Chapter III
Economics of health systems development
Key Words

HEALTH ECONOMICS
DELIVERY OF HEALTH CARE – economics
HEALTH POLICY – economics
SOCIOECONOMIC FACTORS
HEALTH SERVICES ACCESSIBILITY
HEALTH CARE REFORM
COST–BENEFIT ANALYSIS – methods
OUTCOME ASSESSMENT (HEALTH CARE)
PROGRAM EVALUATION – methods
FORECASTING
TEACHING MATERIALS

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### 3.1 Introduction

Chapter 3 of the learning materials is concerned with the development of health systems, with particular reference to the WHO European Region and the areas where the modules are thought likely to be most useful. The modules address aspects of knowledge about the economic approach which are often lacking among the potential users of the learning materials. For example, they may lack basic knowledge about the criteria which are applied by economists in judging existing arrangements or proposals for change; about how economics can be applied in the special circumstances of health systems; or about the alternatives that are available, with their broad advantages and disadvantages. The modules also stress the variations which exist between different countries in the European Region as well as within them. They are primarily “thinking” modules and are organized into three parts.

Section 3.2 discusses the two key criteria by which the development of health systems is judged by economists: equity, thought of as fairness, and efficiency. Section 3.3 is concerned with important aspects of the overall reform of health systems. The three modules in this part address the framework, or identity, which exists between expenditure, income and revenue and its implications; the evaluation of a range of available options for health care reform in the circumstances of particular countries, particularly those of central and eastern Europe; and the structural, political, economic and social transformations that are occurring in those countries. Section 3.4 includes two modules on important specific issues: financing and privatization.

Section 3.2 contains modules on equity and on efficiency, prepared by Professor John Lavis of McMaster University in Canada, the second one in collaboration with Professor Greg Stoddart. Module 3.2.1 presents a framework for thinking about how to distribute fairly the various available resources. This framework builds on three questions: are there aspects of health care which mean that it should be distributed differently from other goods and services? Does it matter who receives health care goods and services? Is it only the process chosen to distribute health care that has to be equitable or does the way in which health care is distributed matter as much (or even more)? The author emphasizes that there is no correct technical answer to a question about the fairness of a given distribution of resources – “values matter”. He concludes that to distribute health-producing goods and services (or health) equitably means to distribute them:

- in a way that is acceptable, given the characteristics of the goods and services to be distributed;
- in a way that is acceptable, given the characteristics of the recipients who will receive them; and
- according to acceptable processes or criteria about acceptable outcomes of these processes.
The module emphasizes that what is acceptable in one jurisdiction may not be acceptable in another.

Module 3.2.2 focuses on efficiency, which is central to health economics conceived of as the study of how scarce resources are allocated between alternative uses for the cure of sickness and the promotion, maintenance and improvement of health. Health care is distinguished from health and the even broader concept of wellbeing. The module considers the three main elements of efficiency: technical efficiency (“do not waste resources”), cost–effectiveness (“produce each output at least cost”), and allocative efficiency (“produce the types and amounts of output that people value most”). Of course, efficiency does not necessarily imply social desirability, since distribution of the costs and benefits can make an important difference to decision-makers. Thus, considerations of equity are often inextricably related to considerations of efficiency.

Section 3.3 contains three modules, each written by a different author. These modules are all concerned with aspects of the reform of health care systems, but the approaches adopted and the detailed subject matter are very different. Together they raise a range of matters which are relevant to the reform of health care systems in the diverse countries of the WHO European Region.

Module 3.3.1, written by Professor Greg Stoddart, is concerned with the identity that exists between expenditure, income and revenue (i.e. that they must be equal mathematically). The same national income–expenditure accounting principles which apply to other economic sectors also apply in the health sector. Thus every expenditure on health care is also an income to someone in the health care industry, and it must be financed through revenue of one type or another. Examining these three dimensions of proposed or actual health care reforms is often a useful aspect of health policy analysis. It can provide valuable insights on issues such as the redistributive income effects of policy changes, or the likely impact of such changes on the levels of expenditure and the real availability of health care services. The module describes a basic analytical tool of economics, the expenditure $=\text{income} = \text{revenue}$ identity, and illustrates how it can be applied in the health care sector, especially in the context of health care reform. This tool enables skills to be developed in the appraisal and in the analysis of health policies and proposed changes. It can be extended to more complex relationships, can be used by a variety of audiences, and there is a wide range of possibilities for applying it to specific reforms. It can be used to record and understand changes retrospectively. It can also be used, perhaps even more importantly, to examine prospectively the likely consequences of health care reforms. Three illustrative examples are presented in the module.

Module 3.3.2, by Dr Panos Kanavos and Dr Elias Mossialos of the London School of Economics and Political Science, considers health care reform by reference to the evaluation of available options in the circumstances of particular countries, including their previous experiences, their values and priorities, and their aspirations in relation to their resources. The authors consider the key factors which should be taken into account when various options for health care reform are being evaluated, including access, cost-containment and quality assurance. Secondly, they discuss the implications for the financing of health care reform once the objectives of the reform programme have been identified in a particular context. Thirdly, they outline four important factors to take into account in order to ensure that the reforms are implemented in an effective and sustainable way. Among other things they emphasize that the incentives inherent in the reforms, either explicit or implicit, should encourage desirable action by the main stakeholders, support appropriate changes in attitudes as well as action, and promote the intended objectives over the longer term. Fourthly, they explain briefly how the development, dissemination and use of knowledge, and also monitoring, evaluation and (where necessary) modifications to health care policy and practice, can be harnessed to ensure that health care
reforms are appropriate, evidence-based as far as possible, and adjusted appropriately as new knowledge
becomes available. Obviously, health care reform in a particular country or region needs to be based
on an extensive knowledge of the existing system, how it has developed and how it is operating in
relation to the desirable objectives (including relevant intersectoral aspects). Thus, in the final part
of their module, the authors consider the particular challenges of health care reform in the countries of
central and eastern Europe, including the countries of the former Soviet Union. They illustrate, inter
alia, the special difficulties that are encountered in seeking to implement health care reforms when the
 economy is shrinking rather than growing, and when society is suffering from considerable stress.

