5. Health systems financing
Health systems financing

5.1 Introduction

Health financing is fundamental to the ability of health systems to maintain and improve human welfare. At the extreme, without the necessary funds no health workers would be employed, no medicines would be available and no health promotion or prevention would take place. However, financing is much more than a simple generation of funds (see Box 5.1). To understand the nature of indicators that can be used to monitor and evaluate health systems financing requires explicit assessment of what it is expected to achieve.

Box 5.1 What is health financing?

Health financing refers to the “function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system… the purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care” (1).

While the goals of health systems financing can be expressed in various ways, there is a general consensus that it should not only seek to raise sufficient funds for health, but should do so in a way that allows people to use the needed services without the risk of severe financial hardship (often called financial catastrophe or impoverishment). This involves the accomplishment of two related objectives: (i) to raise sufficient funds and (ii) to provide financial risk protection to the population. These objectives can be achieved more easily if the available funds are used efficiently, highlighting the need for a third objective, that of efficiency in resource utilization. As a result, the financing system is often divided conceptually into three inter-related functions — (i) revenue collection, (ii) fund pooling, and (iii) purchasing/provision of services. Before focusing on measurement strategies and indicators for these functions it is important to understand their key components.

In most low-income and many middle-income countries, revenue collection derives from a mix of domestic and external sources. Despite the substantial increases in external assistance for health since 2000, the available resources are still insufficient in most low-income settings to assure universal coverage with even a very basic set of needed interventions. The adjustment of Commission on Macroeconomics and Health estimates of the cost of a core package to current prices reveals a need for around US$ 40 per person per year. This is an

1 In 2005, WHO Member States endorsed a resolution urging governments to develop health financing systems aimed at attaining and maintaining “universal coverage” — described as raising sufficient funds for health in a way that allows access to needed services without the risk of a financial catastrophe.
underestimate for many reasons, but even then, almost a third of the 193 member countries of WHO did not have access to even this level of funding in 2005, and 33 spend less than US$ 25 per person per year despite increased external inflows. An ideal indicator for revenue collection would need to capture the amount and adequacy of the funds that are raised.

Financial risk protection is determined by how funds are raised, and whether and how they are pooled to spread the risk across population groups. Direct user-charges, for example, are regressive, i.e. the rich pay the same fees as the poor, which deters some people from seeking or continuing care. The funds also do not provide financial risk protection, in that people pay when they are sick and do not pay when they are healthy. As a result of this lack of solidarity, some people incur financial hardships and may even be pushed below the poverty line. A financing policy must grapple with the question of how to raise funds equitably, which usually implies a degree of progressivity (where the rich contribute a higher proportion of their income than the poor). It also needs to consider how to ensure access to needed services while protecting people against the more severe financial consequences of paying for care. These goals cannot be achieved without some form of prepayment and the subsequent pooling of the collected revenues, i.e. people pay into a pool when they are healthy and can draw on these funds when they are sick. Pooled funds can be derived from tax or health insurance contributions and in most countries they come from a mix of sources. Indicators in this area need to capture the extent to which people are protected from the financial risks associated with ill health. It would also be valuable to measure the extent of progressivity in the way that prepaid funds for health (e.g. taxes and insurance premiums) are raised.

Ensuring efficiency in resource use is a complex issue that should address questions on how to reduce waste and corruption; what interventions should be available for the existing resources; whether services should be provided by the government or purchased from the non-government sector; how providers (e.g. health workers, hospitals, etc.) should be paid to ensure quality and efficiency; and whether specific types of services or incentives should be targeted at the poor. Thus, because of the multiple dimensions, it is not particularly easy to define a single, easily understandable indicator of efficiency for health system financing.

5.2 Sources of information on health systems financing

A national government’s total budget and the part allocated to health are both usually public information, and can be used to evaluate the government’s total commitment to health as well as in proportion to other priorities. A planned budget however, while an important indicator of commitment, can differ significantly from the funds that are eventually released to departments and the subsequent expenditures.

