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Health Policy 56 (2001) 171–204

HEALTH policy

www.elsevier.com/locate/healthpol

A descriptive framework for country-level analysis of health care financing arrangements

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Received 23 July 2000; accepted 18 October 2000

Abstract

Health financing policies are marked by confusion between policy tools and policy objectives, especially in low and middle income countries. This paper attempts to address this problem by providing a conceptual framework that is driven by the normative objective of enhancing the 'insurance function' (access to needed care without financial impoverishment) of health care systems. The framework is proposed as a tool for descriptive analysis of the key functions, policies, and interactions within an existing health care system, and equally as a tool to assist the identification and preliminary assessment of policy options. The aim is to help to clarify the policy levers that are available to enhance the insurance function for the population as efficiently as possible, given the 'starting point' of a country's existing institutional and organizational arrangements. Analysis of health care financing systems using this framework highlights the interactions of various policies and the need for a coherent package of coordinated reforms, rather than a focus on particular organizational forms of 'health insurance'. The content of each main health care system function (revenue collection, pooling of funds, purchasing of services, provision of services) and the market structure with which the implementation of each is organized are found to be particularly important, as are policies with respect to the benefit package and user fees. © 2001 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Insurance; Market structure; Pooling; Purchasing; Benefit package; Regulation and information

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PII: S0168-8510(00)00149-4

1. Introduction

Health care in the UK is funded mainly from general tax revenues, and providers are paid from territorial health authorities of the National Health Service. In the Netherlands, health care is funded mainly from compulsory contributions by employers and employees to social insurance 'sickness' funds and voluntary contributions to private insurance companies, both of which in turn pay providers. In both countries, virtually the entire population enjoys access to needed health care and is shielded from the risk of incurring expenditures that would otherwise be high enough to impoverish some individuals or families. In other words, the health care systems of both countries provide the *function of health insurance* (access to care with financial risk protection) to their populations, albeit with different institutional and organizational arrangements for the mobilization and allocation of resources. Analyzing policy options in terms of the extent to which this 'insurance function' is enhanced[1] and the efficiency with which it is administered, offers a useful way to operationalize the objectives of health care financing policy, unfettered by an attachment to any particular organizational form of health insurance.

This paper is motivated by the perception that, with respect to health care[2] financing, there is frequently a confusion between policy tools and policy objectives, especially in lower and middle income countries. This has certainly been the case with many reforms involving health insurance, where the focus has been on establishing or refining insurance *schemes*, while the effects of these on the efficiency and equity of the broader *system* are either assumed or neglected entirely. In addition, the development of these reforms sometimes proceeds without any reference to the existing health care system in a country.

This paper provides an alternative approach based on two simple principles. First, reforms should be oriented to explicit policy objectives. Second, the starting point for change in any country is the existing organization and institutional arrangements of its health care system. Hence, an adaptable framework rather than a 'blueprint' is needed to assist national health care policy makers to move their systems towards their objectives.

This paper begins by presenting the conceptual framework intended to help countries to identify a coordinated set of policies to enhance the insurance function of their health care systems. The next three sections incorporate lessons from country experience into a review of the various elements of the framework. The paper concludes with a review of selected key policy issues.

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[1] The objectives associated with enhancing the insurance function are specified in greater detail elsewhere [1,2].

[2] The scope of this paper is limited to personal health care services (curative and preventive interventions delivered to individuals), rather than 'health services' more broadly. This is an explicit choice to keep the analysis relevant to the issues of access to care and financial risk protection. This should not be interpreted as denying the importance of 'public health' interventions (e.g. vector control, anti-pollution measures) and non-health system interventions that contribute to health (e.g. girls' education).

2. Conceptual framework

Often, health systems are described by their predominant source of funding (e.g. social health insurance 'Bismarck' systems, general tax-funded 'Beveridge' systems). As many countries have introduced significant reforms without altering the source of funds for health care, however, there is growing recognition that the source of funds need not determine the organizational structure of the sector, the mechanisms by which resources are allocated, nor the precision with which entitlement to benefits is specified. Hence, terms like 'tax-funded systems' or 'social insurance systems' are no longer adequate descriptors of systems; *traditional thinking* about health insurance imposes unnecessary limits on the range of policy choices open to countries.

Even more sophisticated typologies of entire health care systems (e.g. see Ref. [3] in which seven models are identified) are not easily or usefully applied to countries in which finance, organization and population coverage are fragmented. Such fragmentation is more characteristic of low and middle income countries (and the US). The typology created by Londoño and Frenk of health system models in Latin American countries [4] is more useful because it recognizes explicitly and incorporates this fragmentation. While building on their analytic approach, the purpose of this paper is not to create another typology to classify the health systems of different countries. It is, instead, to assist national level policy analysis by facilitating the comprehensive description of a health care system and the identification of reform options. For this purpose, there is a need for a generic framework to conceptualize the disaggregated components of health financing sources, resource allocation mechanisms and associated organizational and institutional arrangements.

Given this need, the conceptual framework depicted in Fig. 1 is proposed as a tool for *descriptive analysis of the existing situation* in a country's health system with respect to health care financing and resource allocation, and equally as a tool to assist the *identification and preliminary assessment of policy options*.[3] The aim is to help to clarify the policy levers that are available to improve access to care and financial risk protection for the population as efficiently as possible, while also highlighting the interactions of various policies and the need for a comprehensive rather than a piecemeal approach to reform.

The central column of the figure depicts the flow of 'pooled' funds in the health system from sources to service providers. In this framework, pooled funds include those resources that can be *organized* on behalf of groups of people or the entire population, meaning all funds other than out-of-pocket payments by individuals to providers. The concept depicted is actually a *functional* flow of funds, in the sense that money is not necessarily transferred across four separate organizational entities in all systems, but the various *functions* depicted do occur, even if these are not explicit or even recognized. The arrows in Fig. 1, depict links between each of these health system functions and the population or individuals within the population.

[3] In addition to [4], the proposed framework has roots in previous work, developed independently and at different points in time [5–7]. An extension of the framework is presented in Section 5.

The figure is a model that attempts to provide a depiction of generic functions that can be applied in a wide variety of country contexts. In particular, the focus on generic functions rather than specific organizations or institutions is meant to capture critical features of all health care systems, while recognizing the great diversity of settings in which these functions are implemented. In some cases, for example, the functions of collection, pooling, purchasing, and provision are internalized within a single organizational entity or unit (e.g. social insurance funds that collect their own contributions and have their own providers, fully integrated privately funded Health Maintenance Organizations that use their own hospitals and salaried providers). In other cases, collection, pooling and purchasing may be done by a single entity, with services provided by other organizations (e.g. voluntary health insurers that are distinct from the public or private sector providers from which they purchase services). Many different combinations of functional integration and separation exist, even within the same country. Moreover, within each of these functions there may be a *market*, with different entities competing to collect, pool, purchase and/or provide services, and there may also be competition between 'networks' of organizations providing several of these functions. Hence, the framework is a simplification of a multi-dimensional array of institutional and organizational arrangements that are possible, but oriented to a set of functions that occur in all settings.

In the next two sections of the paper, various elements of the framework are analyzed in greater depth, indicating the ways in which each is relevant to the objectives of health care financing and the issues that must be understood for a country to develop a coordinated set of policies towards this end.

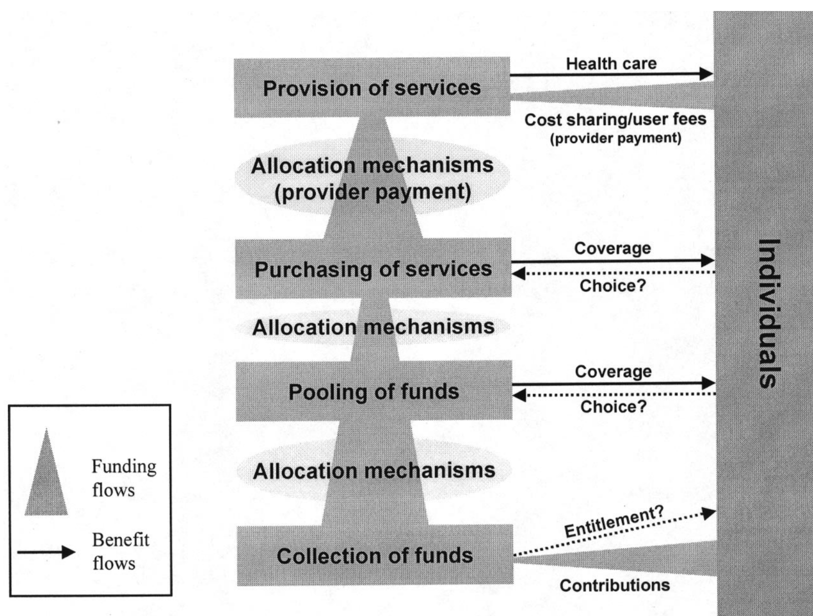

Fig. 1. Framework, part 1: health system financing functions and population links.

Table 1
Prepaid funding sources, contribution mechanisms and collection agencies

Initial funding sources	Contribution mechanisms	Collecting organizations
Individuals/families/employees	(1) Direct taxes	Central government
Employers/corporate entities	(2) Indirect taxes	Local government
Foreign and domestic NGOs and charities	(3) Payroll taxes	Social Security agency
Foreign governments and multilateral agencies	(4) Other compulsory contributions (mandates)	Commercial insurance fund
Foreign and multinational companies	(5) Voluntary prepaid contributions	Other insurance fund
	(6) Grants	Employer
	(7) Loans	Earmarked savings fund
		Health care provider

3. Finance and resource allocation functions

3.1. Collection: sources of pooled funds and contribution methods

While recognizing that apart from external donors, the population (including individuals and corporate entities) is the initial source of all funds (as shown by the 'Contributions' arrow in Fig. 1), Table 1 describes the range of possible sources of funds, methods by which these funds are contributed, and organizations that collect prepaid[4] health revenues. Typically, these are combined into categories of 'sources of funds', such as general government revenues, social health insurance, etc. as with the classification scheme used for National Health Accounts [8].