Module 3.3.3, by Professor Yannis Yfantopoulos of the University of Athens, is different again. It
focuses on the structural, political, economic, social and health transformations that are occurring in
the countries of central and eastern Europe, and seeks to understand the major determinants which
have influenced the changes in health status and health expenditure there following the fall of the
Berlin Wall in 1989. This module is more econometric in its approach than the two previous modules
and includes a case study concerning regional equity and efficiency in the Russian Federation.

This module deals with changes in the overall systems operating in societies in transition over
the period 1989–2000. These changes, for example from one political system to a new set of
arrangements, or, in the economic sphere, from a planned economy to a system in which market forces
play a larger role, went much further than just the health sector system, although they have had major
consequences in that sector. The module considers the overall system adjustments in which particular
changes (whether in health care or elsewhere) have occurred and in the context of which they have to
be understood. It also shows how changes in the overall political and social arrangements in a given
society are often more far-reaching than economic changes alone, let alone changes in the health care
sector alone. The wider context needs to be borne in mind if specific changes are to be fully understood
or proposals for reform most appropriately formulated and implemented. This is not to deny, of course,
that decisions may be connected in a specific sequence and with related timing. Role-playing from
the perspective of multiple stakeholders and with regard to the different circumstances of various societies
(or time periods) can be a valuable method of articulating these differences, the possibilities for health
care reform, and alternative ways of achieving them.

Thus, the three modules in Section 3.3 present different aspects of a complex reality in a
stimulating way. However, they all draw on health economics approaches to illustrate a series of
important problems relating to health care reform options facing the countries of the WHO European
Region, with their diverse histories, values, circumstances and aspirations.

Section 3.4 is concerned with two issues – financing and privatization – of particular importance
in the development of health systems, and where health economists have a useful contribution to
make. Module 3.4.1, written by Dr Panos Kanavos of the London School of Economics and Political
Science, is concerned with financing. It highlights the relative merits of different methods of financing
health services at the aggregate level, and discussing how different methods work and in what
environments. Alternative arrangements for paying providers are analysed, together with the extent to
which these encourage providers to achieve the broad objectives of health policy. The module also
includes some discussion of how health resources and outputs/outcomes are distributed, the effect of
particular incentives on the sustainability of change (particularly over the longer term), and the wider
impacts of the specific factors considered on the broader economy and society.

Module 3.4.2, by Professor Greg Stoddart of McMaster University, provides an overview of
some issues in privatization. He distinguishes several different economic functions in health care
systems, each of which may have a different public/private mix, and cautions that privatization is only a means to previously agreed or specified goals. It is not an end in itself.

Module 3.4.3, by Professor Anthony Culyer of the University of York, United Kingdom, in collaboration with Professor Richard Saltman of Emory University, USA, provides a case study of consultancy services on privatization in a central Asian republic. Countries in transition are well advised to consider carefully the options, prerequisites and likely outcomes of privatization.
3.2  Criteria

3.2.1  Equity in health

John Lavis

Key messages

- Equity can be thought of as fairness. A framework for thinking about equity can help decision-makers understand what fairness means on their jurisdictions.
- A framework for thinking about how to distribute health care resources fairly builds on three questions:
  (i) Are there aspects of health care which mean that it should be distributed differently from other goods and services; for example, does health care have generalized or customized value?
  (ii) Does it matter who receives health care goods and services; for instance, can some individuals benefit from health care more than others?
  (iii) Is it only the process chosen to distribute health care that has to be equitable (e.g. markets versus queuing) or does the way health care is distributed matter as well or even more (e.g. individuals with greater health care needs receive more health care than those with fewer needs)?
- To distribute health-producing goods and services equitably means to distribute them in a way that is acceptable given the characteristics of both the goods and services to be distributed and the recipients who will receive them, and in a manner that accords with acceptable processes or criteria about acceptable outcomes of these processes. What is acceptable in one jurisdiction may not be acceptable in another.

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1 Funding for the first version of this module was provided by the World Bank Institute as part of its Flagship Program on Health Sector Reform and Sustainable Financing. The Flagship Program was supported in part by the Canadian International Development Agency (CIDA). The first version of the module was written by Mita Giacomini and John Lavis. This second version of the educational module incorporates several modifications which enhance the module’s applicability for the WHO Regional Office for Europe. Copyright (c) by the International Bank for Reconstruction and Development. The World Bank enjoys copyright to this material under protocol 2 of the Universal Copyright Convention. This material may nonetheless by copied for research, education or scholarly purposes only in member countries of the World Bank. The views and interpretations in this document are those of the authors and should not be attributed to the World Bank Institute or the World Bank.

