

The way in which a country finances its health care can have a major bearing on the access to health services enjoyed by its poor.

This paper focuses on a specific area of health financing, the allocation of public resources, and the extent to which different approaches enable poor people to access essential services.

It attempts to set out how a country might, if it wishes, begin to allocate public resources in ways which promote better access by the poor to essential services.



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Allocating public resources for health:

developing pro-poor approaches

Mark Pearson

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The DFID Health Systems Resource Centre (HSRC) provides technical assistance and information to the British Government's Department for International Development (DFID) and its partners in support of pro-poor health policies, financing and services. The HSRC is managed on behalf of DFID by the Institute of Health Sector Development (IHSD).

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1 Introduction

The way in which a country finances its health care can have a major bearing on the access to health services enjoyed by its poor. National health policies generally set out a strategic goal of ensuring equal access to essential health services for all on the basis of need and irrespective of ability to pay, or some variation on this theme.

Health financing impacts on this goal in two ways:

- on the supply side by ensuring that essential services are adequately financed and delivered;
- on the demand side by reducing financial barriers to access and by making sure that funds are raised and services delivered in ways which are affordable to all.

In a typical low-income country, where only \$3–5 of public funds per head is available for the health sector, such an ambitious goal is probably unrealistic no matter how well resources are allocated and used. In practice, there will often be significant inefficiency and inequity in both allocation and use of resources. This clearly raises the question as to whether, and how, financing policies could be made more pro poor.

Put simply, health financing can be broken down into the following elements:

- funding – how revenues are raised, from general taxation, indirect taxation, social insurance or out-of-pocket expenditure;
- allocation – how these resources are allocated and used;
- payment of providers – the way that providers are reimbursed for delivering services, through salary, fee for service, capitation, diagnostic-related groups, global budgets etc.

The intention of this paper is not to cover all of these issues as many have been addressed elsewhere. A broad overview of the first two areas is covered in '*Health financing: designing and implementing pro-poor policies*' (HSRC Bennett, 2000), Wagstaff is undertaking work on equity in health funding, and the issue of provider payments is covered in some detail by Barnum, Kutzin and Saxenian (1995). This paper focuses on a specific area of health financing, the allocation of public resources,¹ and the extent to which different approaches enable poor people to access essential services.

Public funds may play a relatively modest role in terms of overall health expenditure. However, they are usually the only funds over which Ministries of Health have direct control and are also often the key source of financing for the services used by the poor.

Still, they cannot be viewed in isolation: as Bennett (2000) points out, 'whether or not the financing system as a whole is pro poor depends crucially on how the different financing systems interact'. It is important, therefore, to assess the extent to which public resources can be made pro poor in their own right but also in terms of their interactions with other financing mechanisms such as user fees in public facilities, and also with broader health systems changes such as decentralisation.

This paper attempts to set out how a country might, if it wishes, begin to allocate public resources in ways which promote better access by the poor to essential services. It is intended to support judgements about current and proposed approaches to the allocation of public resources. This is increasingly important given the shift in donor approaches away from project aid towards support for sector-wide approaches and the promotion of poverty reduction strategy papers which require donors to make broader judgements about health systems performance than previously.

The paper draws on experiences and lessons from a number of countries in which the Department for International Development (DFID) has been working and identifies some of the key problems and issues related to design and implementation. The paper includes three short case studies on Cambodia, South Africa and Uganda (Annexes 1 to 3). It also includes two annexes on the potential for benchmarking and on allocation to hospitals (Annexes 4 and 5).

Notes

- 1 Defined as funds available to a central Ministry of Health from all sources. This would include support from donors but not resources raised at lower levels within the public sector, e.g. at district level or facility level. It also focuses on the issue of service delivery and not on the broader regulatory role of the Ministry of Health (MoH). The issue of balance between these functions is an important one. Does it really make sense for a MoH to devote 90 per cent of its effort to 10 per cent of total expenditure?

2 Current approaches to resource allocation

Resource allocation, at its simplest, is the process by which available resources are distributed between competing uses. It is not an end in itself; rather it is a means of achieving a particular goal. Ministries of Finance, for example, are interested in the allocation of resources between sectors as a means of achieving overall national goals such as full employment, security and the like. Ministries of Health usually see it as a means of improving access to essential services for all.

A number of broad approaches to resource allocation can be identified.

Negotiation and political 'compromise'

Typically, the distribution of health resources is heavily influenced by more vocal, urban populations and by political and other vested interests. The result is that health systems are not geared towards serving the health needs of the population (especially those of the poor), and resources are heavily concentrated in highly visible, urban hospital settings rather than on essential health services. Although this is recognised as inappropriate, in many countries the share of resources going to the hospital sector is actually increasing at the expense of primary care, as in the example of Nepal below.

Trends in budget allocation shares (per cent) by major components – Nepal

Category	1991/92	1993/94	1995/96	1996/97	1997/98
Primary Care:	76.8	72.8	63.4	63.9	57.2
■ Service Delivery	34.8	34.0	34.0	26.6	24.9
■ Support Services	6.3	6.1	7.7	7.9	7.6
■ National Health Programmes	35.7	32.7	21.7	29.4	24.7
Health Policy and Management	5.7	4.4	3.2	2.5	2.5
Hospitals ²	14.6	20.0	30.0	30.6	37.5
Traditional Medicine	2.9	2.8	3.4	3.0	2.8

Incremental budgeting

Resources tend to be allocated as they always have been in the past rather than according to any concept of need. Each facility (for example, a health centre) receives a certain allocation which is usually increased (or decreased) by, say, 10 per cent each year in line with the overall increase (or decrease) in the health budget. There is a

certain logic to this in the short term: it makes sense to provide funds for services you have already and use your current infrastructure efficiently. However, with infrastructure and services often poorly distributed this can mean significant inequity in the allocation of resources and in access to services. An incremental approach serves only to perpetuate this inequity.

Allocation according to health care needs

Some countries have begun to allocate resources on the basis of perceived health needs. The approach can be done judgmentally (based on subjective views of needs) or statistically (based on more objective indicators of need).

In most low-income countries the current approach is usually a mixture of both methods. Shifting towards a pro-poor allocation approach based on health needs implies a significant break with tradition. Countries wishing to do this need to consider how, and how quickly, to make the transition.

Notes

- 2 District hospitals are covered under primary services.



3 The theory: key elements of a needs-based approach

Developing an operational definition of equity

An important first step is to decide what a needs-based approach is expected to achieve. Equity, in itself, is a rather vague concept; it could relate to equity in terms of a number of things – inputs, outputs, access, outcomes etc. DFID, other UK government departments and many governments have generally taken equity to be related to access to services within the health sector, given the close correlation between ill health and poverty. But access, by the same token, can be equally difficult to define and utilisation of services is often taken as a proxy. A key question at the outset, therefore, is whether policy statements about health goals are sufficiently meaningful to be translated into resource allocation decisions at national, provincial, district and even facility level.

Developing a needs-based allocation formula

The main components of a needs-based resource allocation formula should reflect the main reasons why health needs vary. The following proxies³ are generally used:

- population size – a greater number of people will present with a greater health needs;
- age and sex profiles of populations – the very young and very old have greater health needs than the general population, women have greater health needs than men;
- degree of relative/absolute poverty – poverty causes ill health and vice versa.

