developed, competing private plans will seek to avoid these populations, leaving them to the public sector. In addition to avoiding high-cost enrollees, plans may seek to limit their costs for services not directly related to patient care. Competition may drive plans to avoid teaching hospitals and public hospitals on the grounds that they cannot afford to subsidize medical education or social services. Because teaching and public hospitals typically have higher costs, competing networks will probably seek to avoid them to the extent possible. Unfortunately, many of these providers have traditionally been the provider of last resort for the poor. Will competing networks be required to provide access to hospitals and physicians in the high-cost parts of metropolitan areas where many of the poor reside? The government may need to assume a more explicit role in financing the medical education functions of hospitals.

Finally, even researchers involved in the development of managed competition (Kronick et al. 1993) have raised questions about whether it can succeed in smaller cities and rural areas. They have estimated that markets with a population of 1.2 million or more are necessary to support three independent competing plans. They argue that it will be necessary either to develop an alternative type of managed competition or to

consider some form of regulation for the smaller markets in which 42 percent of the U.S. population lives.

Model 4: Combining Managed Competition or Premium Setting with All-Payer Rate Setting

Adding all-payer rate setting to the pure premium setting or managed competition models would strengthen their cost-containment features and provide an alternative model (Ginsburg and Thorpe 1992; Ginsburg 1993). Such hybrids would preserve the essential structure of the premium setting and managed competition models. For example, under the premium-setting model with rate setting, the state establishes premiums that are paid to insurers with enrollees in different risk classes. In addition, however, the state controls the maximum rates charged by physicians and hospitals. That is, no managed care or FFS plan has to pay rates in excess of that established by the state rate-setting system. A plan can pay less by obtaining discounts from doctors and hospitals in their networks, but patients going out of network do not have to pay providers' rates in excess of those set by the state rate-setting system.

Under the managed competition model, rate setting would apply to all providers except those in closed-panel HMOs. The model still has the employer and individual mandates and a central role for HIPCs, with all of the coordination and information provision roles that managed competition sets forth. This combination plan might also have a global budget tied to the benchmark plan and a cap on the maximum premium any plan could charge relative to the benchmark plan. Ideally, there would be a reduction or perhaps elimination of the current tax exclusion of employer contributions. There could also be a requirement that employers contribute equally to all plans. All of the incentives that managed competition advocates expect to impose on consumers are still a central feature of the system. The major addition is that the rate-setting system establishes maximum rates charged by hospitals and physicians.

Advantages of the Combined Approach

The primary advantage of this approach is that it combines elements of the competitive models with the successful track record of rate setting. In other words, it allows for plans to compete for enrollees, but puts some

limits on their potential payments to providers. Ginsburg and Thorpe (1992) have argued that a wider variety of managed care organizations can survive under this arrangement than under either premium regulation or managed competition alone because of the limits on hospital rates and physician fees. The success of these organizations, however, depends on their ability to manage care efficiently, not simply on obtaining discounts relative to plans with a small market share, as they often do today.

This approach also makes it easier for open-panel managed care plans and less controlled FFS plans to compete. Assuring that more types of delivery arrangements can remain competitive gives physicians and hospitals greater clinical autonomy. At the same time, the model guarantees beneficiaries a wider choice of plans. Payers with strengths in managing care but with limited ability to obtain discounts have a greater chance of surviving within the competitive framework. Without all-payer rate setting, only managed care organizations with strong market shares may receive discounts from doctors and hospitals. This can force other managed care organizations out of the market without the dominant insurers necessarily being any better at managing care. A system of all-payer rate setting reduces the likelihood of this occurring. New and effective managed care organizations will also have an easier time entering the market if there are maximums on the rates they must pay providers.

