Toward a Global Budget for the U.S. Health System: Implementation Issues and Information Needs

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The purpose of this paper is to explore general issues involved in establishing a global budget for the U.S. health care system. This paper uses the term global budget to mean the entirety of the information systems used to monitor the performance of the health care financing and delivery system, and the associated regulatory processes by which health spending is controlled and allocated. We use the term global expenditure limit or target to refer to one element of that regulatory process, namely, the amount of resources—prospectively set—that the nation has decided it wishes to devote to health care. In other words, global budgeting is the process by which society chooses, directs, and enforces how much to spend on health care, what to spend it on, and where that spending will take place. Our discussion is very much limited to the environment of U.S. health care reform at present—that is, we assume the context of a multipayer system organized under the principles of managed competition.

In our view, global budgeting has several goals. First, society seeks to control overall health spending and to ensure that people enjoy reasonable access to affordably priced services. Second, it follows from the first goal that information systems must measure spending, monitor performance, and signal the need for corrective action if necessary. Finally, the systems for control and information must be sufficiently comprehensive and flexible to adapt to changing needs and policies over time.

IMPLEMENTATION ISSUES

This section addresses the following questions:

- What services and programs should be included in the budget?
- How should the budget be set?
- How should the budget be allocated across geographic areas, services, and programs?
- How fast should the budget grow each year?
- How can the budget be enforced?

related to global expenditures prepared as part of their program of technical support to states under the State Initiatives in Health Care Reform program.

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RAND Issue Papers explore topics of critical interest to the policymaking community, with the intent of stimulating discussion in a policy area. They may identify trends or present tentative observations or informed judgments based on an ongoing program of research.
What's Included in the Budget?

What Services?

A first issue is whether the scope of services included in the budget should be broadly defined to include core services, supplementary services, and other health services not traditionally covered by insurance, or some subset of these services. Core or basic services are those insured as part of the minimum or benchmark plan in a universal system. Obviously, the core services may change over time. Supplemental services and benefits encompass spending for health care (either in direct out-of-pocket payments or through the purchase of supplementary insurance) that is not covered in the core package (long-term care or extended mental health therapy might be an example). In a system enforced by premium limits, a global budget that includes supplemental benefits would also measure premium payments above the benchmark premium. Other health services that are not usually insured include cosmetic care and amenities.

Most would agree that the budget should include all of the core services, but there are differences about how to treat the other categories of service. One argument for including only the basic benefits in the global budget system is that it is appropriate to control tax-subsidized spending (and reform may limit subsidies to the purchase of the benchmark insurance package), but individuals should be free to purchase other services with after-tax dollars by making out-of-pocket payments or by purchasing additional insurance protection. Others believe that inequities will arise unless supplemental benefits are also included in the global budget because low-income families would be restricted to the basic benefits but higher-income families would be able to secure all of the health care services their money can buy.

We argue, however, that the global budget system should include all three categories of benefits and services. Because one purpose of the global budget is to monitor the performance of the system, it should measure and set targets or standards for the full complement of services to detect cost-shifting and/or inappropriate service substitution. Society seeks to control health care spending and ensure that people enjoy reasonable access to services. However, provider responses to budget limits on one type of service might distort prices for other services in a way that impedes fair access. For example, plastic surgery for cosmetic purposes is likely to fall outside the basic benefits guaranteed by national health reform. Strict controls on spending for covered services is likely to lead to cost-shifting to uncovered services, including plastic surgery. Prices of uncovered services might then rise well above reasonable supply prices, posing a "tax" on persons who wish to consume these services. To take another example, many ask if long-term care should be included in a global budget system. We think the answer is yes because of the close substitutability between hospital beds and long-term care beds. Hospitals might discharge patients to their long-term-care beds earlier, and/or raise their charges to this "unregulated" part of the facility. Regulators need a way to monitor these tendencies to be able to address the problems.

The potential for these problems is greater when a provider supplies (or prescribes) both covered and uncovered services and smaller if a provider (say an acupuncturist) operates with capital, labor, and purchased goods totally outside the covered services area. This suggests a way to define and restrict the scope of health services in addition to the core and supplementary services that are in the global budget system, namely, the additional services would include care whose prices and use may depend on regulations imposed on core and supplementary health services.

While the global budget system should measure expenditures for all services, enforcement need not be the same for all components of the budget. For example, regulators could enforce strict limits on spending for core or basic services while monitoring supplemental and other services as long as spending for these services did not evidence problems of inequity, price distortions, or inappropriate service substitutions.