Of these, population is by far the most important.

However, a needs-based formula alone will not guarantee equal access. Other factors also should be taken into account.

Differing costs

The costs involved in delivering similar services in different locations can vary widely. They can, for example, be far higher in remote rural areas where transport costs are higher and staff may need to be paid remote area allowances to get them to work there. Staff productivity will also be lower if they have to spend time travelling to outlying clinics.

Other funding sources

The resources available to government for allocation may represent a relatively small proportion of overall health expenditure. Typically, private out-of-pocket expenditure accounts for 50–70 per cent of total health expenditure in low-income countries. Although much of this is spent by the better-off in urban areas on non-essential services, some may be spent on essential services (especially those provided by the private not-for-profit sector). If we are interested in equal access to essential services this needs to be taken into account. South Africa, for example, has begun to address this issue by excluding medical aid scheme members (who are the formally employed and, therefore, generally well-off) from the base population when considering how to allocate public funds. However, allowing for other funding sources, particularly private payments for health, requires accurate data on expenditure. This is rarely available, although the situation is improving as more countries introduce and undertake national health accounts exercises. This issue is generally less of a problem in higher income countries, as public expenditure tends to account for a far higher proportion of total health spending.

Focusing on public resources alone, the situation is further complicated by the fact that a significant proportion of public health expenditure may be provided by donors. Although such support has usually been negotiated and agreed with governments, the results can still be extremely inequitable. Some districts may benefit from district support projects; others may be ignored. This is not a problem if funding reflects relative needs, but in practice it rarely does. Although such donor interventions are often justified on the grounds that they are pilot operations and will be replicated if successful, they are rarely rolled out. Only where donors have been willing to provide general budgetary support, with donor expenditure fully reflected in government books (for example, through a sector-wide approach process (SWAp)) can this problem begin to be addressed. Otherwise, governments may need to make adjustments. In the case of Uganda, for example, central allocations to districts receiving large inputs from NGOs and donors were reduced as a means of promoting greater equity in overall resource flows.

Notes

- 3 If a formula approach is to be adopted we require some proxies for need as it is not possible to measure this directly. The degree of ill health is usually taken to be a good proxy of outstanding health care needs, and for the purposes of this paper the Basic Package/DALYs approach is taken as a starting point. However, this approach has been controversial, but since there is an extensive literature on the measurement of health needs this issue is not covered here. In practice, good data is rarely available on the burden of disease at district level, so proxies need to be used.



4 The practice: problems and issues in implementing a needs-based formula

Although the principles underlying an appropriate approach to resource allocation – a population-based formula weighted for needs with allowance for differing delivery costs and other funding sources – hold universally, its application obviously will differ according to specific country circumstances. In some countries urban services may be relatively expensive to deliver; in others there may be specific geographical features, such as island-dwelling populations, which affect costs. Factors such as a sensitive security situation or the presence of refugee populations with special needs will also impact on the formula, as they create significant resource implications.

There are a number of additional practical problems involved in implementing this type of approach of which policy-makers need to be aware.

Issues specifically related to resource allocation processes

Access to reliable and timely data

In low- and middle-income countries the availability of reliable, timely data is a major problem which prevents the development of effective resource allocation formulae. The lack of precision in measuring even the basic data such as population size is the key constraint. Even within the UK the discrepancy in population counts has been estimated to vary from 6 per cent to +25 per cent across health authorities. In Nigeria, the devolution of funds to the ever changing number of states depended crucially on population counts, which were shown to be completely misleading in the last census.

If appropriate resource allocation formulae are to be developed, it is important that information systems begin to generate the necessary supporting information, rather than focusing purely on health status and immunisation data, which is often the case. Current information systems collect very little, if any, data on the very poor; even exercises such as national population censuses generally fail to pick up the very poor (in *Assessing the Health of the Poor*, 2001). There are also major problems in getting reliable data on small populations, which make it difficult to make reasonable allocations below the district level.

In the developed world, relatively sophisticated resource allocation formulae have been developed. These have been better able to capture the variables affecting poverty and

health need and have proved to be more sensitive to health needs. Low-income countries with weak data systems should not be encouraged to go down this route. However, where there are attempts to improve data collection for other reasons it might well be appropriate to search for more sensitive formulae.

The potential to create perverse incentives

There is a danger that the choice of data could create perverse incentives. There may be incentives to exaggerate population or other factors which make up any allocation formula. Similarly, if death rates are used as an index of relative need this might create an incentive not to treat the sick. Self-reported morbidity measures, although simpler to use, may also lead to different results than would more objective measures. It is difficult to avoid this problem but it needs to be borne in mind when selecting measures of ill health or poverty.

Whether to exclude certain services from the formula

A key element in defining essential services is deciding who should deliver these services and, therefore, who needs resources. Some essential services may be considered national services and resources 'top sliced' (i.e. taken from the overall pot before allocation of the balance to lower levels) and not included in any allocation formula. Some services may be considered regional. Hospitals with responsibility for providing defined services to a number of districts will require a budget held at a regional level. Other services may be defined at district level. The allocation of resources to the hospital sector is an extremely important one, not least because of the amount of funds involved, and is often best dealt with separately. This issue is covered in detail in Annex 5.

Whether to earmark funds to particular uses

Many countries have developed an essential health package heavily influenced by the methodologies set out in the *1993 World Development Report (WDR)*. The content of an essential service package is obviously extremely important. Ensuring equal access to an inappropriate range of services does not get us very far – a pro-poor policy requires a pro-poor essential package. In many cases essential packages have proven to be vaguely defined, setting out a range of services but giving little detail on who is to provide them, how they are to be delivered, how many services are to be delivered and to whom. Although many of the interventions outlined in the 1993 WDR basic package do address the health needs of the poor, this is by accident rather than design since the criterion for identifying the interventions included is cost-effectiveness not equity.

Deciding on a realistic time frame for reallocation of resources

Given the existing degree of inequity in many countries, the time frame required to achieve the desired reallocation is likely to be substantial. It may not be possible, therefore, to achieve the required reallocation in the short term. Even if there is a willingness to reallocate resources, a key question is how rapidly this can be achieved,

both politically and technically. Where 80–90 per cent of costs are fixed in the short term, even a small reduction in resources can have a major impact on performance, especially in a situation where non-salary resources are already being heavily squeezed.

The RAWP⁴ approach in England is widely perceived as a success story in this respect. It has achieved a gradual, but significant, shift in resources (away from the relatively overfinanced south to the underfinanced north) since it was introduced in the mid-1970s. This incremental approach has relied largely on allocating any real growth in the budgets to under-resourced areas. A general leveling-up of budgets took place over time, thus avoiding the need for absolute budget cuts. In the case of post-apartheid South Africa, there was significant political commitment to a radical shift of resources away from the relatively prosperous PWV⁵ area. The allocation to the poorer Northern Province was expected to increase from 6–7 per cent of the total share to 15 per cent over a five-year period, whilst funds for Gauteng (formerly PWV) were to decline from 25 per cent to 17–18 per cent, a significant reduction in real terms. Moreover, 30 per cent of this shift was expected to occur in the first year. Not surprisingly this proved impossible. Gauteng received extra support in the short term and Northern Province was unable to absorb the additional funds effectively.

