

HEALTH FINANCING: A BASIC GUIDE



World Health
Organization

Western Pacific Region

HEALTH FINANCING: A BASIC GUIDE

WHO Library Cataloguing in Publication Data

Health financing : a basic guide

1. Health care economics and organizations. 2. Health economics. 3. Financing Health. 4. Poverty. 5. Insurance, Health.

ISBN 92 9061 143 x (NLM Classification: W 74)

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ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
BOD	Burden of disease
CEA	Cost-effectiveness analysis
CHOICE	Choosing Interventions that are Cost Effective
CMH	Commission on Macroeconomics and Health
CNS	Central nervous system
COPD	Chronic obstructive pulmonary disease
DALY	Disability-adjusted life year
ESP	Essential services package
GAVI	Global Alliance on Vaccines and Immunization
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GDP	Gross domestic product
GNP	Gross national product
HIPC	Heavily-Indebted Poor Countries (Initiative)
HIV	Human immunodeficiency virus
HMO	Health maintenance organization
LMIC	Low and middle income countries
MDG	Millennium Development Goal
NGO	Nongovernmental organization
NHA	National health account
NHS	National Health Service (United Kingdom)
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PHC	Primary health care
PRSP	Poverty Reduction Strategy Paper
RBM	Roll Back Malaria
STB	Stop TB
STI	Sexually transmitted infection
TB	Tuberculosis
UNICEF	United Nations Children's Fund
USA	United States of America
WDR	World Development Report (World Bank)
WHO	World Health Organization
WPR	Western Pacific Region

Note: In this publication, "\$" refers to US dollars.

ACKNOWLEDGEMENTS

This guide was prepared by a team comprising Steven Fabricant (consultant and principal author), D. Bayarsaikhan (Regional Adviser, Health Care Financing) and Anjana Bhushan (Technical Officer, Poverty, Gender and Human Rights) at the World Health Organization Regional Office for the Western Pacific. The team gratefully acknowledges the thoughtful comments and inputs received from Graham Harrison, Soe Nyunt U and Aviva Ron. Marc R. Crowe edited the publication. Design and layout were handled by Bhoie Hernandez.

INTRODUCTION

Health and economics have become critically intertwined. Health system performance incorporates goals that are related to health financing and economics. Economics is one discipline that links the main health system functions of service delivery, input production, financing and stewardship. Although the problems are severe and solutions are elusive, the technical concepts are fairly simple.

This guide focuses on health economics and financing with the objective of providing readers with a basic vocabulary and understanding of the most important issues. It does not attempt to provide *all* the tools needed for detailed analysis. Rather, the guide aims to offer staff of the World Health Organization (WHO) Regional Office for the Western Pacific (WPRO) enough information on facets of these issues to be informed participants and provide further assistance at various levels of health planning and policy dialogue. In addition, this guide could be useful in developing the knowledge base of health ministry staff in the region*.

The guide is organized into 5 main sections. Section 1 discusses some key health and development issues, including health and poverty, as well as globalization. Section 2 is devoted to a discussion of the provision and financing of health care. It covers topics such as public-private mix, privatization, the role of governments as purchasers of health services and health care financing alternatives—including tax-based financing, external funding, financing through efficiency gains, and user charges. Section 3 covers key health insurance concepts and issues, such as private (for-profit) insurance, medical savings accounts, key characteristics of social health insurance, and provider payment issues and options. Section 4 discusses issues and options in resource allocation and prioritization, including costing of health services and cost analysis. Section 5 focuses on national health accounts (NHAs). Topics in this section include development of implementing NHAs and their use.

Most sections end with a glossary of selected technical terms and concepts, as well as selected references relevant to the topics under discussion.

* Readers seeking more detailed learning materials on health economics, both on the level of appreciation of issues for decision-makers and for basic economic analysis, should refer to Zöllner H., Stoddart G., Selby Smith C., eds. *Learning to live with health economics*, Copenhagen, WHO Regional Office for Europe, 2005. Available at: http://www.euro.who.int/futuresfora/publications/20050421_1 (accessed 16 February 2006).

1. HEALTH AND POVERTY

Health is more than the well-being of an individual. The health of an individual or group affects the well-being of communities and nations through economic productivity, school attendance and performance by children, and long-term prospects for the development of a country's human resources. Poor health can trigger a vicious cycle that drags down national well-being—as ill health engenders poverty, which in turn perpetuates ill health.

1.1 What is poverty?

Policy-makers and social scientists have been preoccupied with defining poverty for many years, although application of this concept to the developing world has been much more recent. Poverty is multidimensional. It includes low income, poor access to resources and skills, vulnerability, insecurity, voicelessness, and disempowerment. However, the most fundamental dimension of poverty arguably is low income. Poverty also often correlates with gender, race and ethnicity.

The concept of poverty lines allows comparisons between population groups and between countries. The poverty line is an income level that allows households to provide themselves with a minimum of goods and services, usually defined in terms of basic nutritional needs. Families with incomes below this threshold are more likely to suffer from chronic malnutrition, inferior housing and inability to send children to school. They also would be subject to the other disadvantages linked to low income.

Poor children live in areas where the health facilities rarely have any drugs in stock, which might explain the inequalities in child survival between poor and better-off children. Is this lack of drugs due to a dearth of resources? Are public expenditure levels too low? Or is the allocation of expenditures biased against areas where poor people live? Policy can influence the socioeconomic or underlying determinants of health in many ways by rectifying the root cause.

1.2 Health, poverty and development

Reducing poverty is a major goal of nearly all development organizations, as well as the partner governments of low- and medium-income countries (LMIC). It is a multisectoral task that requires the

application of all accumulated experience and current evidence, combined with massive and coordinated investments by developed countries and political commitment by their recipient partners.

Appropriate investment in health, if used effectively, improves health standards for the population. In turn, a healthier population generates incremental gains in economic growth, which increases the resources that institutions and households can use for health. However, those additional resources need to be distributed and used equitably to improve health overall.

Governments' ability to finance the entire spectrum of health services for all their citizens is limited, and economic difficulties in recent years have magnified these constraints. The spending gap between rich and poor countries has continued to grow, with lower-income countries spending a smaller percentage of their much smaller national resources on health.

The gradual shift in WHO's policy towards the "new universalism," defined as the delivery of high-quality essential care to all, implies a need to prioritize health interventions. This makes rationing services in a country, without excluding whole groups of the population, necessary and efficient.

Most people believe that health is worth paying for, and that their own families' health is worth a lot. However, just how much they would be willing to spend is less clear. Faced with high costs, patients must make decisions that often interfere with their receiving the best available

treatment, such as choosing low-quality care and self-medication. Health providers encounter economic issues in their everyday work and on a personal basis as consumers of health services.

For national governments and planners, investment in health improvement is as essential to development as investments in education, agriculture and industry. However, policy-makers have had to face the harsh reality that the demand for health care is almost unlimited and still growing, while resources are finite and, in many countries, shrinking. Governments have learned to limit promises about what can be done. Still, peoples' expectations of health systems have risen, increasing demands and pressures on public and private health sectors.

Especially at the policy and programme-planning levels, a review of decisions is necessary in the light of the economics involved. Questions need to be asked and answered before policies are made and programmes implemented. These might include:

- Is this intervention the best way to approach this problem?
- Will this programme be financially sustainable?
- Is it the best way to meet the health policy goals of government?
- Will the poorer communities receive substantial benefits from these services?
- How can these sometimes conflicting concerns be addressed in a balanced way?

Economic analysis has become important in formulating health policy due to the economic problems that have beset nearly every country over the past three decades. The reality that some countries (or parts of some countries) have better health outcomes than would be expected from their level of spending on health provides a direction to follow. A nation's health depends on far more than the money and other resources spent: how the resources are generated and the efficiency of expenditure are extremely important. Table 1 shows socioeconomic and health indicators for five Western Pacific Region (WPR) LMICs, as an example of some of the issues discussed in this manual.

Even in highly industrialized countries, rapidly rising health care costs have prompted calls for wiser expenditure policies. Policy-makers and managers should now understand that the best results cannot be achieved unless available resources are invested in interventions that have the greatest impact on the most people. Further, those interventions must be delivered at the lowest cost and with the least waste.

Table 1: Basic economic and health indicators in selected WPRO countries

	Cambodia	China	Lao PDR	Philippines	Viet Nam
Per capita GNP (\$)	\$260	\$780	\$280	\$1020	\$370
DALY—adjusted life expectancy at birth	45.7	62.3	46.1	58.9	58.2
Infant mortality 1998 (per 1000)	102	31	96	32	34
Per capita 1997 government health expenditure*	\$7	\$18	\$33	\$48	\$13
Total per capita 1997 health expenditure*	\$73	\$74	\$53	\$100	\$65

DALY = disability-adjusted life years,¹ GDP = gross domestic product, PDR = People's Democratic Republic.

*Total and government health expenditures are in international dollars.

Source: World Development Report 2000/2001, World Bank; and The World Health Report 2000, WHO.

Health economists try to find solutions to two central questions:

- How can more resources be found for health without unfairly burdening the poor?
- How can available resources be used to benefit the most people and improve equity, i.e., reduce health inequalities that are avoidable or unfair?

However, conventional solutions are rarely successful, because the health environment is unique in several respects: health care is a public good; a sick patient rarely can “comparison shop”; the provider, and not the patients, orders the services; and, in some countries, the profit motive dominates or an inefficient financing system distorts the market. Each of these issues encompasses many more, fuelling the topic of health sector reform.

Box 1: The report of the Commission on Macroeconomics and Health

The report of WHO's Commission on Macroeconomics and Health (CMH), published in 2001, has contributed to new thinking about health and development. The report argued strongly that people's well-being—the principle objective of development—can be ensured through good health, particularly for poor and low-income populations. In this way, investment in health is a concrete input to development. The report recommended specific investment goals and time frames, linked with other global health and development initiatives, such as the Millennium Development Goals (MDGs). The CMH argued that, by taking essential interventions to scale and making them available worldwide, eight million lives, representing 330 million DALYs, could be saved each year by 2010—creating an estimated \$180 billion per year in direct economic savings by 2015. However, the actual economic returns could be much higher, since improvements in life expectancy and reduced disease burden would tend to stimulate growth through lower fertility rates, higher investments in human capital, increased household savings, increased foreign investment, and greater social and macroeconomic stability. The correlation between better health and higher economic growth is derived from macroeconomic analyses suggesting that another \$180 billion per year by 2020 will be generated from indirect economic benefits. More information on WHO's support to the CMH follow-up process is available at: www.who.int/macrohealth.²

1.3 Health and poverty links

The general association between improvements in health and development has been recognized for a long time. However, the focus on the link between health and socioeconomic status began largely when economic development in low-income countries slowed dramatically in the late 1970s. This demonstrated that the poor and disadvantaged of the developing world, especially in rural areas, not only had not received a fair share of benefits from investments in health systems; they had to bear an unequal burden in financing them under user-fee schemes introduced to augment the resources of national governments.

¹ DALY is an indicator to measure the burden of disease.

² Accessed 12 October 2005.

Health is a key component of current poverty-reduction programmes. Alleviating suffering is a basic humanitarian goal, even if equality of health status cannot be achieved. Other things being equal, a healthy population is more economically productive than one that is not, allowing goals in other sectors to be achieved faster. Political stability, an issue of interest to the developed world as much as to LMIC governments, generally accompanies reductions in poverty. Finally, because of the mutually reinforcing links between poverty and ill-health, investments in improving the health of the poorer segments of the population might be more cost-effective than in other sectors—and certainly more effective than direct transfers of wealth.

The momentum is clearly in favour of the poor. Much is due to a renewed commitment from the international community to specify poverty-related goals and objectives. These global initiatives determine development fashions and greatly influence national contexts. They can be divided into two groups. The first group comprises initiatives that aim to scale up disease-control programmes targeting poverty-linked diseases, including Roll Back Malaria (RBM), the Global Alliance on Vaccines and Immunization (GAVI), Stop TB (STB) or the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM). These programmes are aimed at diseases that predominantly affect low-income countries, and the poor within countries. The second group involves initiatives that focus on overall national development and poverty reduction, but with prominent health components. Poverty Reduction Strategy Papers (PRSP) provide a framework for the health sector to focus on poverty-related health outcomes at the same time that other sectors are focusing on the other aspects of poverty. This is expected to create synergy that would correct the persistent lack of policy coherence across sectors. PRSPs have the potential to substantially increase the resources for the health sector through access to concessional funding and grants. They promote country ownership and broad-based participation in setting national development policies with a clearer pro-poor focus. They also aim to streamline of donor conditionalities and funding, and promote joint financing mechanisms.

Improving the health of the poor can be challenging, since it involves setting priorities and accepting trade-offs that arise in the course of policy-making and implementation:

- What are the most effective strategies for improving the health of the poor?
- Can overall health improvements be sustained at an acceptable rate?
- What effect will this have on poverty reduction?
- If the health of the poor is prioritized, how will this affect the health of the non-poor?

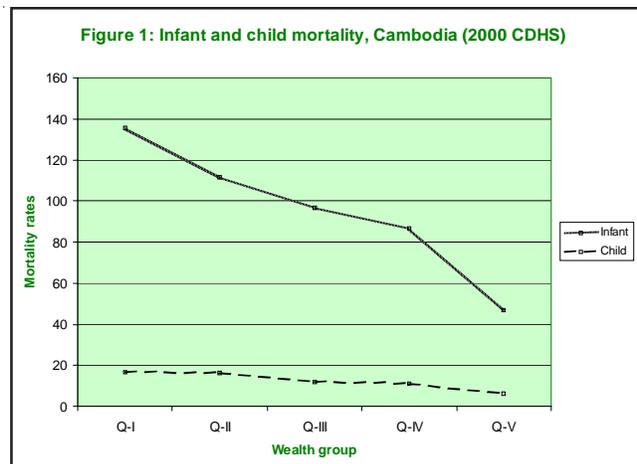
This section summarizes the major issues in this debate and the consensus on the way forward.

Equality of child survival is a component of WHO's Health System Performance Index. The gaps in survival prospects between poor and better-off children also vary by country. Kazakhstan, for example, has virtually no poor–non-poor inequality in under-5 mortality, while Brazil has a very large gap. Viet Nam not only has a low national average child mortality rate, especially given its income, but also has a small gap in survival prospects between poor and better-off children.

Poverty and health are intertwined. Low-income countries tend to have worse health outcomes than better-off countries. Within countries, poor people have worse health outcomes than better-off people. The causal relationship is in both directions: poverty breeds ill-health, and ill-health keeps people poor. Throughout the developing world poor children

suffer higher rates of mortality than better-off children. The gaps in health outcomes between poor and better-off children also vary markedly across countries. However, countries need not wait to wipe out poverty before addressing the health of the poor, as Viet Nam has demonstrated. While average incomes in Viet Nam are much lower than those in Peru and Turkey, Viet Nam has a lower under-5 mortality rate. Poorer people, however affluent or poor their country, still tend to have worse health than better-off people. The reasons for this are complex, involving prioritization, geography, and the access to (and organization of) health systems.

Ill-health is a dimension of poverty. Health levels and the risk of ill-health are key dimensions of poverty. Raising the incomes of the poor might not be enough to reduce poverty without improvements in the health of the poor. People desire good health not just for its own sake, but also to enable them to flourish as human beings. Health is also an asset that is needed for learning at school and when working. For the poor, it is a particularly crucial asset, because they have few others. An illness or death in the household, or excessively high fertility, can have a substantial impact on household income and can make the difference between being above or below the poverty line. In addition to the loss of income due to poor health, households also face the often-substantial financial costs of the medical treatment necessary to restore health.



Proximate (immediate) determinants and health inputs.

A variety of factors at household and community levels directly influence individual health outcomes. In the context of child health, these factors include the use of appropriate preventive and curative health services; feeding and sanitary practices; maternal factors, such as the mother’s age at the child’s birth and the number of children she has given birth to; and the care and stimulation given to the child. For adult health, health service utilization, as well as diet and lifestyle (including cigarette and alcohol consumption), are important. At the community level, the factors having a direct influence on health include water and sanitation conditions, air quality, ecology and geography.

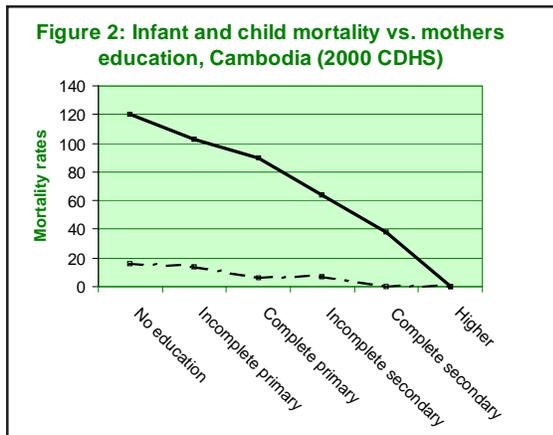
The proximate determinants of health vary widely across households. An important policy and planning question, therefore, is how great is the difference between the poor and the better-off? And, how would a health intervention affect this gap?

These proximate determinants are influenced by the socioeconomic or underlying determinants of health. A household’s resources and their distribution within the household are one set of influences. These include financial income and assets, such as land, tools and animals, as well as human assets in the form of knowledge, literacy and education. Households are influenced by local prices, quality, accessibility and availability of health services. Finally, households are influenced by community-level factors, including the environment, and less tangible factors, such as the culture and values shared by the community. Resource-poor households might give low priority to health care. Sociocultural barriers to access, such as restrictions on physical mobility by women, and the social distance between the poor and health providers have been very important.

