

Designing and Implementing
Health Care Provider
Payment Systems

How-To Manuals



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Published in 2009 by the World Bank and the United States Agency for International Development

Summary for web of chapter 3, pp. 215–253*

Strategic purchasing of health services involves a continuous search for the best ways to maximize health system performance by deciding which interventions should be purchased, from whom they should be purchased, and how to pay for them. In such an arrangement, the passive cashier is replaced by an intelligent purchaser that can focus scarce resources on existing and emerging priorities rather than continuing entrenched historical spending patterns. Having experimented with different ways of paying providers of health care services, countries increasingly want to know not only what to do when paying providers, but also how to do it, particularly how to design, manage, and implement the transition from current to reformed systems, and this how-to manual addresses this need.

The book has chapters on three of the most effective provider payment systems: primary care per capita (capitation) payment, case-based hospital payment, and hospital global budgets. It also includes a primer on a second policy lever used by purchasers, namely, contracting. This primer can be especially useful with one provider payment method: hospital global budgets. The volume's final chapter provides an outline for designing, launching, and running a health management information system, as well as the necessary infrastructure for strategic purchasing.

* This summary was written by Robert Dredge, Senior Fellow, Centre for Health Planning and Management, Keele University, United Kingdom



Hospital Global Budgeting

SUMMARY BY ROBERT DREDGE

Hospital funding mechanisms are a key part of the process of reform in many health care systems. Many countries with publicly funded systems have introduced, or modified, systems of global budgets. Global budgets can be used to deliver changes to service delivery patterns. They can be refined and strengthened by the inclusion of incentives (and in the event of nonperformance, penalties). They can also be developed to reward quality, appropriate clinical practice, and efficiency. One of the major attractions is that this is possible in an administratively simple manner and with relatively unsophisticated data.

The global budget is a prospectively agreed sum within which the revenue operating expenses of the hospital must be contained. It acts as a cap on total spending, and leads to a clearly defined limit to the resources available from the funding body. Other expenditures, such as capital, research and development, and teaching, are generally funded outside the global budget (but may be allocated through a parallel, global budget-type system).

The overriding aim of a global budget is to limit the total amount of money spent on health care. The total will be predetermined by the funding body, such as the Ministry of Health, regional health fund (authority), or equivalent. The global budget can have many forms, but it must be explicit about the services that it funds (and does not fund). Those to be covered by the budget can be defined in various ways, including the sectors of health care, services of facilities and specific treatments (an inclusive list of medical and clinical conditions). Services falling outside this “positive list” are excluded. It should also define the volume of services to be delivered by the budget. It is usual for the budget to be prospective and agreed for a defined time period (such as the fiscal year).

The manner in which the global budget is funded is not a feature of the budget itself, and the collection of revenue to fund the global budget and the process and mechanics of risk pooling are not considered in this chapter. However, the design of the budget and the manner in which it is

managed are likely to be influenced strongly by the funding method. The extent to which the global budget can comprehensively include all sources of revenues will certainly have an impact on the strength of its success.

The benefits of a global budget will be enhanced if it is operated in an environment where the financing agent (or its agents) act as positive purchasers of care, rather than passive financiers of institutions. Such an arrangement enhances the probability that policy goals and objectives will be achieved. The administrative mechanism by which many global budgets are managed is often some form of contract between the purchaser and provider. This can be a formal legal instrument or an administrative quasi-legal process. It can incorporate elements on financing, volume, and quality standards. The extent to which these various elements are developed depends on the management capacity of providers and the policy objectives of the purchaser. Contracts are the most appropriate means by which the intentions of both purchasers and providers can be captured. They are the written formalization of the process of agreements reached between purchasers and providers. They define very clearly the:

- Purchaser and the Provider
- Scope, definition and volume of services to be purchased and provided
- Price to be paid
- Minimum quality of services acceptable and quality standards to be achieved

- Methods and metrics for the measurement and monitoring of performance
- Incentives and penalties appropriate to the level of performance
- Administrative arrangements that enable the contract to be satisfied.

The processes by which the contract is implemented, managed, and monitored constitute the key to success and can be fundamental to the delivery of the benefits of a global budget or other type of payment agreement.

Setting the hospital global budget

From a financial perspective, a global budgeting system operates on the assumption that fixed and predetermined sums are available for the provision of health care. These are preferably allocated to a clearly identified and responsible body. In turn the financing agent will allocate global budgets to the hospitals.

The first steps for the global budget are the definition of the population it is to cover, the services it is to provide, and the financial allocation in the base year of the budget. Once this base allocation is determined, periodic reviews (annual if possible) are needed to allow for such factors as any changes in share of GDP allocated to health care, input price inflation, technological advances, demographic changes, and changes in system efficiencies.