2 This module was prepared by Professor John N. Lavis of the Centre for Health Economics and Policy Analysis, McMaster University, Canada (e-mail: lavisj@mcmaster.ca).
**Tutors’ notes**

Module 3.2.1 considers the relationship between the WHO health for all strategy and health economics, with a particular focus on equity. Module 3.2.2 considers the relationship with a particular focus on efficiency.

The first exercise in this module is aimed at the level of *appreciation* and can be used with the following groups:

- policy-makers (e.g. elected officials)
- civil servants and other government technical staff
- health care managers
- health care professionals (e.g. doctors and nurses).

If the exercise is not relevant to participants’ own settings, tutors can develop another one. The situation should involve pairs of goods and services that cut across most of the categories of goods and services. In the exercise, the first pair can be thought of as inputs, the second can be thought of as access to inputs, and the third pair can be thought of as utilization of inputs. Each pair should involve a health care good or service with characteristics that would make decision-makers concerned with its fair distribution. To foreshadow issues raised later in the module, tutors can ask participants whether they would feel any different about people who love going to the theatre buying their way to the head of a queue for theatre tickets or people with triple-vessel coronary artery disease buying their way to the head of a queue for coronary artery bypass surgery.

The second exercise is aimed at the level of (critical) *appraisal*. It can be used with the following groups:

- policy-makers (e.g. elected officials)
- civil servants and other government technical staff
- health care managers.

The exercise requires the group to focus on a particular policy – needs-based funding – and to appraise it critically. Participants are also asked to assess whether the policy would work in their own jurisdictions, so that they move beyond generalities to the difficulties of judging competing claims for resources.

The third exercise in this module is aimed at the level of (critical) *appraisal*. It follows upon Exercise 2 and can be used with the same groups. The exercise requires the group to focus on fair end-states and to ask what are the relevant aspects of different regions’ situations. The proposed budget allocation is based on population size and one measure of health status (life expectancy), both of which can be considered measures of need. Tutors can ask participants to suggest alternative measures of need. They can also ask participants if they think it is important to consider cost differences between regions.

The conclusion provides a good jumping-off point for discussions about many important issues that could not be explored fully in a short module. For example, it raises issues such as how to make iterative movements towards greater equity, the need for balance between standardized measures of equity across societies and specific measures for specific societies at specific times, and the possibility that some decisions can bring a society closer to both efficiency and equity goals.
Introduction

Health21 – an introduction to the health for all policy framework for the WHO European Region (1) opens with a thought-provoking question: is it healthy? This seems straightforward enough, but “it” means many things. In fact, the question is really a series of questions:
• Are “the social and economic inequalities between groups” healthy?
• Are “our children’s starts in life” healthy?
• Are “our living and working conditions” healthy?
• Is “our physical environment” healthy?
• Is “the way we pay for and deliver health care” healthy?

And the list goes on. The document goes on as well, providing 21 targets for the Member States of the European Region which, if achieved, would move them towards a healthier twenty-first century. The document represents the WHO Regional Office for Europe’s efforts to develop an inspirational framework that Member States can draw on when developing health for all (HFA) policies.

Health economics might seem to be a curious thing to throw into this mix. As Module 3.2.2 will explore in more detail, health economics can be thought of as the discipline of health economics applied to the topics of health care and health. As such, health economics can help to make “better” decisions in general, by providing either new frameworks for thinking about issues or a collection of methods for analysing these issues. There are many courses in health economics that can achieve the very general objective of informing decision-making. For example, the Economic Development Institute at the World Bank makes available health economics course materials on-line.

The WHO European Region has been developing learning modules in health economics for two reasons. First, many of the HFA targets and supporting information have been established, either implicitly or explicitly, using frameworks and tools from health economics. Understanding these frameworks and tools will therefore help to understand HFA targets. For example, the notion of efficiency in producing health pervades much of the document. By understanding that efficiency means “getting the most out of scarce resources” and that health can be thought of as the “output” of a production process involving health care and other “inputs” such as our living and working conditions, decision-makers can begin to see that there are cheaper or more expensive ways of achieving a given level of health status. Why waste resources?

Second, many of these targets require frameworks and tools from health economics for their implementation. For example, one of the targets involves establishing multi-sectoral responsibility for health and suggests health impact assessments as a strategy for implementing this target. Translated into everyday language, this means that employers, the heads of housing agencies, ministers of finance and many other individuals are being called on to think about the health consequences of their decisions (i.e. they are being called on to ask “are they healthy?”). This represents a major change in thinking for health officials (who will face individuals who routinely invoke economic concepts to make decisions and justify them) and for individuals in other sectors (who will routinely have to use tools from health economics such as health impact assessment).

This module and Module 3.2.2 provide background material for learning about health economics in the context of the health for all strategy. Two core concepts provide the backbone of many of the frameworks and tools of health economics. The first concept, efficiency, will be covered in Module
3.2.2. Efficiency can be thought of as getting the most out of scarce resources, a notion implicit in much of WHO’s strategy for health for all and related targets. Considering that the overarching goal of HEALTH21 is to achieve full health potential for all, an ambitious goal if ever there was one, the concept of efficiency has to be at the forefront of decision-makers’ minds.