Income is a determinant of health. At the household level, income (or wealth) and education are the main determinants. In LMICs, better-off people tend to use health services more frequently and to a greater degree than the poor. They often demand more private sector care, as well as more public sector care. Most dietary and child-feeding practices also improve with higher levels of income, as do sanitary practices. Income is often associated with the number of children a woman has, the age at which she has her first child, and better child-rearing practices.

Education. Education leads to better health outcomes, even after controlling for the higher household income that usually accompanies higher levels of education. Education (especially of women) is strongly associated with the level of health service utilization, the type of provider, the choice of private versus

public provider, dietary and child-feeding practices, and sanitary practices. General education matters, as well as health-specific knowledge.



Women's power affects health outcomes. Women bear an especially heavy burden of poverty. They are exposed to regular, specific and possibly life-threatening health risks (pregnancy, labour and childbirth). In addition, due to gender bias and social inequity, they are often less likely to be accorded priority for health care. Among the poor, they are less likely than men to have any education, and often work harder and longer hours. In settings where women have only limited control over household financial resources, or have lower levels of literacy and education, the control over household decisions relevant to health outcomes tends to be unequal. When women's control of household resources increases,

the nutrition, health and education outcomes of household members improve.

Social (community) capital. This term describes the norms and networks that facilitate collective action. The poor are more likely than the better-off to live in remote areas where access to markets and employment is difficult any time of year. Ecology and environmental factors are important. For example, good sanitary practices are hard to follow if water and sanitation conditions in the local community are poor. Getting to a health centre is harder if the roads are impassable during the rainy season. Communities often share similar values and norms, which play a large part in shaping health behaviours. Groups play a key role in mobilizing community action for better health and nutrition. Social pressures among teenagers tend to be strong in poor communities, and attitudes towards women tend to be less favourable to good health outcomes in poor communities.

WHO policy states that out-of-pocket payments should not exacerbate income inequality, or at least should not drive households into poverty, and that payments for protection at least should be in proportion to the ability to pay.

and for food for themselves and family members accompanying them. The time spent seeking care might mean lost wages or income, especially if the illness occurs during a period of peak agricultural labour. Service availability, accessibility, prices and quality greatly affect health outcomes and health service utilization. Travel time and distance also significantly impact utilization and health status. Further, prices for care influence utilization behaviour and health outcomes.

The use of oral rehydration therapy (ORT) should be distributed in favour of poor children since they have a higher incidence of diarrhoea. However, many countries only have a small pro-poor bias; and in some, ORT use is higher among better-off children. Moreover, in some countries, immunization coverage shows a strong pro-rich bias.

burden. Fee-waiver and exemption schemes are intended to protect the poor from user fees. In practice, however, they often benefit better-off groups. Social and private insurance programmes tend to be even more concentrated among the better-off. The poor usually receive less benefit from public subsidies to health services. The usage gap between the poor and the better-off is typically

The poor face many barriers to accessing health care. The poor face financial barriers to seeking health care that go beyond the direct cost of treatment and drugs. People also often incur high costs for transportation to health facilities,

Services are less affordable and accessible for the poor. Where services are free at the point of use, funding might be extremely limited, and the range and quality of services offered by public facilities very low. When fees are charged, large households with many dependents bear a heavier

smaller for primary care services than hospital services. This reflects the heavy bias towards urban hospital spending in LMICs, as well as the large pro-rich inequality in the utilization of these services, rather than any underlying equitability of primary care.

1.4 The burden of disease among the poor

While health indicators have improved over the past decades, large disparities still exist across countries and social groups. Moreover, new issues are emerging precisely because of these advances—the double burden of disease. Increased life expectancy, combined with changes in lifestyle stemming from socioeconomic development, has increased the importance of noncommunicable diseases and injuries (the first burden). At the same time, people in low-income countries still suffer from largely avoidable infectious diseases, undernutrition and complications of childbirth (the second burden). Many developing countries have to confront both burdens. For the poorest, however, the second front will matter most in the coming years—particularly HIV/AIDS, a deadly menace. This double burden requires difficult decisions about the allocation of scarce resources.

The causes of illness and premature death among different socioeconomic groups vary greatly. Communicable diseases comprise five of the top 10 causes of morbidity in poorer, high-mortality countries, whereas these barely appear among the top 10 causes among low-mortality and developed countries. Similarly, the risk factors that underlie these major illnesses (and others) are quite different, and help distinguish between “diseases of poverty” and “diseases of affluence.”

TB is a typical disease of poverty. Exposure is associated with crowding and inferior housing. Progression from infection to disease might depend on nutritional status, and thus on poverty. The duration of infectiousness of source cases depends on access to adequate health care, which might depend on socioeconomic status. Finally, because treatment is costly, many poor people are deterred. Direct medical costs and indirect costs due to loss of income are high because the disease is serious; requires relatively long treatment; and strongly increases the risk of death, often in people 15–44 years old. Thus, not only are the poor more likely to get TB, but TB in turn contributes to poverty.

Table 2: Top risk factors and conditions

High-mortality developing countries, 2000	
Risk factor % DALYs	Disease or injury % DALYs
Underweight 14.9	*HIV/AIDS 9.0
Unsafe sex 10.2	*Lower respiratory infections 8.2
Water, sanitation and hygiene 5.5	*Diarrhoeal diseases 6.3
Indoor smoke from solid fuels 3.7	*Childhood cluster diseases 5.5
Zinc deficiency 3.2	Low birth weight 5.0
Iron deficiency 3.1	Malaria 4.9
Vitamin A deficiency 3.0	Unipolar depressive disorders 3.1
Blood pressure 2.5	Ischaemic heart disease 3.0
Tobacco 2.0	*Tuberculosis 2.9
Cholesterol 1.9	Road traffic injury 2.0
Low-mortality developing countries, 2000	
Risk factor % DALYs	Disease or injury % DALYs
Alcohol 6.2	Unipolar depressive disorders 5.9
Blood pressure 5.0	Cerebrovascular disease 4.7
Tobacco 4.0	*Lower respiratory infections 4.1
Underweight 3.1	Road traffic injury 4.1
Overweight 2.7	COPD 3.8
Cholesterol 2.1	Ischaemic heart disease 3.2
Low fruit and vegetable intake 1.9	Birth asphyxia/trauma 2.6
Indoor smoke from solid fuels 1.9	*Tuberculosis 2.4
Iron deficiency 1.8	Alcohol use disorders 2.3
Water, sanitation and hygiene 1.7	Deafness 2.2
Developed countries, 2000	
Risk factor % DALYs	Disease or injury % DALYs
Tobacco 12.2	Ischaemic heart disease 9.4
Blood pressure 10.9	Unipolar depressive disorders 7.2
Alcohol 9.2	Cerebrovascular disease 6.0
Cholesterol 7.6	Alcohol use disorders 3.5
Overweight 7.4	Dementia/CNS disorders 3.0
Low fruit and vegetable intake 3.9	Deafness 2.8
Physical inactivity 3.3	COPD 2.6
Illicit drugs 1.8	Road traffic injury 2.5
Unsafe sex 0.8	Osteoarthritis 2.5
Iron deficiency 0.7	Trachea/bronch./lung cancers 2.4

* communicable diseases

Source: World Health Report 2002 (WHO)

Low socioeconomic status carries several risk factors for diarrhoeal morbidity in children: crowded and unclean living conditions, low levels of maternal education, low occupational status of the household head, etc. Poor children are also susceptible to developing severe measles. Several factors increase risk: overcrowding, which intensifies exposure; malnutrition; congenital or acquired immunodeficiency, including HIV infection; vitamin A deficiency; and lack of early adequate health care.

1.5 Pro-poor health strategies

Because of the close relationship between poverty and health, a bidirectional approach is required: health must be placed on the poverty agenda, while poverty is placed on the health agenda. In practice, this means that poverty reduction programmes need to ensure increased resource flows to the health sector and better resource

allocation. This, in turn, might require advocacy to promote understanding of health as central to development, and cross-sectoral work to address the other determinants of health and poverty reduction: education, water and sanitation, agriculture, labour and social protection, etc.

PRSPs are one international policy initiative with an explicit pro-poor character. PRSPs are national planning frameworks for low-income countries that wish to access concessional loans or benefit from debt relief under the Highly Indebted Poor Countries (HIPC) initiative. The countries have to spell out pro-poor policies in the field of health, as well as in other social sectors. This is expected to increase social spending by 50% in gross domestic product (GDP) terms, with major implications for health budgets. PRSP countries face the new challenge of planning in a context of budgetary expansion.

Of more immediate interest to health policy-makers is how to put poverty on the health agenda and integrate poverty concerns into health policies and programmes. To reduce poverty, a health care system must provide:

- effective prevention and disease-control programmes, as well as basic reproductive health programmes, to reduce the burden of disease and poor health outcomes;
- accessible and affordable services that reduce the opportunity, travel and incidental costs of services to the poor, enabling them to make good use of the services; and
- efficient management systems, so the costs to the economy of providing effective, accessible and affordable services to the poor are containable and sustainable.

“Supply-side, trickle-down economics” was badly discredited in the USA in the 1980s, when tax cuts for the wealthy failed to stimulate employment and reduce inequalities, as intended. Inequality has grown significantly since then.

Trickle-down... or not? A simple but ineffective approach to improving the health of the poor is to increase investments in health services for the entire population, counting on a “supply-side, trickle-down” effect to reduce

health inequalities. One of the major assumptions behind the Alma Ata (Health Care for All by the Year 2000) initiative, for example, was that this would extend coverage to the underserved rural areas where many of the poor are concentrated. However, since the better-off and urban populations usually capture a greater proportion of health care than the poor, if the intensity of services increases uniformly, the same inequalities are likely to prevail afterwards. As for introducing new health interventions, they usually reach the rich more rapidly and more intensely than the poor. The gap will close only if the trickle-down effect is strong enough: it widens initially and only closes after a time lag. An even worse scenario is where the rich capture all the benefits and health effects of a new intervention (e.g., a limited subsidized supply of anti-retrovirals that the poor cannot afford), which widens the gap. If that intervention diverted resources from targeted interventions for the poor, the poor actually might end up worse than they were before.

Specific pro-poor policies and strategies, therefore, must be developed and implemented to prevent this from happening. Given the relative disempowerment of the poor, which limits their ability to avail of intended health benefits, these strategies must be designed and tested carefully. Policy-makers

should consider several types of strategies that benefit the poor by:

- focusing on the diseases of the poor and vulnerable groups;
- making services more available (selective extension of coverage);
- making services more financially accessible through targeting or exemption; and
- improving the effective use of services through stimulation of demand and empowerment.

The first two are essentially supply-side strategies, while the latter address demand-side issues. These pro-poor strategies can be formulated at several levels. Government decisions and actions influence the amount households pay for their health care, as well as the quantity, quality and type of services they receive. At the macro level, governments decide how much to spend on health care and related services and where, and how to raise the revenues to finance them. At the system level, they decide the mode of service delivery and how to regulate the private sector, as well as how much to charge for different services and how far to exempt the poor from fees and/or insurance premiums. At the micro level, they influence the accountability of providers and the services and interventions they deliver, and how best to implement facility-based revenue-collection schemes.

1.5.1 Supply-side strategies

Prioritizing investments in health conditions that disproportionately affect the poor.

Focusing on TB, malaria, HIV, infant and child mortality, maternal ill-health, and malnutrition is a strategy to improve the health of the poor and reduce poor–rich health differences. Reducing the rate of death and disability from communicable diseases more quickly would increase a 1990–2020 life expectancy among the global poor by 4.1 years over the baseline projection, compared to a gain of only 1.4 years for an accelerated decline in noncommunicable diseases. Doubling the rate of progress against communicable diseases would reduce the currently projected 2020 poor–rich life expectancy gap by 3.7 years. The same acceleration in progress against noncommunicable conditions would have the opposite effect, widening the gap by 3.9 years.

Improved targeting requires greater emphasis on accessing key services. Improving the efficiency of service provision at the primary level is a critical element in increasing access, since individual primary providers often are not ready to provide the standard of care required by the ESP approach. Finally, the system of financial control and management needs to be modified to make allocations more responsive to the priorities. Source: Ensor T. *et al.* Do essential services packages benefit the poor? Preliminary evidence from Bangladesh. *Health Policy and Planning*, 2002, 17(3):247–256.

Women often face greater health challenges than men, particularly among the poor. Maternal and antenatal conditions represent about 13% of DALY losses for the poorest 20% of the world population, versus 3% for the richest 20%. However, more than women’s health is affected—they are also the most immediate health care providers for children and the elderly. Childhood cluster diseases cause more than 8% of all losses, while nutritional deficiencies and diarrhoeal diseases another 15% of the DALY losses for the poorest 20%. Women are vital to nutrition outcomes, as well as the general health status of the family.

For many of these health problems, interventions and delivery strategies are available that are known to be effective. For example, improving midwifery and emergency delivery services can reduce maternal mortality.

Prioritizing investments in types of services that are likely to disproportionately benefit the poor. Primary health care, public health interventions, and preventive or promotive (rather than curative) services can improve the health of the poor.

Priority communicable diseases have typically been the focus of “vertical” programmes. Although they often achieve their goals, these programmes are typically supported intensively by a few donors.

This raises serious questions about their sustainability. In addition, they have been poorly integrated with one another, and are by their nature replicative of many administrative and logistical functions. These weaknesses led to the concept of health care packages or essential services packages (ESP), which integrate disease-control programmes with promotive activities at the primary care delivery level. In principle, these packages are collectively more cost-effective than the individual vertical programmes they replace. The total cost of a package, which might include secondary care, can be estimated and presented to governments and donors as a comprehensive scheme for reducing mortality and morbidity. However, health care packages are not an automatic solution to the inequities of poverty. First, everything depends on how comprehensive such packages are, and how effectively coverage is ensured. Second, merely defining a package does not imply fairness in financial contribution. Third, defining “minimum packages” only marginally touches upon the problems of responsiveness and discrimination against the poor in health system outcomes.

Prioritizing investments in regions or areas where the poor are concentrated (geographic targeting). Resources should be reallocated in favour of poorer geographic areas, and to the lower tiers of service delivery. Infrastructure should be expanded to provide more service delivery points where the poor live, especially in remote rural communities. The number and reach of outreach clinics should be increased. Services can be tailored to the needs of vulnerable groups, such as slum dwellers, migrant labourers, etc.

Intuitively, network expansion seems a good strategy, particularly where the poor are believed to be concentrated in underserved areas. However, the trickle-down effect often fails to operate as intended. Still, given the limited alternatives, it is politically difficult to argue against extension of health care networks to underserved areas under the pretext that the less-poor in those areas would be the first to benefit. In practical terms, the issue is not whether to extend coverage, but to extend it in a way that maximizes the chances of equitability.

Extension of coverage to poor and underserved areas is harder than it might look at first, precisely because such areas are poor and underserved. These areas inherently lack social infrastructure and amenities, and their very poverty makes them unattractive to many health professionals. Several strategies have been tried to overcome the human resource constraints in extending coverage to the rural poor, including recruitment from the areas themselves, requiring service in poor or underserved areas for career advancement or as repayment for training, and financial and housing incentives.

1.5.2 Demand-side strategies

Reducing financial access barriers. When universal provision of subsidized care is considered too costly and/or not effective in reducing poverty, one alternative is targeted subsidies. Targeting is primarily an attempt to increase fairness in financing. From another perspective, it involves redistributing resources and transferring purchasing power to the poor without increasing public spending.

Universal price subsidies tend to be captured by the urban rich. This is the main reason for targeting subsidies, such as exemptions from user charges.

Targeting identifies who should benefit (eligibility) from subsidies or exemptions based on individual characteristics, such as income or household assets (means testing); or based on

membership in a community where poverty is particularly prevalent. The identified target population can then obtain free or subsidized health services, while those not eligible have to pay. The demand per capita for good quality, basic health care among the non-poor is greater than the demand among the poor. At any price, the non-poor will demand higher quantities than the poor due to their greater ability to pay. Thus, with a flat fee for diagnosis and treatment, the poor will be at a relative disadvantage.

Sliding fees, or price discrimination, can help solve this problem. Protecting the poor from user fees entails charging the poor a fee low enough to increase their per capita demand to that of the non-poor. In practice, however, knowing who is poor and who is not is necessary to apply differential prices appropriately.

Targeting is always imperfect. When people who are not poor are classified as poor, resources intended for the poor leak to unintended recipients. This could result from lenient criteria or from bad application, particularly when the benefits are important and the temptation to misclassify is greater. Conversely, when poor people are misclassified as non-poor, this denies health care access to the intended beneficiaries of the targeting programme. This might result from overly stringent selection mechanisms, lack of knowledge or fear of stigmatisation on behalf of the potential beneficiaries, or discrimination by those in charge of selecting beneficiaries. Both types of misclassification are prevalent where exemptions are meant to be applied.

Two approaches can be used to establish the magnitude of the targeted subsidy, which determines the cost to government. These alternatives share the idea that health care payments should not exceed a certain threshold. One approach sets the threshold as a proportion of income to ensure that households do not spend more than some specified fraction (e.g., 5%) of their income on health care. Spending in excess of this threshold is labelled “catastrophic.” The idea is for households to retain a certain proportion of their income for necessities other than health care. The second approach sets the minimum in terms of an absolute level of income (usually the poverty line, as defined locally). This approach aims to ensure that spending on health care does not push households into poverty, or deeper into it if they are already there. The effect of charges on the poor should be an issue whenever fees, exemptions or prepayments are considered. However, both approaches, while conceptually significant, encounter difficult measurement problems.