Another (more pragmatic) reason for including all categories of service is that policy on what is and what is not covered in the core benefits will change over time. We will need baseline measures for prospective analysis of proposed expansions in covered services as well as for simulating payment policies and regulating spending.

What Programs or Populations?

Another issue in defining the scope of services is how to treat programs or populations that are outside of a new national health program. For example, should the budget include health care purchases of workers at large firms if they opt out of the national system? Should Medicare spending be included if it is retained as a separate program? What about services purchased outside of the system by those who are enrolled in it? Should spending for uncovered, undocumented workers be included?

\(^2\)Indeed, no country that limits spending by global budgets applies the regulation to the broad scope of services we recommend be monitored. It is also unlikely that our political system would endorse a policy that prohibited individuals from using their own after-tax income to purchase services that they wish to.
For the same reasons given above—namely, to have the means to monitor and correct cost-shifting among payers and to identify other problems in the system—we believe that the global budget system should include all of these. As long as providers treat patients of different payers, cost-shifting may occur unless payers are held to the same prices and target increases. In addition, increases in out-of-plan use by persons in the national system may indicate problems requiring corrective action. The budget system should provide the information to monitor such developments.

**How Should the Baseline Level of Spending Be Set?**

Most discussions of establishing budget targets center around ways of setting the target rate of growth, thus at least implicitly accepting current spending levels as the base. With this view, the baseline level of spending is set by measuring spending patterns in the most recent available year, and updating this to the policy base year based on population and health spending projections. Such projection models exist. For example, the Census Bureau projects population growth, and the Health Care Financing Administration (HCFA) has developed projection models of health care spending by type of service and payer.

However, national health reform will have other effects that need to be factored into setting the baseline level. Foremost, if universal access is guaranteed, national reform will extend health insurance protection to the more than 37 million uninsured and expand coverage for those who are currently underinsured with consequent increases in the quantity of health care they demand. Second, reform is likely to increase provider payments for patients currently covered by Medicaid, which in turn may increase their access to care and hence increase use. There is evidence, for example, that Medicaid fee increases at least alter the patterns of care for Medicaid patients, for example, shifting from hospital outpatient settings to physician offices (Long, Settle, Stuart, 1986). On the other hand, a national health system might curtail demand among population groups that currently have generous coverage, depending on the cost-sharing features of the basic benefit plan and the rules and terms for the purchase of supplementary insurance. These demand responses to reform need to be accounted for in quantifying the baseline level of spending and its distribution across services and geography.

In addition, architects of managed competition envision the growth of organized delivery systems. Expanding enrollments in managed care programs may result in changes in the quantity and mix of services, since at least some types, especially health maintenance organizations, have been demonstrated to deliver a less costly, less hospital-intensive style of medicine. However, the transition to managed care is likely to take time, and managed care enrollment is likely to remain less than universal. Therefore, the effect of such changes is unlikely to be realized in the baseline year of reform but rather should be considered in decisions about how to increase the budget.

**How Should the Baseline Be Allocated Across Geographic Areas, Services, and Populations?**

After establishing a baseline national budget target, how do we allocate it across geographic areas, across services or providers, and across population groups?

**Allocation Across Geographic Areas**

Large geographic variations in the use of medical care, after controlling for differences in population characteristics, are well documented. For example, per capita spending by elderly persons covered by Medicare varies by a factor of more than two among selected Standard Metropolitan Statistical Areas (McClure and Shaller, 1984). Larger variations in the rates clinical procedures are performed among similar patient populations have been identified (Wennberg and Gittelsohn, 1973; Stano, 1986). Such variations suggest disparities that would make it difficult to justify allocating the budget target across geographic areas using the existing distribution of spending when equal access is one policy goal of reform. Moreover, there are large differences across states in the proportion of the population that lacks insurance, ranging from under 7 percent in 1990 in Connecticut, North Dakota, and Wisconsin to over 20 percent in Texas and New Mexico (Himmelstein, Woolhandler, Wolfe, 1992). Consequently, allocating the budget target to states based on the current geographic distribution of spending would penalize states with a high fraction of uninsured because they will realize large, new demand pressures under universal access. An alternative would allocate the national budget among areas based on population size, adjusted for demographic variables.

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3 An alternative would be to set the baseline by competitive bidding. For example, the budget for an area might be established using the premium quote of the lowest bidder for a standardized package of services multiplied by the area population. In practice, however, both Medicare and states that are designing global budgets base them on historical spending.