Sometimes getting the most out of scarce resources will require a focus on policies with explicit health objectives, such as policies related to the health care system. Several HFA targets address the health care system. Target 17, for example, covers financial arrangements: a funding system should foster universal coverage, solidarity and sustainability, and sufficient financial resources should be allocated to priority health needs. Targets 3 and 6 cover some of the types of health care service that should be provided: reproductive and child health services, and services for people with mental health problems.

At other times, getting the most out of scarce resources will require a focus on policies with health consequences, not health objectives (i.e. on broader determinants of health, not just health care). A number of HFA targets address the broader determinants of health. Targets 6 and 10, for example, cover aspects of the social and physical environment – working conditions and pollution levels – that have been found to be important health determinants. Labour market policies that can affect working conditions and business regulations that can affect pollution levels often do not have health as an explicit objective. Other HFA targets address specific policy domains that have important health consequences as well. Target 5, for example, covers housing, income and other measures that can enhance autonomy, social productivity and health.

These targets have presumably been selected in part using the concept of getting the most out of scarce resources. Advocating the allocation of resources to reproductive and child health services, for example, rather than to health services for the care of a specific set of chronic diseases, suggests that some people believed that this allocation would “buy” more health for all. But Member States still have to decide how many resources should go to priority health needs and how many resources should go to some of the determinants of these health needs, such as working conditions or housing. These types of decision may require intersectoral decision-making processes.

But getting the most out of scarce resources is not the only concept used to select these targets. In fact, unlike most documents, HEALTH21 is refreshingly frank about the values that form its ethical foundation. One of the three values is “equity in health and solidarity in action between and within all countries and their inhabitants” (emphasis added). Moreover, many of the 21 HFA targets have an equity dimension to them. For example, Target 2 involves the reduction of social and economic inequities between groups through policies, legislation and action. The remainder of this module surveys basic concepts of equity and discusses how they might affect economic decision-making for health. It draws on material produced by the author and Mita Giacomin (2).

Equity can be thought of as fairness. This concept is sometimes covered as an afterthought when health economic concepts are introduced. The rationale for this can be traced to the primary concern of health economics: finding the most efficient allocation of health resources to achieve a given policy goal (e.g. to help individuals get well when they are sick or to help populations remain healthy). But efficiency is not the only criterion for judging the distribution of resources. Equity represents another criterion and since it forms an important part of the ethical foundation of HEALTH21, the module introduces a framework for thinking about equity before introducing other frameworks and tools from health economics.
A framework for thinking about equity can help decision-makers understand what they and other groups mean when they say they want to be “fair”. For example, many jurisdictions have formal mandates requiring that health care be distributed equitably (3). But what does equitably mean in this instance? More specifically:

- Are there features of health care which mean that it should be distributed differently from other goods and services?
- Does it matter who receives health care goods and services?
- Is it only the process chosen to distribute health care that has to be equitable, or does the way health care is distributed matter as well or even more?

As these questions suggest, there is no technical answer to a question about the fairness of a given distribution of resources. Values matter.

These three questions are used here as the basis of a framework for thinking about equity. The three questions all focus on health care, but they can be generalized to any good or service that contributes to health. To distribute health-producing goods and services equitably means to distribute them: in a way that is acceptable given the characteristics of the goods and services to be distributed, in a way that is acceptable given the characteristics of the recipients who will receive them, and according to acceptable processes or criteria about acceptable outcomes of these processes. Each of these three principles will be addressed in turn.

**Characteristics of goods and services that may affect their fair distribution**

Health-related goods and services can be divided into categories (4). A list of categories specific to health care is as follows:

(i) Health care insurance;
(ii) Health care inputs:
    - Providers
    - Programmes and services;
(iii) Access to health care insurance and health care
(iv) Utilization of health care:
    - Use of health care services (or “utilization”)
    - Use of effective health care services (“met needs”);
(v) Benefits generated by (i)–(iv) above:
    - Specific health benefits (health)
    - General benefits (wellbeing).

Each category depends to some extent on the categories that precede it. Health benefits can accrue from the use of effective health care services. Health care utilization can depend in turn upon access to health care insurance. The pyramid nature of this listing, with each category building on the foundation established by the previous category, is only approximate. Access to health care insurance does not necessarily ensure use of effective health care services, which in turn does not necessarily ensure an improvement in wellbeing. Also, both health and wellbeing depend upon resources besides health care, such as housing and income. This list can be augmented to include other health-producing goods and services, but we will focus here on health care goods and services.
Decision-makers ideally seek a fair distribution of the “highest” element on this list: an acceptable level of health and wellbeing shared by members of the jurisdiction to which they are accountable. In fact, two of the three basic values that form the ethical foundation of HEALTH21 endorse this view: that “health is a fundamental human right”, and “equity in health ... between and within all countries and their inhabitants”. Of course, health and wellbeing are not goods and services that a decision-maker (such as a government official) can distribute directly. A decision-maker can, however, often have direct control over health care insurance and over health care inputs that can produce health (such as providers, programmes and services). In addition, decision-makers can often influence individual behaviour and thereby influence access to and the utilization of health care services.

To pursue the target of equity in health (Target 2), decision-makers therefore typically seek a fair distribution of health care inputs and encourage appropriate access to and utilization of health-producing goods and services. That is, decision-makers typically focus on allocating the “lower” elements on the list of categories in the hope of influencing the “higher” elements (health and wellbeing). To monitor success in achieving Target 2, decision-makers ideally will examine not only the distribution of health-producing goods and services and the rates of their use, but also the resulting distribution of the “higher” elements, such as health and wellbeing.