If the poor are fully exempted from payment, while the non-poor must pay some fee, the non-poor will bear the entire financial burden for the reduction in the public budget. If the drop in the budget is significant, in percentage terms, the non-poor will have to pay a relatively high fee to

Rapid Rural Appraisal is a useful participatory tool for identifying the poorer groups in a community. However, it has not been applied often for exemption schemes. Objective indicators such as land rented or owned can serve as proxies for income, but are not always reliable.

balance the finances. The non-poor might resent this cross-subsidization, which could make it politically unsustainable. If the service offered is good quality and desired by all, the non-poor will have a strong incentive to qualify as poor. This in turn will make distinguishing poor from non-poor more difficult, thus jeopardizing the adoption of a fair pricing policy.

Means testing is easier in developed countries where record-keeping is well developed, most employment is formal, seasonal fluctuations are relatively unimportant, and the population is concentrated and literate. It is much more difficult where population density is low, records are poor, and much of the population is illiterate and working in the informal economy. In those cases, the severity and prevalence of poverty, as well as its association with rurality, often makes geographical targeting a more realistic option.

Evidence shows that prepayment and risk-pooling through insurance schemes leads to fairer financing. Equally important, prepayment offers a better environment for targeting, since the eligible population generally would be entitled to the same services as those who pay full premiums. In poorer countries, a practical step toward universal social insurance involves increased donor participation in developing and subsidizing insurance schemes for the poor, combined with an expansion and consolidation of smaller job-based, community-based and provider-based schemes.

Progresa is a Mexican programme that stimulates utilization by the poor through financial incentives. To receive a cash transfer, families must participate in several preventive and promotive health programmes. The health outcomes have been significant.

Source: *Wodon Q. et al. Mexico's PROGRESA: Innovative Targeting, Gender Focus and Impact of Social Welfare. En Breve Notes.* Washington, DC, World Bank/LAC, 2003, No. 172003.

Addressing other barriers to access by the poor. Many poor people might not take advantage of exemptions or other targeting schemes that identify them as poor, and which might “entitle” them to what they perceive as inferior service. Part of this inferiority can be due to health staff, who have an incentive to minimize this service if it decreases their incomes.

Sufficient attention is rarely given to the need to address the low demand for, and use of, services among the poor. This can be achieved by identifying and addressing social, linguistic and other non-financial barriers; improving the quality of care; increasing the awareness, sensitivity and skills of providers; and enhancing awareness and information among the poor. Quality problems in health facilities often affect poor users more than others. Thus, improvements can be expected to benefit the poor particularly.

1.6 Globalization and health

Globalization can be defined as the trend towards greater freedom in international trade, travel and investment. The leading edge has been the evolution of major corporations as multinational entities, preceding even the formation of major trading blocs, such as the European Community. The momentum has been taken up to varying degrees worldwide, with the formation of regional free-trade zones, and the accompanying opening of labour markets and reduction of barriers to migration.

Globalization has meant more interaction across nations and people; creation of international legal, institutional and regulatory regimes; and significant spillover and unintended effects from the behaviour of nations and individuals. All three areas have economic and non-economic components. Supporters of free trade and free capital movements say that world income distribution is becoming more equal as globalization proceeds. Therefore, they argue, reducing world income inequality should not be an objective of international public policy. However, most measures indicate that world income distribution has become increasingly unequal over the past 20 years. Whether or not this is a result of globalization, it suggests that if poverty is not a major part of the globalization agenda, at least it should be monitored.

Globalization and the poor. The movement of poverty indicators is related to the average level, variability and inclusiveness (i.e., the degree that it is pro-poor) of economic growth. Before the 1980s, higher and less variable growth, as well as better income distribution, helped to ameliorate the situation of the poor in developing countries. Since the second half of the 1980s, however, uneven growth in the developing world and worsening global income distribution produced small or no improvements for many developing countries. Developing countries in East Asia benefited significantly from these changes, and the poor in those countries benefited at least proportionally.

The relationship between globalization, growth, income distribution and poverty is complex. In general, higher incomes and poverty reduction are associated with better health indicators. However, the impact of globalization on incomes across different groups in society is less clear. Besides the nature and components of the patterns of integration in the world economy by developing countries, two other aspects should be considered: the behaviour of the international economy they are increasingly immersed in; and the type of domestic policies, institutions (especially the health services) and conditions that determine the impact on the poor.

Ultimately, making globalization work for health requires fundamental changes in current approaches to economic issues. At the national level, policies need to be designed explicitly to maximize the well-being of the population, rather than assuming that this will be achieved automatically by policies focused on economic growth, “safety nets” and protection of health spending. At the international level, global rules, activities of intergovernmental organizations, and the external policies of the developed countries need to be oriented towards removing constraints to, and maximizing the incentives for, governments of developing countries pursuing policies that promote well-being.

Selected references

- Bettcher D., Lee K. Globalisation and public health (a glossary). *Journal of Epidemiology and Community Health*, 2002, 56:8–17.
- Bitrán R., Giedion U. *User Fees in Health and Education: Mitigating Their Effect on the Poor*. Washington, DC, World Bank, 2001.
- Dong T.T. *et al*, eds. *User Fee, Health Insurance and Utilization of Health Services*. Hanoi. Viet Nam-Sweden Health Cooperation Programme. 2002.
- Diaz-Bonilla E., Babinard J., Pinstrup-Andersen P. *Globalization and Health: A Survey of Opportunities and Risks for the Poor in Developing Countries*. A report of a commission chaired by Jeffrey Sachs. Geneva, WHO, Commission on Macroeconomics and Health, 2001 (CMH Working Paper Series, No. WG4:11).
- Ensor T. *et al*. Do essential services packages benefit the poor? Preliminary evidence from Bangladesh. *Health Policy and Planning*, 2002, 17(3):247–256.
- Gupta S. *et al*. *The Debt Relief Initiative and Public Health Spending in Heavily Indebted Poor Countries (HIPC)*. A report of a commission chaired by Jeffrey Sachs. Geneva, WHO, Commission on Macroeconomics and Health, 2001 (CMH Working Paper Series, No. WG3:5).
- Gwatkin D., Guillot M. *The Burden of Disease among the Global Poor: Current Situation, Future Trends, and Implications for Strategy*. Global Forum For Health Research. Geneva, WHO, 2002.
- Gelband H., Stansfield S. *The Evidence Base for Interventions to Reduce Under-Five Mortality in Low and Middle-Income Countries*. A report of a commission chaired by Jeffrey Sachs. Geneva, WHO, Commission on Macroeconomics and Health, 2001 (CMH Working Paper Series, No. WG5:9).
- Makinen M. *et al*. Inequalities in health care use and expenditures: empirical data from eight developing countries in transition. *Bulletin of the WHO*, 2000, 78(1):55–65.
- Mills A., Shillcutt S. Challenge Paper on Communicable Diseases. Copenhagen, Copenhagen Consensus 2004. Available in PDF format at: http://www.copenhagenconsensus.com/Admin/Public/DWSDownload.aspx?File=files%2Ffiler%2Fcc%2Fpapers%2Fcommunicable_diseases_160404.pdf (accessed 13 October 2005).
- Segall M. *et al*. *Health care seeking by the poor in transitional economies: The case of Viet Nam*. Brighton, Sussex, UK, Institute of Development Studies, 2000 (IDS Research Report 43).
- Wade RH. The Rising Inequality of World Income Distribution. *Finance and Development: Quarterly Magazine of the IMF*, 2001, Volume 38, Number 4 (December):37–39.
- Wagstaff A. *Poverty and Health*. A report of a commission chaired by Jeffrey Sachs. Geneva, WHO, Commission on Macroeconomics and Health, 2001 (CMH Working Paper Series, No. WG 1:5).
- Wagstaff A., van Doorslaer E. *Catastrophe and Impoverishment in Paying for Health Care: With Applications to Viet Nam 1993–98*. Policy Research Working Paper Series 2715, Washington, DC, World Bank, 1999.
- Wheeler, M. *What constitutes a pro-poor health policy?* Geneva, WHO, undated (unpublished document).
- Woodward A., Kawachi I. Why Reduce Health Inequalities? *Journal of Epidemiology and Community Health*, 2000, 54:923–929.

World Bank. Investing in Health. *World Development Report*. Washington, DC, World Bank, 1993. Available at: http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1993/06/01/000009265_3970716142319/Rendered/PDF/multi0page.pdf (accessed 13 October 2005).

2. PROVISION AND FINANCING OF HEALTH CARE

A useful way of classifying health services and health financing policies is to think of them as points along a public-private scale that is affected by the social and political values that prevail in a given country. The more market-oriented countries opt for public and private financing of privately provided care, while more socialist countries emphasize public and private financing for publicly provide care. The WPR countries include examples of extremes along this scale, though these extremes are gradually headed towards a moderate common position.

2.1 Provision of health care

The provision of health care in the Region ranges from public to private. At a minimum, governments might provide only certain services that benefit large numbers of people, such as water and sanitation, control of epidemics, and immunization. These preventive and promotive services do not benefit specific individuals in the same way as curative health services do. Meanwhile, individuals or companies in the private sector provide a range of health services. At the other extreme, governments might provide the entire range of health care by owning and operating most facilities (clinics, hospitals, pharmacies, etc.) and employing most health workers. In many, if not most, countries, the line between public and private is rather blurred. Sometimes public and private facilities or services are combined, often within the same premises or by the same individual.

Financing of health care also ranges between public and private, and is often associated with the provision of care. Preventive health services, which are relatively inexpensive, are financed almost entirely by governments and donors. When governments provide most curative health services, usually taxes paid by businesses and individuals cover most of the costs. When the private sector provides most curative services, the payment for those services typically comes directly from individuals and private or public insurers.

Under one extreme, the central government makes most decisions about economic development. Revenues collected from individuals and enterprises are invested according to a relatively fixed plan.

This was the case in many developing countries that gained independence in the mid-20th century, as well as in the socialist bloc nations. As part of this plan, the government is responsible for health and other social development, and tries to furnish these services when and where they are needed. Health care is considered a basic human right that should be free to everybody.

At the opposite pole, government leaves most investment decisions in private hands, relying on market forces to provide goods and services, including health care, according to the law of supply and demand. Personal health care is regarded as a commodity—along with food, clothing and shelter—that individuals in principle must pay for regardless of ability to pay.

In reality, these extreme positions no longer exist. Most planned economies have relaxed their control, allowing free markets to operate in most economic sectors. Private providers, health facilities and pharmacies have developed. Due to unfavourable balance of trade, high debt burdens and failing taxation systems, many developing countries have found they cannot afford to fund entire health systems. As a result, they have cut investment in facilities and introduced user charges for many kinds of care. At the other end of the spectrum, where almost all health functions are provided and financed privately, some kind of safety net is provided for the poor. At the same time, it has become apparent that health care use does not necessarily follow market forces. Many developing countries with a significant share of the population employed in the formal sector have introduced social health insurance, or have mandated that enterprises or administrative entities provide insurance. Most of these changes were made in response to conditions imposed by international donors and lenders as part of economic reform packages.

Unfortunately, these adjustments have not always been beneficial, and some alternative financing schemes have not performed as expected. Private and public spending for hospitals and curative care, including advanced technology that benefits a small minority, remains high relative to the need for preventive and promotive interventions. As few public financing systems are progressive, the lower-income population effectively might subsidize the higher-income population. The burden of HIV/AIDS has had disastrous effects on some health systems. On the other hand, the privatization approach has deprived large parts of the population in many of those countries of access to affordable care. Rural-urban differences tend to be accentuated. The quantity and quality of services provided for the poor often fall far short of those available to wealthier people.

Over the past 20 years, many health policy-makers have focused on how an improved combination of providing and financing health evolves. The following section defines relevant terms and concepts, and discusses other systems.

2.1.1 Public-private mix and privatization

The obligation for governments to be the main provider of health care is no longer as important as in the past. In contrast, its obligation to finance health care has become perhaps more critical, especially for the disadvantaged members of society and for many public health functions. As the inability of most governments to finance and provide all necessary health services becomes clearer, a bigger role for the private sector is being explored in nearly every country in the WPR. The economic justifications are twofold. First, the government should provide only those services that are considered public goods, such as mass immunizations and other preventive and promotive measures. Second, if people who can afford private providers use them for individual curative care instead of subsidized government services, the subsidies will be targeted more accurately at those who need it most. This can increase overall equity, as well as reduce the need for public investment in curative infrastructure, which is made

with private capital instead. In addition, the private sector sometimes can provide certain services at a lower cost than governments, or can provide them when the government is unable to provide them at all.

The private sector includes all of those parts of the health sector not under the direct control of the government, including the non-profit and charitable organizations that provide a large share of the health services in many countries, especially in rural areas. The for-profit private sector has been suppressed in some places, returning only recently. However, it has had a major role in providing health care in the past, sometimes even before the development of government health services.

The private and public sectors are each thought to have advantages. For example, the private sector might have greater flexibility, easier access to capital, greater managerial strength and more responsiveness to customer expectations. The public sector might be more sensitive to issues of equity, less driven by profits and less costly (although this might be due largely to low public sector salaries). In reality, these potential comparative advantages can vary widely and need to be assessed carefully in each situation.

Private non-profit nongovernmental organizations (NGOs) are assumed to share with the private for-profit sector the motivation of financial sustainability. Privatization is sometimes used to describe deliberate behaviour changes within the public sector, as well as actual transfer of ownership.

The private sector now provides a large portion of basic health care in the WPR, and controls many of the hospitals, pharmacies, laboratories and ambulatory care. In some countries, the market in private health insurance is significant. This represents competition with the public sector. The nature and outcome of this competition is at the heart of the respective roles of the public and private sectors in health. Consumers, who often have insufficient information about quality and appropriate treatments, rely on providers to act as their agents (supplier-induced demand) once treatment is initiated. Private providers might have incentives to act in ways that conflict with the best interests of patients. As the goal of for-profit providers is to profit, they will seek ways to maximize revenues and reduce expenditures. This might result in the insufficient supply of services that are necessary for the health of the public, such as immunization and preventive care, but are not priorities for individual patients.

Private sector growth also competes with the public sector for scarce financial and human resources, such as trained personnel, which can increase health care costs. The public health system might lose important advocates for maintaining the system, as higher- and middle-income groups use the private sector in greater numbers. A private sector catering to urban and higher-income populations usually creates duplication and two different standards of care. Scarce resources needed for other aspects of national development might be diverted to high-technology personal health services. Monopolistic practices are legitimized by drug patents, which generate high profits for pharmaceutical companies and unaffordable prices for needed drugs. These are examples of different types of market failures that require some type of government intervention to mitigate.

In some countries, rapid private sector growth has stimulated policy changes intended to maintain a balance that advances social goals. This means that certain restrictions are placed on the growth of the private sector, regulatory mechanisms are strengthened, and public information is improved. The experience of industrialized countries suggests that it is possible to organize and regulate a health care system in a way that public and private providers can contribute to equitable and efficient health care. Nevertheless, some places (notably the USA) have mainly privatized systems that operate inefficiently and inequitably by the standards of most other industrialized countries.

2.1.2 Examples of private sector activities

Private sector participation in health is perhaps most prevalent in the sale of pharmaceuticals. When only licensed pharmacies sell good quality drugs, qualified personnel dispense them, and doctors prescribe them rationally, the main problem is the high cost of drugs. However, the preceding scenario is an idealized one in many developing countries where regulation is weak. Powerful medicines and poor quality or counterfeit drugs are sold freely to anyone wanting them without a prescription; ineffective injections are in high demand; and some inexpensive, lifesaving drugs might not be available at all. Working directly with private sector manufacturers and distributors, as well as with formal and informal retailers, has produced some notable successes. This has involved offering training, subsidies and technical assistance to overcome market failures, which has improved access at low prices and use of critical drugs for childhood diarrhoea, malaria, TB and sexually transmitted infections (STIs). WHO is also addressing drug pricing issues internationally.

Some of this work is under the auspices of donor-funded “social marketing” programmes that try to change consumer awareness, although experience has shown that this approach to altering the market is often the most difficult.

Private funding now addresses some priority international health concerns. International funds have been established to finance private and/or public research and development in poverty-related diseases. Assuming that research into

these neglected diseases faces similar cost and scientific hurdles as other diseases, private investment is discouraged by the weak expected return. Despite high need (i.e., a large number of patients), few are able to pay for medicines. Thus, actual expected demand is very low. Some venture capital funds finance the development of new medicines that normally would not have sufficient market potential to allow pharmaceutical companies to invest in them. Several public-private partnerships are working to develop drugs or vaccines for global diseases, such as the International AIDS Vaccine Initiative, the Medicines for Malaria Venture, and Global Alliance for TB Drug Development. Several other groups are seeking better distribution of drugs in the developing world to combat the effects of trachoma, AIDS and various parasitic diseases.

Long-term care facilities, maternity homes and other private providers abound in developing countries, offering care to local populations at modest prices compared to private and even public hospitals. However, the care they provide is often poor quality. They are utilized because they offer ease of access, present fewer social barriers and cost less. These providers flourish where insurance schemes cover them, because they cost less than hospitals. As such, the insurer must take the initiative to require improvements in quality.

Public-private partnerships. These have focused on persuading providers to offer certain services they have not emphasized, especially those that would benefit the poor the most. Some donor projects have established provider groups with clear service priorities and contracted targets for population coverage. Donors have funded projects to assist private practices and nongovernmental organizations (NGOs) in providing reproductive health and family planning services. Others have strengthened links between public hospitals and private providers for more reliable referrals and laboratory tests for TB and STIs. Projects such as these can succeed by meeting a basic need of private providers to maintain their practice base and protect their income. As an added incentive, they bring private providers into partnership with an institution of high repute.

The acquisition of expensive medical technology in private hospitals and diagnostic centres can present a serious problem to health systems financed by insurance, particularly when the fee-for-service method is used for payments. Private providers will try to maximize their income by using these machines as much as possible if a third-party insurer, rather than the patient, bears the cost. Several good reasons exist for limiting the number of expensive diagnostic devices to optimize their usage. The most effective way to achieve this is through a capitation payment method, or by limiting insurance reimbursements to a level that makes it viable for a few machines to be utilized optimally, rather than an incentive for every private clinic to own one. The application of national planning regulations to limit the acquisition of such high technology in developing countries is difficult. For these reasons, insurance systems must have an appropriate quality assurance programme that monitors the type and volume of services used.