4 There exists a substantial research literature that can assist policymakers in adjusting the baseline to account for these various factors. For example, see Long and Marquis (1994) for estimates of the effect of universal coverage on use; see Manning et al. (1987) for estimates of the effect of different cost-sharing provisions on use; and see Blumberg (1993) for a review of the effects of managed care on use.
mographic factors. That is, per capita spending targets for different demographic groups would be established; an area's aggregate target would be derived by multiplying each subgroup's per capita target by the number of individuals in that subgroup in the area and summing over all groups. However, setting budget targets or limits that are too low relative to current practice patterns in an area could seriously impede access for the population in that area. While some would hope that squeezing high-cost areas by strict global limits would lead to reductions in inappropriate care, the evidence suggests that strict limits might result in cutbacks in necessary services as well. The rate of inappropriate use of services is similar in both low- and high-cost areas (Chassin et al., 1987), suggesting that the expenditures at the margin in high-cost areas are not just for low-benefit services. Moreover, any policy that explicitly redistributes spending across states or other geographic entities is likely to be politically contentious. Thus, for some time, a blending of a per capita allocation and the historical patterns might be required.

The question also arises as to what is the appropriate geographic unit for budget allocation, if explicit redistribution to ensure equitable access and reward efficient areas is a goal of policy. Medical practice variations occur among markets within a state as do differences in patterns of spending among states (Wennberg, 1984), suggesting that state budget allocations might be desirable. One model for a national budget system would be to make explicit allocations to state units and require that states be accountable for demonstrating equitable access within the state. A national budget framework could assist this state role by developing the data structures and definitions that will be required to monitor access and use within the state.

State borders pose budget allocation issues, namely, how to measure and count against a state's target actual spending for care received in one state by residents of another state. There are essentially three bases on which actual spending can be allocated to each state: where people live, where people receive their care, and where people are insured.

Under a system enforced by price regulation, the state has a means to control expenditures for care delivered by providers in the state. The state, however, does not have a means to enforce the quantity or price of care delivered by providers in another state. In this case, a state in which a substantial share of the care its population receives is from out-of-state providers may have trouble staying within the budget target if expenditures are allocated to the budget for the state in which the patient lives. Allocating expenditures to the budget for the state where people are insured poses similar problems if providers participating in the plan practice across borders. In contrast, counting against the state's target only expenditures for care delivered in the state may create incentives for providers to refer patients out of the area to avoid any fee reductions from exceeding budget targets or limits. This in turn may create access problems for the patient population.

If budgets are enforced by premium limits, the state sets payments to plans that are licensed in the state and the plans are responsible for finding ways to control spending. The state then has direct control over the premium costs for persons insured by plans licensed in the state, which would argue for measuring spending and setting targets based on where individuals are insured. However, if plans in different states compete for the same patients, then states will need to cooperate in setting premiums in markets that cross borders to avoid selection problems. Alternatively, plans could be licensed in more than one state and residents could be required to enroll in the plan in the state in which they reside. Again, however, unless states cooperate in setting premiums for plans in border markets, plans' licensing decisions and/or patient access to care within a plan may vary adversely across borders. If states do cooperate to set premiums in border markets, adverse consequences of the alternative allocation bases are controlled. That is, allocating spending based on residence, or allocating the per capita premium payments based on site of care, should not alter incentives or affect the state's ability to remain within the target.

A short-run, practical problem in allocating the budget across geographic areas is the shortage of data to establish current patterns and to support allocation decisions. Data needs for a global budgeting system are discussed in more detail later in this paper. But here we note that the only complete source of state-level spending data is aggregate state estimates of spending for hospitals, physicians, and prescription drugs for 1991 prepared by HCFA (Levit et al., 1993). These are the only uniform data on state spending available in the past ten years. However, there are several limitations of these data for setting budgets. First, the data are based on provider location; because they do not account for border crossing, they can not be used for setting budgets for a state's residents. Second, the current accounts do not represent all services, though they cover the majority of services that are included in most proposed benefit packages. Furthermore, the data are not sufficiently de-

5Because of a lack of detailed state data, several states that are exploring global budgeting as a way of controlling costs have undertaken the development of detailed, integrated data systems to measure and monitor health care. For a description of the efforts in three states, see Lipson (1993).