The most direct way to increase the level of pooled resources is through an increase in the allocation of public revenues for health care, either through a reallocation of public expenditures from other sectors, or an increase in the overall level of public expenditures. Even where it is possible to alter public spending priorities in favor of the health sector, massive shifts in allocation patterns are unlikely, and thus real health resource levels are determined primarily by the overall level of public revenues from taxes. The challenge is particularly acute for poorer countries, as the ability to raise public revenues tends to increase with a country's income level. Low income countries raise less than half of the revenues (as a percent of GDP) than high income countries [9]. For health policy makers in these countries, therefore, the desire to do something about low levels of resources must

[4] As noted above, this section of the framework only describes *pooled* or prepaid health revenues. Out-of-pocket health expenditures are discussed in Section 4.

be tempered by the recognition that the main factors that affect the level of funding — economic growth and the efficiency of the tax collection system — are largely outside their immediate control.

Increasing health funding levels through the creation or expansion of compulsory insurance contributions (e.g. payroll tax-financed social health insurance) faces the same macroeconomic constraints as general revenues. In addition, labor market conditions are a critical contextual factor [10]. If macroeconomic conditions are favorable, there may be scope for new types of resource mobilization schemes. If the economy is in recession and the level and growth of the proportion of the population in formal sector employment are low, it is difficult to impose or increase 'social insurance' taxes for health care, and these may have harmful effects on employment and economic growth. Moreover, policies that tie insurance coverage (voluntary or compulsory) to the place of employment can have undesired macroeconomic effects by creating distortions in the labor market.

There are other issues for governments to consider in their planning of new financing schemes. While often viewed as a means to inject new resources into the health sector, the introduction of social health insurance contributions (or the subsidization of private health insurance) typically engender full-fledged *schemes*. In other words, these contributions are usually associated with the creation of new organizations for pooling funds, paying providers, and in some cases, even for providing services. This results in new costs as well as new revenues. This poses an immense challenge to the efficiency with which the insurance function can be administered on behalf of the entire population (rather than just that of the scheme) unless the implementation of pooling, purchasing and (sometimes) provision for members of the scheme(s) is well-coordinated with the implementation of these functions for the rest of the population.

Another complication is that when people make an explicit contribution for 'health insurance', they are entitled to a specific benefit in return.[5] This has the potential to exacerbate inequity, especially in poorer countries in which those who are employed in the formal sector tend to be economically advantaged in relation to the rest of the population. In this context, insured persons are entitled to better benefits, and the result is that the greater financial protection for the well-off expands the gap in utilization between rich and poor. In Indonesia, for example, civil servants, who were beneficiaries of a social health insurance scheme, used public hospitals (free of charge for insured persons) at a rate that was five times the national average [12]. African countries have had similar experiences with social health insurance or 'encouraged' private insurance for their formal sectors [13][6].

[5] The presence or absence of a connection between contributions and entitlement is reflected by the dotted line in the lower right-hand part of Fig. 1. For more on this, see [11].

[6] Also available under the same title in: Beattie A, Doherty J, Gilson L, Lamb E, Shaw P, editors. Sustainable health care financing in Southern Africa: papers from an EDI health policy seminar held in Johannesburg, South Africa, June 1996. Washington, DC: World Bank Economic Development Institute, 1998.

3.2. Pooling of health care revenues

Simply put, 'pooling' refers to the accumulation of prepaid health care revenues on behalf of a population. In Fig. 1, the arrow from 'pooling of funds' to 'individuals' signifies the *coverage* for health service costs for the population on whose behalf the funds are pooled (for groups or the entire population by one or several pooling organizations). The dotted line going in the other direction indicates that in some cases, individuals can choose their pooling organization. Table 2 provides examples of pooling organizations and methods used to allocate financial resources to or among them. From a policy perspective, it is often useful to consider these together. With voluntary contributions to health insurance funds, for example, the collection and pooling functions are implemented by the same organization, and the allocation from collection to pooling is internalized within it. In this context, the contribution mechanism (e.g. premium payments by employers and employees) is also the method for allocating to the pooling organization (note the overlaps between Table 1 and Table 2). The discussion below begins with voluntary insurance and moves to examples characterized by greater levels of state involvement.

All systems of voluntary purchase of insurance suffer from the problem of *adverse selection* [14]. Because individuals have better knowledge of their own health status and potential need for health care than insurers, and because those

Table 2
Examples of pooling organizations and mechanisms for allocating to/among them[a]

Pooling organizations	Allocation mechanisms
Ministry of Health ● Central ● Decentralized units (provincial, district health authorities)	Government (central or local) revenues ● Historical patterns related to Infrastructure or utilization ● 'Needs-based' weighted capitation formula ● Subsidize premium payment for participation of otherwise uninsured
Local government health department Area health boards	
Social health insurance fund(s) Private insurance companies	Earmarked/compulsory contributions ● Percent of salary or income ● Risk-adjusted allocation to insurers, usually with consumer choice of insurance fund
Employers as 'self-insuring' firms Member-owned 'mutual' insurers	● 'Opting out', with or without risk adjustment
Fundholding providers and provider-based insurance schemes	Voluntary contributions ● Individual risk- or community-rated premium payments

[a] The allocations can be from the collecting agency (e.g. Ministry of Finance) to the pooling agency (e.g. Ministry of Health), from the initial source of funds to the pooling agency (e.g. private insurers that implement collection and pooling together), or from one pool to others (e.g. allocation from a central pool to competing or geographically based pooling organizations through a risk adjustment process).

who expect to use health services are more interested in buying insurance coverage, persons who seek to purchase health insurance voluntarily tend to be costlier to insure than the average person in the population. Consequently, private insurers have developed techniques to limit adverse selection or its financial effects.

These measures — including underwriting,[7] tiered rating,[8] durational rating,[9] limiting coverage to members of groups formed for reasons other than to buy insurance coverage, excluding pre-existing conditions from coverage, excluding certain high-cost services from coverage, and patient cost sharing – have one thing in common: *in an attempt to ensure the financial viability of a particular insurance scheme, they detract from the effectiveness of the insurance function for the population as a whole*.[10]

Without strong government involvement to reduce the consequences of adverse selection, the incentives in a competitive voluntary insurance market will lead to a segmentation of the population into different risk pools, which, among other problems, will make it increasingly difficult to finance the premiums of persons in sicker pools on a purely private basis. Over time, this may lead to a progressive 'de-insurance' of the population, especially in systems characterized by a 'mature' competitive health insurance market. This conclusion appears to be supported by the experience of the US, the only industrialized country that relies primarily on a competitive voluntary insurance market. Between 1987 and 1995 for example, the share of the non-elderly population covered by voluntary health insurance fell from 75.9 to 70.7% (analysis of US Current Population Survey data, summarized in [15]), even though this was a period of strong economic growth and job creation, when employment-based insurance coverage might otherwise have been expected to grow.

Whilst the above may appear as an argument against relying on voluntary insurance, it is meant merely to signal some of the issues likely to arise with the development and growth of such markets. For many low income countries, expanded reliance on voluntary insurance affiliation may constitute an improvement over the alternative: out-of-pocket payment (given the relatively low levels of public resources mobilized in these countries). In this context, policies to introduce or expand voluntary prepayment arrangements must be considered [16–20]. However, the creation of a voluntary insurance scheme or market is not an inherent policy objective; such schemes should be analyzed with respect to how they contribute to or detract from the insurance objective for the health system and population as a whole.

[7] This is described as 'the practice of evaluating individual health status and either rejecting potential buyers who are deemed to pose exceedingly high risk or placing them in plans with other people, who represent approximately the same risk' 14, p. 82.

[8] Setting premiums in direct relation to the expected health care costs of each insured individual or group [14].

[9] Charging more for renewal of the insurance contract than the initial enrollment premium [14].

[10] Moreover, many of these techniques also involve considerable administrative costs that produce no systemic benefits in terms of access, quality or income protection.

Several countries that mobilize resources for health insurance through compulsory contributions by employers and employees have introduced changes in the way that resources are allocated to their insurance funds, whereas others have not. Chile is an example of the latter. In 1981, Chile enacted a reform that allowed high income people to 'opt out' (i.e. choose to not contribute) of the national social insurance fund (FONASA) and choose among a number of competing private individual risk-based insurers (ISAPREs). This resulted in the creation of two different health care systems, largely differentiated by income and other individual risk characteristics of the population. As implemented in Chile, opting out eroded 'solidarity' (i.e. cross-subsidies from the rich to the poor and from the healthy to the sick) within the sector and contributed to an inequitable pattern of resource allocation. By 1990 for example, per capita expenditures on FONASA members were about US $65, as compared to US $250 for ISAPRE members. This difference is substantial, especially when the different risk profiles of the two population groups are considered. Moreover, when an ISAPRE 'dumps' a member, who has become very high cost, FONASA must absorb the costs of this health care. As the implicit 'insurer of last resort', the poorer FONASA program subsidizes the richer ISAPREs [21].

Unlike Chile, other countries (e.g. Argentina, Colombia, Germany, Israel, and the Netherlands) have combined the introduction or expansion of consumer choice of fund with a formula to adjust the amount of revenue received by each fund for the relative health care risk of its enrollees. Implementing this 'risk adjustment' procedure requires the creation of a new organization to pool health revenues on behalf of the entire covered population and then to allocate these funds to the competing health insurers according to the number of people choosing each fund, with the amounts for each enrollee adjusted according to the risk adjustment formula. This combination of reforms has multiple objectives:

- improving equity in the receipt of services by attempting to match the resources received by each fund with the health care needs (rather than the income, for example) of its enrollees,
- improving equity in the finance of care by reducing the need for premiums to be based on the health risks of contributors (in those countries that allow variable contribution rates),
- improving consumer satisfaction through expanded choice, and
- improving sectoral efficiency through competition among funds, while reducing their incentive to devote efforts to selecting preferred risks.