In most countries, information on government health expenditures channelled through the ministry of health is usually available through the ministry of finance or regional authorities in decentralized systems. However, information on government health expenditures that are channelled through non-health ministries, such as military or police health services, are sometimes more difficult to obtain. While budget information is available in “real time”, there is often a delay of perhaps about a year in the production of consolidated expenditure accounts. Public expenditure reviews, if available, are often an excellent source of information. These reviews collate information from various sources that help to determine whether government expenditures follow the budget plans and stated strategic objectives. Sometimes these reviews seek to examine the efficiency of resource

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2 The original estimates did not include antiretroviral drugs for HIV, interventions for non-communicable diseases or a variety of health system strengthening costs essential to being able to deliver the package. Moreover, it assumes that only the interventions in the core set will be provided.
use, though in very broad terms, as well as the ability of the financial management and accounting systems and institutions to track expenditures.3

Information on commitments to official development assistance for health made by donor countries, international organizations and some foundations have been collated by the OECD for many years and reported since 2002.4 However, this information, which is available by donor and by recipient country, should be used cautiously. Firstly, a part of the reported disbursements (and a large part in some cases) does not reach the recipient countries and should not be included in estimates of country health expenditure. These include payments for technical support to countries, payments generally made to nationals of countries other than the recipient country, and funds that are generally spent outside the recipient country. Secondly, there is an increasing move towards general budget support to countries, which is difficult to allocate to the different sectors. General budget support is reported in a separate section in the OECD database, and a method of allocation between the different sectors needs to be devised. Thirdly, emerging donors such as China and India, and some private philanthropists, are not included in the database.

It is better to track expenditure from external sources at the country level, but this is often difficult especially where this funding is channelled through non-governmental organizations (NGOs) or the private sector. Many countries do not require external donors or NGOs to report their in-country expenditures, or if they are required to submit budgets with proposals at the time they gain permission to work in the country, there is no database where this information is systematically captured nor where actual expenditures are recorded. This also applies to domestic NGOs and other charitable organizations supporting the health sector, where it is often difficult to track expenditures.

National-level expenditures as a result of third-party payments (e.g. from insurance and/or social security) may be available from fund managers. If third-party payers are primarily small community-based organizations, such as community-based health insurance funds, then compiling expenditure information is much more difficult.

Information on household out-of-pocket expenditures is only available from household surveys. The World Bank has sponsored Living Standards Measurement Surveys since 1980 from which information on household health expenditures can be extracted,5 and World Health Surveys sponsored by WHO in 2000-20016 also contain a household expenditure module.7 Many countries undertake household income and/or expenditure surveys from which information on health expenditures can be gleaned. There is considerable variability in the types of questions used to obtain household health expenditures, which makes comparisons over time and across countries difficult. As a long-term goal it is important to choose a standard instrument that would enhance comparability, either for independent surveys or to piggyback onto other household surveys carried out for other reasons.

**National Health Accounts**

The best source of health expenditure data is from NHA, which combines expenditure data from all sources and through all types of financial agents. The System of Health Accounts (SHA) developed by the OECD for

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3 Probably the bulk of public expenditure reviews have been sponsored by the World Bank and UK Department For International Development to date — see, for example, http://www.opml.co.uk/services/public_expenditure_reviews/index.html.
5 http://www.worldbank.org/LSMS
6 http://www.who.int/healthinfo/survey/whsresults/en/index.html
7 Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) include modules on household assets, but not expenditures.
its countries has become the international classification standard although some country analysts prefer to use variations on this theme, including an approach called 'national account sub-accounts'. In general, it is possible to modify the figures emerging from one method to make them consistent with the other. Recently, the WHO, World Bank and USAID jointly developed a guide to undertake NHA in low-income countries based on SHA, adapted to meet the needs of low-income countries. Application of the methods in a variety of settings has resulted in a group effort between the OECD, Eurostat and WHO to revise the SHA with the goal of making it more appropriate to countries at all income levels.

National Health Accounts studies vary among countries — some countries have undertaken regular NHA studies, some have undertaken one or two studies but not regularly, while still others have yet to undertake a full NHA exercise. In the last case, data on health expenditures need to be collated from various sources. WHO works with countries to collate information from these sources, which combined with the information provided by countries who have undertaken NHA studies, allows annual reports of selected health expenditure aggregates for 192 of its 193 member countries. These figures also form the basis of the health expenditure data reported in the World Bank’s World Development Indicators.

Various organizations provide support to countries seeking to develop better information on health expenditures, such as the USAID’s Health Systems 20/20 project, WHO and the Swedish International Development Cooperation Agency. However, full NHA analyses have yet to be institutionalized in all countries.

5.3 Core indicators

Building on the discussion in Section 1, the core indicators for the availability of funds and the extent of financial risk protection have been agreed on at various fora.

**Recommended core indicator 1a: Total expenditure on health**

This indicator provides information on the overall availability of funds. Sufficiency must be considered as a second step, in relation to country-specific estimates of the funds needed to ensure access to the desired level of services, or in terms of comparisons with other countries with similar levels of gross domestic product (GDP) per head. Some countries also seek to compare their total expenditure on health as a proportion of GDP with those in other countries. This is included in Table 5.1 as a possible additional indicator.