6HCFA plans to produce residence-based estimates in the future, as well as to extend the accounts to cover other services.
tained to measure spending for specific covered services representing a subset of each service aggregate, by different payers, or for different population groups. The lack of data to establish baseline geographic allocations is more serious if the policy is to allocate at the substate level, for example, across multiple health-insurance-purchasing alliances that might be created within a state.

Allocation Across Services and Providers

How disaggregated should the budget allocations be across services and providers? Should hospital and physician expenditures be budgeted separately? Should there be allocations by physician specialty or by type of procedure (such as evaluation and management services, surgical procedures, or other services)? Should there be a separate budget for drugs, outpatient tests, or supplies?

Our answer depends in part on how the budget is being used. To describe and monitor the current system, to carry out policy analysis (such as simulating alternative rate-setting options), and to monitor access, we need an accounting and budgeting system that is disaggregated by sector (that is by hospital, physician, etc.). In addition, in monitoring access and how practice changes in response to reform, one might also wish to disaggregate physician spending by place of service, by specialty, and by broad type of service category.

Various considerations apply in setting expenditure targets or limits that will be enforced. The method of enforcement is one factor in how the target is allocated. For example, if different regulatory models apply to different sectors or providers, the budget allocations need to be disaggregated accordingly. In a system of premium regulations, plans would be held to a budget based on a per capita payment. Plans have an incentive to make cost-efficient reallocations among services and sectors, for example, to shift care from inpatient settings to outpatient settings. In this model, the budget target would be a total health care system spending target (i.e., a target for the entire state, or for those payers under state regulation), and the budget target would not, and should not, make explicit allocations across services and sectors.

In a price-regulated system, prices are used to enforce the limit. This could be accomplished by across-the-board adjustments in all prices if a system-wide target were exceeded. Some argue that establishing target budgets by sector would lock in place the current composition of spending and discourage cost-effective substitutions; they would establish a total health care system target. Furthermore, physicians prescribe many services that they do not actually perform, and so adjusting physician prices to stay within a total health care system budget would make physicians accountable for these decisions.

Although physicians do make decisions about whether and how long to hospitalize patients, other countries with targets or limits do set separate budgets for physicians and hospitals. In a price-regulated system, including overruns of hospital budgets in the adjustment formula for physicians may be viewed as placing unacceptable risk on physicians. Whether to further disaggregate budgets for physicians' services according to type of service and whether to establish separate budgets for other services and supplies involve a tradeoff between targeting controls to areas of overservice and making physicians responsible for the range of services they provide. Some argue that setting different standards for different types of service allows policymakers to focus controls on services that have exhibited rapid volume increases and provides another policy mechanism for stimulating desired provider behavior and responding quickly to undesired changes. For example, Germany sets different budget pools for direct physician consultation, laboratory services, and other ambulatory services to restrain laboratory testing and encourage direct consultation (Kirkmann-Liff, 1990). As another example, the Medicare volume performance standards (VPS) set different volume standards for surgical and nonsurgical services. However, setting different budget targets for different types of service requires accepting the current mix or making decisions about what mix is appropriate—information that we do not currently have.

Demand responses need to be considered in making allocations across services and sectors. Use of inpatient hospital care is less responsive to changes in the level of insurance coverage than is use of outpatient care (Manning et al., 1987). Thus, extending coverage to the uninsured in a universal system is likely to alter the current service mix, with a somewhat higher fraction of spending devoted to ambulatory service use.

Allocation Across Programs and Populations

Large firms may be able to opt out of a national health program. Some existing government programs, especially Medicare, may be retained. Therefore, the baseline budget must allocate total national baseline spending between the new national program and these other payers. The existing distribution of spending among these subpopulations reflects current insurance status. Changes in insurance coverage will therefore alter the distribution of spending among these groups. A greater share of the total will be attributable to those who will be covered in the national program, which will include those who are now uninsured and underinsured, than is currently observed. Baseline allocations need to
adjust for this demand response. Failure to do so would impose budget limits on the new national program that are too low, with potential adverse consequences for access among the vulnerable population groups the reform is intended to help.

**Capital Allocation**

Newhouse (1993) argues that growth in technology is the major factor in the sustained U.S. growth in health expenditures. Therefore, a case might be made for budgeting capital expenditures separately from the budget for individual services. Indeed, other countries that have adopted global budgets restrict capital spending to meet cost-containment goals (Altman and Cohen, 1993). Regulatory controls on capital spending may reduce the rate of innovation and slow diffusion; however, regulation of new technology is also likely to be contentious as it involves the distribution of income across providers.