To set the budget for the first time, data are required on the price of services and the volumes to be delivered. Existing data sources will determine the degree of refinement and sophistication of the initial budget. Experience suggests that most countries have at least some data that can be used for this initial budget setting process. Patient-based data and procedure-based costing are not necessary prerequisites for global budgets.

There are three broad approaches to setting the budget which we will call historical, capitation, and normative. Within any approach it is desirable to include a mechanism to adjust the budget for any differences (“variances”) between the planned and actual volumes of services. Line item budgets can be converted into global budgets through any one of these approaches.

In practical terms it may be useful or pragmatic to take elements from each approach, depending on the particular

circumstances, policy objectives and quality of the information available in the country.

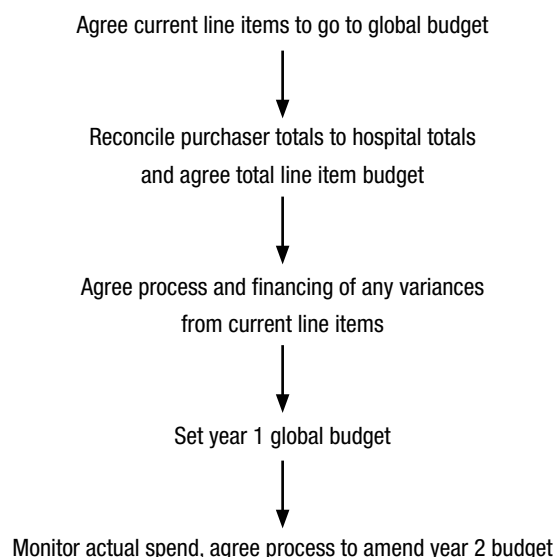
The transition from current to global budgets may require the refinement of management information and governance systems. For this reason the use of pilot sites and/or short periods of shadow budgeting (when current and proposed budgets are run and monitored in parallel) are desirable. It may also be wise to phase in over a limited number of years the share of hospital financing that is based on historical and global budgets.

Historical approach

When setting the global budget it is important that both financing agent (purchaser) and providers are satisfied that a fair allocation of resources is made and that services can be maintained. If an existing geographic or institutional relationship is kept it is easy to have such continuity. The current funding level is maintained, a nominal global budget based on the new mechanics for setting budgets is calculated, and transitional arrangements are planned.

This approach, based on total spending in the hospital, is set out in simple terms in Table 1. The Ministry of Health or Finance undertakes this task in the first instance by simply aggregating the current line item budgets of each hospital. Hospital managers must be included in the discussions, negotiations and agreements made on the budgets so that they have a degree of responsibility and commitment to the delivery of the budget.

Table 1. Historical budgeting



The reconciliation process is important as it verifies that the system can sustain the current level of both spend and service delivery volumes, and thus gives stability to the initial years of the global budget.

Capitation approach

Despite its merits of simplicity and stability, the historical approach perpetuates existing resource flows. If population and service provision are, in some way, out of balance it will not rectify issues of equity of access to services.

This is an important policy issue in many transition and low-income countries where the main population centers often have a disproportionate concentration of services. In these circumstances a move toward a capitation-based funding model will lead to a more equitable distribution of resources. Such a move may have to be phased in over a number of years to enable transition and capacity-building issues to be addressed.

Capitation aims to distribute resources between providers on the basis of the relative needs of the populations that they serve. This distribution has to be done within the

context of the total amounts available, since a “zero-sum” game is at play: any provider who gains from the new formula will do so at the expense of others who receive a reduced level of funding.

Capitation funding directly to providers is a very complex arrangement. It requires that both the provider-served population and the range of services be defined with certainty. One way of developing a capitation-based global budget is shown in Table 2:

This approach requires a considerable volume of relatively sophisticated data, as well as advanced modeling skills. It may also be expensive to maintain and refine and, for these reasons, despite the methodological advantages it can bring it has not been widely adopted.

Normative approach

There are many variants of the normative approach to setting budgets but they share the principle that external rate-setting mechanisms determine a unit price for services. This predetermined rate is then applied to the

Table 2. Costing patient flows: Capitation index

Task	Data (and comments)
1 Agree services to be covered	Analyze total activity by specific code
2 Determine factors that drive needs for service	Demographic, socioeconomic and access data
3 Establish formula that isolates step 2 from total global budget	Weighted capitation base model
4 Calculate share of global budget	Prorate to relative needs Use cost-weights approach
5 Determine which providers deliver services	Historical provision, verified by quality accreditation
6 Allocate budget share to eligible providers on basis of population covered	Capitation basis of provider population

Table 3. Costing patient flows: Normative approach

Task	Data (and comments)
1 Determine activity base for global budget	Historical data from provider Aggregate at appropriate patient care level
2 Agree price norm to be used	“Industry best” if no data available National average cost per case/procedure Procedure-based cost if known
3 Apply price norm to activity	Cost x volume
4 Aggregate budget for provider	Total of (cost x volume) by patient care level

volume of services that the purchaser requires from the provider. Generally this is prospective rate, fixed for the budget year.