Now what is it about health-producing goods and services that may affect their fair distribution and lead decision-makers to intervene in their distribution? Consider the following pairs of goods and services:
• a television and a kidney dialysis machine;
• an art exhibit in a private gallery in the nation’s capital and a CAT (computed axial tomography) scan service available at every hospital;
• watching a theatrical performance and undergoing a coronary artery bypass procedure.

We might accept certain processes for the distribution of the first item in each of these pairs (such as market exchange) and certain criteria for acceptable outcomes of these processes (such as inequality in the distribution of these goods and services in accordance with people’s ability-to-pay and willingness-to-pay). At the same time, we might be very uncomfortable using the same processes or the same criteria for acceptable outcomes for the second item in each of these pairs. Entertainment-related goods and services are typically seen in a very different light from health-producing goods and services; the first part of the framework for thinking about equity can help in understanding why.

Three characteristics of a good or service may affect its equitable or fair distribution:
• its physical nature;
• the degree to which it possesses customized as compared to generalized value across the citizens of a given jurisdiction; and
• prevailing cultural beliefs about a good or service and acceptable processes for its distribution or criteria about acceptable outcomes of these distribution processes.

The fairness of a given distribution of the goods and services listed above can be examined with regard to each of these three characteristics.

Physical nature of the good or service

The physical nature of a good, in particular its divisibility and its scarcity, will affect how it can be distributed. Regarding divisibility, some health care inputs can be divided; others cannot. A hospital, for example, is a capital-intensive type of input which cannot be divided and which cannot be
distributed uniformly over a large geographical area and without regard to where the majority of potential users of the hospital live and work. Examining the distribution of hospitals (as an input) by geographic area therefore makes little sense. Instead, decision-makers could examine the distribution of access to hospital-based programmes and services and/or the distribution of the goods (e.g. private cars and fuel) and services (such as buses) required for access to hospitals. Human resources in health care, on the other hand, are an input which can be divided into individual health care providers such as physicians and nurses. Health care providers, especially those who provide primary care, can be distributed in a meaningful way over a geographical region. Finally, moving from health care inputs to the benefits generated by these inputs, it is impossible to distribute health benefits meaningfully across a population. Genetic endowments, for example, are such that there are physical limits to the equal distribution of these benefits.

Scarcity can also influence how fairly goods and services can be distributed. In many countries, inputs such as kidney dialysis machines are scarce resources because both their purchase price in the local currency and the operating costs related to technical staff and materials are high. Other resources are naturally scarce, for example human tissues (such as blood) and organs (such as hearts). Where the need for a health-producing good or service such as kidney dialysis is greater than its supply, decision-makers often rely on one of the other two equity principles. As discussed in the next two parts of this module, such principles could include the characteristics of the potential recipients (e.g. providing kidney dialysis to young rather than old people), or acceptable processes (e.g. using waiting lists or lotteries) and criteria about acceptable outcomes of these processes (e.g. people with end-stage kidney disease are all treated the same, even if this means that no one receives kidney dialysis).

Generalized compared to customized value

Some goods and services have roughly the same value to everyone (generalized value); others have different values for different people (customized value) (7). A television, for example, might offer something for everyone and therefore have roughly the same value for everyone. An art exhibit or theatrical performance, on the other hand, may be highly sought after by some and less highly sought after by others. Access to health care can be thought of as a good or service with generalized value. The knowledge that health-producing goods and services will be available in case of need is presumably highly valued by everyone. The use of these services, on the other hand, has customized value. Using a kidney dialysis machine represents a “met need” if an individual has end-stage kidney disease. Similarly, having a CAT scan of the head has customized value for an individual who has recently become paralysed for no apparent reason; and undergoing a coronary artery bypass procedure has customized value for an individual with severe triple-vessel heart disease. Neither the CAT scan nor the bypass procedure has much value for a healthy individual. Note that value need not be restricted to the person receiving the good or service. Immunization against a communicable disease benefits both the individual who receives it and the individuals with whom that individual comes into contact.

Cultural beliefs

The citizens of one jurisdiction may have a strong cultural belief that a particular good or service should be distributed in one manner, while the citizens of another jurisdiction may believe that the same good or service should be distributed in another manner (6,8–10). Many governments have defined an essential health care service package of which they would ensure the fair distribution across their jurisdiction (11–14), leaving discretionary services to the private market. Which services
are considered essential and which discretionary, however, varies with the values of the decision-makers in a given jurisdiction. The essential package endorsed by the World Bank contains five types of services prenatal and delivery care, family planning, management of the sick child, tuberculosis treatment, and management of sexually transmitted diseases (14).

Moving from inputs to access, many European jurisdictions value universal access to health care insurance, in part as a symbol of national solidarity. Other jurisdictions (such as the United States) feel a stronger ideological commitment to competitive markets than to universal access to health care insurance (15). Moreover, some jurisdictions feel that the removal or lowering of financial barriers to access is only part of the answer. Decision-makers and citizens in these jurisdictions believe that additional barriers such as language, education deficits and getting time off work must also be addressed.

**Exercise 1**

Consider again the following pairs of goods and services:

- a television and a kidney dialysis machine;
- an art exhibit in a private gallery in the nation’s capital and a CAT scan service available at every hospital;
- watching a theatrical performance and undergoing a coronary artery bypass procedure.