2.1.3 The role of governments as purchaser of health services

Governments have an obligation to ensure access to health services for low-income and vulnerable people, though its role can be restricted to financing these rather than providing them directly. Regardless of what mode of purchasing services is adopted, several critical prerequisites must be in place before this can be done successfully. Purchasing discipline and management capacity must be in place to ensure that results are achieved at a reasonable price and quality, and to avoid corruption. Other prerequisites include reliable and adequate financing capacity to support all contract obligations, and the capacity to provide the desired services in the private or not-for-profit sectors.

Options for purchasing services from private providers:

- Contracting or outsourcing
 - Contracting-in, as for management services
 - Procurement, for goods (e.g., drugs) or services (specified health services)
 - Lease or rental arrangements (e.g., for buildings, vehicles, specialized equipment)
 - Subsidy or subvention, typically to NGOs to provide services in underserved areas
 - Privatization of public health facilities, with a possible contractual arrangement to provide services
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Public facilities have begun to contract with the private sector, an important development in private sector participation. The motivation is the presumption that the private sector can provide some services at lower net cost than the government, or can provide services where the government has difficulty providing them efficiently or at all. Contracting can shift part of the financial risk for supplying the required services from government to the contractor, who also has the possibility of making a profit.

Contracting-in for management support to a district by an NGO is a variation that has been tested in Cambodia. Contractors had full management control over allocation of a small budget supplement, but followed government regulations regarding government resources. Preliminary results suggest that this improved performance significantly at low additional cost.

Equally important in the context of rapid privatization, contracting gives governments some leverage to improve the private sector in ways that would be more difficult to achieve through regulation. Governments can provide direct assistance to the contractor in the form of training, equipment and rent of premises as part of the total package. In practice, contracting can span a wide range of arrangements—from “contracting-out” for certain hospital support services, to contracting with another organization (often a non-profit or church-related NGO) to run government health facilities in a geographic area, to “internal contracts” with existing staff and groups to provide specified health benefits to a population.

Laundry, cleaning, security, maintenance and food preparation were among the first services to be contracted out. The belief was that private companies could provide higher quality services at more competitive costs, given high overhead costs due to lax hospital management, restrictive civil service employment rules, and (in some places) strong health worker unions. Contracting of this kind is more prevalent in large cities, where private firms are more likely to operate.

NGOs have always played an important role in health services in developing countries. However, formalizing the relationship through contracting offers the advantage of harmonization of public health priorities, treatment guidelines and user fee schedules. While hospital services are most often contracted, examples of contracts for primary care can be found as well. The performance of these NGO-contracted hospitals is usually better than public hospitals, regardless of any contracting arrangements, because of superior management and staff motivation. Writing clinical service contracts that provide clear objectives and sanctions for non-performance has been difficult. NGOs have also been contracted to provide all specified services in a district (e.g., the “contracting-out” option in the Cambodia experiment), directly employing government staff with full management control over resource allocation and disbursement. Although the additional costs are high, the increased services, especially to the poor, have been impressive.

The development of internal markets does not usually involve the private sector. Rather, it is intended to encourage competition or market-like behaviour within the public sector. Internal contracting was instituted in the United Kingdom as part of 1988 National Health Service (NHS) reforms. Many hospitals became self-governing trusts. In addition to receiving capitation payments, general practitioners became fund-holders for hospitalization costs of their enrolled patients. Donors have assisted systems of capitated general practitioner groups in Eastern Europe and Central Asian countries. In developing countries, this can take the form of better management, including job descriptions and schedules, and salary bonuses geared to better performance. Again, the capacity for government monitoring and supervision of contracts has been problematic.

The overall impact of contracting on efficiency, quality and equity remains uncertain. In developing countries, contracting performance has rarely met expectations over more than a short period. Administrative costs and complexity have exceeded initial estimates, while competition for contracts and the attendant improvements in quality and efficiency have been limited.

Private practice and charging by government health workers. Health workers also operate their own private practices, sometimes during official hours and on government premises. Liberalization of private practice rules has been a part of the privatization of some hospitals. With the creation of private rooms, this allows admission of private patients—so-called “intramural” private practice since it occurs within the hospital. Reimbursing the hospital for the private use of facilities remains an issue. Government staff are sometimes permitted outside private practices after official hours, though this privilege is often abused. In some countries, staff have resigned as private practice proves to be much more lucrative.

Unofficial payments have important equity implications since the poor suffer most from this practice. If the poor cannot pay these relatively high amounts, they do not receive the same treatment as people who can.

During economic downturns in developing countries—and declining government health budgets that led to health financing changes—health workers commonly demand unofficial payments from patients in public facilities. In

some countries, this is an extension of the traditional practice of giving a gift to a healer. Even though this might be illegal, it might not be considered a crime to be prosecuted. The worst of these abuses

have stopped as other reforms, such as privatization, contracting and user fee-based bonuses, are instituted. However, health workers still need to support their families, and have a right to do so. Salary increases for health staff are linked to the larger issue of pay reforms for the civil services in a country. Increasing salaries for health sector staff alone, while neglecting other sectors, addresses only part of the problem and can prove politically difficult. Hospital autonomy, which gives institutions more freedom to establish salary scales, can be a solution to this problem.

2.2 Health financing

The cost of providing health services continues to rise. At the same time, government revenues might decline, or become unpredictable, due to stagnant or worsening economic conditions. In such cases, alternative sources of funding for the health sector have to be found. The objectives are:

- to maintain and increase access by all to basic health services;
- to improve quality of services generally, so that utilization of health services and facilities—and, therefore, the efficiency of resource utilization—will increase; and
- to create incentives for providers and consumers to use more services efficiently through various payment methods.

This has occurred mainly under the rubric of health sector reform in recent years, with a focus on expanding social safety nets. Additional and stable budgetary financing is sought to improve drug supplies, health workers' salaries and other operational inputs; as well as to improve health system quality and effectiveness. The extra-governmental sources that have been used most frequently include out-of-pocket payments, various forms of health insurance and external donors. The methods for tapping these resources that have received the most attention over the past 20 years are user charges, social health insurance and donor consortium financing. These methods differ significantly in terms of individual, household and collective population approaches and goals.

2.2.1 Tax-based financing

Until recently, the most common method of financing the majority of government-run health services was the government budget, which is based on general public revenues. Typical sources of public funds for public services include direct taxation of individual and business incomes, and other kinds of direct or indirect levies, such as import duties, licence fees, property taxes, sales and market taxes, registrations, etc. In many developing countries, however, where large portions of the economically active population might be engaged in the informal sector or in subsistence-type economic activities, the tax base might be small. This reduces the scope for mobilizing significant additional resources from taxes. Governments also can choose, or be forced, to borrow from private sources by selling bonds to finance operations, with eventual repayment from tax-based revenues.

Taxes: Regressive, neutral or progressive?

When wealthy people pay a higher percentage of their income in taxes than the poor, the income tax is progressive; it is regressive if the poor pay a higher percentage. Taxes that increase the cost of basic necessities, such as food and clothing, are usually regressive. Assessing the equity of certain taxes, such as those on transport or fuel, which wealthy and poor people use, or on tobacco and alcohol, is complicated and sometimes not resolvable.

Some argue that financing health services through tax revenues is the most equitable system, because health services are then free to everyone. However, when revenues are insufficient, government health services are often cut first in ways that affect the poor the most. For example, when drug supplies are reduced, people have to buy drugs from private pharmacies. Any of the methods by which government gets its general revenues from the population can be judged in terms of its equity.

Earmarked taxes are another mechanism suggested for increasing government revenues. For example, a national tax on tobacco can be justified on the grounds that smokers should pay for the increased burden placed on the health system by smoking-related illness. Such earmarked taxes were implemented recently in Australia, Malaysia and Thailand—even though the imposition of new taxes is generally unpopular and, therefore, politically difficult. Other proposals have included special health taxes by local governments that would be used for local health facility improvements. Pilot tests have shown that an additional local tax can be an equitable and efficient way of raising revenue for health care in poor rural communities since the poor benefit directly.

In one Indian state, government spending accounted for 31% of state GDP, but 21% of total health spending and only 3% of spending on reproductive and child health. Raising this latter level to 21% would add only 1% to the state budget, but would have a large effect on fertility and mortality.

Source: Sharma S. et al. Reproductive and child health accounts: an application to Rajasthan. *Health Policy and Planning*, 2002, 17(3):314–321.

A standard that can be applied to the sufficiency of tax-based funding is to compare the share of tax-based funding to total health spending to the share of government expenditure in GDP. The share of total expenditures on health from taxation can be determined from NHAs or from similar analyses. This comparison can be

extended to the share of government spending on specific programmes.

2.2.2 External funding for health

Typically obtained from foreign donors, this funding takes the form of specific components of health programme support; or fully-funded development projects, including vehicles, supplies, consultants, and expert personnel salaries and living expenses. Alternatively, external aid sometimes takes the form of budgetary support or non-project assistance through cash transfers directly to the national treasury based on mutually agreed milestones in the implementation of policy reforms. The sector-wide approach tries to pool and coordinate donor support for a health sector plan as a whole to avoid the fragmented efforts of the past.

2.2.3 Financing through efficiency gains

Removing waste in the health system can finance additional services. The scope for this is considerable, ranging from competitive procurement of generic drugs, to contracting out certain services, to modifying the payment structure under insurance, to closing underused facilities. A recent proposal in the US state of Oregon to establish “single-payer” universal health insurance (similar to the Canadian and Japanese systems) would have financed a wide range of services and covered many uninsured people by eliminating the profits and overhead costs of the multiple private insurers, as well as the high administrative costs faced by providers in dealing with them. These nonproductive expenditures are estimated at nearly a quarter of total health expenditures.

2.2.4 User charges

As with other public services, such as water and electricity, requiring payment for health care at the time and place of service assumes that individuals and households, though far from wealthy, are willing and able to pay for health services out of pocket at the time of use. The demand for health services is generally inelastic, especially for individual curative treatment. As such, the demand will drop relatively little if charges are instituted. Where demand for services is elastic, charges would not be recommended since demand would drop sharply. The revenues collected would be used to improve service quality,

Table 3: Arguments for and against user fees

For	Against
<p>Public facilities already receive government subsidies, but lack funds to function appropriately. These funds can be collected through modest user fees, well below private market prices. User fees, therefore, can help reduce much higher out-of-pocket spending by the poor in the private sector and increase their demand and consumption of health services.</p>	<p>However low, user fees depress demand. If fee revenue is small relative to total costs, a small increase in public funding of health and education should make public services free for the poor.</p>
<p>Without user-fee revenue, government health care systems would not have sufficient resources to function. User fees must be accepted as a second-best policy while governments' willingness or ability to spend more on health care remains limited.</p>	<p>User fees depress demand, especially by the poor. Governments should increase health funding, ensuring that partly or fully subsidized services are available to the poor. Also, when user fees are adopted, governments often reduce budgetary support by an amount equal to that generated from user fees. Fees end up becoming a substitute for public spending, not an addition.</p>
<p>User fees in government health systems account for a fraction of all private costs that individuals incur to obtain the service. Other costs include transportation, the opportunity cost of time while waiting and travelling, and medicines and supplies purchased in private pharmacies. Elimination of user fees alone will not boost demand for health services.</p>	<p>Governments should do more to alleviate as much as possible the financial burden that the consumption of basic social services imposes on poor households. Government should provide services and medicines at no charge to the poorest. User fees can result in delays in seeking care, which can harm public health significantly and increase treatment costs.</p>
<p>User fees depress demand for health services that are not really needed.</p>	<p>Yes, but only in rich countries with well-performing health services. In poor countries, the problem is not excess or unnecessary demand, but insufficient demand.</p>
<p>The poor can be protected from financial hardship by exemption from user charges. This has been done successfully in many NGO health facilities.</p>	<p>Exemption systems have proved difficult to implement so that they achieve the desired results. NGO providers have different social relationships with their clientele than government facilities. Reliable identification of the poor is difficult enough. If the provider determines the fee to be charged, a disincentive for the provider to exempt the poor from charges is built into the system.</p>
<p>User fees improve efficiency in health care systems by promoting more efficient demand patterns through "bypass fees" —graduated fees that encourage use of primary care before hospitals.</p>	<p>The efficiency of allocations could be improved by reallocating excessive public budgets from hospitals toward underfunded primary health care. The lack of funds and poor performance of primary health care facilities are what lead the poor to bypass them.</p>
<p>User fees signal consumers that the services are worthy of consumption. Free services tend to be underappreciated precisely because they are free.</p>	<p>Consumers are not stupid. If offered good service, they will recognize quality and will demand the service, particularly if it is offered for free.</p>

attracting more patients, including the poor. The acceptability of this method, however, requires exempting from charges those who cannot pay due to lack of income.

The efficiency of user-charge systems is based on the net revenues (user revenues minus additional administrative costs) as a percentage of recurrent costs. In public systems, these rarely have exceeded 15%, but non-profit hospitals often recover nearly 100% of non-staff costs. This is ascribed to the willingness of the better-off to pay for high-quality care, and well-organized systems for managing exemptions and collecting overdue bills.

(typically 50–70% of the health budget). Payment of health worker salaries in public facilities is considered a non-negotiable commitment of government. Thus, the usual goal of user charges is to cover or help cover the cost of drugs, fuel, cleaning supplies, repairs, supervision costs, incentive bonuses and other recurrent costs. From the perspective of the health facilities, the additional revenues are considered beneficial in improving conditions for staff and patients in many countries where the user-fee system has been evaluated.

Although the willingness to pay for drugs has been demonstrated clearly, drug revolving fund schemes often fail because consumer prices were set too low. The real cost of running such a system must include the administrative and logistical functions, drug wastage and spoilage, inventory costs, etc. The required markup might exceed 100% of the cost of drugs from a low-cost supplier.

than before. Recent research has found that utilization by low-income households falls more than that by better-off people. In principle, the poor can be protected from this deterrence by an administrative system of exemptions or waivers from paying part or all of the costs. In practice, these arrangements are rarely implemented effectively. Government employees and others who are financially secure often capture these exemptions, while the poor rarely receive them. Even with revolving drug funds,³ those in charge are reluctant to provide people who cannot pay with free drugs, because they know that they will be unable to replenish drug supplies if they collect too little revenue. However, poor rural people

Few effective ways have been found to make exemptions work for the poor, especially in rural areas where salaried or steady employment is rare. The approach most likely to succeed might be to replicate the system of using social workers employed in some NGO hospitals to determine eligibility. Another possibility is to have community members certify eligibility. Research also has found that using a sliding scale is a better approach to exemptions, although more difficult to manage. It could increase fee collection without preventing access for the poor or almost-poor. Incentives to cheat the means-testing system are reduced if the alternatives are something other than all or nothing.

Source: Nolan B., Turbat V. Cost-Recovery in Public Health Services in Sub-Saharan Africa. EDI Technical Materials. Washington, DC, World Bank, 1995.

A key variable in the design of a cost-recovery system is the level of costs to be recovered. Because they involve additional administrative burdens, user-charge systems should try to recover a substantial portion of the costs of curative services. Few public providers have tried to recover all recurrent costs, of which salaries and related costs are the major components

The equity effects of user charges imposed by public providers have been debated vigorously, and have been researched in many countries. Generally, when user charges are introduced for health services at the primary care level, utilization initially declines sharply. However, usage recovers in a matter of months to a somewhat lower level

seem to have the capacity to overcome this obstacle. Since they know that they will not receive drugs or other treatment, even if they are entitled to it, the poor will find some way to obtain the needed money, usually by borrowing it or selling some produce or household asset. This is similar to allowing payment in kind, which has been proposed as an acceptable alternative to cash for the small amounts generally required for basic medicines. The higher user charges, usually associated with chronic illness and emergency hospitalization, are a leading cause of the long-term impoverishment of families.

³ Such funds are a way to finance the supply of pharmaceuticals. Following the provision of startup capital, drug supplies are replenished with money collected from the sales.

Most of the user charges should be retained and used where they are collected to improve the quality of services. However, these revenues should be an addition to the health budget, rather than make up for budgetary reductions from a central funding source. These principles often can conflict with the principle of remitting all collected user charges to the Ministry of Finance, a general requirement in many countries that has been difficult to change sometimes.

If the additional revenues generated from user charges are used to improve the quality of services (better drug supplies, cleaner facilities, motivated staff, etc.), the poor potentially could benefit more than the wealthy if they make relatively greater use of the improved services. However, this has been documented in only a few countries, usually where the systems have benefited from intensive donor inputs to implementation and monitoring.

The ultimate sources of most health care financing in all economies are the incomes of households from the factors of production. Therefore, user fees do not equate to additional sources of funds for health systems in developing countries.

2.2.6 Different approaches to user charges

User-charge systems involve trade-offs between simplicity and efficiency, as well as equity. The administrative costs of a system requiring a single payment on registration will be lower than that in a more complex system. However, a single-payment system is likely to achieve higher cost-recovery targets. Compared to charging a single fee per prescription or per visit, a fee schedule based on a charge for each item prescribed or each service performed is likely to result in fewer items being prescribed, lower average cost per prescription, less waste and more appropriate prescriptions. On the other hand, a single, fixed charge per visit might make it easier for patients to bring the necessary amount of money to the clinic each time.

WHO does not consider user fees a preferred mode of financing health care, except in the short term and under specific conditions, such as when a revolving drug fund might be the only alternative to insufficient essential drug supplies. Prepayment with wide risk-pooling is more equitable and efficient, but requires a large commitment from government.