In its simplest form this approach takes no account of current levels of activity, access, or provider costs. A method for applying these principles is outlined in Table 3. This approach is simple and very transparent, provided that the appropriate level of data is available.

It also allows purchasers to apply a cost norm that represents their view of an acceptable level of cost, thus forcing cost reducing, or acceptable cost levels, from providers. If this efficiency pressure is too great there is a real risk of the provider facing financial pressures such that some services may be put at risk. If a provider is efficient and can deliver service at less cost than the cost norm, it will benefit by being able to use the resulting financial surplus to develop more services, improve quality, or reward its staff (singly or in combination). This is a very simple and powerful dynamic, but usually requires some provider regulation to guarantee continued quality and quantity of service, and also some clear governance system around the methods of achieving and distributing any financial gains.

There may be legitimate short-term reasons for providers to be granted some financial support under a system of normative budgeting. These could include the poor physical condition of the facility (militating against efficient service delivery) or weak local infrastructure.

If a normative method is used, the factors that enter the calculation, such as case mix, disease severity, and even localized market factors (primarily pay), must be fully allowed for, otherwise the formula could lead to inappropriate responses by providers.

One variation is the use of norms to set differential efficiency-based reimbursement rates. This is then sensitive to the relative cost positions of individual hospitals and the need for them to become more efficient. This process sets the norm as the general reimbursement rate, but allows some time-based flexibility to achieve it. For example, if the norm was 100, but a provider could demonstrate a current cost of, say, 120 then it could be reimbursed at the rate of 115, 110, 105, and 100 over a four year period. This would give the purchaser an immediate efficiency gain and give the provider a period for adjustment.

Transforming line item budgets

In many countries hospitals have traditionally been financed on the basis of centrally directed line-item budgets. The central funding body determines not only the total budget of the hospital but decrees exactly how the budget is to be spent. In many cases this prescription is enshrined in laws or regulations. The hospital has little or no ability to move money between line items, irrespective of local needs, demand, or ability to spend the line-item budget effectively. This approach has many obvious drawbacks including inflexibility (it does not allow for in-year or inter-year changes in the relative costs of inputs) and a lack of incentives (it gives no incentives to clinicians or managers to refine their behavior or treatment patterns).

In conceptual terms a line-item budget can be regarded as a collection of very specific global budgets, each line item being a self-contained and discrete budget. However, its rigidity invariably leads to suboptimal performance.

The line items can, though, be transformed into a global budget by a series of relatively simple steps. These rely on data being available for each line item, and also a breakdown of the purpose, function, and treatment specialty that it was applied to. One approach to building the new global budget is given in Table 4.

The “salaries” and “salaries tax” input lines in the line-item budget can be allocated directly to most of these service areas on the basis the individual members of staff working in the departments. If a member of staff works in more than one function then their costs can be apportioned on the basis of the hours spent in each. The full employment cost, including any payroll tax, must be allocated to the department.

The allocation of non pay expenditure from the current line items will depend on the level of disaggregates of the existing accounting data. There are two extremes:

- Line-item expenditure is already allocated directly to individual functional cost centers such that data on use (and cost) of expenditure are collected at the departmental level. In this case the individual line items can be allocated to departments, and to the department budget.
- Line-item expenditure is not analyzed in any detail other than to the subjective line (that is, a description

Table 4. Building a global budget

Task	Data (and comments)
1 Determine functions/program basis for future budgeting	Analyze function of hospital into clinical areas and supporting services (see step 6)
2 Allocate current line-item expenditure to revised budget structure	Current expenditure data analyzed to each new function on basis of: Actual data (i.e. function as a cost center) Allocated on basis of Direct cost Indirect cost allocation OR Transition year established for data capture during which expenditure accounted for on functional cost center lines
3 Review functional/departmental split of historical basis expenditure	Activity-related data for each department
4 Agree global budget for hospital	Sum of existing line items
5 Set internal functional budgets	Based on historical split and review to reflect current/ planned practice
6 Determine functional (or department) cost centers for management accountability (financial reporting and budgeting)	Examples: clinical department (surgery, medicine, therapies, laboratories, and radiology); facilities support; maintenance (energy, catering, and cleaning services); transport; and administration