A counterargument to a separate capital allocation is that market forces will lead to appropriate capital spending if reform fosters competition. For example, individuals who wish to pay the higher cost for access to new technologies would enroll in plans that offer the technologies, whereas consumers who do not value the newest medical innovations would remain in a basic plan. One undesirable outcome of such a scenario, however, would be that low-income individuals, who cannot afford the more costly plans, would not have access to new technology, whereas upper-income families would.

If capital expenditures are allocated separately, issues similar to those raised above will have to be addressed. What is the scope of the capital budget—for example, will it include facilities, equipment, or new technologies? Should there be separate capital budgets only for selected sectors such as hospitals? How is the appropriate baseline stock established and measured? How should the baseline be allocated across geographic areas and providers?

**How Fast Should the Budget Grow?**

How fast the total should grow gets to some fundamental social values—namely, the tradeoff between health consumption and consumption of other goods and services. Although public opinion polls show that the majority of Americans believe that the high cost of care is the most important health care issue facing the country (Blendon et al., 1992), still only a minority (23 percent) favor limiting total health care spending if it means constraints on care (Blendon et al., 1992) and many (69 percent) believe that we are not spending enough to improve the nation’s health (Newhouse, 1993). Nonetheless, policymakers believe that health care costs cannot continue to consume a larger and larger share of gross domestic product (GDP) at the expense of other important needs.

There are a number of models to establish how fast the budget should grow: use of a strict formula, decisions by Congress or a national board, or formal negotiations between the government and interest groups. Under a formula-based system, the target growth in health care spending would be tied to some economic indicator such as the consumer price index or GDP (Thorpe, 1992; Altman and Cohen, 1993). Many experts seek to stabilize the share of total output devoted to health care and would link the growth in health spending to the projected increase in GDP, adjusting for the changing composition of the population and perhaps other factors such as technology growth. Over the past decade, such a policy would have substantially reduced the increase in health care spending. From 1980 to 1990, GDP grew at an average annual rate of 7.2 percent, whereas spending for personal health care services grew at 10.3 percent per year (Jencks and Schieber, 1991). Therefore, if health care spending had been held to the growth in GDP, it would be 25 percent below its current level.

A strict formula-only approach is unlikely to work in the long run because some components of spending increases—technological growth, the amount of technological improvement to pay for, and changing medical needs—are difficult to measure. Under an alternative, second model, Congress, or a national board created by Congress, would determine the annual growth rates in expenditures. Under this model, the Congress, or its delegated authority, would set a rate of increase using both statistical indicators and judgment, with the advice and comment of other interested parties. This is the approach that was adopted by Congress for setting VPS in Medicare and used by states such as Minnesota and Vermont that are designing and implementing global budgets.

The third model, one of formal, structured negotiations, is the approach taken by several other countries. Guidelines or initial targets are put forth by government, but final spending goals reflect the outcome of negotiations between various interest groups. Critics of this approach to setting budgets in the United States observe that there is little evidence that formal negotiations in other countries reduce conflict between the medical profession and the state. They also observe that there are

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7A technical monograph addressing in more detail the issue of capital expenditures for global budgeting is one of the series of monographs on global budgeting being prepared as part of the Robert Wood Johnson Foundation's State Initiatives in Health Care Reform program. The monograph on capital spending is being prepared by the Alpha Center, Washington, D.C.
problems of involving interested parties other than physicians—such as consumers—in formal negotiations. These critics prefer the second model we described, which involves informal input from interest groups who can offer advice and comment on the proposed standard.

Under any of these models, different growth rates might be established across geographic areas, services, and payer groups. Many of the arguments that we noted above in considering how to allocate the baseline suggest that varying growth rates may be desirable. For example, different growth rates might be adopted by location to bring high-cost areas in line with national per capita norms over time and to encourage the expansion of care in resource-poor areas. Different growth rates might be adopted across services and sectors to encourage cost-effective substitutions, to reflect new technologies, or to curtail the use of services that are perceived to be overused. Different growth rates for different payer groups might be adopted to account for projected changes in the demographic characteristics of the groups.

How Can the Budget Be Enforced?