**Definition**

- **Numerator:** The sum of all health expenditures (ideally from NHA and including all sources of funds — external, government, and non-government including household out-of-pocket payments).
- **Denominator:** Total population.

**Data collection methodology**

Data collection is through country-specific reporting by the ministry of finance/ministry of health/other relevant ministries (for government expenditures), donors (for funding that is not channelled through the...
ministry of finance/ministry of health), insurance fund managers (for third-party funding) and household surveys (for out-of-pocket expenditures) using NHA methodology. Population numbers should ideally be de facto rather than de jure population, with the most complete cross-country source being the United Nations Population Division.

**Periodicity**

Health expenditures should ideally be calculated on an annual basis. Full surveys of household expenditure are expensive and could be done less frequently, with extrapolations in the inter-survey years.

**Cost**

The cost of initially producing NHA varies considerably depending on the information and bureaucratic structure already available and the need for external technical assistance. Experience in some countries has shown that the costs to pull together existing information for the first NHA could be as low as US$ 50 000–75 000 with subsequent yearly costs largely related to producing recurrent statistics. This assumes that household expenditure surveys are already available and that international consultants do not do the bulk of the work. Initial costs include: a) training personnel; b) ensuring adequate computers and office infrastructure; c) logistics related to explanatory meetings and training on completing reporting forms or collecting information; and d) development of report templates relevant for national planning (2).

**Recommended core indicator 1b: General government expenditure on health as a proportion of general government expenditure (GGHE/GGE)**

This indicator is related to how much funding is raised for health and reflects government commitment. African heads of state committed to ensuring that 15% of overall government expenditure goes to health in the Abuja Declaration of 2001 (3). This can be taken as an aspirational goal, which even a few of the richer countries in the world have yet to achieve. While it is difficult to justify why 15% is the ideal cut point, many countries still devote less than 4% of GGE to health, suggesting low levels of government commitment.

**Recommended core indicator 2: The ratio of household out-of-pocket payments for health to total expenditure on health**

The ideal indicator of financial risk protection is the proportion of the population incurring catastrophic health expenditure due to out-of-pocket payments. A variation is the percentage that is impoverished as a result of out-of-pocket payments.

WHO has defined financial catastrophe for the past eight years as direct out-of-pocket payment exceeding 40% of household income net of subsistence needs. Subsistence needs are taken to be the median of household food expenditure in the country. Expenditures in excess of the 40% cut point generally require reallocation of household expenditures from basic needs, sometimes even from children’s education (4). The World Bank now has a simpler definition of financial catastrophe, i.e. occurring when out-of-pocket payment exceeds 10% of a household’s total income. While this does not incorporate the progressivity allowed by the deduction of basic subsistence needs, it is probably simpler to estimate and similar to those derived by the WHO method.

To explore questions of equity, it may be possible in most cases to estimate the incidence of financial catastrophe by income quintile, or by wealth quintile if a separate wealth or asset index can be constructed from the same household survey. Indeed, in most developing countries, self-reported total expenditure is regarded as a more reliable indicator of command over resources than self-reported income, and thus these comparisons are usually made in terms of total expenditure quintiles (5). Such comparisons however need to be interpreted carefully.
many countries the quintile with the lowest income (or lowest level of total expenditure) has a lower incidence of catastrophic payments than richer quintiles. This reflects the perverse nature of user fees. When people are very poor, they do not use services for which they have to pay, and thus do not suffer a financial catastrophe. As they become slightly richer, they begin to use services, but then suffer the adverse financial consequences linked to paying for care.

Definition
The number of households in each region where direct out-of-pocket payments to providers for health during the past 12 months was more than 40% of their household income net of subsistence, or 10% of their total income.
- **Numerator**: Household out-of-pocket expenditure for health during the past 12 months.
- **Denominator**: Household income. As argued above, in most developing countries it is accepted that self-reported total expenditure on health is a more reliable indicator of household purchasing power than self-reported income, so this should be used as the denominator in those settings.

Data collection methodology
Household interview surveys.

Periodicity
The ratio is not likely to change dramatically over time unless substantial health financing reforms are done. In most countries, measurements done every five years would be adequate.