The potentially long time frame raises further concerns about the difficulty in sustaining commitment over a long period. Whilst any proposed reallocation of resources should be reflected within a 'medium-term expenditure framework' (if it exists), these generally only cover a period of three to five years, which may not be sufficient. Some countries are developing longer-term visions for their health sectors, such as the long-term health plan in Nepal, Vision 2020 in Andhra Pradesh. Although such approaches are welcome, they often refer to principles and aspirations without setting these within a resource framework. Although it is difficult, of course, to project resource availability so far into the future, countries should be encouraged to assess resource implications, if only because this serves to generate useful discussion about priorities.

It may be easier to secure a more rapid shift in resources if funds are earmarked to specific purposes and in ways which are seen to be fair and acceptable by the population. One way might be to earmark funds for those districts which need to catch up. However, this can have significant drawbacks. The temptation is often to broaden coverage by building more facilities, which often leads to major problems of sustainability further down the road. One possible solution might be to encourage countries to develop national infrastructure development strategies, which would enable them to prioritise future capital investments (rather than respond opportunistically when donor funds appear). This would ensure the expansion is consistent with the human and financial resources available to operate and maintain them. Another similar approach might be to set aside earmarked funds to cover both capital and necessary recurrent costs, so that poorer districts can meet minimum service standards. The National Minimum Needs Programme in India and the proposed Equalisation Grant in Uganda are examples of this.

What to do in the short term

In the short term it is inevitable that resources will need to be, in part at least, facility based. If this is the case, it raises the key question of how much a facility needs to function effectively. There is no easy answer to this, although it may be possible to get ideas from the experience of well-functioning facilities inside the country (in public or private sectors) and from broader international experience.⁶ It may be possible to begin to allocate resources to facilities in ways that make the long-term transition easier. Facilities often receive funds according to bed numbers, which make no distinction between hospitals that are busy and those that are not. To counteract this, a number of countries have tried relating allocations to workload, basing workload on some composite measure of all the services the facility provides. Although far from perfect, this approach begins the process of relating resources to needs. Such an approach is fine if workload data is accurate and can be validated, but it does provide a strong incentive for facilities to exaggerate activity and undermine the whole process.

The need to review and update formulae over time

Changes in population, whether from general population growth, migration or changes in the population structure, need to be taken into account. Where countries are rapidly urbanising, as is the case in many low- and middle-income countries, this can help accelerate the reallocation process as the increasing numbers in urban areas gradually absorb the 'excess' resources.

The need for complementary systems changes to support resource reallocation

Whilst changes in the proposed allocation of resources can be made at the stroke of a pen, making them work as intended will need complementary systems changes. For example, in Uganda, when resources were allocated to the mission hospitals for the first time, it proved necessary to develop guidelines for the use of the funds and simple service agreements to ensure value for money. This implies new tasks for Ministry of Health staff.

How far to decentralise budgets

Some countries have looked at the decentralisation of budgets to administrative units below the district level. This is understandable, as there is clear evidence that health need varies significantly *within* districts as well as between districts, but it is often neither practical or cost effective. It creates additional problems in terms of the extra data requirements implies, increases risks as budgets are set for small populations, and increases the transaction and administrative costs in the resource allocation process.

Possible conflicts between health policy objectives

Where health systems are highly decentralised decision-makers may not be able to set budgets and allocate resources directly. Instead, they may have to rely on more indirect approaches to influence the overall allocation pattern. In some countries, districts receive funds through a block grant and there may be no specific allocation to the health

sector. In the case of Uganda (see Annex 3), the amount of public funds spent on primary health care at the district level declined dramatically following decentralisation, despite it being a clearly stated national priority. The response here was to shift back towards a direct allocation approach in the short term by earmarking funds to the health sector. This has caused problems as it was seen by some as inappropriate recentralisation. Others saw it as a legitimate move by government to ensure national priorities were followed. South Africa, in similar circumstances, adopted a different approach (see Annex 2). Instead of earmarking funds, provinces are spelling out in greater detail the services which districts are expected to deliver. This largely dictates the resource requirements without having to set them out specifically.

Broader issues influencing impact of needs-based approaches

There is more to improving access than just allocating resources sensibly – this only represents one link in the chain. As they are not the main subject of the paper the following issues are only touched upon here. However, whilst not specific to the issue of resource allocation, they do need to be considered when assessing the likely impact of a reallocation of resources on the delivery of health services.

The need for adequate financial management systems

There is little point in starting down the road of allocation formulae if there are no effective mechanisms to regulate financial flows. In many low-income countries actual releases bear little relation to budgets and releases tend to be highly unpredictable, making resource planning almost impossible. Not only was only two-thirds of the 1997/98 conditional grant for primary health care released in Uganda, but releases were made in three tranches, with the last reaching the districts during the final few days of the financial year.

Care also has to be taken in interpreting expenditure data as it may be extremely misleading. In the case of Nepal, for example, staff posted to remote regions often try to secure deputations to more favourable locations. This practice is widespread, with the result that a great deal of expenditure recorded for the remote district is actually being used to deliver services in another.

The need for adequate monitoring and supervision (performance management)

There is little point in setting out targets and ensuring that resources reach the intended recipients if there is little prospect that the resources will be put to their intended use. How do we know, for example, if we reallocate resources from the generally better-off districts to the poorer ones in Ghana that we are not just taking services away from the poor in rich districts and giving them to the rich in poor areas? Or how do we know that a block grant intended to provide immunisation services is not being used to fund plastic surgery for the rich? Even worse, how do we know that the resources are not just being appropriated by corrupt officials?

The need to manage uncertainty and deal with risk

Resources can only be allocated according to projected or estimated needs and costs, not actual costs. Whilst these levels can be predicted with some accuracy from past trends, some uncertainty will always remain and there is a risk that the allocation will prove to be insufficient to meet actual health needs. This problem is particularly pressing where:

- the population size is small – the smaller the population, the smaller the risk pool and the greater the impact of a high-cost case on the overall annual budget than for a larger population. With decentralisation the trend is towards coverage of smaller population groups and catchment areas, which exacerbates this problem;
- the services covered are high cost and/or unpredictable;
- there are large and unpredictable cross-border flows or the population is changing rapidly – where people are more mobile, some will need to access care outside their district of residence. In the UK this issue was addressed by ensuring that the money follows the patient and making the district of residence responsible for the payment. However, within a low-income setting, where administrative systems for recording addresses of patients are poorly developed and inter-district service agreements difficult to broker, it is probably best to adjust the population size as part of the formula (e.g. increasing the allocation for those areas receiving many commuters), but otherwise to ignore the issue. However, if cross-boundary flows change substantially from year to year, this adjustment may inhibit health service development in under-resourced areas.

The aim of policymakers is (a) to reduce risks in the first place, and (b) manage the risks which inevitably remain.

The main lessons of relevance are that the risk is difficult to manage where population sizes are small and that district-based allocations are probably the best approach. Some allowance should be made for cross-boundary flows if they are significant, although it should be noted that these are often exaggerated, as distance is a major barrier to access, especially for the poor. Finally, where population size is changing, any formula needs to be regularly reviewed and updated.

Notes

- 4 Resource Allocation Working Party.
- 5 Pretoria Witwatersrand Vereeniging.
- 6 The potential of benchmarking is discussed in greater detail in Annex 4.