The closed-panel HMOs that already provide outstanding care because of excellent management will clearly survive and should be able to expand market share rapidly. At the same time, individuals and physicians who prefer not to be in closed-panel plans have a wider variety of options at a reasonable system cost. This combined model might be harder for closed-panel HMOs because more plan options that do not restrict provider choice are likely to survive in this environment, and enrollees may very well prefer them to the closed panels. In addition, an all-payer rate-setting system could address the difficult problems of establishing payment rates for services in areas where competition is unlikely to survive: small cities and rural areas; special services used by the poor and disabled; and services provided by public and teaching hospitals.

Disadvantages of the Combined Approach

The disadvantages of this mixed approach include most of the issues raised in our discussion of model 1, including the difficult ones of decid-

ing on payment rates for hospitals, physicians, and other providers. Centralized or governmental utilization control is likely to be less of an issue under a hybrid system than it is under all-payer rate setting alone, however, because private plans are held responsible or are at risk for living within the budget limits. In the premium-setting model, for example, insurance companies have the incentive to control provider behavior in order to be able to operate profitably within the fixed premium structure. In the managed competition hybrid model, incentives to control provider behavior stem from insurance company needs to keep premiums down in order to maintain or increase market share. An investment in public data systems for monitoring services provided by both FFS plans and open-panel HMOs would be needed. (Because data systems will have to be developed to monitor utilization and quality of care even in HMOs, this should not be a major additional expense.) Some of the potential inequities that can arise from geographic border crossing by beneficiaries are also a problem with these combined models.

Capital Expenditure Controls

The final issue is whether a separate method of controlling the introduction of expensive new technology needs to be adopted. An argument can be made regarding each model that a separate policy for controlling more expensive capital purchases adds to the cost control potential of each approach. In model 1, separate controls over capital expenditures limit new technologies from driving health care costs upward and threatening to have costs exceed the global budget. Specific policies for capital expenditures are a part of the global budget strategies in other nations. Whereas, in principle, controls over fees as well as utilization can discourage unnecessary use of cost-increasing new technologies, acquisition of new technologies gives physicians and hospitals an edge in their competition for patients. If this drives up utilization, a comprehensive policy will imply reduced fees to keep the system within the global budget. Because continual lowering of fees may be infeasible politically and, if done across the board, might unfairly penalize physicians in certain specialties for others' behavior, it may be advantageous to control technologies directly.

There are also reasons within both the premium regulation and managed competition models to control technology directly. In principle,

competition for market share should force insurers/managed care organizations to limit the purchase and utilization of new technologies in order to control costs. In practice, they may come to believe that aggressive control over the use of technologies would adversely affect the public perception of the quality of service offered. If managed care organizations compete over access to technology rather than over price, then it will be difficult for insurers to remain within a global budget. If expenditures continually exceed the global budget, more direct controls over technologies may be necessary to prevent a medical arms race.

Conclusions

We have outlined three broad models for implementing global budgets. These include models that rely on rate setting, premium setting, and managed competition. A fourth model combines either managed competition or premium setting with all-payer rate setting. Finally, we discuss the issue of separate capital expenditure controls that would operate in parallel with a global budgeting strategy for operating expenditures.

All these approaches have important strengths, but some major weaknesses. Our preferred approach to global budgets is one that relies on the basic structure of either managed competition or premium setting but that includes all-payer rate setting for all providers who are not either direct employees or under contract with closed-panel HMOs. There are elements of both managed competition and premium setting that offer strong advantages. However, both models are likely to fall short of global budgeting's cost containment goals in the absence of provider rate setting.

The managed competition HIPC structure offers a way to facilitate beneficiary choice among health insurance plans and removes from employers the burdensome role of health care purchasing agent. Over time, it also should greatly facilitate the provision of information on quality of care and consumer satisfaction. HIPCs are also convenient mechanisms for establishing a policy of global budgets (Reinhardt 1993b).