First, match each pair with one of the following categories of goods and services: inputs, access to inputs, utilization of inputs, benefits generated by the utilization of these inputs.

Second, describe which characteristics of each good or service in a pair means that it is more likely that decision-makers will be concerned with the fair distribution of the health-related goods and services rather than the entertainment-related goods and services.

**Characteristics of potential recipients that might justify their claims to particular goods and services**

In the case of some goods and services, individuals or groups may argue that they have a claim to a greater proportion of resources than others. What characteristics of potential recipients could justify this claim – membership of a group, past contribution to society, need for health care? Typically, when an answer is sought to these questions, potential recipients are thought of as groups or populations rather than as individuals. Decisions about how to distribute resources across different groups will depend upon decision-makers’ commitments to them.

Consider the following example: an administrator of a local health authority wants to close one of the two hospitals in a small community to get the most out of scarce resources. One hospital serves one religious group and, in keeping with religious custom, provides care to men and women in separate sections of the hospital; the other hospital serves another religious group. Activists from both religious groups argue that both hospitals must remain open. This example illustrates how group membership can, and often is, used to justify a claim to particular goods or services.

Groups can be defined socially (e.g. by membership of community organizations or by religious affiliation), economically (wealthy or poor), demographically (gender, age or race), geographically (urban or rural), intergenerationally (current or future generations), or along other dimensions. The meaning and legitimacy of a particular group division is best understood within a particular social
context, because cultural beliefs about historical entitlements or injustices will vary across social contexts. Group-based equity analysis can be used to advance social justice, but it can also be used to advance prejudicial discrimination. The latter may conflict with international human rights principles, for example, that health is a fundamental human right.

Now consider another example: a government cannot afford to pay for the drugs to treat all the people infected with the human immunodeficiency virus (HIV) that causes AIDS. Some people argue that infected health care workers should be given priority because they make a critically important contribution to society. Others argue that managers and professionals should be given priority, because society has made an important investment in their education and training and they have made and could continue to make an important contribution to society. Both arguments are based on contributions to society – past, present or future – which economists call a human capital criterion.

Using the contribution to society as a characteristic to justify claims for health-producing goods and services raises two problems (16). First, health and social productivity are interrelated: it is more difficult for sick people to make a contribution to society, so preferential treatment of the productive often means preferential treatment of the healthy. Second, historical patterns of discrimination can mean that certain groups of people (such as women or ethnic minorities) will consistently appear less productive in measurable terms (e.g. taxable earnings, intellectual contributions).

Now consider a final example: in a war zone or other extreme situation where medical personnel and supplies are very scarce, medics often cannot treat everyone. They simply do not have the time and supplies to do the job. These medics make a triage of the injured on the basis of the severity of their injuries and the likelihood that they will benefit from emergency medical attention. The same approach is typically taken in less extreme situations. Health care providers make a triage of the population on the basis of their ability to benefit from health care, that is on the basis of their need for health care. Need represents a third characteristic of potential recipients that might, and often does, justify their claims to particular goods and services.

Need may be measured in different ways, depending upon the good or service to be distributed. For example, if the good is access to health care insurance or health care, then need may be defined in part by degree of poverty. If the good is health care utilization, then need would ideally be defined by ability to benefit from health care. Unfortunately, such information is rarely available. Therefore, analyses of equity commonly compare the distribution of health-producing goods and services across groups that, on average, have known relative needs for health care. For example, all groups can benefit from immunization so immunization rates should be similar across all groups if people were immunized according to need. However, it has been found that residents of urban regions in Peru have been immunized at roughly four times the rates of rural residents for poliomyelitis and other diseases (17), suggesting that people were not immunized according to need in that jurisdiction at that time. As another example, not all groups can benefit from asthma drugs and urban populations may have higher rates of asthma, because of poorer air quality, and therefore they may have higher needs for asthma drugs. In this case, a higher rate in an urban region may suggest that asthma drugs are distributed according to need.

**Exercise 2**

Many jurisdictions distribute the money for health care on the basis of historical patterns of use. More money is distributed to regions with more hospitals and more health care providers, without explicit regard to the relative size or health of the local populations. In an effort to improve the equity or
fairness of publicly financed health care systems, some jurisdictions have introduced needs-based funding for health care. According to this approach, money is distributed to local health authorities based on population size and population health indicators (i.e. the larger or sicker the local population, the more money its local health authority would receive to spend on health care goods and services).

Consider the following questions:
(i) What “good” is being distributed by needs-based funding?
(ii) Who is receiving the good?
(iii) Within each local jurisdiction, how might local health policy-makers ensure that services will be distributed according to need?
(iv) Would needs-based funding work in your own jurisdiction?

Fair process or fair end-states

The third part of the framework involves how resources are distributed (i.e. the fairness of processes) and the acceptability of the resulting distributions (i.e. the fairness of end-states). Equity objectives such as those articulated in HEALTH21 can be defined in terms of fair processes, fair end-states, or both.

Fair process approach

The fair process approach holds that fair processes will necessarily distribute resources fairly. This approach can be particularly helpful in two situations: first, when the good or service cannot be distributed to all those with a claim on it (so each individual may be provided with a fair chance to obtain the good or service, perhaps leaving others with none of it); and second, when informational problems preclude the valid assessment of the final distribution of a good or service, making end-state judgements impossible.