5 Conclusions

In terms of overall reforms in the health sector, changes in resource allocation are amongst the most simple to make and are often amongst the earliest and most visible. In deciding whether to develop new approaches to the allocation of resources it is important to assess the likelihood of achieving the desired impact. Experience shows that this requires a number of preconditions to be met:

- data must be available to support the process;
- there needs to be supporting changes and improvements in overall planning procedures, particularly those related to personnel and capital planning and management;
- there must be basic capacity to regulate financial flows, i.e. to ensure the resources get to the intended destination;
- there must be a reasonable likelihood that the resources are put to their intended use and reach the intended beneficiaries, and the capacity to monitor whether they do.

Many of these may not be feasible in low-income, capacity-constrained settings.

What follows are the more specific lessons.

- The resource allocation process must be developed around sectoral goals with clear targets; the actual allocation of resources can be an extremely good indicator of whether countries are adopting pro-poor policies.
- Effective implementation requires that:
 - (a) the definition of equity at a macro level is consistent with any existing pro-poor health policy (recognising that a needs-based approach is not necessarily pro poor);
 - (b) the definition can be translated from a national to a provincial or district level;
 - (c) data exists at the lower level for the formulae to be reliably calculated;
 - (d) there is a political willingness to deliver at all levels.
- Any approach to the reallocation of resources should be fully reflected in any medium-term expenditure framework. It has to be recognised that the reallocation process may take longer than the period covered by existing financial frameworks.
- Formulaic approaches are more objective and more transparent than alternatives, making the process less subject to negative external influence. This is often more

important than the quality of the formula itself. The downside is that reliance on a formula may result in the development of a 'formula industry', with different groups lobbying for approaches which favour their own interest. However, the resources devoted to developing formulae are trivial compared to the previous efforts put into lobbying, which is what they have mostly replaced.

A needs-based approach need not be necessarily pro poor. Other factors such as the costs of delivering services and other financing sources also need to be considered.

- Formulae require accurate and timely data which are rarely, if ever, present in low-income countries. Data on key variables such as population can be extremely unreliable. More sophisticated formulae can be more sensitive to health needs; where data systems are adequate or improving changes to allocation formulae should be considered. Highly sophisticated formulae are, however, unlikely to be appropriate in low-income country settings as the data requirements are likely to be too demanding. Simple formulae based on population, age and sex with an adjustment for specific local factors should be sufficient. Formulae should be reviewed regularly and updated as necessary.
- Developing an appropriate resource allocation formula is important but it does not absolve central government from its responsibility for ensuring systems are in place to make sure that the resources are put to good use.
- Design of an allocation formula should take into account other financing approaches, such as user fees, to ensure consistency with overall goals for the health sector. The potential for introducing perverse incentives needs to be recognised and steps taken to prevent them or minimise their impact. However, the approach may come into conflict with other health systems changes, such as decentralisation. Negotiation will be required and a compromise will need to emerge.
- Hospital services pose particular problems and may require different approaches.
- Formula-based approaches are most useful for predicting the relative levels of resources required to meet the needs of larger populations over broader groups of services. Similar approaches for smaller populations or a narrow range of services introduce a significant margin of uncertainty. Some risk can be avoided; some will have to be managed.



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Annex 1: Resource allocation for district-level health services in Cambodia

In recent years in Cambodia, authority and responsibility for the annual budget preparation, negotiation and allocation has been transferred from local government to central sector ministries. This has enabled the introduction of a standard formula for allocating resources to districts and provinces.⁷ The challenge was to find a formula that was sensitive enough to reflect need, broadly equitable, transparent and easily understood, and yet simple enough to maintain in an environment of relatively low capacity and inadequate information.

The authority for sector ministries to set the government budget allocation to the 23 provinces came at the same time as a reorganisation of district health services from 170 districts based on administrative boundaries to 73 population-based 'operational health districts'. Inevitably, the new operational districts still vary in size, but individual health centres now more or less support a standard population.

Unsurprisingly, the coverage targets did not match what was actually on the ground. Health centres and hospitals were therefore classified into two categories: those providing a basic service package and those not yet at this level. A further category of health centre was also added, health centre with beds, in order to accommodate the process of reclassifying former administrative district hospitals. Each of the new operational districts had a hospital and an approved number of health centres appropriate to the population, categorised according to whether they met the target level of service provision. This provided the basis for a simple resource allocation formula to each district (see table page 23).

Standard costs were calculated for each type of facility, and so calculating the district budget became a simple task of multiplying the standard cost by the number of each type of facility. A district budget will increase when either a facility is upgraded or standard costs change. As most costs covered by the formula are fixed, this standard cost-based formula is the basis for the bulk of districts' allocation.

The formula was extended to include an additional element based on workload (number of patients treated). This was done for two reasons. First, because some costs, such as patient food, vary according to the workload of the hospital, and any formula should reflect this. Second, incentives matter. Under a fixed allocation per facility, an additional

patient becomes a cost to the hospital and not a source of income. In order to prevent a financial disincentive to treat more patients, it was felt important that at least some of the money should follow the patient (or at least covered the variable cost).

The formula is then applied to each district, and resources allocated to provincial health departments, who provide a management and supervisory function. In order to maintain simplicity and to ensure that the provincial overheads do not exceed 20 per cent of the overall province budget, a simple formula was established; that the province health department budget should be 25 per cent of total district budgets.

The formula does seem to work; it is widely understood and accepted and reasonably easy to maintain. As the distribution of hospitals and health centres are now population based, the facility-based formula is reasonably equitable. By focusing on the facility the Ministry of Health has also set a minimum budget that all health centres and hospitals should receive.

However, a number of problems have also been encountered.

- For a number of provinces, budget increases have been allowed over and above the formula (as contained in the adjustments line). This has increased the fudge factor in the formula.
- Difficulties with the health information system has allowed inaccurate and inflated data on workload to be reported, undermining the credibility of this section of the budget allocation.
- The greatest difficulty has been the weak link between the budget allocation and the actual cash disbursements. Though the Ministry of Health has been given authority for budget allocation, the execution of the budget has remained under the control of the local authorities.

In-year cash rationing in recent years has turned real 'resource allocation' into a month-by-month process, with priorities set by local financial controllers and governors. As a result, despite a clear formula, many health managers at a local level do not believe that they will receive the annual allocation given to them by the Ministry of Health. Fortunately, the situation is beginning to change.

In the last 12 months the release of funds has greatly improved and a process of budget decentralisation has begun.⁸ As a result, the credibility of the budget allocation and formula is being restored. The fundamental point is that in a country like Cambodia, the development of a budget formula must go hand-in-hand with efforts to ensure that the budget promise can be met. This includes developing an effective treasury system and an efficient expenditure and procurement process.