Some successes with these measures have been documented. For example, prior to the introduction of risk adjustment with expanded choice of 'sickness fund' in Germany in 1994, the financing system was inequitable because each fund had to set contribution rates to cover a standard package of benefits. Funds with a sicker mix of enrollees therefore had higher contribution rates, which meant that, on average, poorer and older persons paid a higher percentage of their income than did richer and younger persons. The introduction of risk adjustment with an expansion of consumer choice of sickness fund led to a decrease in the contribution rates of some funds serving relatively high risk populations [22].

Despite some observed benefits from risk adjustment, this mechanism is technically complex and not well developed in actual use as yet. Most countries using this are only basing the adjustment on demographic variables (age and sex), which have been found to explain only a small percentage of the variance in individual health expenditures [22–24]. Thus, the expected benefits of this mechanism should not be overestimated, especially with respect to the ability to curtail risk selection behavior by competing insurers.

For public budget revenues that have been allocated to a Ministry of Health or that have been allocated to local governments and from there to the local government health service, funds may be distributed directly to service providers, or there may be an intermediary, such as a territorial health administration or board, charged with accumulating funds from the MOH and allocating these on behalf of a defined population.[11] In an attempt to improve equity in the distribution of public funds, several countries have introduced or strengthened these intermediary organizations and changed the basis for determining the size of their budgets, so that resource flows more closely reflect population needs rather than historical patterns of utilization or infrastructure development. For example, the UK [3] and Zambia [25] introduced changes to allocate public funds to territorial health authorities or boards based on the relative size of the population living in the area, with these per capita allocations adjusted ('weighted') for various indicators of relative health care resource needs (e.g. population density, percent living below the poverty line, etc.).

Needs-weighted population-based allocation formulae for distributing budget funds to territorial health administrations are conceptually similar to 'risk adjustment' formulae for redistributing prepaid contributions to insurance funds. The purpose of each is to ensure that the pooling organization has the 'right' level of funds to finance the defined benefit package for its 'risk pool'. Risk adjustment of contributions to insurance funds may serve the further purpose (not needed with general revenue financing or fixed nationwide payroll tax rates) of trying to improve equity in the finance of care by reducing differences in contribution rates that relate to the expected health care risk of the contributors.

3.3. Purchasing and provider payment

In general terms, 'purchasing' means the transfer of pooled resources to service providers on behalf of the population for which the funds were pooled. Together, (as indicated by the arrows in Fig. 1) pooling and purchasing provide *coverage* for a defined population, and it is useful to think of organizations that implement these

[11] One implication of this is that potential problems associated with 'fragmentation' of pools are not limited to systems of voluntary insurance or even compulsory social insurance with multiple funds. Issues arising from fragmentation of pools can, and often do, arise within 'Ministry of Health' systems.

Table 3
Examples of purchasing organizations

Ministry of Health
● Central
● Decentralized units (e.g. provincial or district health departments)
Local government health authority
Area health boards
Social health insurance fund(s)
Private insurance funds
Health 'plans'
Employers
Member-owned 'mutual' insurers
Fundholding providers

functions as *insurers*.[12] Table 3 gives examples of purchasing organizations. Frequently, the purchasing and pooling functions are implemented by the same organization. This is reflected in the overlap of the examples provided in Tables 2 and 3.

'Provider payment' refers to the methods or mechanisms used to allocate resources to providers. These allocation mechanisms (summarized in Table 4) generate incentives that can affect the behavior of service providers. As suggested by the table, within each type of payment method can be a number of variations that provide different incentives. In fact, most countries use mixed methods of provider payment, sometimes with the explicit intention of countering some of the adverse incentives of 'pure' methods of provider payment [26][13]. Two sets of broad policy questions that need to be addressed with respect to purchasers are:

- What is their role with respect to the providers of care? Are they passive financial intermediaries, or do they use their financial power to promote improved quality and efficiency in the delivery of health care?
- What is the market structure of purchasing organizations? Is there a 'single payer' covering the population in a defined geographic area? Are there multiple insurers, and if so, do they compete for 'market share', or are persons assigned to them in a non-competitive system? In the public sector, is there an organizational unit with explicit responsibility for purchasing?[14]

[12] In terms of the flow of funds, all purchasers are also poolers, though not all poolers purchase (e.g. in the context of risk adjustment, a redistribution fund performs a pooling function but does not allocate resources to providers directly).

[13] Also available with the same title as: Human resources development and operations policy working paper 51, Washington, DC: the World Bank, Human Development Department, 1995.

[14] The questions on market structure also apply to pooling organizations.

Table 4
Provider payment methods and incentives[a]

Payment method type	When price or budget defined	When payment made	Basis or unit for price/budget	Payment ‘steered’ by	Treatment incentives
Budgets (line item and global)	Prospectively	Prospectively	Inputs or all services of provider for a given period	Various criteria, e.g., negotiated contracts, patient- volume, physical capacity, etc.	Underprovide, shift (refer) patients to other providers
Salaries	Prospectively	Prospectively	Staff time (hours worked)	Contract	Underprovide, refer to other providers
Capitation without fundholding for referral services	Prospectively	Prospectively	Expected cost of covered services from capitated provider for each person per period	Consumer choice or size of population in catchment area	Enroll healthy people; under-provide and refer, mitigated by re-enrollment process
Capitation with fundholding	Prospectively	Prospectively	Expected cost of all covered services for each person per period	Consumer choice or size of population in catchment area	Enroll healthy people
Case-based payment	Prospectively	Retrospectively	Treatment comprising bundle of services, most commonly a hospitalization	Fee schedule codified in regulation or contract; patient choice of provider	Increase volume of less severe patients in each case category; decrease services per case
Fee-for-service according to fee schedule	Prospectively	Retrospectively	Each agreed service item or input	Fee schedule codified in regulation or contract; patient choice of provider	Increase patient volume and services per case
Fee-for-service, no fee schedule (or informal)	Retrospectively	Retrospectively	Each item of service provided	Patient choice of provider; negotiation between provider and patient	Increase total volume of services provided
Mixed, e.g., salary plus fee-for-service	Depends on specific mix	Depends on specific mix	Depends on specific mix	Depends on specific mix	Depends on specific mix

[a] Sources: [26][13], [27,6].

3.3.1. Role of the purchaser: specific actions involved in the allocation to providers

Evidence from both developing [28][15] and industrialized countries [29] indicates that, largely as a result of information asymmetries that give providers powerful influence over consumer demand for health care, incentives and regulations oriented towards the supply side of the market (e.g. provider payment methods) are far more powerful policy tools than those oriented solely towards the demand side. Thus, a critical factor for the performance of health care systems is the extent to which purchasers use their financial power actively to encourage providers to pursue efficiency and quality in service delivery. To the extent that purchasers are simply *passive* financial intermediaries, the result is invariably provider-led cost escalation, often accompanied by potentially harmful expansion of unnecessary service delivery (as in China [30] and Korea [31], for example).

Alternatively, purchasers can link their resource allocation decisions to the performance of providers. Such *active purchasing* can take several forms and requires information systems to provide data to both purchasers and providers in a timely manner and management skills and systems to use this information to improve performance. Specific categories of active purchasing mechanisms include:[16]

- *financial incentives* (provider payment methods, such as those summarized in Table 4), that usually shift some of the financial risk for patient care costs to providers and/or are targeted to achieving specific cost control or quality objectives;
- including non-emergency specialty services in the benefit package only if patients have been referred by a primary care *gatekeeper*;
- *managing choice* by pre-qualifying a group of ‘participating’ primary care providers from which beneficiaries can choose, with services (apart from emergency and referral) obtained from other providers not covered (i.e. not paid for) by the purchaser;
- *contracting* by the purchaser only with *selected* providers (in contexts in which the provider market is competitive), requiring them to cooperate with certain utilization controls and provide services for a discounted price or fee schedule, in return for an expected high volume of patients;
- maintaining *profiles* of individual providers for monitoring and providing feedback (and possibly financial sanctions) to them on their treatment, referral and prescribing practices and costs;
- intervention by the purchaser in clinical decisions to reduce inappropriate services and improve quality in the process and outcome of care through various forms of *utilization review* (UR) and quality assurance (QA), including *prior authorization* of elective admissions or specialized ambulatory procedures, review undertaken during a hospitalization (‘concurrent review’), and ‘retrospective

[15] Also available as: How health insurance affects the delivery of health care in developing countries. Policy Research Working Paper WPS 852, Washington, DC: World Bank, 1992.

[16] Kane refers to these as the ‘elements of managed care’ [32].

review' of payment claims, denying full or partial payment if clinical management is found to have been inadequate or certain procedures unnecessary; and
- as part of the UR and QA activities, promote the use of *standard treatment protocols* to compare the practices of contracted providers with defined clinical standards, such as adherence to national essential drug lists and prescribing protocols.

Unless guided explicitly by public health policy considerations and an awareness of market failures in the patient/provider interaction, however, the administrative procedures used by purchasers can easily get 'out of control'. This seems to be happening in the US, where commercial managed care firms are guided by the short-term financial interests of their owners in a market that lacks the regulatory framework needed to ensure/encourage purchasing decisions to be made in the public interest [33]. In response to some of the perceived abuses of 'managed care' (i.e. the actions of these companies, especially the denial of certain services and other interventions into the medical care decision-making process), a patchwork of regulations has evolved at the state and national governmental levels in an attempt to promote quality, access and patient's rights [34–37].

A competitive insurance market is *not* a pre-requisite for active purchasing. Many of these features, such as the use of primary care gatekeepers and fixed budgets, existed in West European health systems for many years before the rhetoric of 'managed care' became popularized in the US [38]. A few examples of active purchasing can be found in low income countries as well, such as the UMASIDA scheme in Tanzania [39] and the health insurance scheme of the Self-Employed Women's Association (SEWA) in India [17]. UMASIDA uses selective contracting, provider profiles, utilization review and standard treatment protocols, and SEWA uses provider profiles and utilization review. These are experiences of particular insurance schemes serving relatively small (compared to the total population of their countries) numbers of people. There is no evidence as yet of active purchasing methods used as part of the broader health system in a low or middle income country.