There are three methods by which actual health care spending can be held to a global budget target: limiting prices, limiting premiums, or limiting provider budgets or revenues. The method depends, in part, on the organization of the financing and delivery system. Limiting prices is a strategy for containing costs in a fee-for-service system. Premium limits can be applied to control spending under traditional insurance plans, but that strategy is most often associated with systems in which capitated plans play a large role. Limiting provider incomes works best when there is a single payer who is responsible for paying hospitals and doctors for care for the whole population.

However, these are not mutually exclusive methods. It is possible for different methods to be applied in different locations, to different providers, or to different payers. For example, premium regulation in areas with a number of competing health plans might coexist with price regulation of physicians in sparsely populated areas; price regulation in Medicare might coexist with premium regulation for a new, national health insurance program; price regulation for physicians might coexist with fixed hospital budgets. Each of these methods is discussed briefly below.\(^8\)

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\(^8\)For a more detailed discussion, see Holahan, Blumberg, and Zuckerman (1993).

Limiting Prices

Price regulation is one method to enforce global budget targets or caps. Prices would initially be established based on expected utilization patterns and budget targets. For price regulation to be effective in enforcing budgets, there must be a mechanism to adjust prices if the budget is exceeded. Under a system of budget targets, such as the Medicare VPS system, prices in a future year are altered if the target level of expenditures for the current year is exceeded. Under a budget cap system, prices are adjusted each year so that spending in a year stays within the limit for that year. For example, in Germany prices are determined ex-post facto by adjusting the monetary value of a point on the fee schedule to account for differences between the actual and expected volume of services (Kirkmann-Liff, 1990).

Under a budget system with price regulation, the global budget provides a collective incentive for physicians to control volume to avoid penalties in the form of price adjustments. However, collective incentives alone may not alter individual behavior because the individual physician receives little benefit from his own volume control if no other physician responds, and bears no cost from failure to respond if others do respond (Hadley, 1984; Newhouse, 1973). That is, the individual physician who changes his practice style will still face fee reductions if the physician community fails to control spending. But the individual physician who does not change practice behavior in response to budget limits will not face a fee reduction if all other physicians do control volume.

If volume is not controlled, the feedback adjustments in price are a direct signal to alter quantities. However, there is some evidence that lower fees lead to increases in the volume of services (Rice and McCall, 1982; Gabel and Rice, 1985; Reinhardt, 1985; Holahan et al., 1979). While physicians might respond to fee adjustments by trying to increase their volume, in the long run other responses (e.g., physician supply) to continuing fee adjustments would restrain total volume.

Limiting Premiums

Under a system of premium regulation, budget targets would be translated into capitated payments to health plans. Plans would have to operate within an annual budget, providing the plan with strong incentives to develop programs or provider payment systems to encourage providers to practice in cost-effective ways.

However, plans might also try to operate within their budgets by selecting healthier patients. To avoid this problem, premium regulation will require risk-adjusted payments to plans. In recent years, a number of
risk-adjustment models have been developed, but even the complex models explain only about 15 percent of the variation in health care use. Few of these models have been tested in practice and may not have sufficient predictive accuracy to avoid problems of risk selection.

Whereas the concern in fee-for-service delivery is overuse, the concern in capitated payment systems is underuse. Plans may try to stay within budgets by withholding appropriate care. To ensure that the policy goals of equitable access are achieved in this system will require good monitoring data.

Limiting a Provider’s Budget

A third method to enforce budgets is to provide an annual budget for a provider. For example, hospitals in a number of other countries are each subject to annual budget limits, which are fixed in advance and do not vary with the volume of services delivered. Rochester, New York, also has experimented with fixed hospital budgets. This approach provides a direct economic incentive for the provider of care to use resources efficiently. However, underservice and risk selection are also problems.

INFORMATION NEEDS

An implication of the above discussion is that we require a very detailed data collection framework to provide the flexibility to measure different groups of services and payers as policy and the health system evolve. Moreover, the data system must represent spending at various geographic levels, including states and substate health districts or regions.

Within a global budget might be several different groupings of services or payers/populations being regulated in very different ways. Specifically, the global budgeting system measures the effectiveness of the system of policies in meeting its objectives. But it should not be restricted to measuring the object of any particular policy instrument. For example, under managed competition it should be capable of measuring spending increases for services and administrative costs under the alternative health plans of the health insurance purchasing cooperatives, the exempt self-insured employers, Medicare, and the various uncovered services making up the balance of health spending. If some payers are under capitation and others under rate regulation, these would also be measured separately.