For inpatients, a good user-charge system can balance equity and efficiency. When patients are billed per service or item consumed, or even per day, seriously ill patients who require long medical stays, surgery or expensive drugs will be disadvantaged. Many will be unable to pay the whole bill, negating the potential high cost-recovery rate under this itemized system. An alternative is a flat per-day fee, which spreads the costs of drugs, laboratory, etc., among all patients in a department. However, this still provides disincentives to long stays. Each of these approaches has variations, and empirical research and trial-and-error are required to find a clearly superior version for a particular environment.

In Uganda, policy-makers considered a flat fee per consultation to be more equitable. However, users found this less acceptable than charging for drugs and tests consumed. When awareness of the market value of different drugs is high, cross-subsidization always will be evaded by net losers. Source: McPake B. et. al. The Economic Behaviour of Health Workers in Uganda: Implications for quality and accessibility of public health services. London, London School of Hygiene and Tropical Medicine, 1998 (PHP Publication Series, No. 27).

External donors are often the main source of encouragement for establishing cost-recovery systems. As such, they should play a role in the initial financing and sustaining of the scheme until it has reached a size and level of managerial competence that allows for economies of scale and sustainability. This means continuing subsidies over a certain number of years, based on the cash-flow projections from a realistic financial plan. Of course, this applies equally to social insurance systems.

Selected references

User Charges and Other Health Financing Alternatives

- Arhin-Tenkorang D. *Mobilizing Resources for Health: The Case for User Fees Revisited*. A report of a commission chaired by Jeffrey Sachs. Geneva, WHO, Commission on Macroeconomics and Health, 2001 (CMH Working Paper Series Paper, No. WG3:6).
- Bennett, S. *et al.* 2004. *21 Questions on CBHF: An Overview of Community-Based Health Financing*. Bethesda, MD, Partnerships for Health ReformPlus, 2004. Available at: http://pdf.dec.org/pdf_docs/PNACY501.pdf (accessed 20 October 2005).
- Creese A., Kutzin J. *Lessons in cost-recovery in health*. Geneva, WHO, 1995, WHO/SHS/NHP/95.5.
- Fabricant S., Kamara CW, Mills A. Why the poor pay more: household curative expenditures in rural Sierra Leone. *International Journal of Health Policy and Management*, 1999, 14:179–199.
- Gertler P., Hammer J. *Strategies for Pricing Publicly Provided Health Services*. Washington, DC, World Bank, 1997. Available at: <http://www.worldbank.org/html/dec/Publications/Workpapers/WPS1700series/wps1762/wps1762.pdf> (accessed 19 October 2005).
- Holloway KA, Gautam BR, Reeves BC. The effects of different kinds of user fees on prescribing costs in rural Nepal. *Health Policy and Planning*, 2001,16(4):421–427.
- Hung PM *et al*, eds. *Efficient, Equity-Oriented Strategies for Health: International Perspectives—Focus on Vietnam*. CIMH, Melbourne, 2000.
- Kutzin, J. *Experience with Organizational and Financing Reform of the Health Sector*. Geneva, WHO, 1995, WHO/ARA/CC97.5.
- Muela S., Mushi A., Ribera J. The paradox of the cost and affordability of traditional and government health services in Tanzania. *Health Policy and Planning*, 2000, 15(3):296–302.
- Murakami H. *et al.* Revolving drug funds at front-line health facilities in Vientiane, Lao PDR. *Health Policy and Planning*, 2001, 16(1):98–106.
- Nolan B., Turbat V. *Cost-Recovery in Public Health Services in Sub-Saharan Africa*, EDI Technical Materials, World Bank, 1995.
- Russell S., Fox-Rushby J., Arhin D. Willingness and ability to pay for health care: a selection of methods and issues. *Health Policy and Planning*, 1995, 10(1):94–101.
- Russell S. Ability to pay for health care: concepts and evidence. *Health Policy and Planning*, 1996, 11(3):219–237.
- Russell S., Reynolds J. *Community Financing*. Maryland, USA, Center for Human Services, 1985 (PRICOR Monograph Series: Issues Paper 1).
- Sauerborn R., Bodart C., Essomba RE. Recovery of recurrent health service costs through provincial health funds in Cameroon. *Social Science and Medicine*, 1995, Vol. 40 No. 12, 1731–1739.
- World Health Organization. *Debt for Health Swaps: A source of additional finance for the health system?* Macroeconomics and Health Series. WHO/ICO/MES2.3. Geneva, WHO, 1992.
- World Bank. *Financing Health Services in Developing Countries. Agenda for Reform*. World Bank Policy Study. Washington, DC, 1997.
- Wouters A. Improving quality through cost recovery in Niger. *Health Policy and Planning*, 1995, 10(3):257–270.
- Zöllner H., Stoddart G., Selby Smith C., eds. *Learning to live with health economics*, Copenhagen, WHO Regional Office for Europe, 2005. Available at: http://www.euro.who.int/futuresfora/publications/20050421_1 (accessed 16 February 2006).

Public-Private Mix

- Skaar C. *Extending Coverage of Priority Health Care Services through Collaboration with the Private Sector: Selected Experiences of USAID Cooperating Agencies*. Bethesda, MD, Partnerships for Health Reform Project, Abt Associates Inc., 1998 (Major Applied Research No. 4, Working Paper 1).
- Bennett S., Creese A., Monash R. *Health insurance schemes for people outside formal sector employment*. Geneva, WHO, 1998 (Current concerns series, ARA paper, No. 16).
- Bennett, S., McPake B., Mills A. *Private Health Providers in Developing Countries: Serving the public interest?* London, Zed Books, 1997.
- Brugha R., Zwi A. Improving the quality of private sector delivery of public health services: challenges and strategies. *Health Policy and Planning*, 1998, 13(2):107–120.
- D Asiimwe *et al.* The private-sector activities of public-sector health workers in Uganda. In: Bennett S. *et al.*, ed. *Private health providers in developing countries: serving the public interest?* London, Zed Books, 1997.
- Ha N., Berman P., Larsen U. Household utilization and expenditure on private and public health services in Viet Nam. *Health Policy and Planning*, 2002, 17(1):61–70.
- JSI. *Initiatives Private Sector Toolkit: A step-by-step guide for working with the private health sector*. Arlington, VA, JSI Research and Training Institute, 1995.
- McPake B. *et al.* *The Economic Behaviour of Health Workers in Uganda: Implications for quality and accessibility of public health services*. London, London School of Hygiene and Tropical Medicine, 1998 (PHP Publication Series No. 27).
- Medicus Mundi International. *Contracting NGOs for Health*. Brussels, Medicus Mundi, 1998.
- Mills A. *et al.* What can be done about the private health sector in low-income countries? *Bulletin of the WHO*, 2002, 80(4).
- Mills A. To contract or not to contract? Issues for low and middle income countries. *Health Policy and Planning*, 1998, 13(1):32–40.
- Mills, A., Broomberg J. Experiences of Contracting: an overview of the literature. Geneva, WHO, 1998, WHO/ICO/MESD.33.
- Muschel J. *Privatization in Health*. Technical Briefing Note. Geneva, WHO, 1995, WHO/TFHE/TBN/95.1.
- Taylor Associates International. *Private Participation in Health: Strategies for developing a public/private mix in health services delivery in Cambodia*. Phnom Penh, Ministry of Health, 1999 (MOH and WHO Health Sector Reform Phase III Project).
- Newbrander W., ed. *Private Health Sector Growth in Asia: Issues and Implications*. NY, Wiley, 1997.
- WHO. *Experiences of Contracting: An Overview of the Literature*. Geneva, WHO, 1998, WHO/ICO/MESD.33.
- WHO. *Health Systems: Improving Performance*. The World Health Report. Geneva, WHO, 2000.

3. HEALTH INSURANCE

The development of health insurance systems has become a major focus of health reform. The objectives are twofold: to improve equity of financing, and to provide a more stable source of funding for the health sector than government revenues can provide. All types of insurance schemes are based on risk-sharing. In a large group of people, only a small percentage in a given year will have a serious illness. If everyone regularly contributes a small amount (the premiums) to an insurance pool, the total collected is available to pay for health care services for the smaller number who will require treatment. As a part of overall health financing, the pooled premiums represent a fund that is reliably available to supplement the often less reliable government budget for health services. Alternatively, the pool might be reserved primarily for those who contributed premiums (subscribers). Resources released by moving workers from a government-funded system to one funded by insurance can be used to develop other priority services for groups not covered.

In effect, the healthy members of the insurance plan subsidize the sick ones in any given year. Over several years, however, the amount paid out per household for treatment becomes more equal. Younger households will be subsidizing older (and less healthy) and economically inactive ones over many years, which is considered beneficial in some systems. In any case, when the premium is a fixed percentage of earnings, this is compensated for since older workers usually earn more than younger workers.

Insurance is based on several key principles, the main one being to protect against the hazards of paying for medical care, which is usually unpredictable and often expensive. Insurance systems, compulsory and voluntary, can differ in several ways, including the population they cover and the type of actual or implied contract between the insurer and the insured parties. Some countries have national-level health insurance intended to cover a large part of the population, also called social insurance. This is based on national legislation, which is generally mandatory for all employees in the public sector, parastatal enterprises and private enterprises with a defined minimum number of workers. These systems operate on a break-even or non-profit basis. Large countries might have separate but similar social insurance schemes in different geographical areas. In some cases, private sector employees might not be part of such schemes if they have another option, usually group-based insurance administered by the firm or a for-profit insurance company. In addition, for-profit insurance companies might offer private insurance to individuals, sometimes as a supplement to social insurance for a wider range or a higher quality of services.

3.1 Private (for-profit) insurance

The high degree of risk-selection and risk-rating are the main characteristics that distinguish private insurance from social insurance. People with pre-existing medical conditions or who are deemed to be at high risk (e.g., smokers) might be denied coverage or required to pay very high premiums. Premiums might be higher in some communities due to higher average medical costs. If employee groups are insured, the premiums might depend on the type of business or the work environment. This is a powerful form of cost control that benefits many subscribers. In comparison to social insurance, however, it is unfair to many more, since manual workers and older workers are at higher risk for illness. The private industry is generally profit-driven, and profits in the insurance industry are quite high. Administrative costs are elevated, not least by high managerial salaries. This means that for a given level of coverage, premium costs of private insurers might be 25–40% higher than for a social insurance scheme. Private for-profit insurers and many non-profit private insurers use this demand-side cost control and many forms of supply-side cost-control as well. In developing countries, private for-profit insurance usually covers no more than 2% of the population. Rather than discourage any private insurance, suggesting that private insurance be considered for supplementary benefits—that is, benefits that are not medically necessary—is usually useful.

Some argue that low-income groups benefit indirectly from private health insurance, because it transfers wealthy groups from the publicly financed health system to the private sector. However, opting out of public systems not only reduces the premium revenue available to those schemes, but also reduces the willingness of the wealthy to pay taxes for supporting them.

3.2 Medical savings accounts

An innovation that appears to have succeeded in Singapore is essentially a government grant to individuals, held in a privately owned account, which can be used to purchase health insurance or pay providers directly. Account owners have the right to use the money as they wish, and any money that remains in the account after a specified period becomes theirs. This limits the government's obligation and rewards good health, but also puts the risk of illness on the individual. This is considered by many to be a “win-win” system, and might be more attractive than insurance to people in some cultures.

All insurance systems must be able to sustain the fund by widening the base of paying subscribers or members, and by controlling the cost of the health care benefits paid on behalf of the subscribers. While a company that offers private insurance usually hopes to make a profit, social insurance systems also need to run a surplus that will form a reserve and investment fund. The benefits package determines the medical costs that the fund will reimburse to health care providers. Expenditures on benefits are limited by a combination of contracts with a restricted set of providers, non-coverage of certain services, deductibles and copayments. In a competitive health insurance market, each insurer will try to offer the most attractive benefits package to gain subscribers, while maintaining as tight control on reimbursements as possible without reducing quality as perceived by the subscribers.

Community insurance and prepayment schemes are sometimes tried in countries where relatively few people are employed in the formal sector, i.e., with most people working in farming, small trading, or as self-employed craftsmen. Simple prepayment schemes are useful when people have difficulty paying for health services during some periods of the year, as is normal in agricultural communities. These are organized at a local level for ease of management, and because people tend to have greater confidence in local officials than in those in a distant capital. A tradition of mutual aid or community financial pooling adds to the social acceptability of such schemes. People with few financial

In a sense, the risk that is spread is not that of expensive illness, but rather that of inability to pay for basic health care during the “lean” seasons of the year.

reserves often express willingness to pay for protection when they are well. However, when the time comes to subscribe, the money might not be available or they might have changed their minds unless someone in the household is ill at the time. Such schemes often might be unable to cover all costs of care, because of the limited membership and adverse selection, which results in high-risk individuals joining the scheme. Moral hazard—the unnecessary utilization of health services when they are free at the point of service—has been a much less serious issue in community health insurance schemes. Many of these problems can be overcome with good design of the community-based schemes. However, long-term sustainability and coverage of a significant proportion of the population through community-based schemes are the major problems.

3.3 Social health insurance

Social health insurance systems, which are based on contributions to a health fund, provide a stable source of revenue for health services. No single model of social health insurance is best; each country must design a system to fit its circumstances. When employers and employees share the contribution burden, payrolls are the main revenue source. The fund might also receive direct subsidy from tax revenues and investments. Since each contribution usually consists of a percentage of the employee's wage or salary, this system can be considered progressive. Furthermore, this system of funding is as reliable as the general economy, and contributions can be collected easily, which are great advantages.

With social health insurance, age or health risks do not determine the amount of the premium, and generally it is not adjusted for the number of dependents covered. Dependents are usually defined as the legal dependents, including spouse and children under 18 years old of the insured employee. In some systems, elderly parents without personal income and residing in the same household as the insured workers also are covered as dependents.

Health insurance funds, by their nature, promote solidarity and support among the covered population by risk-pooling—the healthy supporting the sick, the high-wage earners supporting low-wage. Since the health funds are a public entity, their policies can be formulated to support government health policy.

Social health insurance funds are usually independent public agencies, or function under the framework of ministries of health, labour or social welfare. They might be part of a broad social security system, covering cash and service benefits for old age, disability, maternity, death

and unemployment, as well as health care. Alternatively, they might be limited to the provision of health care benefits. Cash and health care benefits for occupational injuries and illness might be covered under the same fund, or might be handled by a separate work injury programme. Likewise, health care benefits for the victims of accidents unrelated to work, such as motor vehicle and sports accidents, natural disasters and civil strife, or terrorism might be covered by other government and private agencies. In developing countries, where such insurance institutions are relatively less developed, this issue can be a major problem. New social health insurance tends to exclude care of victims of such accidents, particularly motor vehicle accidents. With the significant increase in traffic accidents in recent years in developing countries, this exclusion is a major problem for newly insured populations with expectations that their health insurance contributions will cover all contingencies.

As they are based on legislation, social health insurance systems have a set of regulations that are generally updated periodically to allow for changes in contributions, benefits and other conditions. Usually, they are governed by boards or councils with representatives from public agencies, employers and employees (the insured), as well as health care providers. The health insurance funds might provide services directly, such as when they own and operate their own clinics and hospitals; or they might contract with independent providers for services to enrolled members. In turn, the providers also

might receive funding from other sources, such as tax revenues and private insurance. Most countries have mixed financing and provision systems, although the social health insurance funds are usually the largest financer of providers that serve their members. The main disadvantages of social insurance financing are relatively high administrative costs, problems of cost containment (relatively little control over adverse selection, because universal enrolment is an objective), and the problems of extending coverage to the unemployed, workers in agriculture, and the informal sector.

The existing supply of health care resources is usually the major determinant of whether a new social insurance system should develop its own facilities. In some cases, the new system might create specific facilities, such as pharmacies or ambulatory care clinics, to deal with imbalances or to control costs.

Several technical factors must be evaluated when considering the introduction of social health insurance. Besides the technical factors, the existing structure of health services is also relevant, since it will be more heavily utilized, and its funding restructured and possibly expanded. The private non-profit and for-profit health services, as well as the public sector, might be subjected to the influence of a social insurance scheme. New investments in health facilities will also affect the existing structures, as well as health staffing requirements.

Population coverage is another important factor for planning and policy development. When social health insurance covers only the formally employed segment of the population with what might be regarded as superior health services, resentment might build among the uninsured. Therefore, efforts should be made to find ways eventually to include as many population groups as possible—the self-employed, pensioners, students, disabled and others. The inclusion of these groups can face technical difficulties, such as accessibility to registration, ability to pay and income assessment. Moreover, cross-subsidization is a potential political issue.

Many other factors impact sustainability, efficiency and equity. Whether group membership should be compulsory or voluntary also raises a wide range of technical feasibility, financial and political issues. If a voluntary scheme is chosen, planners can take a number of approaches to minimize adverse risk selection and fraud, including qualifying conditions, qualifying period and limited enrolment periods. Family coverage, through the coverage of dependents of the insured, can reduce adverse selection. Contributions are most often related to wages or income, though they might have a ceiling to limit disparities. Ceilings are particularly important when the system covers populations with wide disparities in wages or income, as is often the case in developing countries when public and private sector workers are covered by the same system. The premiums or contributions and other funding requirements, therefore, must assume a morbidity profile of the covered population that includes a significant number of expensive diseases and injuries. This also could impact whether the health fund or social insurance system invests in new hospitals and expensive technology, which might be necessary if certain services are not available at an acceptable price.

Most of the remaining policy considerations relate to cost control, which can be ensured by implementing appropriate health care benefits and exclusions, copayments and provider payment mechanisms. Since these are not unique to social insurance, but are common to most other types of health insurance, they are discussed below.