Market exchange, ideally conducted in a perfect market, is one process that could be used to distribute resources (18). Most people believe that this process distributes resources equitably only if: (i) transactions are completely voluntary; (ii) people have full information about the consequences of their transactions; and (iii) there are no substantial starting differences in people’s wealth (which would influence their ability-to-pay and willingness-to-pay for health care goods and services). In practice, these conditions are rarely satisfied in markets for health care goods or services.

A second process that could be used to distribute resources is a lottery. Although seldom used in clinical practice, lotteries do underlie the randomized controlled trials used in clinical research. Lotteries are seen by some as a fair way to distribute an indivisible and scarce good, because they give each potential recipient an equal chance of receiving the good or service. Because the process is blind to the characteristics of recipients – everyone has the same probability of winning regardless of who they are – there can be no unfair discrimination. Lotteries are not common, however, in part because people do not always want an equal chance. Instead, people often want a fair chance that reflects what they see as their legitimate claim to the good (6). That is, they are seeking fair discrimination.

Queuing represents a third process (7). Queuing in health care can be based on a number of characteristics of potential recipients. For example, in some jurisdictions the time since the need for a good or service was determined (i.e. time in the queue) and degree of need for the good or service (i.e. clinical severity) are used to establish the recipient’s position in the queue for coronary artery bypass surgery and hip replacements.
Governance and decision-making processes represent a fourth category. For example, democratic processes may be used to involve the general public in broad policy decisions such as the types of goods and services that should be paid for in publicly financed health care systems. Alternatively, contracting processes may be used when a small number of decision-makers act on behalf of a larger group (19–21). Such processes require that decision-makers specify a distribution of goods as if they have no idea what situation they might find themselves in after the goods and services have been allocated. Simply put, a decision-maker must make a decision guided by the notion that “there but for the grace of God go I.” This approach tends (to some extent) to minimize harm to whomever will be made worst off. A limited health care service package for the poor in the American state of Oregon, for example, has been criticized on the grounds that the poor were not adequately involved in the decisions, and that the decision-makers (state employees) might not agree to such a limited package for themselves (through state employee health insurance) (22,23).

Moral duty may conflict with other fair processes, as well as with efficiency (24). Moral duty (i.e. the imperative to do the right thing in a given situation) is a principle upon which health professionals place great emphasis (25). In particular, clinicians’ ethical duties to rescue individuals in danger can result in the redirection of large amounts of resources into intensive or emergency care. To the extent that a jurisdiction recognizes this particular moral duty as fair, it may accept the resulting distribution as fair.

The fair end-state approach

The fair end-state approach adopts a very different viewpoint. Here the concern is not with the process of distribution, but with where resources actually end up (i.e. the end-state distribution). Equality represents one possible fair end-state distribution. A strictly equal distribution of a health care budget across regions may, for example, turn out to be quite unfair to the citizens of some regions. Many local health authorities might argue that the citizens of their regions have legitimate claims to more goods and services. For example, these citizens may be sicker or poorer than the citizens of other regions and so they may have a legitimate claim to more resources for health care. It may be necessary to make an unequal distribution of a health care budget based on population size, needs for goods and services, and the costs of providing those goods and services, in order to provide equal access to goods and services for the inhabitants of each region. Hence, although they are closely related, equality is not the same as equity.

Another possible fair end-state distribution involves equals being treated equally and unequals being treated unequally according to their degree of inequality, an idea of formal justice first articulated by Aristotle (26). In economics, the term horizontal equity refers to the distribution of equal amounts of a good among recipients who are similarly situated according to relevant aspects of their situations. Hence, a funding formula may seek to ensure that regions with similar needs and costs receive equal shares of the budget. In contrast, vertical equity refers to the distribution of unequal amounts among differently situated recipients in proportion to the degree to which they are differently situated. Hence, a funding formula may also seek to ensure that regions with greater health care needs and costs receive a greater share of the budget.
Exercise 3

Imagine that you are the chief executive officer for a local health authority in your country. You receive a letter from the minister of health informing you that the central government has decided to move from basing budget allocations on past allocations (i.e. historical patterns of health care use) to basing them on health care needs. The government has decided to use population size and life expectancy as measures of health care need. Your region has received a budget allocation of 100 million currency units. This amount is 20 million current units less than you received last year. The letter provides the following comparative information about the budget allocations for all regions in the country (Table 1).

Table 1. Comparative budget allocations in a country

<table>
<thead>
<tr>
<th>Region</th>
<th>Population size (your region)</th>
<th>Life expectancy</th>
<th>Budget allocation (currency units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>500 000</td>
<td>67.5</td>
<td>100 million</td>
</tr>
<tr>
<td>B</td>
<td>250 000</td>
<td>70.0</td>
<td>45 million</td>
</tr>
<tr>
<td>C</td>
<td>1 500 000</td>
<td>65.0</td>
<td>320 million</td>
</tr>
<tr>
<td>D</td>
<td>5 000 000</td>
<td>67.5</td>
<td>1 000 million</td>
</tr>
<tr>
<td>E</td>
<td>500 000</td>
<td>67.5</td>
<td>100 million</td>
</tr>
</tbody>
</table>

Has the central government addressed both horizontal and vertical equity? What aspects of your region’s situation would you bring to the attention of government if you wanted to argue that your budget allocation is not equitable?

Conclusion

To distribute health-producing goods and services (or health) equitably means to distribute them:

• in a way that is acceptable given the characteristics of the goods and services to be distributed;
• in a way that is acceptable given the characteristics of the recipients who will receive them; and
• according to acceptable processes or criteria about acceptable outcomes of these processes.