Year 2000 budget allocation to provinces and districts, Ministry of Health, Cambodia

Criteria	Allocation	All provinces (\$1=4000 riel)	
I Fixed costs according to facilities		number	
1	District health offices	30,000,000	66 1,980,000,000
2	Provincial referral hospitals/ hospitals with CPA	240,000,000	19 4,560,000,000
3	District referral hospitals/hospitals not yet CPA	120,000,000	48 5,760,000,000
4	MPA health centres with beds	18,000,000	67 1,206,000,000
5	MPA health centres	12,000,000	429 5,148,000,000
6	Health centres not yet providing MPA	3,000,000	408 1,224,000,000
	<i>Sub-total</i>		19,878,000,000
II Variable costs according to patient numbers		number	
1	Number of inpatients (episodes)	15,000	183,941 2,759,115,000
2	Number of outpatients (new cases)	500	3,350,951 1,675,475,500
	<i>Sub-total</i>		4,434,590,500
III Special allocation (approved by the MoH)			
	Total fixed and variable costs plus special allocation for operational districts (I+II+III)		24,312,590,500
IV Province management and programmes			
1.1	Provincial health department and programmes = total for operational districts x 25 per cent		6,078,147,625
1.2	Adjustments to IV.1.1 (approved by the MoH)		2,477,261,875
1.3	Basic allocation for provincial health departments (IV.1.1. + IV.1.2.)		8,555,409,500
2	Allowance for remote provinces		150,000,000
3	Allocation for regional training schools		200,000,000
	<i>Sub-total province authorities</i>		8,905,409,500
TOTAL (I + II + III + IV)			33,218,000,000

Source: WHO/Ministry of Health, Cambodia, Health Sector Reform Project

Notes

- 7 The formula applies to only 50 per cent of government resources going to provinces; non-wage operating costs, excluding drugs. Drugs (35 per cent of government allocation) are purchased centrally, added to donor contributions and distributed by a central medical store, and salaries, at \$15–20 per month (15 per cent of the allocation), are allocated predominantly on a historical basis.
- 8 Districts are being established as 'budget management centres' with increased control over their budget.



Annex 2: Lessons from the South Africa Health Function Committee Formula⁹

Broad support for the principle of redistribution is critical

Redistribution between geographical areas or levels of care in any setting is a political action and can only be effected successfully if it has broad support. Such support is also important in countering the inevitable challenges to the design that will result from scarcity of data in most low- and middle-income country settings.

A strong central role is essential

Although the sub-national levels of any health system are critical in health care management and delivery, resource reallocation will always require a strong role for the centre. Although not necessarily requiring wholly centralised determination of health budgets, it is critical that the centre always monitors progress towards policy objectives and revises policy guidelines as appropriate. It is particularly important to monitor the impact of contextual changes (such as decentralisation, macro-economic policy and budgetary reform) on resource allocation patterns.

The policy objectives of a formula must be clear and explicit

In developing countries, health planners have to manage a fairly complex process of shifting resources between regions while *at the same time* shifting resources between levels of care. This requires explicit policies on the relative priority of different sorts of services.

The policy objectives of a formula must be consistent with other health service policies

A needs-based formula should complement other strategies for health sector reform. Most importantly in middle-income countries, the formula should take account of the effect of policies on the private health care sector. Likewise, policies that enhance the impact of the formula should be implemented in parallel. These include policies that prioritise services and focus on preventive care, ensure equitable access to scarce services, reform financing and management mechanisms and create positive incentives to utilise resources efficiently.

Reasonably accurate population data are critical to formula design

Population data are a prerequisite of formula development. Where such data are weak, resource reallocation using a formula should be undertaken gradually to prevent target

budgets changing with data sets in ways that impact significantly on health care delivery. Other methods of determining resource needs may also be useful in informing the overall process of resource reallocation.

The formula should attempt to estimate need for health care accurately

Needs-based formulae are usually controversial. This is partly because of the difficulties associated with measuring need. Acknowledging the complexity of the problem of estimating need, and that data sets are limited in low- and middle-income countries, it should still be possible for such countries to go beyond simple per capita calculations to include other indicators of need. Methodologies can be developed on the basis of existing data and explicit assumptions, and continually updated as improved data become available.

Special allocations should also be estimated using sound methodologies

Most needs-based formulae include calculations for special allocations that are not distributed on the basis of need (such as allocations for training activities, highly specialised services, cross-boundary flows and the special costs of service delivery in different areas). These allocations, which can also be controversial, must be based on a methodology as rigorous as the methodology for structuring the formula itself.

The pace of budget reallocation must be realistic

A realistic pace of budget change should be adopted to ensure health sector sustainability and to reduce opposition to the process of redistribution. Guidelines concerning the 'ceilings' and 'floors' on percentage annual budget increases and reductions, respectively, are useful in this respect. It is particularly important not to attempt to redistribute resources too rapidly when formula design is still being refined and while data inaccuracies exist.

The time frame for implementation of the formula should be feasible

The formula itself sets target budgets. *Annual* shifts in budgets should be determined by other factors, however. When there is sustained growth, the development of under-provided services can be achieved mainly through using growth funds. When there is no growth, resources have to be shifted from existing services. This is difficult when redistribution requires, for example, that health workers move to less attractive areas of employment, and facilities be built in remote areas.

The formula should be adapted when necessary

When conditions change or when the formula becomes inappropriate it must be reviewed. Any changes introduced for subjective or political reasons should be acknowledged explicitly. Changes to the formula should not cause major disruptions to health services, as the goal is to provide a medium- to long-term framework within which health service managers can plan the rational and sustained transformation of services.

The implementation of the formula should be accompanied by sound health services planning

A formula determines how funds should be distributed fairly between regions. It does not provide guidance on how to translate funds into resources such as personnel, pharmaceuticals, facilities and equipment that are distributed at the district level in the service of high-priority care. The reasons for this relate to a host of problems in operationalising equity, particularly in developing countries. For example, changes in the distribution of facilities and even personnel are not effected easily, and there are numerous and subtle barriers to access, including income, class and race. Purposeful planning is required to ensure that disadvantaged populations receive improved health care. As the capacity to link policy-making, budgeting and planning processes into a sound development strategy is often weak in developing countries, active steps should be taken to develop relevant skills.

Notes

- 9 Gilson, L., Doherty, J., McIntyre, D., Thomas, S., Brijlal, V., Bowa, C., and Mbatsha, S. (1999) 'The dynamics of policy change: Health care financing in South Africa 1994–99', Centre for Health Policy Monograph No. 66, Centre for Health Policy/Health Economics Unit, London School of Hygiene and Tropical Medicine.

Annex 3: Resource allocation in Uganda

In order to improve value for money, the Government of Uganda is committed to shifting resources from the secondary and tertiary sectors to primary health care services, and within the hospital sector from government units to NGO units. This has been done by the reallocation of resources between budget lines and, more importantly, by the introduction of new budget lines as explained below.

Allocation of resources to the health sector 1997/98 and 1998/99 (billion shillings)

Budget Line	1997/98 Budget	1998/99 Allocation
Ministry of Health HQ	8.25	7.84
Butabika (National Referral Hospital)	1.39	1.19
Mulago (National Referral Hospital)	8.06	7.33
Support to NGO Hospitals	1.00	1.92
Support to Lower-Level NGO Units	-	1.08
PHC Conditional Grant	1.70	6.36
District Hospitals	6.45	6.26
Training Schools	1.54	1.54
Referral Hospitals	4.02	3.85
Lunch Allowances (Hospital Workers)	5.17	4.59
Lunch Allowances (PHC Workers)	-	5.23
Development (MoH)	5.67	11.06
Development (Mulago)	2.17	1.51
Total	45.42	59.76

Two new budget lines were introduced in 1997/98:

- PHC conditional grant
- Support for NGO hospitals.