Based on the experience of West European countries, Saltman and Figueras [38] have suggested that many of the active purchasing features can have positive effects for the health system if purchasers can be held publicly accountable for their decisions. For schemes such as UMASIDA and SEWA, public accountability is not an option, but as member-owned schemes they are at least accountable to their members. This may contribute to the importance that they attach to both quality and cost control. Strengthening local accountability mechanisms figures high on the list of policy recommendations for reforms of community financing in China as well [18]. The experience of the US suggests, conversely, that where there is no such accountability to either the public or to just the covered population, the administrative actions of individual insurers may be a threat to system-wide efficiency, equity and quality. While there is a need for more research to determine the extent to which accountability (and the form in which it is exercised) affects the consequences of various aspects of active purchasing, available evidence and common sense does suggest that it would be dangerous to promote active purchasing that is only accountable to commercial interests.

3.3.2. Market structure

As suggested by Fig. 2, the organization of purchasers (or more generally, insurers) in any health system can be categorized according to the number of these organizations and the extent to which they compete with each other. Some health systems are described as 'single payer'. Canada is frequently cited as an example of a single payer system, even though it has a different purchaser in each of its provinces (the provincial insurance fund). This suggests that a definition of 'single payer' (or single insurer) is needed for clarification. It is useful to think of this as a single purchaser for the main service package on behalf of the entire population living in a defined geographic area. Hence, Canada has a single health care purchaser for each province. Similarly, Sweden has a single purchaser in each of its counties (the County Council), and Zambia has a single purchaser for primary and first referral care in each district (the District Health Boards) and one national purchaser for higher level hospital services (the Central Board of Health). In Costa Rica, there is a single purchaser of health care services for the entire population of the country (the Social Security Fund).

Many countries have more than one significant purchaser of services covering different groups of people in the same (or overlapping) geographic areas. In some cases, there is no competition between them (people are assigned to one or the other). In Mexico, for example, there are two main insurers, the Social Security Institute and the Ministry of Health, and they serve different populations within the same geographic areas. In Thailand, there are more purchasers (five statutory insurance funds), but they also do not compete for enrollees. Until fairly recently, South Korea and Argentina were characterized by multiple (hundreds), non-competing insurers. Alternatively, the US and Switzerland have multiple competing insurers. Some countries, such as South Africa and Jamaica, have a small but still

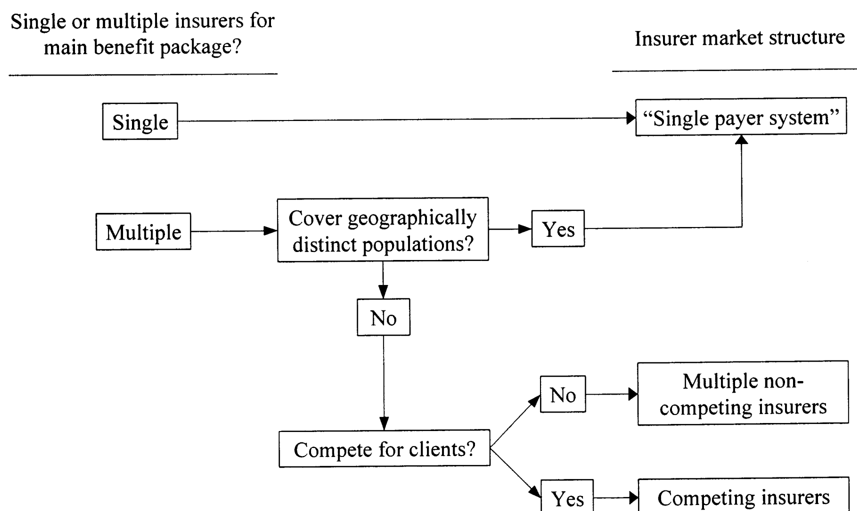

Fig. 2. Framework for understanding market structure of insurers.

important competitive insurance market in addition to the main publicly financed system. While Fig. 2 provides a simplified classification scheme for summarizing purchaser market structure, in reality there are nuances and variations within each of these categories. It is essential that policy makers understand the details and implications of their own market structure if reforms are to proceed from a sensible starting point.

Country experience and certain elements of market failures in the health sector suggest a number of reasons why understanding the market structure of purchasers is important for informing the kinds of measures governments can take to promote accountable active purchasing. There would seem to be theoretical advantages to a single payer system (either a public sector entity or a tightly regulated but independent 'quasi-public' agency, such as a social insurance fund) because a monopsony purchaser of services on behalf of the population could use its financial power to ensure that service delivery occurs in line with the objectives of efficiency and high quality. This is not only because of the possibility to take advantage of economies of scale in purchasing, but also because a single payer can offer a coherent set of incentives to providers, whereas the existence of multiple organizations that pay the same providers, as in the US, can lead to diluted incentives and strategic (and socially unproductive) behavior by providers. Examples of the latter include 'cost shifting' — adjusting prices charged to different purchasers for the same service [40,41], or manipulating the costs of care (and thus treatment practices) for persons with the same clinical condition but different levels of insurance coverage [42] – and increasing the supply of services to patients covered by one scheme in response to changes in the payment system of another scheme [43,44]. In addition, the need to monitor and regulate the actions of multiple insurers means that the administrative costs of the *system* will be high, even if some individual insurers are well run.

Conversely, a case can also be made for multiple competing purchasers. Competition might be expected to lead to a better match between consumer preferences, purchasing arrangements and benefit packages. It is also likely to facilitate a greater degree of experimentation in payment methods and other purchasing features. Moreover, despite the potential advantages of having one powerful and publicly accountable purchaser to generate appropriate incentives to providers, single payer systems are not without problems, both conceptually and in practice. For example, Baeza [21] attributes the bureaucratic approach of many Latin American social health insurance funds to the absence of any real competition.

Irrespective of whatever is theoretically best, the starting point for policy analysis and reform in any particular country is the existing system. In countries in which multiple (often private) insurance funds exist, the appropriate and realistic role for government is to improve its regulatory framework and ability, rather than to try and dismantle the insurance industry [14]. Thus, the issue for any country is not about the theoretically best market structure (whether that is with a single payer or otherwise), but rather, given the existing insurer market structure, what is the appropriate direction for policy changes that will facilitate active purchasing that is publicly accountable, or at least accountable to the population covered by each purchaser.

In many low income countries, the government (usually through the health ministry) is the main organization that pays providers from pooled revenues, even though most health spending is unpooled (i.e. out-of-pocket). While these countries could be characterized as having 'single payer' systems,[17] most do not have an identified agency with explicit responsibility for ensuring that the funds allocated to health care providers are, at least to some extent, tied to the performance of these providers. While this is primarily a question of the purchasing function rather than the market structure, there may be a link between reforms to strengthen purchasing within the publicly funded health system and the introduction of new organizational entities (e.g. Zambia's introduction of the Central Board of Health and District Health Boards as purchasers funded from general tax revenues).

While it is conceptually feasible to create this 'purchaser–provider split' by changing the responsibilities and resource allocation mechanisms within and between existing public sector organizations (as in the UK, for example), this has been difficult to put into practice in low and middle income countries. For example, reform plans in the Kyrgyz Republic included the pooling of all health budget revenues at the oblast (province) level, with the oblast health departments (OHDs) to act as active purchasers introducing new methods of payment for primary and inpatient care. In practice, the OHDs proved unable to take on this role, and a new organization, the payroll-tax financed Mandatory Health Insurance Fund (MHIF), has taken the lead in introducing payment system changes. In early 2000, the government eliminated the OHDs, and the MHIF is set to become the single payer for the entire system, receiving funds from general revenues as well as from payroll taxes [46].

While the reforms in the Kyrgyz Republic and Zambia are innovative and would enable the process of purchasing to be changed from historical patterns of allocating public budget funds, it is far too early to reach conclusions regarding the effectiveness of these changes. They have introduced a purchaser–provider split using public revenues, but they face the challenge of trying to introduce a 'purchasing' mentality into what have been historically highly bureaucratic systems. Moreover, rules governing the use of general tax revenues in many countries (e.g. strict line item budgets) limit the flexibility with which public sector purchasers can allocate to providers and with which providers can use these resources. Hence, while it is *conceptually* possible to introduce a purchaser–provider split in the public sector, it may be very difficult to implement this in *practice*.

[17] In fact, because responsibility for allocating resources to provider units is often divided among different parts of the system, it may be more appropriate to characterize these systems as having multiple, non-competing purchasers. In Ghana, for example, government health facilities are allocated funds from several sources: the central government is responsible for allocating salaries directly to health workers in all public facilities, regional health administrations allocate non-salary operating budgets to public hospitals, and district health administrations allocate non-salary operating budgets to health centers [45].

Table 5
Examples of service provider organizations

Primary (first contact) care, secondary and tertiary care providers, pharmacies, laboratories, etc.
● Government or insurer-owned providers, with varying degrees of managerial autonomy
● Private (or otherwise independent) providers contracted by system
● Independent providers, without contracts
● Individual practitioners, single-specialty group practices, and multi-specialty groups
● Networks of providers linked by ownership or contract

3.4. Provision of services

As with pooling and purchasing, understanding the market structure of service provision is essential for designing appropriate reforms to encourage efficiency and strengthen the insurance function (Table 5). Important sets of policy questions are:

- To what extent is the structure of service provision competitive or monopolistic? How does this vary in different markets within the country (e.g. urban and rural), and for different kinds of services (e.g. primary care, inpatient care, drugs, etc.)?
- How much autonomy do managers of provider units have, especially with respect to staff? Does this differ significantly between the public and private sectors?
- What is the distribution of service providers? Are there parts of the country that have no effective access to health care? Are there particular population groups (e.g. those who are not members of a statutory insurance scheme) with very limited access to health care?