The benefits package: Social insurance and private insurance operate under mandates of limiting costs, the former to maximize benefits and the latter to maximize profits. Both might require copayments as a demand-based means of reducing utilization, and both will place limits on services covered. Social insurance systems and some types of private insurance (health maintenance organizations or HMOs) provide coverage of many preventive services (i.e., no copayment to reduce utilization), since these

reduce treatment costs in the long-term. Social insurance rarely restricts pre-existing illnesses or maternity, or caps annual or lifetime expenditures, while this is the rule for private insurance. Many social insurance systems, and some private HMOs, control costs by operating their own polyclinics and hospitals, directly employing all staff. HMO members generally are limited to free services available in these facilities.

3.4 Provider payment

Table 4: Incentive effects of various payment methods

Reimbursement type	Underlying incentives for:			
	Cost/unit	Services/case	Quantity of cases	Risk selection
Global budget	--	--	-	0
Fee-for-service unconstrained	-	++	+	0
Fee-for-service fixed	--	++	+	+
Capitation	--	--	--	++
Case-based	--	--	++	+

+ is an incentive to increase, - is incentive to reduce, and 0 is neutral

Adapted from: Barnum H., Kutzin J., Saxenian H. Health reform: Incentives and provider payment methods. Washington, DC, World Bank, 1995 (HRO Working Papers, No. 51).

Providers can be paid by an insurance fund in several ways. Each has different effects on the quality of health care services, cost containment, and administrative complexity and costs. In particular, the payment mechanism affects expenditure on health care because the provider, not the patient, specifies the kind and quantity of treatment and medication required. Providers can maximize their incomes several ways in dealing with patients, generally by excessive prescribing; sending financially unattractive patients elsewhere; and by unnecessary procedures, often to amortize the cost of expensive equipment they have invested in. Efficient provider payment systems allow providers to earn a reasonable income, but maintain good quality of care while preventing waste and unnecessary service provision. This is a difficult balance to achieve. Despite being a major preoccupation of health economists and a subject of political scrutiny, an optimum system has not been accepted. No single provider payment method provides all the right incentives. A mixture of payment methods can exist in the same system, emphasizing stronger incentives for underused services, such as immunizations and prenatal exams. Some of the more common types and variations are described here:

Under fee for service, providers can maximize their income by seeing as many patients and performing as many scheduled treatments as possible. They also might delegate patients to see less-qualified personnel, which could undermine quality. However, the provider also is encouraged to work hard.

Fee for service: Providers are paid for each treatment act or product they provide. These fees might be uncontrolled, allowing each provider to charge as much as the market will pay. This can and does work for uninsured patients, though it is an obvious source of financial risk to the

insured. Where fee for service is still the reimbursement mechanism, it has been replaced by systems of a fee schedule, sometimes called “usual and customary” charges. Such a fee schedule informs the patient and the provider of what the insurer is prepared to pay. It might allow the provider to charge a higher fee, if the patient is willing to pay the additional cost over what the insurer will pay. The scheduled fee might be based on the actual costs of service, namely the variable costs (providers’ labour, materials consumed, lab tests, etc.) plus the overhead costs, which prorate the fixed annual costs of the clinic according to the time spent delivering a specific service. In the case of drugs, the

schedule might limit the reimbursement to the price of a generic drug, or set prices for specific branded products.

The insurer can encourage or discourage certain services by setting the fees higher or lower than the cost of production. However, when the fees for procedures are set too low, providers will tend to “game” the system by claiming for a more lengthy or complex procedure, or by detecting additional symptoms when the patient is interviewed.

A fee for service system has very high administrative costs. For the providers, billing procedures are costly. For the insurer, the cost of processing claims is high. Moreover, the insurer must establish expensive monitoring procedures to minimize false claims.

Capitation payments: The insurer (government, social insurance, or private insurance under the HMO model) pays the provider organization a negotiated amount per year to provide all treatment for a patient enrolled in their service. This method is favourable to the provider, because it guarantees revenue over a defined period. However, the provider might try to minimize the costs of care. A positive approach is to implement preventive care programmes to keep their patients as healthy as possible, prescribe from a limited, mostly generic formulary, and minimize hospital stays. On the other hand, the danger is that the provider will provide less than the necessary volume and type of services at the individual patient level, resulting in dissatisfaction and sometimes negative health outcomes.

Case-based payment: If the provider is paid a predetermined amount for treating a case rather than for each treatment, the provider is likely to use as few treatments as possible to achieve a good result. Most private insurance reimbursements in the US are based on this important cost-control tool, known as a diagnostic-related group. Although difficult, a provider can claim that a case falls into a higher-reimbursement group than the true one. Insurers employ controls to minimize this. However, the basic assumption is that all diagnoses are appropriately classified, and that a sophisticated and computerized information system is essential.

Selected references

- Normand C., Weber A. *Social Health Insurance – A Guidebook for Planning*. Geneva, WHO/ILO, 1994.
- Ron A. *Planning and Implementing Health Insurance in Developing Countries: Guidelines and Case Studies*. Geneva, WHO/ICO/MESD, 1993.
- Ron A., Carrin G. *The Development of National Health Insurance in Viet Nam*. Geneva, WHO/ICO/MESD, 1993.
- Soderlund N., Hansl B. Health Insurance in South Africa: an empirical analysis of trends in risk-pooling and efficiency following deregulation. *Health Policy and Planning*, 2000, 15(4):378–385.
- Supakanaunti S. Future prospects of voluntary health insurance in Thailand. *Health Policy and Planning*, 2000, 15(1):85–94.
- Tangcharoensathien V. *et al.* Patient satisfaction in Bangkok: the impact of hospital ownership and patient payment status. *International Journal for Quality in Health Care*, 1999, 11(4):309–317.
- Yip W. *et al.* *Impact of capitation payment: The social security scheme of Thailand*. Washington, DC, U.S. Agency for International Development, 2001 (Partnerships for Health Reform Project, Major Applied Research 2, Working Paper No. 4, January).

4. RESOURCE ALLOCATION AND PRIORITIZATION

How available resources are allocated among many possible functions and services affects health system performance, efficiency and equity. Since the possibilities for raising more money for health are limited in times of lower economic growth, and because governments and donors are under increasing pressure to report good results, resource allocation has become a magnet for the attention of economists and policy-makers. Efforts have focused on improving the information available to policy-makers and managers from the national level through development of NHAs, and from the health intervention delivery level through costing and cost-benefit analyses.

In many countries, health budgets are based on the previous year's budget, with only minor changes. This approach reduces the likelihood of allocating resources according to evidence-based criteria. In principle, to render the most benefit to a population from a limited set of resources for health, budgetary resources should be allocated to programmes that are the most effective in improving the health of the population. If equity and humanitarian considerations could be set aside, the first priority would be given to the most cost-effective, second priority to the next most cost-effective, etc. The amount that can be invested in some kinds of interventions encounters natural limits, such as broadly targeted immunization of newborn babies or insecticide spraying of malaria-prone areas. For some others, cost-effectiveness decreases with the increasing level of spending.

Some criteria for choosing interventions to be financed from public sources are:

- if the intervention is essentially a public health measure, or reduces external effects among the larger population when individuals are treated;
- if the intervention is for a condition that can place a heavy financial burden on individuals;
- if the demand for the intervention is high among underserved and low-income groups; and
- if the private sector cannot efficiently and equitably meet the demand for this service.

The method for setting health priorities expounded in the World Bank's 1993 World Development Report (WDR) has generated much research and debate. This report's evidence-based methodology for setting priorities has been the focus of much of the attention. To improve government investment in health, this approach estimates the extent to which populations suffer from diseases (burden of

disease or BOD), as well as the costs and effectiveness of curative and preventive measures known to reduce this burden. BOD is estimated in terms of DALYs lost, and the cost-effectiveness of interventions in cost per DALY gained. These are combined to assess the burden of disease that could be averted if the interventions were implemented. Using this methodology, the intervention should be considered a priority only when the BOD is large and the cost-effectiveness of an intervention is high. In this way, a number of clinical and public health interventions are identified as “good buys” for governments that should be included in a minimum package of essential health services. In practice, of course, other criteria can take precedence, including the need to improve gender and socioeconomic equality of service use, response to political pressures, and the priorities of external donors.

The most essential services identified in the 1993 WDR, and supported by WHO, include primary health care (PHC) interventions that are already high priority in most countries—maternal and child health, birth spacing, immunization, oral rehydration, anti-smoking campaigns and TB control. The report estimates the potential improvements in health status gained from increasing and reallocating health budgets in favour of these priority interventions. One reason they have been controversial and sometimes politically unacceptable is that they imply a reduction in funding for other services, especially tertiary hospital services, which urban, better-off and politically powerful population segments tend to use. The accuracy of the conclusions—and certainly their universal applicability—also has been criticized based on a number of technical and ethical weaknesses. The issue appears at an impasse. Due to technical difficulties and cost, many countries have little hope of carrying out their own BOD and cost-effectiveness studies. At the same time, however, countries are reluctant to accept a “one size fits all” global prescription for prioritized investment.

One of the most persistent critiques of DALYs is that the disability weights used are subjective and unfair to certain groups. If most weight is given to disabilities due to disease in economically active people, lower priority is given to diseases that affect children, the elderly and perhaps women who are not employed outside the home.

Investing the entire health budget in a few top priority interventions, even very cost-effective ones, is neither good policy nor sound economics. In practice, additional demands for the health budget always arise, with politically powerful voices often calling for interventions or programmes that might be the least desirable from a theoretical viewpoint—notably high-technology hospitals. For reasons of equity, improving access to underserved people is also desirable, even though the expansion of programmes in many places might not be very cost-effective.

Some high-priority public health services are extremely underutilized. In this case, efficient alternatives to funding their direct expansion are available. Public funding can be used to increase knowledge and demand among those in need, to improve the quality of public services, to subsidize travel costs, or even to subsidize the costs incurred when low-income people use private providers.

4.1 Costing of health services

Frequently, governments are unaware of the true costs of providing services, which makes identifying where efficiency could be improved and resources allocated more efficiently nearly impossible. Costing is a process of determining the costs of inputs to a programme or service—personnel, facilities, drugs and supplies, and needed capital investments. Normally, these basic input categories must be allocated to the various outputs through a so-called step-down process.

While costing is basically a simple and straightforward exercise, valid alternative methods might be available that yield different results. The approach selected should be based on how the resulting cost data will be used.

Economic costs are real, but often invisible to the provider and consumer of any given health service. These include opportunity costs of capital, costs of personnel if they were paid fair market wages, “shadow” prices of subsidized inputs such as fuel and electricity, and depreciation of capital assets. The consumer’s costs of obtaining health care, such as buying prescribed medicines, unofficial payments, transport, and the value of time lost by the patients and anyone accompanying them to hospital, are other economic costs.

Financial cost accounting is based on current and accrued monetary costs of providing services. Total financial costs are equal to all sources of revenue: central and provincial government health budgets, official user fees, insurance reimbursements, depreciation of capital assets based on standard accounting practice, and deficit borrowing, if any. It is useful to distinguish

between fixed costs (such as buildings and administrative staff), which have to be paid regardless of the patient load, and variable costs (such as drugs, immunization cards, transport fuel, etc.), which change with output or the level of utilization. Overlapping inputs to a given programme or service can complicate costing. Thus, judgment and consistency are required. Unit costs usually are given as cost per bed-day or per admission for hospitals, and cost per contact for outpatient and PHC activities.

Box 2: The CHOICE initiative

Decision makers often use cost-effectiveness analysis (CEA) to assess health interventions in terms of the best value for money. It is a tool for choosing interventions and programmes that might maximize health outcomes for the available resources. Under the CHOICE initiative (Choosing Interventions that are Cost Effective), WHO has developed tools and methods for generalized CEA. The objectives are to develop a standardized method for CEA that can be applied to all interventions in different settings; develop and disseminate tools to assess intervention costs and impacts at the population level; determine the costs and effectiveness of a wide range of health interventions, undertaken by themselves or in combination; summarize the results in regional databases that will be available on the World Wide Web; and help policy makers interpret and use the evidence. Currently, the WHO-CHOICE database contains cost-effectiveness ratios for more than 200 interventions, including maternal health, childhood diarrhoea, pneumonia, vaccine preventable diseases, underweight, vitamin A, iron and zinc deficiencies, indoor air pollution, poor water and sanitation, tobacco and alcohol dependence, unsafe sex, risk factors for cardiovascular diseases, diabetes and other noncommunicable diseases. More information on WHO-CHOICE is available at: www.who.int/evidence/cea.⁴

4.2 Cost analysis

Accounting (or financial) costs are the actual expenditures on goods and services purchased. Economic costs are values of goods for which no financial transactions occur, such as the value of land occupied by a hospital; or when something might have a different value when used elsewhere, such as the official salary of a government health worker. Another term, used almost interchangeably, is “shadow price”.

Cost analysis can provide valuable insight on the functioning of programmes. It can improve budgeting by monitoring costs; improve efficiency by identifying potential cost savings; and estimate the resources needed to start up the intervention, sustain it, and expand it. Recurrent financial costs to any kind of health programme

or facility can be categorized as variable (costs that are directly associated with service delivery and vary with the number of patients or clients, such as drugs, medical supplies and some provider costs), and fixed (costs that do not depend much on the number of patients, such as rent, utilities, depreciation of buildings and equipment, and costs of non-medical staff). The cost of operating a facility is the sum of fixed and variable costs. The average cost per patient is the total cost divided by the number of patients. If a facility has few patients, the average cost per patient will be higher, because each patient will carry a larger share of fixed costs. With more patients, total fixed costs are divided by a larger

⁴ Accessed 12 October 2005

number, so the average cost per patient becomes closer to the variable cost per patient.

The annual depreciation of a vehicle with an initial cost of \$20,000 and an expected life of 8 years would be $\$20\,000/8 = \2500 per year.

Depreciation: This refers to the amount by which the value of a physical asset decreases continuously due to its productive use. Knowing or forecasting with certainty the useful life of, say, a building or a car is almost impossible. Therefore, standard lifespans are usually used to calculate depreciation costs of many kinds of physical assets. For the purpose of budget allocation, the annual depreciation of an asset is a good approximation of the amount that should be set aside for the eventual replacement of the asset, or the amount that should be budgeted for maintenance to keep the asset in full productive condition. Land is a physical asset that does not depreciate.

Selected references

- Abt Associates. Decision Making for Equity in Health Sector Reform. PHR Primer for Policymakers. Bethesda, MD, 2002.
- Bobadilla J., Cowley P. Designing and implementing packages of essential health services. *Journal of International Development*, 1995, 7(3):543–554.
- Fox-Rushby JA, Hanson K. Calculating and presenting disability adjusted life years (DALYs) in cost-effectiveness analysis. *Health Policy and Planning*, 2001, 16(3):326–331.
- Goodman C., Coleman P., Mills A. *Economic Analysis of Malaria Control in Sub-Saharan Africa*. Geneva, Global Forum for Health Research, 2000 (Strategic Research Series, Volume 1. ISBN 2-940286-00-0)
- Goodman C., Mills A. The evidence base on the cost-effectiveness of malaria control measures in Africa. *Health Policy and Planning*, 1999, 14(4):301–312.
- Paalman M. et al. A critical review of priority setting in the health sector: the methodology of the 1993 World Development Report. *Health Policy and Planning*, 1998, 13(1):13–31.
- Phillips M., Sanghvi T. *The Economic Analysis of Nutrition Projects*. Washington, DC, Human Development Department, World Bank, 1996.
- Reynolds J., Gaspari K. *Cost-Effectiveness Analysis*. Maryland, Center for Human Services, 1985 (PRICOR Monograph Series: Methods Paper 2).
- Walker D. Cost and cost-effectiveness guidelines: which ones to use? *Health Policy and Planning*, 2001, 16(1):113–121.

5. NATIONAL HEALTH ACCOUNTS

Health sector reform often calls for changes in the financing and provision of health services. As new modes of public and private financing are proposed, policy-makers and planners in the health sector must understand their potential, as well as the limitations of resource allocation and mobilization. Efficient use of financial resources is an essential intermediate step in improving health systems. Fairly distributing the financial burden of health care, especially to reduce its effects on the poor, is another goal.

What questions can NHAs answer?

- Who pays and how much do they pay for health services?
 - Who are the important actors in health financing and health care delivery, and how significant are they in total expenditure?
 - How are health funds distributed across the different services, interventions and activities that the health system produces?
 - Who benefits from health expenditure?
-

NHAs are a tool that allows countries to generate and retrieve comprehensive financial information, in the same way that population mortality and morbidity is basic information. The key information includes how much is spent, on what types of health services and related activities, and who benefits from these expenditures. This type of information is critical to understanding the functioning of any health system, and to making

sound decisions about health financing.

National patterns of health care provision, use and cost differ significantly. As governments seek to control rising expenditures, they can look to the experience of others for both good and bad examples. The data used on expenditures and other resource inputs, intermediate outcomes, and outputs must be comparable for this type of analysis to be meaningful. This, in turn, calls for uniform methodologies, definitions and understandings of the many components of these NHAs.

NHAs consist of a standard set of tables that display aspects of a country's health expenditures. NHAs are different from other forms of expenditure review in that they form a rigorous classification of the types and purposes of expenditures, as well as all the actors in the health system. They also

comprise a complete accounting of all spending for health, regardless of the origin, destination or object of the expenditure. They represent a formalized approach to collecting, cataloguing and estimating those flows of money and are intended for ongoing analysis, as opposed to a one-time study.

Establishing a set of standardized national health accounts is a prerequisite for health sector reform. NHA production should be a neutral activity not done with the intention of reform. However, when NHA data are combined with other relevant information, such as information on health services and goods, outputs, and outcomes, it becomes a reliable framework for modelling new strategies and monitoring their effects.