Table 5. Certainty, risks, incentives, and penalties

Category	Purchaser	Provider
Block	Certainty over costs Control over total spend No efficiency incentive Financial risk shifted to provider	Certainty over income Incentive to be efficient Incentive to minimize volume/reduce quality Takes all financial risks
Cost and volume	Certainty over costs Cap on affordable volumes Incentive to achieve volumes Shared financial risk	All income at risk Incentive to downsize/ minimize risk of excess cost or capacity Expensive to administer Minimal financial risk
Cost per case	Absolute control over volume/spend Risk of lack of capacity Expensive to administer “Money follows patient” Retains all financial risk	Fixed and semi fixed costs met Variable cost uncertain Incentive to be efficient/contain costs Shared financial risk

of the expenditure). In this case there are two options, i.e.

- allocate, on the basis of indirect cost apportionment methods, the current expenditure to a function on a national usage basis;
- instigate a data capture period during which new cost centers for the functions are established; code expenditure to each function, rather than the hospital as a total; and at the end of the period set the functional budgets.

- in both examples it will be necessary to reconcile the new functional budgets, by line-item category, to the overall current line-item budget.

If this is to be done then the accounting code structure should be changed to allow data to be captured directly to this level of analysis. The output of the above exercise will be a matrix that analyzes the line-item budget into their functional cost centers.

The hospital management then needs to review these initial budgets and to be satisfied that they reflect the current patterns of expenditure and planned workload, and make any self balancing adjustments within the new budget total. The hospital global budget is, then, the total of all the functional budgets.

Actual contracts can be seen to be a continuum in terms of complexity and sensitivity to actual numbers of patients treated and their associated costs. Without these contract refinements there is a risk that global budgets will merely become a block grant with no performance guarantees. The different contract categories have differing dynamics in terms of certainty, risks, incentives, and penalties, as outlined in Table 5.

Global budgets and contracts

Within the global budget, there should be a framework to ensure that volume levels are achieved, quality standards are maintained, and changes to the way in which services are delivered are consistent with the purchasers' wishes. This framework must have incentives for good, and penalties for poor, performance, applied to both purchasers and providers (and the necessary monitoring system) and be able to stimulate efficiency. This framework is best achieved through a system of written and formally enforceable contracts. Contracts take a variable and potentially flexible format. In discrete terms the general models can be described as:

Block contracts commit the purchaser to pay a fixed sum for access to services (irrespective of volume) by its responsible population. Providers are guaranteed income. These are most often used in the high volume/low cost setting. They are valid and useful where access must be guaranteed in areas such as accident and emergency and maternity services.

Cost and volume contracts specify a baseline, agreed, guaranteed level of funding conditional on the provision of a baseline level of activity. These can be set in many ways and depend on the degree of complexity required and specification in the information available. The base volume will be the minimum level of service to be achieved. Any extra patients will be treated at an agreed marginal price.

Cost per case contracts, where the money flow will be retrospective and based upon the actual value of services

Table 6. Certainty, risks, incentives, and penalties

Category	Key feature
Block	Fixed-sum payment Defined service access
Cost and volume	Defined service and minimum volume level Fixed-sum payment for minimum volume level Marginal cost for extra volume
Cost per case	Defined service Fee per patient Case-mix base

provided. There will need to be procedures in place to ensure that treatment is granted and payment underwritten. It does not always follow that there will be a single invoice for each patient. These can be aggregated to issue one periodic invoice to each purchaser. The transaction costs associated with these are very high.

These three broad approaches can be summarized as above in Table 6.

Contracts tend to be set for a single year. This is to link to the cycle of funding of most systems. One advantage is that neither party is locked into rigid agreements. However, single-year contracts present some uncertainty to providers and may represent a risk to the continuity of services. For this reason a move toward a longer period for contracts may be advisable.

The contractual framework can be used to complement and strengthen the global budget. A fixed cap on the total funds available can be managed in such a way that it is sufficiently sensitive to variations in performance. This is particularly the case where the block contract is less dominant. For example, let us take a case where the purchaser has agreed a contract framework of:

	Initial budget	Revised budget
Block contract for access to emergency services	4,000,000	4,500,000
Cost and Volume contract for non urgent treatments and surgery	5,000,000	4,500,000
Cost per case contract for high cost/low volume cases	1,000,000	1,000,000
Total Global Budget	10,000,000	10,000,000

In the course of the contract year it becomes apparent that the demand for emergency services is exceeding the anticipated volumes, and in turn costs. In the absence of any ability by the purchaser to add additional income to the provider – which would be contrary to the underlying principles of the global budget – the provider is contractually able to deny treatment for emergency patients beyond the contract value of 4.0 million. To avoid this purchasers can agree to adjust the structure of the global budget by taking monies from the cost and volume element (and reducing expected contract volumes accordingly) and reallocating them to the block element of the budget.