3.4.1. Market structure

Analysis of the existing market structure of providers is an essential input into a broader assessment of the appropriateness of market vs. planning approaches to reform. The latter should not be an ideological decision but rather one based on an assessment of the specific mix of approaches that is most likely to yield improvements in efficiency, quality, and equity. In general, the supply of primary curative care services will be more competitive than referral and specialized care.[18] Where there is a relatively large number of primary care providers (GPs, for example) in a relatively small geographic area, it may be appropriate to use consumer choice or selective contracting by the purchaser with GPs as the basis for allocating funds to providers. In non-competitive markets for particular services, these options are unlikely to be a useful mechanism for steering provider payments because no real choice exists. Hence, it is possible that different approaches (planned or competitive) to provider payment will be appropriate for different kinds of providers in the

[18] Competition for some hospital services exists but is mostly driven by providers (physicians as agents for their patients), not consumers.

same geographic area or for the same kinds of providers in different geographic markets within the same country.

3.4.2. Autonomy of provider units

Many lessons about the effects of reforms, especially those involving changes in the ways that providers are paid, are drawn from countries in which most service provision occurs in private or otherwise independent organizations. Where providers are predominantly 'owned' by the public sector, the lessons drawn from other contexts may not apply because of the constraints on managers usually associated with this form of ownership. For example, both Chile and Costa Rica have implemented (nationally or on a pilot basis) case-based payment systems for public (in the case of Chile) or social security (in the case of Costa Rica) hospitals, but the expected benefits of each have been limited by the constraints facing managers with respect to their ability to adjust their cost structures in response to the new incentives [21].

Many countries have introduced or are considering reforms to increase the autonomy of managers of public sector facilities (mainly in hospitals) in order to simulate the flexibility of independent firms and, in some cases, expose them to competitive pressures. Evidence on the effects of these reforms remains limited, however [47,48]. If increasing the managerial autonomy of public hospitals does not prove successful at increasing their responsiveness to new performance-oriented incentives and leveling the playing field with private hospitals, this would suggest that creating a purchaser–provider split in the public sector may be ineffective at generating efficiency gains. This might mean that the *ownership* of providers does matter, in practical if not necessarily conceptual terms. This may bring the issue of privatization of service provision onto the policy agenda in a new way, provided the context is appropriate and that it is part of a more comprehensive reform effort.

3.4.3. Distribution of providers

A promise of insurance protection is meaningless for people who do not have reasonable physical access to primary care, emergency services, or necessary referral care. Therefore, analysis of the insurance function and proposals for reform must include an assessment of the geographic distribution of providers, irrespective of whether or not individuals happen to be members of an identifiable insurance scheme. In Costa Rica, for example, poorer persons who were ostensibly covered by the social security health insurance system, suffered from very long waiting times that limited their access to primary care. The solution to this was not to expand financial protection (to which they were already entitled) but to establish 800 basic health teams to provide comprehensive primary care [49]. Thus, the insurance function was enhanced by expanding the physical availability of services.

4. Benefit package and out-of-pocket payment: opposite sides of the coin

Operationally, it is useful to conceptualize the benefit package not simply as a list of services to which the population (or beneficiaries of an insurance scheme) is entitled, but as those services, and means of accessing services, for which the purchaser will pay from pooled funds. This definition implies that services not included in this package are those for which direct out-of-pocket payment by users is required to fully or partially finance their provision. This definition is useful for analyzing the financing of the health care system in a comprehensive manner, with fees/cost sharing viewed as a part of the entire financing system rather than just an isolated tool for raising revenues or deterring demand. Moreover, as identified explicitly in Fig. 1, the role of out-of-pocket payments as part of 'provider payment' needs to be taken into account for policy and planning. Key sets of policy questions with respect to this are:

- What is the basis for determining entitlement to benefits?
- Is policy on user fees related explicitly to the benefit package? Are fees designed to promote efficiency through appropriate use of the referral system? Are there provisions to enable access for low income persons, who would otherwise be deterred from necessary service use as a consequence of fees? Are they effective?
- How should package/fee policy differ for services with different 'demand' characteristics?
- What is the nature of the services covered by the system or scheme(s)? To what extent is the package comprehensive, catastrophic, or based on an assessment of the relative cost-effectiveness of medical care interventions? Where people can make use of more than one benefit package (e.g. entitlement to a publicly financed system plus membership in a private insurance scheme), how well do the different packages 'fit' to provide efficient insurance protection?
- How important are formal and/or informal out-of-pocket expenditures as contributors to provider payment? How do such direct payments from patients interact with purchasing methods from pooled funds and affect the environment of incentives facing providers?

4.1. Entitlement to benefits

As noted in the discussion of revenue collection in Section 3.1, the way that the health care system (or schemes within the system) is funded may determine the entitlement of the population to benefits [11]. Where contributions by or on behalf of individuals or families to an insurance fund determine entitlement to benefits and a large percentage of families have no one working in the formal sector, inequities in the receipt of services are likely to be exacerbated. Health care systems funded from general tax revenues tend to offer benefits to the entire population (citizenship entitles people to benefits). However, in many middle and low income countries, such coverage through general tax revenues is only theoretical for parts of the population that lack effective physical and financial access to services of adequate

quality. Hence, what in several countries is a constitutional guarantee of access to all is in fact an empty promise, or at least an unfulfilled one.

4.2. Role of direct payment by patients

It is important to identify, whether fees are designed and implemented as part of a coordinated and comprehensive system of financing and targeted incentives, or whether they are used simply as an isolated instrument for raising revenue from users. Used appropriately, cost sharing can be an essential part of the active purchasing function. For example, the gatekeeper function is strengthened if it is backed by a policy to charge high fees to persons who bypass the gatekeeper (for non-emergency services) and self-refer to specialty service providers. In such a system, the benefit package can be defined as including referral services if these are authorized by the primary care gatekeeper, but excluding the same higher-level services if the patient self-refers. By conceptualizing the benefit package not only as a list of services, but also as the *means* by which the services are accessed, its role as a potential policy instrument for demand management becomes clear.

4.3. Demand characteristics of different kinds of services

In general, the demand for first-contact, primary care services is largely consumer-driven, since the contact with the health care system is motivated by the individual, who is seeking care. However, the demand for referral and specialized care is usually provider-driven, because the provider's greater knowledge about the nature of illness and the types of treatments available puts him/her in a position to identify the need for specialized or referral services on behalf of the sick person, who rarely has such knowledge. Consequently, the potential role of cost sharing as a tool to limit 'unnecessary use' of services due to *moral hazard* is far greater for primary care than for referral services [50].

4.4. Services in the benefit package

Direct payment by patients (i.e. user fees, cost sharing) is conceptually linked to the concept of the benefit package. If a service is 'fully covered', there is no requirement for patient payment at the time of use. If a service is 'partially covered', then patients have to pay something at the time of use ('cost sharing'), but not the full costs. 'Uncovered' services are those, which have to be financed entirely by the user, if they are to be provided at all.

Two particular features of cost sharing policies give an indication of the extent to which people are protected against out-of-pocket expenditures in case of severe illness: a 'benefit maximum' or an 'out-of-pocket maximum'. A benefit maximum means that there is a defined limit on the amount of health care costs that will be paid from pooled funds by the purchaser, leaving individuals at risk for expenditures above this amount. An out-of-pocket maximum, conversely, defines a limit on the total out-of-pocket payments for which individuals are responsible, with all the

costs of care over this amount paid for from pooled funds. In West European countries, there is either no cost sharing or an effective out-of-pocket maximum for inpatient care, meaning that populations are financially protected against the risk of high-cost health care [50]. In many other countries and specific insurance schemes, there is either no out-of-pocket maximum or there is a defined benefit maximum, leaving even 'covered' persons at risk for a substantial level of out-of-pocket expenditure in case of serious or prolonged illness. For example, the benefit package of the 'universal' social health insurance system in the Republic of Korea has an upper limit on the number of days of care covered per year (i.e. a benefit maximum), no out-of-pocket maximum, and excludes entirely several high-cost services [31].

In low and middle income countries, the issue of the benefit package to be guaranteed by health systems has received intense attention since the publication of the *World Development Report 1993* [51]. Among other things, this report promoted the idea that countries should define, *publicly fund*, and ensure delivery of an 'essential package' of clinical health services based on an analysis of the relative cost-effectiveness of interventions. This recommendation has been very influential at the international level and has generated considerable debate [52–55]. In terms of practical implementation, however, as Söderlund notes, 'the development of packages of entitlements based wholly or mainly on cost-effectiveness has yet to be seen at a national level anywhere in the world' (55, p. 201). In political terms, limiting explicitly the services to be available to a large segment of the population has proven to be quite difficult.

The main concern of a conceptual nature raised with the recommendation has to do with the implications of allocating public funds on the basis of intervention cost-effectiveness in countries that lack privately funded health insurance for protection against the risk of high-cost illness. Where no other source of insurance protection exists, targeting public expenditures to the most cost-effective interventions will leave people at financial risk for unanticipated high-cost medical care, thereby ignoring 'the insurance function of health policy' (52, p. 38). A 'catastrophic' funding strategy may be unworkable, however, in low income settings, where even expenditures for basic services may constitute a high percentage of household income and thus prove to be a substantial barrier to access. In this context, the contents of an 'essential' package are likely to be very similar to a 'catastrophic' package.[19] In any event, it may be useful to refine the strategy of *WDR93* by thinking of the 'essential package' not as a 'benefit package' (as defined here), but rather as those services which the government should ensure that the health system is able to deliver to the entire population (but not necessarily fully finance for the entire population).

The validity of the arguments in favor of an 'essential package' or a 'catastrophic package' cannot be addressed in isolation from the other elements of the health system and an understanding of the market structures of poolers, purchasers and

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[19] I am grateful to Christian Baeza for this insight.

providers. For example, without active purchasing to control unnecessary use of specialized care, public funding of a hospital-based 'catastrophic package' is likely to lead to excessive and medically unnecessary use of expensive care. Moreover, the role of an explicit benefit package is different in different health systems. While packages may have multiple objectives, they are either part of plans to (a) ration scarce public funds, or (b) regulate or manage competition among insurers [55]. Thus, the analysis of the existing benefit package, and options for reform, need to be considered within the context of the comprehensive system of health care financing, including the national regulatory framework and capacity.