This reflected concerns about the dramatic decline in government spending on primary health care from district revenue (which fell from over 4bn Shs in 1994/95 to just over 1bn Shs by 1996/97), with significant disparities between districts, and the difficult financial position faced by a number of NGO hospitals.

In 1998/99 two additional budget lines were introduced:

- Lunch allowance (primary health care workers)
- Support for lower level NGO units.

This was done to remove the incentive for government employees to work in hospitals and encourage them to move to lower-level units, and also to encourage existing workers in lower-level units to be more productive (staff in hospitals already received such allowances and they represented a major proportion of total remuneration). It was also recognised that lower-level NGO units were in financial difficulty and that by providing financial support at that level more services could be provided, reducing some of the burden on the hospital sector and reducing overall costs of health care. However, this has proved to be extremely cumbersome and has taken time to become effective.

Basis for allocation of resources

PHC Conditional Grant 1997/98

The allocation of 1.7bn Shs for 1997/98 was made on the basis of:

- population size;
- donor spending (inverse of);
- adjustment factors (socio-economic conditions and security situation).

1998/99

The total allocation for the PHC Conditional Grant for 1998/99 was 6.358m Shs. Some of these funds were earmarked for particular purposes:

- 1.73bn Shs to carry out upgrading of health centres (over a period of three to four years health centres in all districts will be upgraded as necessary);
- 1.212bn Shs as additional recurrent funding for the upgraded health centres;
- 0.378bn Shs to establish an 'Epidemics Fund' in the districts which will enable them to respond immediately to any emergency situations that arise.

The balance of 3.04bn Shs is allocated according to the following criteria:

- population;
- Human Development Index (per capita income, life expectancy, school enrolment ratios);
- donor and NGO funding (the inverse of);
- adjustment factors (security situation and presence of government hospital).

The actual formula was as follows:

- 60 per cent – index of percentage of total population age;
- 20 per cent – index of (the inverse of) Human Development Index;
- 20 per cent – index of (the inverse of) per capita donor and NGO spending in the district;
- a 25 per cent addition was made for districts with a difficult security situation and for districts with no district hospital.

It should be noted that the allocation formula was modified between 1997/98 and 1998/99. The formula is now more objective as it has incorporated the Human Development Index. The data on donor spending, however, remains weak. Districts are expected to spend these funds on priority activities outlined in an annual work plan.

Hospital services

The allocation for 1997/98 was based largely on bed numbers. Referral hospitals received additional resources. For 1998/99 the resources were based purely on bed numbers. Each hospital received 150m Shs of delegated funds per 100 beds. The Ministry of Health made a number of adjustments, and a verification exercise is planned to determine the actual number of beds in place. The Ministry is considering a shift towards a formula which takes into account workload as, at present, busy hospitals receive the same funding as empty ones, and also the possibility of rewarding hospitals which perform well with additional resources.

For NGO hospitals the allocations were made on the basis of a formula developed by the NGO sector itself. This was based on number of beds, distances from Kampala, whether the hospital had a training school, whether it was a referral hospital, whether it provides public health care services, whether it has access to national power and the district Human Development Index. The overall allocation, however, was subsequently modified somewhat by the Ministry of Health.

Lunch allowances

The budgets are based on giving all government health workers the full lunch allowance; Shs 66,000 per month for an established member of staff and 44,000 per month for support staff. Any shortfalls should be made good from the delegated/conditional funds allocated to the hospital or district.

The Ministry of Health has also circulated detailed guidelines on how the funds should be allocated and used within the districts and how financial accountability should be assured.



Annex 4: The potential for using benchmarking

It is often difficult to make judgements about whether facilities are over or under financed. First of all it is necessary to ask what the level of funding is to be judged against. Clearly, health centres in low-income countries are under financed in relation to health centres in the UK or the US, but this is not surprising and does not help us very much. The technique of benchmarking – used here in terms of trying to set standard costs for a standard set of services – can be useful in assisting such judgements and informing the resource allocation process.

A number of options are available. Policymakers may wish to use well-functioning facilities in their own countries as a benchmark of good practice, as this has the advantage of taking into account local circumstances. Where NGO or even private facilities are thought to provide effective and efficient services they could also be used, although if there are large differences in costs it may be useful to set out a time frame over which these targets are to be met rather than introducing them immediately. Alternatively, policymakers may wish to use global standards. Although these will usually have to be adapted to local circumstances, they can provide a useful starting point in the discussion.

The following table is taken from analyses carried out by the World Bank in the run up to the *1993 World Development Report*, with costs updated to the present day. The main point to note is that the standards are explicit in that they set out the infrastructure, human resource and other needs required to deliver specified levels of a defined range of services. This is followed by a section on costing which begins to set out reasonable resource allocations (although it has to be recognised that most of the low-income countries in which DFID focuses its efforts could not afford to achieve such levels of coverage). Finally, there is a section illustrating the application of the approach in Uganda.

Detailed costing guidelines

In terms of costing, policymakers are generally interested in knowing, first, how much it might cost to expand the existing infrastructure, and second, what is a reasonable allocation towards running costs to allow facilities to function effectively (e.g. a 140-bed hospital should cost roughly \$3m to build and \$330,000 per annum to run).

Generic Guidelines

	District Hospital	District Health Management Team	Health Centre
Coverage	150,000 population	150,000 population	10,000 population (15 health centres per district)
Services Provided	<p>In-patient</p> <ul style="list-style-type: none"> ■ Surgery inc. c. section ■ Chronic care ■ Laboratory ■ Blood bank ■ Referred patients <p>Out-patient</p> <ul style="list-style-type: none"> ■ Emergencies ■ Referred patients <p>5000 admissions per year Total bed days 30,000 Average length of stay 6 days</p> <p>2,000 deliveries per year Average length of stay 3 days</p>	<p>Supervision and monitoring of district health care system (15 health centres / 1 hospital)</p> <p>In service training to hospital and health centre staff</p> <p>Logistical support</p> <p>Liaison with local, regional and central authorities</p>	<p>ANC screening, tetanus, immunisation, malaria prophylaxis, syphilis screening</p> <p>Children <1 yr – 3 contacts per year – 80 per cent coverage</p> <p>Children <1 5 yrs – 1 contact per year – 80 per cent coverage</p> <p>Well Baby Services (including EPI and growth monitoring)</p> <p>Family Planning – advice provision of contraceptive and STD screening 10 per cent</p> <p>Chronic care e.g. TB – new cases 3 per cent of population – 50 per cent coverage</p>
Staff	<p>3 doctors</p> <p>3 medical technicians</p> <p>2 clerks</p> <p>10 registered nurses</p> <p>25 assistance nurses</p> <p>2 management staff</p> <p>15 support staff</p>	<p>1 medical officer</p> <p>1 sociologist/IEC</p> <p>1 accountant</p> <p>1 pharmacist</p> <p>1 registered nurse</p> <p>1 water and sanitation specialist</p> <p>1 driver</p>	<p>1 registered nurse</p> <p>2 assistant nurses</p> <p>1 clerk</p>
Infrastructure	4000m ² , 140 beds, 21 units, staff housing, 3 vehicles, cold storage facilities, medical equipment		125m ²
Costs	<p>Unit capital costs: \$3.07m</p> <p>Annual costs:</p> <p>Capital – \$0.288m</p> <p>Recurrent – \$0.331m</p>	<p>Unit capital costs: \$175,000</p> <p>Annual costs:</p> <p>Capital – \$17,500</p> <p>Recurrent – \$26,400</p>	<p>Unit capital costs: \$55,500</p> <p>Annual costs per facility:</p> <p>Capital – \$4,500</p> <p>Recurrent – \$21,000</p>

Source: A Framework and Indicative Cost Analysis for Better Health in Africa, World Bank 1993. Costs updated at 3 per cent per year.