The provider will have experienced a change in the cost base needed to deliver the changes. Some of the new volume of activity may be contained at marginal or variable costs, and some at variable and additional fixed costs. It is unlikely that it will be at full average cost. Similar cost dynamics will impact on the reduced volumes in non emergency activity. The final contract adjustment should take this into account. It would be good practice to have an in-year protocol to agree such changes as part of the initial contract, and so avoid potentially divisive in-year negotiations on cost.

Non budget funding

The global budget is designed to deal with the recurring revenue funding of the hospitals. There will be other funds in addition to this. These will be legitimate, but are inappropriate for the global budget because they are either one-time or irregular. There are three broad categories, namely funds from patients; specific-purpose funding such as Research and Development grants and teaching and educational financing; and capital funding. They should still be estimated and planned into the hospital's business process and budgets.

Managing the new global budget

In most financial reform projects the introduction of global budgets will be a significant change. Alongside it may be even more radical changes in the movement from centralist to decentralized processes for managing health care. In most instances global budgets will replace centrally imposed line-item budgets for specific expenditure headings and resource inputs.

During the transition from line-item to global budgets there may be a need for some retained central direction for their

application, mainly because the providers (and purchasers) will need time to adjust to the concepts and mechanics involved. These bodies will need a technical and managerial capacity-building program. This must involve both the development of technical tools and aids to assist in introducing and running the budget as well as management training in budgeting techniques and practices. Appropriate monitoring and control processes for the new budgets will also need to be built, tested, and run.

Global budgets will operate more successfully if the hospitals—and, in turn, their managers—have a degree of autonomy, authority, and responsibility. The managers must be able to control and manage the resources paid for by the global budget, and deliver the quality, volume, and cost targets, and be accountable for any penalties for non performance detailed in any contract. Purchasers will be able to demonstrate appropriate governance by monitoring the budget and intervening when this indicates that plans and agreements are not being achieved. Their ultimate sanction is to withdraw the contract.

Understanding cost behavior

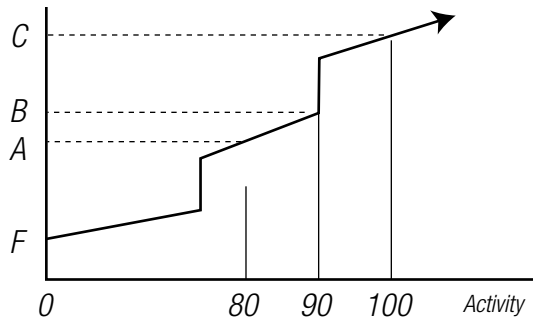
An understanding of the relationships between changes in activity and costs is essential if managers are to achieve the full benefits of global budgeting. Contracts can be costed in any degree of detail, from the hospital as a whole at one extreme to individual patients at the other, dependent on the degree of sophistication of the data captured. The more detailed the level of costing the more expensive are the administrative costs. Experience in the United Kingdom and other countries suggests that the available data in many developing and transitional countries is adequate and sufficiently accurate for the costing and monitoring of initial global budgets.

Costs should be analyzed to identify:

1. Behavior—that is to say fixed, semi fixed, or variable, and
2. Type—Direct, Indirect or overheads.

The more that costs can be allocated in a direct manner, the more accurate the final cost data will be. In terms of the setting and management of global budgets, it is probably the behaviour of semi fixed costs that are of the most interest, both to the hospital and the purchaser. Semi fixed costs become particularly relevant when the activity asso-

Figure 1. Total costs



ciated with the global budget changes outside the normal operating range. In these circumstances the unit price that is justified may differ even if the volume change is the same. This is demonstrated by the chart in Figure 1.

The cost curve displays the conventional shape of a fixed level of costs (F) irrespective of the number of patients seen. This is the cost of providing facilities and overheads. Beyond that step costs come in, for example, a new ward or operating theater is required to deal with demand. Below and above this point costs rise in a steady linear way, reflecting the variable costs associated with each new patient (such as drugs, disposable medical supplies, and catering). The same incremental increase in activity from 80 to 90 units and then from 90 to 100 will justify a different increase in contract price, determined by the position on the cost curve. Hospitals, and purchasers, will be at an advantage if they know this when negotiating the price for the new activity level as a different incremental price will cover their operating costs.