When considering the possibility of implementing new schemes or changing the benefit packages of existing schemes, an assessment should be made of how well such changes will enhance the overall insurance function in the country. For example, if formal sector employees already have good financial access to private sources of primary care financed through direct out-of-pocket payment, setting up a scheme for them covering an 'essential package' of cost-effective interventions will do little to enhance insurance coverage (in functional terms) for the population as a whole. The creation of a scheme for a relatively well-off part of the population that provides comprehensive protection for both low cost and high cost health care represents a confusion between policy objectives and policy tools. By focusing on getting people into an 'insurance scheme', the objectives of expanding access and financial protection may be lost as policy makers focus on 'insuring' that part of the population least in need of more coverage. This kind of problem has occurred in many low income countries with relatively small percentages of the population in formal employment, generally resulting in a greater concentration of public and private spending on health care for the (relatively) wealthy [13][6]. Countries should thus be wary of implementing schemes offering comprehensive or 'essential' packages for relatively well-off parts of the population, who can afford to pay for primary curative care, since all they really need is catastrophic protection. Comprehensive schemes may only be warranted for this part of the population if they include sufficient 'active purchasing' functions to improve efficiency in the health care system, or, similarly, if they are designed as a means to move a greater share of the population into an 'organized' system of first contact and referral care.

One interesting model of potentially well-coordinated benefit packages involves combining schemes for individual savings (or very limited community risk pooling) to pay for relatively low cost services with a 'backup' insurance arrangement protecting against the cost of financially catastrophic health care. The only country with an explicit combination of savings and insurance schemes with coordinated benefit packages is Singapore [56]. While the specifics of the 'Singapore model' may not be widely applicable, the concept of combining different arrangements for the population to insure against different kinds of risks may be worth considering. In particular, in contexts (e.g. rural areas of some countries) where there is not great expressed demand for broad-based risk pooling [17], it may be feasible to combine public budget funding of high cost services with limited community risk sharing or individual savings (e.g. through 'health cards' entitling users to a fixed number of health center visits) to cover health care costs that are low in absolute terms but still

significant for relatively poor persons, who experience fluctuations in cash incomes over the course of a year. Establishing coordination of the benefit packages covered by different purchasers is not without problems, however, since this creates strong incentives for providers (and purchasers) to 'shift' costs. Thus, it is essential that reforms to coordinate benefit packages among different purchasers include active purchasing mechanisms (e.g. pre-admission certification) to limit cost-shifting behavior or mitigate its effects.

4.5. Out-of-pocket payment and provider payment

In many parts of the world, out-of-pocket payments comprise a substantial share of provider incomes. In this context, it is important to address provider incentives inherent in direct payment as part of a comprehensive policy analysis. For example, in county general hospitals in Shandong Province, China, most patients are not covered by insurance and thus pay for care at the time of service use. These revenues are used to pay cash bonuses to hospital-based physicians, with the level of bonus related to the quantity of services and revenue generated by each physician. A review of patient records from six of these hospitals, over a ten-year period for two tracer conditions revealed a substantial amount of unnecessary service provision, especially for drugs and professional services [30].

Addressing out-of-pocket payments in the analysis of health care financing is complicated in contexts in which most such payments are 'informal' or 'under-the-table'. It is essential, however. Based on their assessment of experience in the countries of the former Soviet Union (FSU), Ensor and Savelyeva [57] suggest that the provider incentives inherent in direct (mostly informal) payment are likely to limit the effectiveness of the provider payment reforms from pooled revenues being implemented in some FSU countries. If, as they note, most physician income comes from fee-for-service payments made directly by patients, the introduction of capitation payments from pooled sources (as in Kazakhstan and the Kyrgyz Republic) may not affect provider behavior in the expected manner.

5. Regulation and information to improve policy outcomes

The conceptual framework presented so far is incomplete. Although issues relating to the regulatory environment have been mentioned, the role of regulation and information as policy tools to enhance the insurance function of health systems needs to be addressed more fully. Fig. 3 provides an outline of the overall conceptual framework that incorporates these important tools for implementing public policy. Of course, the range of available policy tools extends beyond regulation and the provision of information. In order of increasing intrusion into private decisions and actions, the instruments for public intervention in the health sector can be categorized as [58]:

- provision of *information* to the population, providers, insurers, purchasers, etc.;

- *regulation* of how activities may be undertaken in the health system, often in concert with financial incentives;
- *mandating* specific actions by private firms or individuals;
- *financing* health care or insurance coverage with public funds; and
- *provision* of services in the public sector by civil service staff.

For each health care system function described in Section 3, issues arising in a variety of circumstances, including public *provision*[20] and *finance*, were explored and will not be repeated here. The focus here is on critical issues in regulation (broadly interpreted to include mandates) and information provision that apply to each of the functions and policy on benefits and fees. It is useful to think of each of the functions as a 'market', meaning that each is characterized by suppliers and demanders of the function (even in non-competitive contexts). The purpose of regulation and information provision is to enable each of these markets to perform better in terms of public policy objectives.

As noted by Londoño and Frenk [4] in their discussion of 'modulation', the effectiveness with which these functions are implemented (if at all), as well as the way in which their implementation is organized, have important implications for the performance of the health care system. While usually associated with government (as instruments of *public* policy), it is possible for some of these functions to

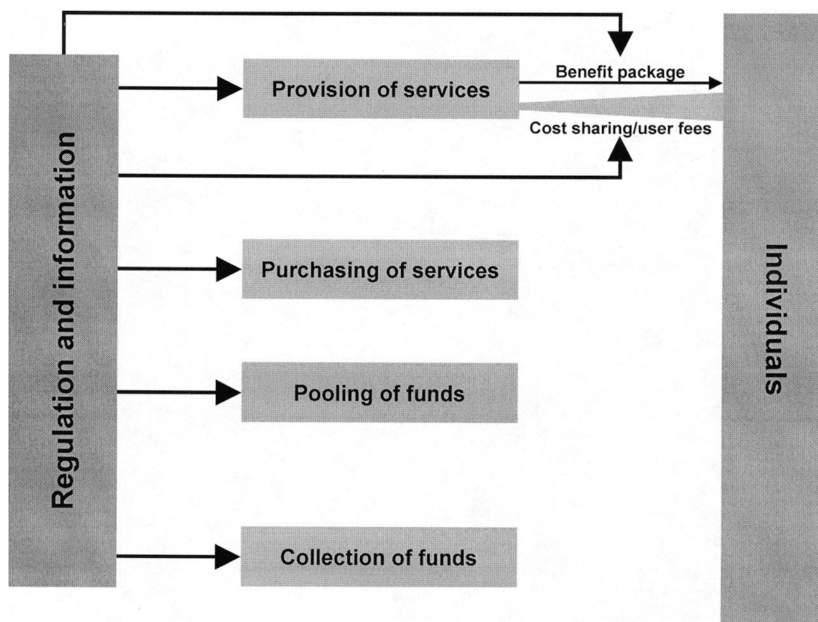

Fig. 3. Completing the framework.

[20] In this context, 'provision' implies not only provision of health care, but also provision of the collection, pooling, and purchasing functions by public sector organizations employing civil service staff.

be implemented by one or several public or private entities. Thus, as with the other functions in the health system, it is important to address the content and market structure of regulatory and informational interventions.

Issues of market structure are less ambiguous here than with the other functions, however. It is in the interests of the system for regulatory and informational activities to be implemented for the population as a whole (e.g. by one insurer or by the MOH on behalf of entire system) so as not to dilute the effectiveness of these functions or limit the benefits to members of particular schemes. Of course, different agencies or firms (or branches of the same agency or firm) could implement the regulations in different geographic areas, but a common set of measures and messages should apply. If each insurer has its own technology assessment policy and drug formulary, for example, this yields higher than needed administrative costs (from the perspective of the entire system), exacerbates inequalities across populations covered by different schemes, and induces cost shifting by providers according to the rules of the scheme by which patients are covered. The absence of these functions means that providers are free to obtain whatever equipment or drugs they deem necessary or marketable. Thus, there should be an attempt to shift the design of these functions to the broad system level on behalf of the entire population as a part of the reform package.

As suggested by the preponderance of examples in Table 6, an important area for which rules need to be set in many countries is with regard to a competitive insurance market. The enforcement of a clear set of regulations on the insurance industry is necessary to set the 'rules of the game' for 'managed competition' to promote expanded coverage in countries that rely on competing insurers as their pooling organizations for health care. Types of measures that need to be enforced include restricting the practice of underwriting, requiring all insurance plans to cover, at minimum, a defined basic benefit package to improve comparability and thus facilitate informed choice by consumers, defining an 'open enrollment' period, when people are free to choose a new insurer or re-enroll in their existing one, and risk adjusting the premiums received by any insurer to further limit the practice and consequences of preferred risk selection. The broad objective of this package of measures is to motivate or induce insurers to compete on the basis of the quality and cost of the services that they offer, rather than to compete by attempting to register young, healthy people who are likely to be less expensive to insure. Put another way, in the context of multiple insurers, the aim is to foster competition in terms of how well they purchase, while reducing the scope for competition on the basis of selective pooling.