Cost
The cost for undertaking a national level household survey with a sample size sufficient for regional level disaggregation specifically for the purpose of collecting health expenditure data varies widely depending on the existing in-country capacity. The cost range may be from US$ 350 000 to US$ 1 000 000 depending on the level of technical support required. However, usually health expenditure data would be collected as part of a broader income and expenditure survey, or as an added module in a broader health survey. Accordingly, the additional costs are likely to be relatively small. The main new cost will be incurred by personnel who analyse the data and produce the information for policy makers.

Despite the logic of using the incidence of financial catastrophe as the core indicator, it is argued that a simpler indicator of financial risk protection is the ratio of out-of-pocket spending to total expenditure on health (OOP/THE) — or the inverse, the ratio of prepaid expenditures (taxes and insurance) to total expenditure on health. Undoubtedly, there is a high correlation between this indicator and the incidence of financial catastrophe (and impoverishment), and therefore is included as the core indicator here.

While the indicator may appear simpler, it requires exactly the same data from household expenditure surveys as the indicator on financial catastrophe described above. So if the surveys to estimate OOP/THE are available, they can also estimate the incidence of financial catastrophe. Experience has shown that policy makers can immediately perceive the political relevance of the incidence of financial catastrophe and/or impoverishment, whereas OOP/THE may not have the same immediate policy impact. For the purposes of discussion, at this stage OOP/THE is used as the recommended indicator in Table 5.1, with the incidence of financial catastrophe as an optional indicator. However, the ordering preference can easily be reversed.
Indicator to capture efficiency of the health financing system

At this stage, a core indicator to capture the efficiency of the health financing system is not being recommended because it is difficult to define a single indicator that is relatively simple to measure and easy to interpret. The proportion of total government health expenditure spent on salaries is included as one possible optional indicator, but needs to be interpreted very carefully. Certainly if this proportion is very high, health workers would not have sufficient drugs or other inputs to be able to do their jobs properly. However in some countries, where governments choose to contract out the provision of services to the private sector or NGOs rather than employ their own personnel, the proportion spent on salaries is low because payments to external contractors do not appear as salaries. Thus, this is not a very useful indicator of efficiency.

Certain optional indicators that could be measured depending on the capacity of the country are summarized in Table 5.1. Some of these reflect processes or outputs, while others are more related to outcomes.

5.4 Needs assessment for institutionalizing collection of data for monitoring finance indicators

Since total expenditure on health is currently being reported for 192 of the 193 WHO member countries, the primary need is to improve the quality of information that is already being collected, and to strengthen the institutionalization of the generation and utilization of this information. This requires regular and accurate reporting of government expenditures at all levels of the government, regular household expenditure surveys, and some method of routinely tracking expenditures by NGOs, faith-based organizations, philanthropies and the private sector.

WHO has identified four steps essential to the institutionalization process of NHA (2). These are: (i) creating a demand on the part of policymakers for institutionalization; (ii) determining a location where NHA is housed; (iii) establishing standards for data collection and analysis; and (iv) instituting data reporting requirements.

The institutionalizing process of NHA also requires an assessment of existing infrastructure and systems and should include the following critical information.

- Government and stakeholder commitment to NHA as indicated by such steps as delegation of responsibility for generating NHA to a specified body and allocation of a budget for implementation.
- An assessment of existing human resources numbers and capacity, and infrastructure for generating NHA data.
- Clarity of health financing mechanisms related to funding sources, processes for channelling funds, and knowledge on where information on external health funding and third-party funding is available including if it is provided to any central or coordinating body. An assessment of the process currently used by WHO for NHA estimates for the country and identification of which data are weakest or least reliable should help obtain this information.
- Identification of problems with regards to transparency in national or donor health funding, and the need for policy changes or advocacy to improve this.
- Development of an audit function within the NHA to periodically assess the completeness and accuracy of the submitted or collected information, with a systematic strategy for feedback to the data sources to improve availability and quality of needed information.
5.5 Using financial indicators for health systems strengthening

In general, total expenditure on health should be increasing both in absolute terms and as a proportion of GDP in low-income countries, while the proportion of households facing financial catastrophe as a result of out-of-pocket payments should be decreasing. Financial indicators could be used to answer the questions listed below.

Is the total expenditure on health per capita, within the range defined internationally, enough to allow universal coverage of key health interventions (e.g. at least US$ 40 per capita)?

Is the percentage of the national budget for health reasonable given the national situation? Does it reflect a strong government commitment to health?

What proportion of total expenditure on health is dependent on external funding, and may not be sustainable in the long run? What steps can be taken domestically to raise additional funds for health?

Does a high total expenditure on health get reflected in health outcomes? If not, the efficiency and quality of service, and possibly transparency and corruption issues need to be reviewed.