Long-Run Objectives

One approach to specifying the data needs under global budgeting is to ask what policymakers will want to have done with the data. We can identify at least five uses:

- to describe baseline spending and rates of growth, for all services and for detailed service and payer groups, at least at the national and state levels
- to set prospective limits on rates of spending increase for specific services/payers/areas
- to facilitate enforcement of these limits, often by simulating the details of enforcement tools—for example, fees under physician fee schedules, or risk adjusters under capitated premium regulation
- to monitor the quality of care
- to monitor trends in spending for “uncovered” services or populations.

In the long run, to achieve these purposes the global budgeting system would require information about service use, costs, and payments for all health care services. One implication of this is that a data system cannot be based on administrative data—such as claims—alone, but must be based on information from multiple sources. Paid claims data, for example, do not provide information about out-of-pocket payments for cost-sharing for basic services, for noncovered services, or for out-of-plan use. However, to assure that national health reform results in equitable access to affordable health care requires that total service use, consumer out-of-pocket payments, and out-of-plan use be monitored. To do so, the information system needs to measure both the provision of care and payment for care.

A total health care use data system would obtain information at the point of service. That is, it would collect data about each hospital discharge, each discharge from a long-term-care facility, each encounter with a physician or other health care provider, and each pharmacy transaction. Overlaying this service use data system would be data about claims paid by Medicare, self-insured companies, and the national health care system. Payers would be required to report revenues as well as outlays so that regulators have the information to monitor and set premium payments. This integrated system would provide a complete picture of the sources and uses of health care funds.

Another element that is required to coordinate the encounter data and the payer data is a national enrollment data system that assigns common patient identifiers and tracks plan eligibility and enrollment. Common identifiers are needed to link the payer and provider data and to track individuals over time and place to measure and monitor patient-level use and cost burdens and to make appropriate geographic allocations.
If states are to be accountable for meeting state-specific budget targets, then states would be the natural collector and repository for these data. However, to assure that data are comparable across states, payers, and providers, the federal government should coordinate the development of uniform data collection instruments and standardized definitions. In addition, as we noted above, a national patient identifier system is required.

This is seemingly an incredible amount of data. Is it really necessary? We see no other way to ensure the flexibility to meet all of the above policy needs. One alternative would be to sample rather than collect complete utilization and cost data. However, there is no natural sampling unit that would provide the data to make it possible to address all of the important policy objectives. For example, sampling encounters would preclude patient-level analysis of encounters, or provider-level analysis of quality of care delivered. Sampling all care delivered by some providers would not provide information to perform patient-level analysis or to develop profiles for all providers to monitor the quality of care delivered. Moreover, if the budgeting system is asked to make real cuts in the rate of growth in spending, and these cuts are to be enforced through direct reductions in the receipts of insurers or providers, the quality and precision of the data must be beyond question.

Moreover, such a data system can be useful for more than monitoring and describing patterns of care and carrying out and enforcing regulatory efforts. It might also be used to help improve the quality of care delivered and thereby contribute to the objective of cost containment. For example, the data system could be used to develop physician practice profiles as part of a package of educational materials for physicians to help improve medical practice. A national data system might be used to improve continuity of care and avoid unnecessary duplication of care by giving providers access to information about a patient’s encounters with other medical providers.

The development of new technologies such as electronic claims processing and electronic encoded patient cards makes such a data system feasible, though there are important issues of patient and provider confidentiality and data access that need to be addressed. On the other hand, it will take some years to put such a system in place.

**Interim Steps**

What can be done in the meantime? There are two issues here—the creation of state health accounts to monitor general trends, and the choice of interim target growth rates for enforcement purposes.

The national health accounts, estimated annually for the entire United States by HCFA, provide a conceptual framework that can be used by the states to meet their interim data needs in beginning to implement a global budget (Levit et al., 1991; Lazenby et al., 1992). These accounts provide an estimate of the total value of goods and services used in health care, as well as estimates of various aggregate sources of health care spending and various aggregate service groups purchased with these funds. Comparing the estimates from year to year, we can calculate growth rates for the total and the detailed source/use cells.

Because the estimates are based on aggregates supplied by providers, payers, surveys, and price indexes, the accounts are better suited to monitoring trends. They are not sufficiently detailed to measure spending on specific benefit packages or for individual payers, nor do they provide the service or procedural detail to support development or maintenance of rate or fee regulation. However, as an interim step to estimating total spending and trends, pending the availability of detailed uniform claims and encounter data, the states should undertake comparable estimates.