It is not intended to go into detail with respect to all of the other specific regulatory and informational measures that should be implemented. The point made here is that an analysis of the insurance function in a country should include a description of these measures. This would include an assessment of *what* activities are being performed, *how well* they are being performed, and *who* (what organization(s)) is performing them. As mentioned above, the effectiveness of these measures for the system as a whole is diluted, when they are carried out by multiple actors by or on behalf of individual schemes. The effectiveness of these measures in

Table 6
Examples of regulation and information across health system functions

Functions/policies	Information provision	Regulation
Collection	Informing exempted persons of their rights/entitlements	Tax treatment of health insurance and health care contributions Caps on social insurance contributions Exemptions from contribution
Pooling	Development and dissemination of standard minimum benefit package	'Qualifying' insurers by requiring they offer at least standard package as basis for competition
	Consumer guidelines to assist with choice among competing insurers	Standards for marketing health plans
	Development of risk adjustment method	Restrictions on underwriting; open enrollment periods
Purchasing	Standardized criteria for assessing health plan performance	Consumer protection mechanisms, such as administrative or legal channels to appeal individual purchasing decisions
	Standardization of data systems to be used to inform purchasing	
	Dissemination of standards and lessons for effective purchasing to 'community based' insurance funds	Requirement for second opinion for denials of certain services
Provision	Development and dissemination of standard treatment protocols and essential drug lists	Licensing, certification, accreditation
	Technology assessment	Rules governing technology acquisition
	Dissemination of information on provider performance	Consumer protection, such as right to seek redress for malpractice
Benefits/fees	Dissemination of exemption categories and entitlements to defined package of services	'Plain language' requirements on marketing of benefits and rules governing use of services
	Definition of explicit benefit package	Exemption rules

enhancing efficiency in the health system depends on the capacity of governments to define and implement (or commission) essential regulatory and informational functions.

6. Conclusions

The framework presented in this paper is proposed as a tool for descriptive analysis of the key functions and interactions within an existing health care system. The review of the components of the health care system provided above suggests

that progress towards the objectives of health care financing policy requires a comprehensive approach involving coordination among multiple aspects of health care systems rather than an approach aimed at reforms in these aspects in isolation from each other. Appropriate policies with respect to enhancing the insurance function require an orientation toward this objective, with the clear understanding that the 'achievement' of specific organizational reforms, such as the creation of an insurance scheme, is a means rather than an end of policy. However, the starting point for reform is the existing institutional and organizational arrangements of the health care system. The framework also implies that even where macroeconomic circumstances limit the scope for additional resource mobilization, there are many policy levers available to governments to enhance the insurance function. Thus, insurance is not just a question of the level of finance. Enhancing the insurance function of health systems requires that policy makers recognize the importance of *managing* the system, not just funding it.

6.1. Market structures at function and system levels

Market structure issues have been stressed in many aspects of the paper, in particular with respect to the pooling, purchasing, provision and even regulatory functions. Part of the discussion of market structure for each of these functions included references to issues that cut across functions. For example, the appropriateness of any method of provider payment cannot be divorced from the market context of service providers and purchasers. To the extent that there are multiple purchasers setting their own incentives but paying the same providers, the collective potential of provider payment reforms is reduced, given the potential for providers to shift costs across patients according to the payment rules of a particular purchaser. This not only weakens the effect of specific payment incentives on provider behavior, it also results in resources being used by providers for a socially unproductive administrative effort to strategize the management of costs according to the rules of each insurer. Similarly, the design of provider payment reforms must be informed by an understanding of the service provider market, and also the capacity of providers to respond to the payment incentives.

This suggests the importance of understanding the market structure of entire health care systems as well as of each specific function. For the health system as a whole, therefore, it is useful to describe how the implementation of health system functions is integrated within or separated across organizations. For example, do purchasers (if there are more than one) have their own providers in an exclusive relationship (i.e. vertical integration), or can the same providers can receive payment (and patients) from different purchasers. For example, does the social health insurance scheme have its own hospitals that only serve its own beneficiaries? This situation is characteristic of a *segmented* health system [4] like that of Mexico [59], in which the different social groups in the population are served by parallel, vertically integrated systems for revenue collection, pooling, purchasing, and provision of health care. Alternatively, do purchasers contract with independent providers? Are publicly owned facilities organized by level of government, so that,

for example, provincial hospitals are funded through provincial governments and district hospitals and health centers are funded through district governments? Answers to these questions give an indication of the nature of the relationship between purchasers, providers, and populations in various geographic markets.

To facilitate understanding of health care system functions, resource allocation mechanisms, and their interactions, 'mapping' the organizations and flow of funds is an indispensable descriptive tool. One approach to this (an extension of the technique pioneered by Barnum [5]) involves turning the 'central column' of Fig. 1 on its side and replacing the contents with the actual organizations and allocation comprehensive approach involving coordination among multiple aspects of health care systems rather than an approach aimed at reforms in these aspects in isolation from each other. Appropriate policies with respect to enhancing the insurance function require an orientation toward this objective, with the clear understanding that the 'achievement' of specific organizational reforms, such as the creation of an insurance scheme, is a means rather than an end of policy. However, the starting point for reform is the existing institutional and organizational arrangements of the health care system. The framework also implies that even where macroeconomic mechanisms used in the country being analyzed (see [45] and [46] for applications to Ghana and the Kyrgyz Republic). Londoño and Frenk [4] also provide visual depictions of market structures for stylized models of health systems, and these can be adapted to the health care functions described here and usefully applied to the specific features of any country.

6.2. Costs and benefits in administering the insurance function

The issue of administrative costs has appeared in various points in the paper, most notably in the discussions of market contexts of poolers and purchasers. The emphasis given to 'active purchasing' in Section 3.3 suggests that it is not desirable to focus simply on minimizing administrative costs because some administrative actions can contribute to health system objectives. Thus, it is useful to analyze various administrative features in terms of both their costs and their contributions to the system. Using the definitions and concepts proposed at the beginning of the paper, this can be phrased as analyzing the costs and benefits of administering the insurance function of the health system.

Table 7
Administrative issues to be addressed in health care systems

Function	Administrative issues
Collection	Avoid undue diversion of attention of health authorities on schemes to increase health revenues, especially in low growth economies
Pooling	Minimize system-wide investments in underwriting and related risk selection activities
Purchasing	Promote accountability, transparency, and knowledge among population and providers
Provision	Minimize cost-shifting and other behaviors to 'game' payment systems

The benefits of certain administrative functions depend on how well they are performed, and analysis of this must be done on a country-by-country, system-by-system basis. However, many administrative activities undertaken in health systems are 'pure costs', that is, they make no contribution to effective insurance coverage of the population. These tend to be aspects of strategic behavior by individuals and organizations that extract private benefits from the system without making a net addition to coverage. No moral judgment is implied; very often, this behavior is simply a product of the market context in which the individuals and organizations are found. In general (but not exclusively), the scope for this strategic behavior is greatest in systems with multiple pooling and purchasing organizations. Policy makers need to respond to these challenges by first recognizing their own context and identifying the strategic behavior likely to arise. This can be followed by appropriate policy responses (broad possibilities are summarized in Table 7), ranging from regulatory actions or incentives to a more radical re-design of the system, if this is politically feasible.

6.3. Schemes vs. systems: avoid confusing ends and means

The objectives of policy relate to the entire population and thus the overall health care system; insurance 'schemes' (and reforms related to them) should be assessed in terms of how the schemes contribute to the system-wide insurance objective. As noted above, for example, many of the actions taken by insurers in a competitive market to enhance the financial viability of their schemes (e.g. underwriting, coverage exclusions) can be in direct conflict with the objectives of the health care system as a whole. Thus, policies that can improve the financial sustainability of individual insurance schemes can, at the same time, detract from the efficiency and sustainability with which the insurance objective of the entire health care system is pursued.

This does not mean that schemes and systems are necessarily in conflict. The challenge to governments is to create the conditions for schemes to contribute to system objectives [18]. By mapping the existing institutional/organizational arrangements and financial flows for health care, policy makers can see more clearly how various sources of funds can be channeled to *complementary* purposes, rather than being segregated into overlapping yet self-contained subsystems. With a good understanding of the content of health policies (such as user fee policy) and the how the implementation of health system functions is organized, the role of schemes can be defined or modified, with corresponding changes in government policies, to serve overall system objectives in an efficient manner. Thus, for example, benefit packages can be made complementary, and certain administrative functions can be shared across schemes or managed jointly with the public system. Schemes can also be directed or encouraged to make use of government-supported policies with respect to essential drugs, treatment protocols, technology assessment, etc.

A challenge facing many low and middle income countries is how to incorpo-

rate various features of active purchasing into the broad health system that serves the majority of the population. One possibility worth exploring is to channel public subsidies for health care to the *purchase* of services on behalf of the population rather than directly to health facilities. This may be particularly true in urban areas characterized by a rapidly expanding number of private providers. In this context, strengthening purchasing on behalf of the population may have a better chance of promoting public policy objectives than relying on government's traditional regulatory mechanisms, which are often ineffective in poor countries.

Acknowledgements

Earlier versions of this paper were presented at meetings in Bangkok, Mexico City, Geneva and Washington during 1998 and 1999, while the author was a staff member in the headquarters office of the World Health Organization. The terminology used herein was finalized in May 1999 following a presentation of the conceptual framework to a joint WHO/World Bank meeting in Geneva. The paper has benefited from detailed comments on earlier drafts and presentations from Christian Baeza, Jan Bultman, Andrew Creese, Varun Gauri, Melitta Jakab, Jack Langenbrunner, Alex Preker, Phyllida Travis and Adam Wagstaff. Additional helpful comments were provided by Bart Criel, Rena Eichler, Julio Frenk, Felicia Knaul, Xingzhu Liu, Anne Mills, Christopher Murray, and Ellie Tragakes. The author is responsible for the views expressed in this paper, and thus the individuals and organizations identified above are not to blame for any errors.

References

[1] Kutzin J. Enhancing the insurance function of health systems: a proposed conceptual framework. In: Nitayarumphong S, Mills A, editors. Achieving universal coverage of health care. Nontaburi, Thailand: Office of Health Care Reform, 1999.

[2] Kutzin J. Towards universal health care coverage: a goal-oriented framework for policy analysis. HNP Working Paper. Washington, DC: World Bank, Health and Population Advisory Service, 2000.

[3] Organization for economic cooperation and development. The reform of health care: a comparative analysis of seven OECD countries. Health Policy Studies 2, OECD, Paris, 1992.

[4] Londoño JL, Frenk J. Structured pluralism: towards an innovative model for health system reform in Latin America. Health Policy 1997;41:1–36.