NHAs are descriptive statements as well as reference documents that can improve the effectiveness of planners and managers in the health sector. For example, the declining gains in life expectancy from increasing health expenditures have been tracked, raising questions about what is being purchased with the current proportion of national spending devoted to health, and what is an appropriate level of spending. If NHAs are sufficiently detailed, they also can track the flow of resources for specific health programmes, such as HIV/AIDS, or the flow between households and institutions. In this way, they might be used to examine the equity impacts of policies—i.e., which households benefit most and least from the public resources being spent. At the international level, NHAs can be used to compare countries.

Essential to such understanding is accurate information about the availability and distribution of resources in the health sector and their directions of flow, as well as changes in that pattern. In most countries, investments in other social sectors, such as education and environmental services, also might influence health. Therefore, NHAs must include, or at least note, such inputs. The aim of national estimations of health expenditures is to provide this type of information. Because the NHA approach is comprehensive, it is also independent of the organization of the health system. Moreover, it is equally useful whether the dominant modality is single-payer or multi-payer, tax-supported or user-supported, for social insurance, private insurance, or no insurance.

In most low- and middle-income countries, estimating national health expenditures is relatively difficult. Historical reasons and the complexities involved in making such estimates have prevented most of these countries from establishing NHAs, current or retrospective. Traditionally, most governments took the position that if they had a role in the health sector, it was to take sole responsibility for provision of services. Thus, they did not believe accounting for the activities of agencies outside the public sector was necessary. With the realization that governments lack sufficient resources to meet such goals, interest in examining alternative sources of provision and financing has grown. NHA estimates have provided evidence that private expenditure on health, especially on primary care, is far more significant than previously realized. It might exceed government spending in this sector by many times. Expenditure estimates must, therefore, include private sector contributions and activities.

5.1 Development of NHAs

In most countries, the task of producing the NHA will be assigned to a small team of experts, working for or with concerned government agencies. The professional skills required are varied. The team does not necessarily include economists, but rather specialists who are familiar with using data sources and maintaining their validity. The team should be prepared for many instances where estimates might be needed because the specified data are not available. The actual production of NHA tables is complex and time-consuming, and only the basics of the tables can be described here as an indication of what is finally required. WHO has created a comprehensive guide to this process, the NHA Producers Guide, which can serve as a primary reference for the detailed operations required.

Box 3: The NHA Producer's Guide

In 2003, WHO launched a guide to producing NHAs, which has special applications for low-income and middle-income countries. The main goal is to provide conceptual and practical information needed to set up and implement NHAs at the country level. The NHA Producer's Guide takes advantage of the extensive work on standards for health accounts undertaken for the Organization for Economic Co-operation and Development. Pulling together the experiences and expertise from developing countries, it provides useful information and steps for policy formulation, analysis and monitoring in settings relevant to low- and middle-income countries. More information on NHAs is available at: www.who.int/nha⁵.

The compilation of NHAs involves identifying “sources and uses” in the form of matrices or grids that represent the flow of funds from one level to another—for example, from financing sources, such as the Ministry of Finance and external donors, to providers, such as hospitals. This imposes the discipline of accounting for who pays, how much, and for what. All subtotals must add up and be consistent. In many countries, the ultimate source of financing (Ministry of Finance, foreign aid, or employer and individual insurance premiums) generally does not purchase health care services directly. Therefore, it is useful to include an intermediate level of financing, such as the social security organization and other financing agents that receive some funds from these ultimate sources and disburse it to providers and other implementers.

Tables 5 and 6, taken from the standard NHA presentation, are provided as examples.

Table 5: Financial flows from financing agents to types/uses of expenditures

Use of funds	Financing Agencies									Total
	Ministry of Health	Ministry of Defence, other ministries	Ministry of Education	Local government facilities	State enterprises	Social Security	Households	NGOs insurance	Private	
A. By uses										
Primary care										
curative										
Preventive/promotive										
Secondary hospitals										
Tertiary hospitals										
Administration										
Training										
Totals (A)										
B. By line items										
Personnel										
Drugs										
Capital investment										
Supplies										
Totals (B)										

⁵ Accessed 12 October 2005.

Table 6: Financial flows from ultimate sources to financing agents

Financing Agencies	Ultimate sources of finance					External aid	Totals
	Ministry of Finance	Local government revenues	State-owned firms	Private employers	Households		
Ministry of Health							
Ministry of Defence, other ministries							
Ministry of Education							
Local government health facilities							
State enterprises							
Social Security							
Households							
NGOs							
Private insurance							
Totals							

Challenges in developing NHAs: As useful as they are, NHAs should not be developed without a firm idea of the effort, time and expense involved. A single year’s NHA is a snapshot frozen in time of a country’s health financing, requiring a large amount of accurate information. If the health financing picture is to be monitored over time, this snapshot must be duplicated over and over—just as a motion picture is made of many still pictures. With the development of guidelines, each country does not have to develop its own conceptual framework. However, certain important expenditure components will not be found readily in the form of established reliable accounts. Thus, one-time surveys or investigations might be required.

The fundamental definition of a health expenditure is spending on activities whose primary purposes (regardless of effect) are health improvement. However, the costs of water and sanitation programmes, or health worker professional training, usually are not included. These might be treated as capital investments for some purposes.

The easiest data to find are the public sector budgets, such as for hospitals, public health programmes, etc., whether for government or social insurance health systems. These budgets are generally broken down into sub-accounts for personnel, supplies, drugs, and so on. They also might be spread out for individual hospitals and/or geographic regions. The accuracy of this budget-based data is usually good, though often the level of detail is insufficient for NHA purposes. Thus, additional analysis might be required. Particularly at the primary care level, further research might be necessary to learn how facility-based budgets are used for curative, preventive and promotive services. Analysis of budget (revenue and expenditures) variations between different facilities also can provide important information

Household spending is a major component of health expenditures, exceeding government spending in many countries. It can be estimated with general household expenditure surveys, though these are less accurate than specific health expenditure surveys. However, since even focused surveys are subject to various sources of error, the preferred method for estimating household expenditures is to examine the records of each provider to determine the revenues received from private household payments. Similarly, private spending on pharmaceuticals is hard to obtain accurately from household surveys. Retail-level drug spending is also difficult to obtain, leaving the option of using sales records of local manufacturers and importers. Sometimes finding the actual markup at various levels in the private drug distribution chain—and, therefore, the actual level of household expenditures—is difficult. Since

these sources rarely include the denominator of population, their use is limited to sources of financing. They also do not provide exact data on expenditures per household.

This brief description intentionally does not delve into the details of data sources, or the many ways that available data might need to be handled. Suffice it to say, the thorough preparation of the NHA is a long and difficult task, with potential rewards. However, it should not be undertaken with the expectation of immediate results. Before beginning such an effort, countries with limited technical resources should carefully evaluate the uses that will be made of the NHA.

5.2 Use of National Health Accounts

NHA analysis reveals allocations between major levels and functions of the health system. NHA analysis can be carried down to geographic areas, enabling comparisons of per capita expenditures and across facilities in the same country. This still leaves much to be known about the ultimate use of these expenditures, and therefore their potential for reallocation through an effective decentralized planning/budgeting process.

Adequately-funded PHC means that many people receive preventive services and can be treated close to their homes, reducing the economic costs of illness, as well as the workload of higher-cost provincial hospitals. It is also a way of improving equity, since the poor tend to live farther from hospitals, and suffer more from preventable diseases.

One important criterion for maximizing health system efficiency is assuring that PHC receives adequate resources. What constitutes adequate financing (and what is actually included in PHC) will vary from country to country since it involves local costs for staff, supplies, etc. In 1993, the

World Bank estimated the minimum requirement at \$12 per capita to cover basic PHC costs up to the district hospital level, adjusted for local purchasing power parity. In 2001, the CMH revised these early estimates to a more realistic \$38 for low-income countries. The NHA allows a detailed analysis of whether the expenditures from all sources in all areas meet this criterion.

Several characteristics of conventional, centralized government budgeting procedures restrain effective resource allocation. Most often, future provincial and district budgets are based on past budgets. They do not consider local changes, other than the opening or closing of facilities, since any greater level of detail is usually unreported to the central level. The use of “standard costs” or standard percentages of total costs, for physical assets and human resources, results at best in two similar facilities receiving similar budgets. Urban areas, and provinces or districts with many health facilities, receive the greatest amounts. Rarely are adjustments made that equalize per capita expenditures, which in itself would be an important step towards improving equity in providing health care.

Once equal budgets per capita have been attained, further reallocation of budgets to health facilities based on utilization, including preventive contacts, can improve equity and efficiency further. Utilization can vary widely among equally resourced health facilities for several reasons. Some costs are fixed (e.g., rent, electricity and most staff salaries), meaning they are incurred regardless of the utilization of the facility. Others are variable costs, which depend on the volume of patient visits or hospital bed-days (e.g., drugs, medical supplies, linens, patient food and possibly nursing staff costs). Comparing the average cost per patient, a health facility with few patients is less efficient than one with high utilization, because the cost per patient includes a relatively high amount of the fixed costs. A well-run clinic with good access by a well-informed population might see as many as two contacts per year per capita. On the other hand, a more poorly situated or managed facility within the same district might have one-fourth as many. Budgeting based on utilization of facilities allows heavily utilized facilities to hire and train more staff, order sufficient drugs, and maintain the facility to sustain or improve the quality of the

services offered. Table 7 illustrates how budget allocations on PHC inputs among districts depend on which criterion was used for budgeting.

	District A	District B	District C
Number of health centers	5	10	15
Population	80 000	120 000	100 000
Average contacts/year	0.5	0.8	1.0
Budget allocation by HC	16 667	33 333	50 000
Budget allocation per capita	26 667	40 000	33 333
Budget allocation by utilization	16 949	40 678	42 373

Which allocation method is most equitable, which most efficient?

Allocation between different levels of health care: A prime objective in health financing should be achieving a fair and consistent allocation of resources for primary, secondary and tertiary care. NHAs, which allow comparisons between geographic areas, are an invaluable tool. The difficult part is correcting imbalances—the political reality is that reducing hospital budgets in favour of primary care is very difficult. The argument that hospital utilization and, by extension, costs will decrease as PHC utilization increases due to better quality and access rarely convinces hospital managers to plan for budget cuts. Usually, hospital budgets will have to be maintained until utilization data show decreases. This might never happen, because one of the outcomes of better PHC might be increased referrals to hospitals. Planners (and donors) should be prepared for this outcome, though medium-term planning and budgeting should be flexible enough to take advantage of opportunities for reducing hospital costs.

Where donors (multilateral, bilateral and/or NGOs) provide heavy but uncoordinated input to the health sector, a sector-wide approach can facilitate better allocation of resources. Part of this process requires a complete accounting of the amounts of these inputs, as well as the types and locations of services subsidized. Imbalances are often found that can then be corrected by redirecting the donors or by rebudgeting government funding.

Allocation between different resources (balancing the inputs): Many different inputs are needed to produce health services. These include staff, buildings, drugs, supplies, electricity, vaccines, vehicles, refrigerators and others. If these inputs are not available in the correct proportions, the capability of the health facility to treat patients and make outreach contacts declines. For example, if staff salaries consume most of the budget of Hospital A, the staff might be satisfied, but few drugs and supplies will be available for treating patients. If Hospital B receives the same budget, but is oversupplied with drugs and has a small personnel budget, it also would face significant difficulties. Too few staff, or staff who are so underpaid that they do not work very hard, would be unable to treat many patients properly. If Hospital C has the same budget allocated more equally between staff and materials, it probably would be the most productive and efficient of the three. This principle also applies to other essential inputs. Typically, maintenance and repairs are underfunded, because a facility can function in the short term without them. After a while, however, treating patients satisfactorily becomes more difficult. Ultimately, fewer and fewer will seek treatment.

Selected references

- Berman P. National Health Accounts in Developing Countries: Appropriate Methods and Recent Applications. *Health Economics*, 1997, Volume 6, Issue 1, January 1997, 11–30.
- Rannan-Eliya R., Berman P. *National Health Accounts in Developing Countries: Improving the Foundation*. Data for Decision Making Publication Nr. 2. Boston, MA, Harvard School of Public Health, 1993.
- Sharma S. et al. Reproductive and child health accounts: an application to Rajasthan. *Health Policy and Planning*, 2002, 17(3):314–321.
- Tangcharoensathien V. et al. National Health Accounts development: lessons from Thailand. *Health Policy and Planning*, 1999, 14(4):342–353.
- UNICEF. *Household Surveys of Health Care Demand and Health Expenditures, A Practical Guide*. New York, 1993 (Bamako Initiative Technical Report Series, No. 17).
- WHO. *Macroeconomics and Health: Investing in Health for Economic Development*. Report of the Commission on Macroeconomics and Health. Geneva, WHO, 2001.
- WHO. *Guide to Producing National Health Accounts: with special applications for low-income and middle-income countries*. Geneva, WHO, 2003).
- WHO. *Analysing disrupted health sectors: A toolkit*. Geneva, WHO, Undated. Available at: http://www.who.int/hac/techguidance/tools/disrupted_sectors/en/index.html (accessed 20 October 2005).

GLOSSARY OF SELECTED TECHNICAL TERMS AND CONCEPTS

The following terms are often used in discussions of health financing. The definitions and explanations provided here are not comprehensive, but will be useful in the context of most of the current literature.

Ability to pay: Ability to pay can be defined loosely as the amount a person or household can spend for health care—out of pocket, by borrowing or by selling assets—without causing any major negative short-term or long-term effects. These include reductions in consumption of necessities or investments (in education, for example) that affect future household earning capacity. Ability to pay is not the same as willingness to pay.

Demand is more elastic for preventive health care than for curative treatment. The reason: if a low-income household faces a choice between paying for the prevention of an illness, which it does not know to be inevitable, and other necessities, such as food or school fees, the latter usually takes priority.

Adverse selection and moral hazard: These two terms are associated with financial threats inherent to any type of insurance system. Adverse selection refers to a situation when many people out in the pool of insured are at high risk for expensive illness, and consequently the expenses of the insurance fund might exceed the premiums collected. This can happen when the criteria for membership encourage people to join when they are already ill, or have an increased likelihood of known risk, such as pregnancy or old age; or when the fund fails to attract the young and healthy. Moral hazard occurs when insured individuals or their agents (health care providers) use insurance cover for personal financial gain by claiming for reimbursement for unnecessary or overly expensive services. Every insurance system must attempt to minimize these two problems through appropriate design and monitoring.

Cost-benefit (ratio): This is the best known measure of relative effectiveness. It requires the outputs (the benefits) of the activities to be compared in identical units. A specific malaria control strategy, for example, might have a cost-benefit ratio of \$500 per death averted. Alternatively, the ratio for cerebral malaria might be \$75 per case averted. Different people value benefits differently, and debate continues over questions such as how to value the life of a child versus that of an income-earning

For some types of health interventions, the cost-benefit ratio increases and cost-effectiveness decreases as the programme succeeds, the incidence of disease falls, and cases become more expensive to detect.

adult. In recent years, the relatively value-neutral DALY, which attempts to incorporate economic losses due to death and disability at different ages, has been used as the standard BOD or health benefit measure.

Cost-effectiveness or cost-utility (ratio): Cost-effectiveness analysis provides a sound framework for assessing the relative costs and consequences of different interventions necessary for setting priorities. Determining the most cost-effective alternative involves comparing cost-benefit ratios. For example, the malaria strategy mentioned above might be evaluated against a different strategy that has a cost-benefit ratio of \$1,000 per death averted. Since the first strategy is more cost-effective, it should receive more of the resources available for malaria control. Cost-utility analysis generally compares the costs per DALY of alternative health interventions. Users of cost-effectiveness studies should be aware that comparing them directly might not be valid, because of the different technical approaches used.

The cost-efficiency of a health facility is closely related to its utilization, because the average cost per patient decreases with increased patient load. However, increased utilization might lower quality, which in turn might constrain utilization.

for a mobile clinic can be compared to the output of the clinic (e.g., number of immunizations) in a given period. Again, the main use of such cost-efficiency measurements is for comparing programmes with similar outputs that operate within similar environments, or for comparing the same programme over time.

The sick use more services than the healthy under pooling and risk-sharing, which is an inherent and desirable form of cross-subsidization.

involves both groups paying the same amount, but one group consistently receiving a higher value of services. Cross-subsidization might be by design to improve equity. However, it frequently occurs by accident and can reduce equity. For example, health care services financed by taxes often are more accessible and relatively more heavily used by city dwellers. In this situation, taxes paid in rural areas effectively subsidize health care for city dwellers. In addition, wealthy people use health services more than the poor due to better information about health care and services. Political opposition can arise when intentional cross-subsidization to improve equity is designed into programmes, such as when revenues from a wealthy region are proposed to supplement revenues from a poorer one.

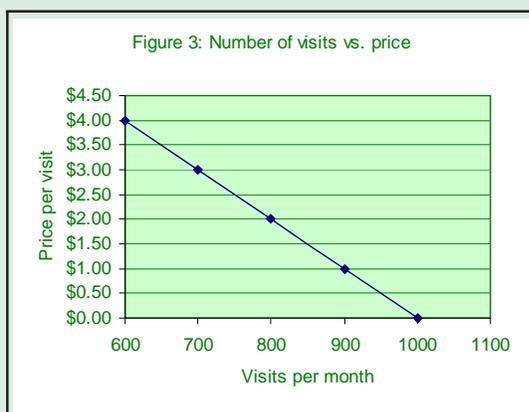
Cost-efficiency (ratio): This is a comparison of the output to inputs of a programme or process, with all inputs converted to a monetary equivalent. This allows multiple inputs to a complex programme to be included. For example, personnel salaries, the costs of drugs and the costs of fuel

Cross-subsidization: If one group pays more than another into a fund for financing health care, but they receive the same amount of services, one group is subsidizing the health care costs of the other. Another form of subsidization

involves both groups paying the same amount, but one group consistently receiving a higher value of services. Cross-subsidization might be by design to improve equity. However, it frequently occurs by accident and can reduce equity. For example, health care services financed by taxes often are more accessible and relatively more heavily used by city dwellers. In this situation, taxes paid in rural areas effectively subsidize health care for city dwellers. In addition, wealthy people use health services more than the poor due to better information about health care and services. Political opposition can arise when intentional cross-subsidization to improve equity is designed into programmes, such as when revenues from a wealthy region are proposed to supplement revenues from a poorer one.