Our principal concerns with managed competition lie in the possibility that consumer incentives may not work as well as intended. This could be because of flaws in how its design is likely to be implemented, as, for example, failure to eliminate the current exclusion of employer contributions from taxation. It may also happen because consumers are

less price sensitive than managed competition advocates believe. If consumers, particularly middle- and higher-income consumers, gravitate toward higher-cost plans with wider choice of providers and greater access to new technologies, the managed competition model by itself will not contain the costs of the entire system. Costs of closed-panel HMOs may be controlled through both management efficiencies and limitations on services. There is no comparable strategy, however, for controlling costs in some open-panel plans; if middle- and higher-income Americans strongly prefer these plans, they may grow increasingly dissatisfied with the inability of the system to control their costs.

We therefore believe that systems of all-payer rate setting for FFS providers should be incorporated into a system of managed competition. A major goal is to give FFS and open-panel HMO plans greater ability to control expenditures. This would prevent excessive and potentially unjustified differences in costs among plans. It would make open-panel plans more available to a wider segment of the population. It would allow physicians greater clinical autonomy by offering plans in which they can survive independently (i.e., outside of managed care systems), but at the same time assure that costs can be controlled. The combined model has greater public administrative costs than a pure managed competition model because of the need to maintain centrally data on services provided in open-panel and FFS plans. These costs could be more than offset, however, by the ability to control payments to providers under these plans.

The advantages of premium setting, on the other hand, include a framework for developing an enforceable "top down" health care budget. In addition, central collection of a single community-rated premium, regardless of plan choice, provides a convenient avenue for risk adjustments to insurers. Premium regulation is also less likely than the other models to lead to a multitiered health care system based upon income.

Our primary concern with a pure model of premium setting is the potential that the insurance marketplace could shrink to a few powerful insurers in each market. Open-panel plans that have difficulty controlling the level of provider payments could go out of business despite whatever efficiency and service quality characteristics they possess. If a market is left with only two or three insurers, the government's ability to control the growth rate of premiums is compromised. A public authority could not afford to let one of only two or three insurers leave the market, and

would therefore be forced to respond to insurer demands for higher growth rate allowances.

If, however, a rate-setting system is combined with premium regulation, smaller plans will have more success in controlling provider payments. More insurers will be able to remain profitable in the market at the determined premiums; thus, more insurers would remain in the market. Furthermore, the government can more easily maintain a role of tough negotiator regarding premium growth when more insurers are competing in the market.

We also believe that there is a compelling argument to be made for controlling the adoption and diffusion of new technologies. Although likely to be a politically contentious issue, it is probably essential for society as a whole to make decisions on how quickly technologies are adopted and how widely diffused they will be. Because the adoption of new technologies is a central force in the escalation of costs in the U.S. health care system (Newhouse 1993; Aaron and Schwartz 1993), decisions on these issues are central to the control of expenditures under any of the models we have discussed. We therefore believe that it may be necessary for national and state policy makers to influence these decisions directly, given the significant implications for the growth in employer premiums and in the taxes that will need to be raised to finance the system.

References

- Aaron, H.J., and W.B. Schwartz. 1993. Managed Competition: Little Cost Containment without Budget Limits. *Health Affairs* 12 (suppl.):204-15.
- Altman, S.H., and A.B. Cohen. 1993. The Need for a National Global Budget. *Health Affairs* 12 (suppl.):194-203.
- Congressional Budget Office. 1992. *Economic Implications of Rising Health Care Costs*. Washington.
- Coulam, R.F., and G.I. Gaumer. 1991. Medicare's Prospective Payment System: A Critical Appraisal. *Health Care Financing Review* 12 (suppl.):45-77.
- Ellwood, P.M., A.C. Enthoven, and L. Etheredge. 1992. The Jackson Hole Initiatives for a Twenty-First Century American Health Care System. *Health Economics* 1:149-68.