[5] Barnum H. Health financing reform. Lecture presented at second workshop on health in the Newly Independent States (NIS), 15 December. Washington, DC: World Bank, 1993.

[6] Saltman RB. A conceptual overview of recent health care reforms. European Journal of Public Health 1994;4:287–93.

[7] Saltman RB. Applying planned market logic to developing countries' health systems: an initial exploration. Forum on health sector reform discussion paper no. 4. WHO/SHS/NHP/95.7. Geneva: World Health Organization, 1995.

[8] Berman P, Thompson A. Developing national health accounts in lower income countries: guidelines for boundaries, definitions and classifications. Unpublished draft, Harvard School of Public Health, Boston: International Health Systems Group, 1999.

[9] Schieber G, Maeda A. A curmudgeon's guide to financing health care in developing countries. In:

Schieber G, editor. Innovations in health care financing: Proceedings of a World Bank Conference, March 10–11, 1997. Washington, DC: World Bank Discussion Paper no.365, 1997.
[10] Ensor TE. Developing health insurance in transitional Asia. Social Science and Medicine 1999;48(7):871–9.
[11] Ensor TE. Health system reform in former socialist countries of Europe. International Journal of Health Planning and Management 1993;8:169–87.
[12] Prescott N, editor. Indonesia: health planning and budgeting. A World Bank country study. Washington, DC: World Bank, 1991.
[13] Kutzin J. Health insurance for the formal sector in Africa: 'yes, but...'. Current concerns series, ARA paper number 14. WHO/ARA/CC/97.4. Geneva: World Health Organization, 1997.
[14] Chollet DJ, Lewis M. Private insurance: principles and practice. In: Schieber G, editor. Innovations in health care financing: Proceedings of a World Bank conference, March 10–11, 1997. World Bank Discussion Paper 365. Washington, DC, 1997.
[15] Employee Benefits Research Institute. Trends in health insurance coverage. Issue Brief no. 185. Washington, DC, 1997.
[16] Atim CB, Diop FP, Etté J, Evrard D, Marcaden P, Massiot N. The contribution of mutual health organizations to financing, delivery, and access in health care in west and central Africa: summaries of synthesis and case studies in six countries. Technical report 19. Partnerships for health reform project, Bethesda, MD: Abt Associates, Inc., 1998.
[17] Bennett S, Creese A, Monasch R. Health insurance schemes for people outside formal sector employment. Current concerns series, ARA paper number 16. WHO/ARA/CC/98.1. Geneva: World Health Organization, 1998.
[18] Bloom G, Tang S. Rural health prepayment schemes in China: towards a more active role for government. Social Science and Medicine 1999;48(7):951–60.
[19] Dror DM, Jacquier C. Micro-insurance: extending health insurance to the excluded. International Social Security Review 1999;52(1):71–97.
[20] Kaddar M, Galland B, editors. Prepayment of health care. Children in the tropics 228. Paris: International Children's Centre, 1997.
[21] Baeza C. Taking stock of health sector reform in LAC. World Bank technical discussion paper, LASHD, Washington, DC, 1998.
[22] Chinitz D, Preker A, Wasem J. Balancing competition and solidarity in health care financing. In: Saltman RB, Figueras J, Sakellarides C, editors. Critical challenges for health care reform in Europe. State of health. Buckingham, England: Open University Press, 1998.
[23] Baeza C, Cabezas M. Is there a need for risk adjustment in competing health insurance markets in Latin America? Latin American Center for Health Systems Research, Santiago, Chile, 1999.
[24] van de Ven WPMM, Ellis RP. Risk adjustment in competitive health plan markets. In: Culyer AJ, Newhouse JP, editors. Handbook of health economics. Amsterdam: North-Holland, 2000.
[25] Choongo DE, Milimo JT, Cassels A. Decentralization and health systems change: Zambia case study. Geneva: World Health Organization, 1995.
[26] Barnum H, Kutzin J, Saxenian H. Incentives and provider payment methods. International Journal of Health Planning and Management 1995;10(1):23–45.
[27] Bloor K, Maynard A. Provider payment mechanisms. Background paper to flagship module 7, Flagship course on health sector reform and sustainable financing. Washington, DC: World Bank Institute, 1998.
[28] Kutzin J, Barnum H. Institutional features of health insurance programs and their effects on developing country health systems. International Journal of Health Planning and Management 1992;7(1):51–72.
[29] Saltman RB, Figueras J. European health care reform: analysis of current strategies. EURO series 72, Copenhagen: WHO Regional Office for Europe, 1997.
[30] Liu X, Mills A. Evaluating payment mechanisms: how can we measure unnecessary care? Health Policy and Planning 1999;14(4):409–13.
[31] Yang B. The role of health insurance in the growth of the private health sector in Korea. In: Newbrander W, editor. Private health sector growth in Asia: issues and implications. Chichester, UK: Wiley, 1997.

[32] Kane N. Costs, productivity and financial outcomes of managed care. In: Saltman RB, von Otter C, editors. Implementing planned markets in health care: balancing social and economic responsibility. Buckingham: Open University Press, 1995.
[33] Saltman RB. The sad saga of managed care in the United States. Eurohealth 1998;4(2):35–6.
[34] Paterson R, Dallek G, Hadley E, Pollitz K, Tapay N. Implementation of managed care consumer protections in Missouri, New Jersey, Texas and Vermont. Report prepared for the Henry J. Kaiser Family Foundation. Washington, DC: Georgetown University, Institute for Health Care Research and Policy, 1999.
[35] United States General Accounting Office. Medicare managed care: greater oversight needed to protect beneficiary rights. Report GAO/HEHS-99-68, Washington, DC, 1999.
[36] Scanlon WJ. Managed care: state approaches on selected patient protections. Testimony before the Committee on Health, Education, Labor, and Pensions, U.S. Senate, Report GAO/T-HEHS-99-85, United States General Accounting Office, 1999.
[37] Pollitz K, Dallek G, Tapay N. External review of health plan decisions: an overview of key program features in the states and Medicare. Executive summary of report prepared for the Henry J. Kaiser Family Foundation. Washington, DC: Georgetown University, Institute for Health Care Research and Policy, 1998.
[38] Saltman RB, Figueras J. Analyzing the evidence on European health care reforms. Health Affairs 1998;17(2):85–108.
[39] Kiwara AD. UMASIDA backup report, January to August 1997. Tanzania: Dar es Salaam, 1997.
[40] Brooks JM, Sorofman B, Doucette W. Varying health care provider objectives and cost-shifting: the case of retail pharmacy in the US. Health Economics 1999;8:137–50.
[41] Clement JP. Dynamic cost shifting in hospitals: evidence from the 1980s and 1990s. Inquiry 1997;34:340–50.
[42] Dor A, Farley DE. Payment source and the cost of hospital care: evidence from a multiproduct cost function with multiple payers. Journal of Health Economics 1996;15:1–21.
[43] Yip WC. Physician response to Medicare fee reductions: changes in the volume of coronary artery bypass graft (CABG) surgeries in the Medicare and private sectors. Journal of Health Economics 1998;17:675–99.
[44] Fahs MC. Physician response to the United Mine Workers' cost-sharing program: the other side of the coin. Health Services Research 1992;27(1):25–45.
[45] Nyonator F, Kutzin J. Health for some? The effects of user fees in the Volta region of Ghana. Health Policy and Planning 1999;14(4):329–41.
[46] Kutzin J, Ibrahimova A, Kadyrova N, Isabekova G, Samyshkin Y, Kataganova Z. Resource allocation and purchasing in the Kyrgyz health care system. Report to the World Bank and Ministry of Health, Bishkek, Kyrgyz Republic, 2000.
[47] Preker AS, Harding A, editors. Innovations in health service delivery: corporatization in the hospital sector. Baltimore, MD: Johns Hopkins University Press 2000.
[48] Govindaraj R, Chawla M. Recent experiences with hospital autonomy in developing countries – what can we learn? Data for decision making project technical report. Boston: Harvard School of Public Health, 1996.
[49] Salas Chaves A. Country report on Costa Rica. Paper presented at the WHO Interregional Consultation on Health Insurance Reforms, 3–7 April, Seoul, Republic of Korea. Geneva: World Health Organization, 1995.
[50] Kutzin J. The appropriate role for patient cost-sharing. In: Saltman RB, Figueras J, Sakellarides C, editors. Critical challenges for health care reform in Europe. State of health. Buckingham: Open University Press, 1998.
[51] World Bank. World Development Report 1993: investing in health. New York: Oxford University Press, 1993.
[52] Hammer JS, Berman PA. Ends and means in public health policy in developing countries. In: Berman PA, editor. Health sector reform in developing countries: making health development sustainable. Cambridge, MA: Harvard University Press, 1995.
[53] McGreevey W, Rannan-Eliya RP, Akin J, Musgrove P, van der Gaag J, Hammer J, Pritchett L. Public hospitals as catastrophic insurance: an exchange of views. Unpublished, Washington, DC: The World Bank, 1996.

[54] Kutzin J. Public hospitals as catastrophic insurance. Unpublished response to McGreevey et al., Geneva: World Health Organization, 1996.
[55] Söderlund N. Possible objectives and resulting entitlements of essential health care packages. Health Policy 1998;45(3):195–208.
[56] Nichols LM, Prescott N, Phua KH. Medical savings accounts for developing countries. In: Schieber G, editor. Innovations in health care financing: proceedings of a World Bank conference, March 10–11, 1997. Washington, DC: World Bank Discussion Paper 365, 1997.
[57] Ensor T, Savelyeva L. Informal payments for health care in the former Soviet Union: some evidence from Kazakhstan. Health Policy and Planning 1998;13(1):41–9.
[58] Musgrove P. Public and private roles in health: theory and financing patterns. World Bank Discussion Paper 339. Washington, DC: World Bank, 1996.
[59] Fundación Mexicana para la Salud. Health and the economy: proposals for progress in the Mexican health system. Overview. Fundación Mexicana para la Salud, A.C, Mexico City, 1995.