Baseline estimates of state health accounts could be developed within a year or two, especially with the aid of federally specified definitions and procedures, federal data, and enabling legislation (especially amendments to the Employee Retirement Income Security Act—ERISA—to enable the states to collect data from self-insured employers). Minnesota and Vermont are currently developing health accounts and several other states have expressed a desire to do so. State health account estimates would aid in monitoring spending trends and in setting target rates for spending growth—two of the five purposes identified above.

To estimate a state’s health spending accounts, data must be collected from sources of payments and from providers of services. Table 1 illustrates the form state health accounts might take—the rows list the types of payers and the columns show the types of services.

Aggregate annual data on payments by type of service would be collected from payers. For payers to disaggregate their total spending by type of service, they must be provided with uniform definitions of service types. In addition, numerous accounting conventions must be specified—for example, whether spending is measured on a cash or on an accrual basis, and how lump sum settlements to providers are assigned by service and in time.

Some payment sources are easily within the reach of the state—for example, Medicaid, the state employees’ health plans, and direct delivery through public health departments. Medicare data are also available at an aggregate level by service. A number of other federal pro-
Table 1. Illustrative State Health Account

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>Uses of Funds</th>
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<tbody>
<tr>
<td></td>
<td>Total</td>
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<tr>
<td>Total</td>
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<tr>
<td>Private Insurance</td>
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<tr>
<td>Blue Cross/Blue Shield</td>
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<tr>
<td>Insurance Companies</td>
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<tr>
<td>HMOs</td>
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<tr>
<td>Self-Insured Employers</td>
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<tr>
<td>Government</td>
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<tr>
<td>Federal</td>
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<tr>
<td>Medicare</td>
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<tr>
<td>Department of Defense</td>
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<tr>
<td>Department of Veterans</td>
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<tr>
<td>Affairs</td>
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<tr>
<td>Other Federal</td>
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</tr>
<tr>
<td>State</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
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<tr>
<td>State Employees</td>
<td></td>
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<tr>
<td>Direct Delivery</td>
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<tr>
<td>Other State</td>
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</tbody>
</table>

Direct Patient Payment

Programs must cooperate too, including those of the Department of Defense, the Department of Veterans Affairs, and the Indian Health Service. Insurers regulated by the state—including Blue Cross/Blue Shield plans, insurance companies, and health maintenance organizations—do not routinely file such reports, but could cooperate in making estimates if they choose to do so. States may meet greater resistance from self-insured employer plans that are exempt from state regulation under ERISA. Finally, out-of-pocket payments for services must be estimated, both from survey data and by reconciling for each service the receipts of providers with the reported payments by third parties. In principle, the difference between provider receipts and third-party payments is the direct patient payment.

Data would also be collected from all providers on revenues for services by source of payment. Again, there are important measurement issues to be resolved. For example, the concept of value in these accounts is payment—neither charges nor costs will do, despite their frequent availability. The provider data that are currently available vary greatly by type of service.

Most states have hospital cost and discharge reporting systems that come close to meeting estimating needs, with the possible exception that they report insufficient detail on types of payers. The discharge data are very important in establishing the magnitude of direct patient payments. Unfortunately, much less is known about the aggregate receipts of other providers. Even when total receipts are available, their distribution among the payer categories is generally unknown. It is particularly problematic that we have no good sources for data on physicians’ revenues by source of payment.

An exception to the lack of provider data occurs with the recent use of provider excise taxes by many states, especially to finance their Medicaid programs. Taxes on hospitals, nursing homes, physicians, and pharmacies have come into widespread use. In principle, the information generated as a by-product of collecting these taxes can be used to estimate revenues by broad service groups. The tax base is generally total receipts. It is a short conceptual step to require departments of revenue to specify that these receipts be reported in disaggregated fashion by payer type. Provider taxes are also consistent with equitable financing of a health reform program in that they prevent providers from capturing the windfall gains associated with receiving full payment for serving the uninsured, whom they had previously served for little or no payment.

Reconciling the two types of data allows for estimation of the cells of the health accounts matrix. Repeating
the estimation annually allows calculations of rates of increase, both for total spending and for individual services, payers, or payer/service cells.

What other steps might be taken to move toward full implementation of the ideal data system described above? States might be required to put in place uniform hospital discharge abstract systems with much finer detail on sources of payment and on actual payments received. The federal government might support several efforts to develop uniform definitions and forms for other encounters, including physician visits and prescription drugs dispensed.

References