- Garamendi, J. 1992. *California Health Care in the 21st Century: A Vision for Reform*. Sacramento: State of California.
- Ginsburg, P.B. 1993. Expenditure Limits and Cost Containment. Paper presented at Robert Wood Johnson Conference: Managing the Health Care System under a Global Expenditure Limit, April 28–29, Washington.
- Ginsburg, P.B., and K.E. Thorpe. 1992. Can All-Payer Rate Setting and the Competitive Strategy Coexist? *Health Affairs* 11:73–86.
- Glaser, W.A. 1993. How Expenditure Caps and Expenditure Targets Really Work. *Milbank Quarterly* 71:97–127.
- Holahan, J., and S. Zuckerman. 1993a. The Future of Medicare Volume Performance Standards. *Inquiry* 30:235–48.
- . 1993b. Geographic Border Crossing: Implications for Controlling Expenditures. *Health Care Financing Review* 15:101–22.
- InterStudy. 1985. *HMO Summary: Report Detailing HMO Growth, July 1984–June 1985*. Excelsior, Minn.
- Katz, S., S. Zuckerman, and W.P. Welch. 1992. Comparing Physician Fee Schedules in Canada and the United States. *Health Care Financing Review* 14:141–9.
- Kronick, R., D.C. Goodman, J. Wennberg, and E. Wagner. 1993. Special Report: The Marketplace in Health Care Reform—The Demographic Limitations of Managed Competition. *New England Journal of Medicine* 328:148–52.
- Long, S.H., and S.M. Marquis. 1993. Toward a Global Budget for the U.S. Health System: Implementation Issues and Information Needs. Paper presented at Robert Wood Johnson Conference: Managing the Health Care System under a Global Expenditure Limit, April 28–29, Washington.
- Marquis, S.M., and G.F. Kominski. 1992. Alternative Volume Performance Standards for Medicare Physicians' Services (no. R-4154-HCFA). Santa Monica, Calif.: RAND.
- Newhouse, J.P. 1993. An Iconoclastic View of Health Cost Containment. *Health Affairs* 12 (suppl.):152–71.
- Porter, M.J., and R.L. Hamer. 1993. *The InterStudy Competitive Edge* (vol. 2, no. 2). St. Paul, Minn.: InterStudy.
- Reinhardt, U.E. 1993a. Global Budgeting in Germany: Insights for the United States. Paper presented at Robert Wood Johnson Conference: Managing the Health Care System under a Global Expenditure Limit, April 28–29, Washington.
- . 1993b. Reorganizing the Financial Flows in U.S. Health Care. *Health Affairs* 12 (suppl.):172–93.
- Russell, L. 1989. *Medicare's New Hospital Payment System, Is It Working?* Washington: Brookings Institution.

- Starr, P., and W.A. Zelman. 1993. A Bridge to Compromise: Competition under a Budget. *Health Affairs* 12 (suppl.):7-23.
- Thorpe, K.E. 1992. Is Canada Really Different: A Comparison of Health Care Spending in Selected U.S. States and Canadian Provinces. Paper presented at conference on Competitive Health Policy Reforms: Appraisal and Prognostication, November 14-15, 1991, University of Illinois.
- Zuckerman, S. 1987a. Rate Setting and Hospital Cost-Containment: All-Payer Approaches. *Health Services Research* 22:307-26.
- . 1987b. Commercial Insurers and All-Payer Regulation: Evidence on Hospitals' Responses to Financial Need. *Journal of Health Economics* 6:165-87.
- Zuckerman, S., J. Holahan, C. Coelen, M. Sulvetta, M. Miller, and J. Hadley. 1993. Alternative Approaches to All-Payer Rate Setting (working paper 6169-04). Washington: Urban Institute.

Acknowledgment: This research was funded through Grant #18524 from the Robert Wood Johnson Foundation through their State Health Care Financing Initiatives Program. Opinions expressed are those of the authors and do not necessarily reflect the positions of the Robert Wood Johnson Foundation, The Urban Institute, or its sponsors.

Address correspondence to: John Holahan, PhD, The Urban Institute, 2100 M Street, NW, Washington, DC 20037.