Demand curve and elasticity of demand: For most goods that people need, they will buy less as the price rises to maintain their consumption of other necessary goods. This can be shown as a simple graph with price on the vertical axis and quantity on the horizontal. The normal demand curve slopes downward to the right as the prices increases. Everybody responds to price changes differently. The demand curve for a good or service represents the total demand at any given price for an entire population.

Elasticity of demand refers to the rate at which the quantity demanded changes relative to price changes. If the price of a curative visit to a health centre is raised by 10% and the



utilization of this service drops by less than 10%, demand for that particular service is called inelastic. If the demand were to drop by more than 10%, the demand is elastic. Demand for most types of basic health care is fairly inelastic. Demand elasticity is usually higher for low-income groups—for a given price increase, the poor will have to reduce their consumption more than the wealthy. Elasticity also depends on the starting price level. For example, the effect on demand of a 10% price change from \$3.00 to \$3.30 will not necessarily be the same as a change from \$1.00 to \$1.10.

Economic burden of health care (and related terms):

This can be defined as the amount a family or household pays for health care relative to its income, or relative to the amount it has left after buying a nutritionally adequate amount of food and other basic necessities. In most LMICs, households falling below a locally defined poverty line spend from 60% to 80% of their household income on food. Health care expenses that use up a large part of their remaining income can harm the family's welfare in the short-term, or even permanently. Some households have the capacity to cope with these expenses. As a rule, however, household expenditures on health that exceed 5% of household income create a serious financial burden on the poor. Solid empirical evidence is lacking that 5%, or any other level, is acceptable. Moreover, this is not easy to convert into an appropriate fee at the point of service for a single visit. This type of analysis makes more sense when applied to the question of an affordable prepayment or insurance premium for household coverage. A main concern is to protect all households from catastrophic health care expenditures—high costs typically from a serious illness or accident, resulting in expensive hospital care; or a chronic illness requiring long-term expensive drug therapy, which is likely to push a household into poverty.

Efficiency (and related terms): Efficiency is the relationship between the outputs of a process or a programme and its inputs (resources). Technical efficiency refers to the effect or end result achieved from the resources used. If a programme or strategy achieves the same result as another, but with relatively fewer resources, it is more technically efficient. Productivity is similar to technical efficiency. Typical productivity indicators are the number of patients seen by a doctor or nurse per hour; the number of immunizations given per vial of vaccine used; and the number of wells chlorinated per technician per month, etc. These numbers might not signify anything by themselves. However, they are useful in making comparisons to find where improvements are possible. Operational efficiency is another term used almost interchangeably with these two.

Allocative efficiency measures how well resources are used in response to demand or need. When resources are directed at interventions that yield the greatest health gains for all, allocative efficiency is the highest. If this also concentrates resources on services used most by the poor who have the worst health status, equity can also improve. However, private providers can also allocate their resources in response to patient demand for inefficient treatments, such as vitamin injections. This can mean that patients' allocative criteria are met, but not that of the population. Allocative efficiency bears on the issue of resource allocation in

In nearly every LMIC where health-seeking behaviour has been studied, all but the poorest quintiles can find a modest amount of money to pay for basic health care when needed. Most often, money is borrowed from immediate family members or something is sold. Short-term hunger is a common result. Obtaining larger amounts is often more risky, e.g., by borrowing at high interest, or selling or pledging assets, such as farm animals and land. Impoverishment due to health care costs is fairly rare, but the alternative strategy of not seeking expensive care for the elderly or newborns is used frequently.

In one WHO Region, \$100 supplied only \$12 worth of drugs to the user. When all possible waste due to drug procurement errors, losses and spoilage in transport and storage, over- or under-prescription, etc., were removed, the drug supply system will be operating at maximum technical efficiency.

Allocative efficiency infers operational efficiency: "If something is deemed worth doing then it must be carried out in a way which ensures the optimum use of scarce resources."
Source: Donaldson C., Gerard K. *Economics of health care financing: The invisible hand*. Basingstoke, Macmillan, 1993.

the way resources are balanced within a given programme or sector. For example, primary health care facilities might have well-trained and well-paid staff, but inadequate transport for outreach; or good transport, but underpaid and unmotivated staff. In both cases, the output as measured by the number of patients receiving preventive care, or the outcome of that care, probably would be higher if the same budget were allocated more efficiently between transport and salaries.

Equity is not the same as equality. However, increasing equity is fundamentally a way to reduce inequality among different groups. Health equity in Viet Nam is defined as “access to good quality essential health care services according to need rather than purchasing power” (Dong *et. al.* 2002). According to this definition, access to good quality essential health care should not depend on how much a person earns or other characteristics (e.g., gender, location of residence, ethnicity), but should depend on a person’s need for health care.

Some measures of equity:

- Strongly pro-poor programmes provide the poor with proportionally more benefits than their share of the population. Weakly pro-poor programmes provide the poor with a greater share of benefits than their share of household income or consumption.
- Vertical equity refers to distribution between groups having different needs (or incomes). Horizontal equity refers to distribution between those having the same needs.

Quintiles are divisions of groups into 5 parts, or 20% each. This is the most common way of comparing social groups, usually in terms of income, sometimes in terms of consumption.

Benefit Incidence is a measure of how different income groups “capture” public subsidies. Since measuring how the subsidy is distributed can be difficult, in practice only the relative utilization of key services (health centers, immunizations, hospitals, etc.) by income group can serve as a proxy.

Equity: While this term has many possible definitions, all include the idea of fairness in how resources for health are obtained and who benefits from them. What is fair under one set of ideals might not be considered fair under another. An accepted principle in the context of basic social services is that equity exists when services are used in accordance with need, while their financing is in accordance with the ability to pay. In practice, equity can be measured by comparing the extent to which different socioeconomic groups benefit from public expenditures. In large population groups, the need for health care is negatively correlated with income, i.e., poorer individuals tend to have a lower health status and greater need for curative health care. Thus, if basic health care services were used in accordance with medical need, the poor would consume, on a per capita basis, greater amounts than the non-poor. This is rarely the case, however. Key planning objectives include making a minimum package of essential health services available to everyone, regardless of who has paid the most for them directly or indirectly; and preventing the exclusion of the poor because they cannot afford to pay. Equity also might mean that more resources should be used for people with the worst health, and who might have been neglected previously. Those who can afford to pay for more advanced care and more comforts when available should not benefit from public subsidies. Further, investment in these costly facilities should be regulated to ensure that public services are not impaired.

Externalities: The production and consumption of certain goods or services results in costs (or benefits) to people other than the consumer. A well-known example of a negative externality is the production of electricity by coal-fired

generators. The price the consumer pays usually does not include the external costs of the environmental pollution that is also produced. An example of a positive health externality is the value to a community of an immunization programme—even if only part of the population is immunized, the whole population benefits from the reduced risk of an epidemic. Treatment of an individual who has a contagious disease can benefit the larger community. Individuals generally are unwilling to voluntarily pay their share of the cost of externalities, since they do not perceive any benefits to themselves. As such, these types of illnesses or health services require public subsidies to increase demand to a desirable level.

Financial protection: Governments have had to stop providing health care free at the point of service and introduce cost recovery. In this context, policy-makers have become concerned about protecting individuals and households from the financial burden of health care costs. The following

concepts provide some protection from the undue burden of direct user charges that otherwise would have to be paid. User charges when treatment is needed have the advantage of simplicity and low administrative costs, and also effectively signal to the patient the approximate cost of service. This reduces the tendency to make unnecessary use of the service. However, a fee-for-service system requires a sick patient to pay when the household might be least able to due to loss of income resulting from the illness. If a service is too expensive, the patient might delay or forego receiving essential treatment. In addition to jeopardizing the individual's health, this can have a public health (externality) effect if an untreated illness progresses to a more contagious stage.

Financial sustainability: Expenses and available resources must be in balance for any health programme to continue at an adequate level. Sources of funding must be considered to achieve sustainability, which might require the addition or increases in user fees, premiums, government subsidies or donor inputs. Control over expenditures is equally important, requiring examination of the efficiency and cost-effectiveness of all programmes and their component parts. To ensure this happens, a component of a master plan must always consider the financial implications of changing health policies over the short, medium and long term.

Health expenditures: This refers to the value of all resources used to provide individual and public health care in a country. This is of primary interest for comparisons across countries and in national health accounts. Expenditures comprise public spending and private spending.

Public spending involves government-owned health facilities and programmes, including:

- recurrent costs, such as salaries, medicines, fuel, electricity and maintenance, which are paid as long as the programme continues;
- one-time capital costs, such as new buildings and equipment that will be used for more than five years, and usually training and other costs of developing human capital;
- a social insurance system, if run by the government, though the costs of safe water and sanitation programmes, by convention, are not included; and
- external aid, since it is granted to the government.

Private spending involves individuals, companies and insurance providers, including:

- all payments by individuals (out of pocket) to any providers;
- payments for all medicines not supplied by providers, eyeglasses, medical devices for home use, etc.;
- payments to private insurance companies as premiums (although the portion of these not paid out to providers is profit and overhead for those companies, it is still a private health care expenditure); and
- the cost of social insurance, if (as in some countries) it is an institution operated independently from government and funded mainly by employer contributions.

In Asian countries, private funding accounts for 58% of total health care financing, with a range among countries from 8% to 71%.

Income elasticity (of demand): As income increases, individuals will consume more of an ordinary good. At a given price, the elasticity of demand for a good with respect to income (income elasticity) is denoted by the increase in demand relative to an increase in income. It is positive if the relative demand increase is greater than the relative income increase; negative if it is less. The income elasticity of most health services is positive or neutral—as

If income elasticity of a good is negative, it is called an “inferior” good, because another, better good will be consumed more as income rises. This is true sometimes of treatment with herbal medicines—as income rises people tend to buy modern pharmaceuticals.

income increases, people make more doctor visits, use more drugs, and go to more private hospitals. However, they may use less traditional treatment.

Marginality is a concept that is fundamental to economics for describing what results from very small changes. Rather than marginal revenues, the idea of marginal benefits might be relevant in a preventive health programme, for example.

cost of producing the additional unit. Marginal revenue is the additional revenue obtained from one additional unit (e.g., a visit). It is profitable to increase production (i.e., expand services) if the marginal revenue is greater than the marginal cost.

Before WHO and UNICEF intervened in the market for rehydration salts (ORS) in the 1980s, consumption of this cost-effective, life-saving treatment for severe diarrhoea was very low in developing countries. The availability of ORS increased and the market price dropped significantly when local production was stimulated. Demand increased many-fold as restrictions on non-prescription sales were removed and successful promotive activities in the public and private sectors were carried out.

more or less than socially beneficial. This can be true for essential health care for individuals if a high price is charged. It also often applies to health services, such as immunization, which have externalities.

Financing health systems by taxation is a basic and efficient form of prepayment, but requires institutional capacity not always found in low-income countries.

Marginal costs/revenues: This is the cost of (or revenue from) one additional unit of production, (e.g. one more immunization or one more patient visit) at any level of output. The marginal cost of a health service is lower than the average cost since the latter includes fixed costs. It is usually the variable

Market failure: This occurs when the smooth operation of a market is constrained, so the amount of a good that is demanded at a given price is more or less than the optimum amount. Constraints can take the form of regulations, which can be removed if necessary, or can result from the nature of the goods and services themselves. Monopolies by providers and producers, as well as lack of information by consumers, are examples of market failures in health care. From a practical health policy perspective, this means the use or consumption of some important health services might be

Opportunity costs: Alternative investments can be made with a given set of resources. The opportunity cost of capital can be simply the return from an equivalent fixed investment, such as a treasury bond, or it can be the return from investing the same resources in an alternative health intervention.

Prepayment: This is a fundamental way of reducing individual financial risk of illness. Regardless of health status, individuals, households or employers pay a certain amount to a health care provider or an intermediary at the beginning of the year or at specified intervals. In exchange, certain agreed services will be provided to the insured persons at no cost or for a small copayment when the service is needed. This greatly reduces the risk that an ill person or household will delay seeking treatment for financial reasons.

Prioritization: Operating within a limited budget for health, governments indicate their priorities by increasing investments in the health services they value the most. To achieve the overall goal of making the largest possible improvement in health for the most people, every investment should be the most cost-effective for a given health problem. Moreover, the investment should guarantee a minimum amount of the health service for everyone who needs it. However, assigning priorities has an equity component as well, because the lowest-income populations, the segment that needs these services the most, often use them the least. Effective prioritization might involve targeting the poor and removing barriers to access that they face.

Public-private mix: Private provision of health services is rising in nearly every country. In most developing countries, the demarcation between public and private is becoming less clear. In many cases, the private sector provides a useful and efficient complement to publicly-funded services, relieving

them of the burden of some segments of the population. However, many countries lack the regulatory capacity to ensure that the private sector responds to national health policy goals, rather than maximizing profits by responding to the demands of relatively uninformed patients.

Relative purchasing power: The unit costs of inputs to health (labour, drugs and supplies, buildings, transport, etc.) differ among countries. To fairly compare health costs and expenditures, they should be adjusted for relative purchasing power. For example, if two countries spend the same amount on equivalently skilled health worker salaries, but the average of health worker salaries is \$1200 per year in Country A and \$1800 per year in Country B, Country A provides 50% more labour input to its health system. This applies to the relative costs of other inputs as well, although these would be more similar since many are internationally traded products, such as drugs. Therefore, the average cost of the same health intervention—or of a basket of essential services—can differ widely among countries. For this reason, rankings of health interventions by cost-effectiveness also might be different. When local currencies are converted into dollars, adjusted for purchasing power parity, they are often referred to as “international dollars”.

Risk-sharing or fund-pooling: Another principle of health insurance is that, in a large population over some period, most people will be healthy and need only minor treatment, while relatively few will require very costly treatment. Members of an insurance plan pay regularly into a pool of funds. The amount paid by each individual or household member is unrelated to health status (private insurance plans are often an exception to this principle). Payments received from all members (the premium pool) become the fund used to pay all covered health care costs. This fund should be enough to pay for the many inexpensive charges, as well as the few expensive procedures, needed by members of the plan. The larger the membership, the more predictable are the financial inflows and outflows from year to year.

Supplier-induced demand: To increase personal profit, a health provider might supply more than the optimum level of services by prescribing unnecessary drugs, injections or laboratory tests. While the usual explanation of this induced demand is that the patient requested it, the providers might have influenced them heavily. This is, perhaps, the most significant cause of high health care costs, especially when providers have invested irrationally in high technology equipment and must use it as often as possible to pay for it.

The “equity vs. efficiency” debate: Efficiency refers to the value of the services that are produced from the resources used in the health sector. Greater efficiency implies greater value to society resulting from these services, assuming that they are high quality and targeted at real health needs (very large assumptions). Equity deals with social justice, and relates to who benefits from the health interventions and services that are produced. A health system can be efficient without being equitable, and it can be equitable without being efficient. The most desirable condition is for a health system to be efficient and equitable, though this might be hard to achieve because reaching the underserved is often costly. If a trade-off must be made between equity and efficiency, one argument holds that attention always should be given to efficiency when considering policies designed to promote equity, since more efficient ways to improve equity often can be found.

Purchasing Power Parity is a cost index based on a common basket of commodities. This is calculated and published regularly by nearly all governments, and can be used to index health care costs in the absence of specialized surveys. **Shadow Pricing** corrects distortions in many developing economies that cause market prices of goods, or even currencies, to not reflect their “true” value.

Although greater equity is generally desired in health and other social services, if the poor capture most of the benefits of a public programme, political support for the programme—and ultimately its funding—might decline.

User charges or user fees: This term refers to the payment required from the person who uses some service. Many governments have introduced fees for formerly free public services (not only health) as a way to augment revenue. Economic reforms in the 1980s accelerated the introduction of user charges for government health care in developing countries. However, this remains a highly controversial issue.

Affordability: Affordability does not have a real definition in economics. The terms relative and absolute affordability have been used to describe the effects of user charges for basic drugs and treatment. *Relative affordability* means that the charge levied for a drug is lower than what a patient would have to pay to get it from a different source. An indication of the *absolute affordability* of health services to different income groups can be derived by calculating the cost of a fixed bundle of services, and then expressing it as a proportion of household disposable income. In Viet Nam in 1998, for example, the average user charge per episode of inpatient care in a public hospital was equivalent to 45% of the poorest quintile's average annual non-food expenditure. The figure for the richest quintile was just 4%.

Willingness to pay: Willingness to pay is based on the value a person or household places on a given health service. When this willingness is assessed prospectively through household surveys, people generally claim a high willingness to pay for cures of obviously life-threatening illness, as well as for treatments that provide quick relief from pain even from self-limiting causes, and for cure of illness or injury that prevents someone from working. In addition, high willingness to pay often is expressed for prepayment plans—paying in advance for all needed treatment is of high priority to most people. The willingness to pay is generally low for treatments for mild illness, even those dangerous because they are contagious, and for illnesses affecting non-working household members, including children. In almost all countries, people are willing to pay relatively high amounts for injections, but

less for tablets of an equivalent drug. People almost always are willing to pay for insurance when they or a family member are sick, and much less so when everyone is well.