Overall district resource requirements

Unit Capital Costs	Cost \$
District Hospital	3,068,535
Health Centres	55,529
District Health Management Team (DHMT)	174,642

Recurrent Cost Requirements	Cost \$	Percentage of total
District Hospital	331,018	49.2
Health Centres	315,020	46.8
DHMT	26,383	3.9
Total	672,421	100.0

Breakdown of district resource requirements

The following shows a breakdown of how the above resources might be reasonably allocated. Of particular interest is the balance between salary and non-salary expenditure. Note that the inclusion of annualised capital costs gives an indication of average district costs over the long term as it spreads the cost of capital investment over the life of the facility. This is of more relevance for long-term planning than annual budgeting, except perhaps in a case where capital investment is decentralised to the district level. In the cases where capital investment is largely controlled by the centre, the capital costs of developing hospitals (e.g. \$1.5m over two years) should be recorded in central budgets, whilst the recurrent costs would go to the districts.

District Hospital	Cost \$	\$ per capita
Annual Capital Costs	248,637	1.66
Medical Supplies and Drugs	147,585	0.98
Personnel	138,115	0.92
Operation and Maintenance	37,244	0.25
In-service Training	8,074	0.05
Total	579,656	3.86

Health Centre	Cost \$	\$ per capita
Annual Capital Costs	4,461	0.45
Medical Supplies and Drugs	10,806	1.08
Personnel	9,101	0.91
Operation and Maintenance (O&M)	579	0.06
In-service Training	515	0.05
Total	25,462	2.55

District Health Management Team	Cost \$	\$ per capita
Annual Capital Costs	17,513	0.12
Personnel	21,277	0.14
O&M	4,463	0.03
In-service Training	643	0.00
Total	43,897	0.29

Total District Health Services	Recurrent \$	Capital \$	Total Cost \$
District Hospital	331,018	248,637	579,656
Health Centres	315,020	66,911	381,931
DHMT	26,383	17,513	43,897
Total	672,421	333,062	1,005,483

In practice, it can be extremely difficult to work out how much is being spent, especially at health centre and district health management team levels, as funding may come from multiple sources (MoH, donors, user fees etc.). Similarly, configuration of the infrastructure to a 140-bed district hospital and related health centres covering 15,000 population may not conform to national standards, and activity levels may differ. Unit staffing costs may also be higher or lower than those assumed in the World Bank guidelines. However, it should be possible to adapt the approach to the local circumstances and get an initial rough idea of whether allocations seem to be of the right order of magnitude.

An example of the application of generic World Bank guidelines: Uganda

(a) District Hospital

Costs (m Shs)	World Bank Guidelines	Uganda*
Staffing Costs	142	215
Medical Supplies and Drugs	108	42
Operation and Maintenance	27	45
Training	8	-
Other	-	38
Total Costs	286	340

* Adapted to reflect a 100-bed hospital. Figures are also updated to present prices by adding a 15 per cent inflation factor to cover US inflation between 1993 and 1997.

Activity assumptions

Actual data for a sample of 20 government hospitals indicates that reported workload in Ugandan hospitals exceeds the assumptions made by the World Bank as shown below:

- 4,872 in-patient admissions (136 per cent of guidelines);
- 1,013 deliveries (71 per cent);
- 28,417 in-patient days (111 per cent).

Comparison

Total expenditure for a 100-bed hospital in Uganda is about 15 per cent above that recommended in the World Bank guidelines. Activity also appears to be rather higher, but needs to be verified. It would appear, therefore, that total funding for hospitals in Uganda is, in general, more or less consistent with the guidelines, and perhaps slightly on the high side.

Within this total, however, there are significant discrepancies.

- Drugs expenditure in Ugandan hospitals is only 40 per cent of that recommended by the guidelines.
- O&M is more than expected, although this includes significant expenditure on cleaning the wards and the compound.
- Staffing costs are well in excess of those recommended by the World Bank: total staffing, at 87, significantly exceeds the guideline of 60.
- Other categories of expenditure include items such as administration and food (no provision is made in the World Bank guidelines). It is estimated that around 1.25bn Shs per annum is spent on food in government district and referral hospitals, yet relatives usually expect to bring food to family members staying in government hospitals. NGO facilities do not provide food to patients.

(b) Health Centres

Costs (m Shs)	World Bank Guidelines	Uganda
Staffing Costs	9.4	19.0
Medical Supplies and Drugs	11.1	8.9
Operation and Maintenance	0.6	5.2
Training	0.5	4.3
Total Costs	21.6	37.4

* Based on 9 health centres in 5 districts, and excludes all in-patient costs (which are estimated to account for 11.7 per cent of costs in the facilities examined).

Activity assumptions

The World Bank guidelines are based on the following assumptions:

- ANC: 960 contacts per year (C/Y)
- EPI/Growth Monitoring: 1,600 C/Y
- Family Planning: 200 C/Y
- Curative Care: 8,000 C/Y
- Chronic Care: 15 C/Y

Actual figures for Uganda:

- ANC: 3,600 C/Y
- EPI/Growth Monitoring: 9,600 C/Y
- Family Planning: 600 C/Y
- Curative Care: 22,200 C/Y
- Chronic Care: not available

The activity figures for the Ugandan health units appear to have been inflated. One health centre, for example, has reported over 55,000 out-patient visits per annum (around 185 per day), despite only having two medical assistants and a nurse. An analysis of returns to the health management information system for Kabale district, covering all health facilities, indicates an average of 5,900 out-patient visits per annum, an average of 430 new ANC clients (or 1,290 contacts) and 42 family planning clients. These figures suggest utilisation rates in line with those set out in the guidelines.

Comparison

Total expenditure in health centres is almost 75 per cent greater than the recommended guidelines.

Of this:

- salaries are more than double that recommended; staffing levels are also far higher;
- training is far in excess of the guidelines;
- medical supplies and drugs are only 80 per cent of that recommended.



Annex 5: How to deal with hospitals?

Capital investment

In many countries, allocations to hospital services account for more than half of total public health expenditure. In terms of capital investment, where there is a fairly even geographical spread of infrastructure as is the case in, say, Cambodia, this presents relatively few problems. Where current coverage is inequitable – as is often the case – it may be extremely difficult to do anything about it. It is politically difficult (and often impossible) to rationalise or close down facilities where there is overprovision. At the same time there is also likely to be a clamour from districts to have their own facility where currently they have none, despite the fact that the money could be better spent on other things and that the quality of the health care offered may be poor. Yet some donors have been willing to fund inappropriate investment in the hospital sector. In order to help prevent this, a useful step would be to develop a national capital development strategy which could cover rehabilitation as well as new investment needs in primary care as well as at hospital level. It would need to set out clearly investment priorities and be costed to ensure that it is affordable and linked to the overall budgetary processes so that the necessary recurrent implications can be taken on board and met. In some countries, government has indicated that no public funds will be used for hospital construction. Andhra Pradesh, for example, has indicated that all hospital construction should be privately financed.