2. What policies or implementation practices are needed to decrease catastrophic expenditures?

What does the assessment of out-of-pocket catastrophic expenditure show in terms of health finance mechanisms that contribute to, or hurt, equity in financing health? What other options are available to improve equity?

Are the existing health finance policies being implemented in a transparent manner (e.g. are the households receiving exemptions or subsidized services and medicines if they are eligible?).

Are there regional disparities that need to be addressed separately?
### Table 5.1 Recommended indicators on health systems financing

<table>
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<tr>
<th>Objectives and actions</th>
<th>Possible output indicators</th>
<th>Data sources</th>
<th>Associated outcome indicators</th>
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</table>
| 1. Raising sufficient funds for health. In low-income countries this must come from external and internal sources. Increasingly reliable external funds are needed in most countries, but more can be done to raise funds, or raise them more efficiently, domestically. | 1. Data on total health expenditures routinely collected and reported. | 1. National Health Accounts (NHA) | **Core indicator 1a.** Total expenditure on health (THE)  
**Core indicator 1b.** General government health expenditure as a proportion of general government expenditure (GGHE/GGE)  
**Optional Indicator 1:** THE as % GDP |
| 2. Improving financial risk protection and coverage for vulnerable groups. In most countries this requires moving away from direct out-of-pocket payments and towards a form of prepayment with risk pooling that is tax- or insurance-based. | 2a. Patient / household out-of-pocket expenditures of accessing or obtaining services collected intermittently.  
2b. In countries with widespread health insurance: Number (%) of people/households covered by health insurance, by population group and specifically for poor/vulnerable groups. | 2a. Household expenditure and utilization surveys.  
2b. Health insurance enrolment records. | **Core indicator 2.** The ratio of household out-of-pocket payments for health to total expenditure on health  
**Optional indicator 2:** % of households impoverished annually by out-of-pocket payments, by expenditure quintile |
| 3. Improving efficiency of resource utilization. | 3a. Information on government expenditures on wages and salaries readily available.  
3b. Availability of data on government expenditure on priority problems, by level of government. | 3. Government expenditure accounts. | **Optional indicator 3:** Government expenditure on wages and salaries as % GGHE |
| 4. Improving financial transparency and management at operational levels. | 4. Number and % of facilities meeting established national financial management criteria. | Audit office. |
Selected tools


Health financing policy requires decisions on how to raise funds, how to pool them, and how to use them equitably and efficiently. Informed decision-making requires reliable information on the quantity of financial resources used for health, their sources and the way they are used. National Health Accounts provides evidence to monitor trends in health spending for all – public and private sectors, different health-care activities, providers, diseases, population groups and regions in a country. It helps in developing national strategies for effective health financing and in raising additional funds for health. The information can be used to make financial projections of a country’s health system requirements and compare its experiences with those in the past or with those of other countries.


This Guide walks the reader through the process of acquiring and evaluating data for National Health Accounts, and provides step-by-step examples on translating numbers into information useful for policy analysis and development.

OASIS (forthcoming) (http://www.who.int/health_financing/tools)

The Organizational Assessment for Improving & Strengthening Health Financing can be used to: (i) analyse the performance of a health financing system by assessing key design issues and implementation, (ii) identify bottlenecks in the functioning of institutions and organizations and (iii) help in finding institutional and organizational alternatives.

Further reading

Health expenditure

Financing policy


Financial catastrophe and impoverishment


Related links

GTZ-ILO-WHO-Consortium on Social Health Protection in Developing Countries (http://www.socialhealthprotection.org, accessed March 27, 2010).

OECD data on health expenditures (http://www.oecd.org/document/16/0,3343 en_2649_34631_2085200_1_1_1,00.html, accessed March 27, 2010).

WHO CHOosing Interventions that are Cost Effective (CHOICE) (http://www.who.int/choice, accessed March 27, 2010).

WHO Contractual arrangements in health systems (http://www.who.int/contracting, accessed March 27, 2010).

WHO’s Department of Health Systems Financing (http://www.who.int/healthsystems/financing, accessed March 27, 2010).


WHO Regional Office for Europe, health systems financing programme (http://www.euro.who.int/financing/, accessed March 27, 2010).

WHO Regional Office for South-East Asia, *Health systems development* (http://searo.who.int/EN/Section1243/Section1307.htm, accessed March 27, 2010).

WHO Regional Office for the Western Pacific. *Health financing and social protection* (http://www.wpro.who.int/sites/hcf/overview.htm, accessed March 27, 2010).


References