Recurrent costs

The next question is how to finance hospital running costs. In an ideal world, referral networks would operate effectively and district hospitals would only treat those patients whose needs could not be met at health centres or elsewhere. In practice this simply does not happen. Although up to 90 per cent of cases at district hospitals could be treated at lower levels, patients still tend to present directly at hospitals where they believe they will receive better care. Similarly, hospitals are supposed to be a district or regional resource. In practice, this view of the catchment area is unrealistic, with the vast proportion of patients treated being those living in the immediate vicinity of the facility. A review of patients in a major mission hospital in Uganda indicated that around 80 per cent of patients came from within five kms of the facility. In addition, the hospital sector in most low- and middle income countries is made up of a range of providers – government, NGO (not-for-profit) and private-for-profit facilities; indeed in many countries government facilities cater for less than half of the hospital-based services provided.

Allocation to the hospital sector as a whole

Against this background Ministries of Health have to decide how much of total health spending should go to the hospital sector, which hospitals should receive funding (and how much) and how to ensure that incentives are in place to encourage hospitals to deliver the right services at a reasonable cost.

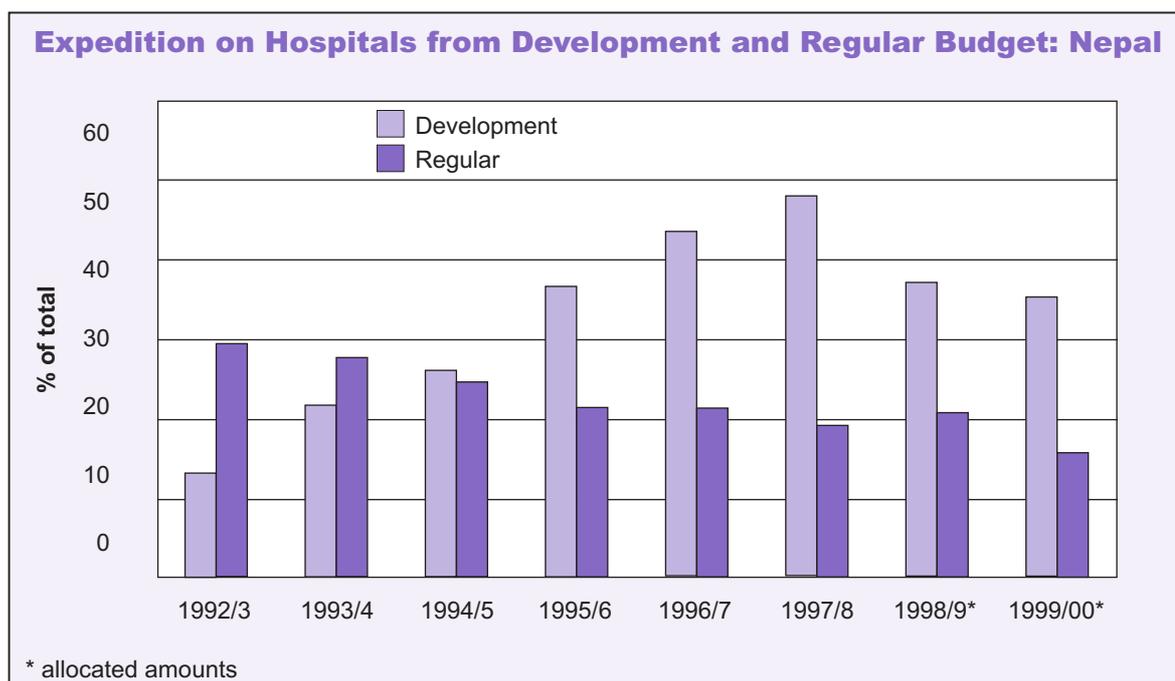
Whilst individual hospitals are often chronically underfunded in terms of what they are expected to deliver (especially for non-salary items), their needs must be viewed in terms of other priorities within the health system. Ministries often try to do too much with too little, and underfunding of primary health care where the real health gains can be made tends to be even worse. Clearly, allocations to hospitals have to be made according to local circumstances, but they should also take into account the overall financing framework.

The example of Nepal (see page 38) illustrates this point. Although total expenditure on health is low by international standards, the relative proportion of expenditures on the hospital sector grew rapidly as a share of the total during the 1990s. This has involved a rapid expansion of the infrastructure and a large increase in capital investment which is just beginning to subside. However, at the same time, the allocation of overall recurrent resources has been declining and are now much more thinly spread between the existing hospitals. This has major implications for efficiency and also for equity, as much of the shortfall is being made up for by user fees.

Which type of hospitals to support

Government must also decide which types of hospitals to support. Governments rarely give recurrent support to private-for-profit hospitals. However, in many countries public funds are used to support NGO hospitals, and in some such facilities they act as designated district or regional facilities on behalf of government. In Tanzania, for example, there is a tradition of meeting the recurrent costs of NGO facilities; in Uganda this has just begun. In the case of Uganda, the government is meeting 10 to 15 per cent of total running costs, with the allocation based on a number of factors agreed, including the financial situation of the hospital. From a government perspective there is no reason why the running costs of an NGO-designated district hospital should be fully subsidised, particularly as many are successful in raising funds both from user fees and other sources, and should be encouraged to continue to do so.

Government has to decide what to do in districts where there is no government facility: develop new facilities where this is justified, or perhaps encourage or finance non-government providers to deliver additional services according to a service agreement or memorandum of understanding. In Uganda, districts with no government hospital receive additional resources to strengthen primary services.



Allocating resources between facilities

Another key issue is to decide how much each facility should receive. Whilst a population-based formula for hospital services might be ideal, the usual approach is to go for a facility-based approach, generally based on bed numbers. This is less of a problem where the hospitals are distributed in line with population, as in Cambodia, but in Uganda where some districts have no government hospitals and others have three, this is clearly an issue. A further drawback to this approach is that the funding takes no account of demand or workload. In such circumstances, an interim approach with the allocation based on workload (which would, of course, have to be validated) might be considered, although planners need to be aware of the danger of hospitals having a strong incentive to exaggerate workloads or carry out inappropriate activities and increase lengths of stay unnecessarily.

In most cases the allocations to facilities are arbitrary and are not linked to any analysis of the funds required to deliver a defined range of services. Although in many countries the responsibilities of a district, regional or referral hospital are set out, they do not set out how many outputs or services the facility might be expected to deliver. This, and the lack of cost data in the public hospital sector, make it extremely difficult to determine what appropriate funding levels should be. The World Bank, however, has developed a set of indicative costings which could form a useful starting point for discussions, and some countries are now developing their own methods; Uganda, for example, is taking advantage of its relationship with the NGO sector to begin to develop a set of benchmarks.

Conclusions

Overall, one should expect a move towards a more population-based allocation of resources, although, for reasons noted above, there are many circumstances in which the ideal allocation might deviate from this norm. Hospitals tend to be well placed to advocate for additional resources, often with great success, and primary care services tend to lose out. This is best dealt with through the development of a medium-term expenditure framework which clearly sets out the proposed allocation between hospital and lower-level services over a period of time, and developing accountability mechanisms.