What is acceptable in one jurisdiction may not be acceptable in another.

Distributional decisions are made every day, every month and every year in health-producing sectors. If these decisions and their outcomes are tracked, it is possible to learn about what types of decision bring us closer to where we want to be. Many decisions will bring us closer to both our efficiency and equity goals. At other times, one goal will be sacrificed at the expense of the other, at least to some degree. Many jurisdictions will share an interest in tracking similar outcomes, such as equity in utilization of health care services by socioeconomic status. Other jurisdictions may have a particular interest in health differentials between aboriginal and non-aboriginal children. The important steps are, however, shared: establish equity goals, measure the extent to which these goals are achieved, and revise the goals or the approach as necessary.
References

1. Health21—an introduction to the health for all policy framework for the WHO European Region. Copenhagen, WHO Regional Office for Europe, 1999 (European Health for All Series, No. 5).


### Further reading


*Health21: the health for all policy framework for the WHO European Region.* Copenhagen, WHO Regional Office for Europe, 1999 (European Health for All Series, No. 6).


3.2.2 Efficiency in health care provision\textsuperscript{3}

John Lavis and Greg Stoddart\textsuperscript{4}

Key messages

- Health economics can be thought of as the discipline of economics applied to the topics of health care and health. More specifically, health economics is the study of how scarce resources are allocated among alternative uses for the care of sickness and the promotion, maintenance and improvement of health.
- The three main elements of efficiency may be summarized in everyday language as follows:
  (i) do not waste resources (technical efficiency);
  (ii) produce each output at least cost (cost–effectiveness); and
  (iii) produce the types and amounts of output which people value most (allocative efficiency).
- Society’s resources can be used to produce health care, health and wellbeing. A given use of society’s resources may be technically efficient (or cost-effective or allocatively efficient) in the production of health care, but it may not be technically efficient (or cost-effective or allocatively efficient) in the production of either health or wellbeing.
- For almost any use of society’s resources, there will be both winners and losers. Some economists have proposed that a sufficient condition for viewing a change in resource allocation as an improvement in (allocative) efficiency is that those who gain from the change value their gains enough to, in principle, be able to compensate those who lose for the value of their losses, thereby leaving the losers as well off as before the change.
- The general requirement for allocative efficiency is that each activity or output should be pursued only until the extra benefits from pursuing it just equal the extra costs. Under some very specific conditions, this requirement can be met through a system of prices and markets. In the case of health care, these conditions are often violated.
- Efficiency does not necessarily imply social desirability. As outlined in Module 3.2.1, who wins and who loses may make an important difference to decision-makers. The measurement of fairness (equity) is therefore often inextricably related to the measurement of efficiency.

Tutors’ notes

The core exercise in this module is aimed at the level of (critical) appraisal of core economic concepts. It can be used with the following groups:

- civil servants and other government technical staff
- health care managers
- health care professionals (e.g. doctors and nurses).

\textsuperscript{3} Funding for the first version of this module was provided by the World Bank Institute as part of its Flagship Program on Health Sector Reform and Sustainable Financing. The Flagship Program was supported in part by the Canadian International Development Agency (CIDA). This second version of the module incorporates several modifications which enhance the module’s applicability for the WHO Regional Office for Europe. Copyright © by the International Bank for Reconstruction and Development. The World Bank enjoys copyright to this material under protocol 2 of the Universal Copyright Convention. This material may nonetheless be copied for research, education or scholarly purposes only in member countries of the World Bank. The views and interpretations in this document are those of the authors and should not be attributed to the World Bank Institute or the World Bank.

\textsuperscript{4} This module was prepared by Professor John Lavis (e-mail: lavisj@mcmaster.ca) and Professor Greg Stoddart (e-mail: stoddart@mcmaster.ca), Centre for Health Economics and Policy Analysis, McMaster University, Canada.
The first exercise in this module requires the group to focus on a particular policy proposal. If the proposal is not relevant to the participants’ own settings, tutors can develop another one. The proposal should contain examples of technical inefficiency (e.g. the provision of ineffective medical procedures or excessive staffing levels), cost-ineffectiveness (e.g. a mix of providers skewed towards more expensive ones relative to what they produce, say physicians, and away from less expensive ones, say nurses), and allocative inefficiency (e.g. some of the types of service that people value most are not provided).

The second exercise is aimed at the level of appreciation and can be used with the following groups:

- policy-makers (e.g. elected officials)
- civil servants and other government technical staff
- health care managers.

It will be of most interest to those individuals with broader responsibilities for health care and health, including officials in ministries other than health, such as finance. Again, if the situation is not relevant to participants’ own settings, tutors can develop another one. The situation should involve moving from a production-related notion of efficiency (cost–effectiveness) to a consumption-related element of efficiency (allocative efficiency). It should also involve moving from traditional inputs into the production of health (hospital-based services) to non-traditional inputs such as those outlined in Fig. 1.

The third exercise is aimed at the level of appreciation and can be used with the following groups:

- policy-makers (e.g. elected officials)
- civil servants and other government technical staff.

This exercise requires the group to focus on a situation that involves an externality but in which a price system may allow for a stable allocation of resources such that marginal social cost equals marginal social benefit, and that these in turn equal both marginal private cost and marginal private benefit.

**Introduction**

Different groups in any society speak different languages and dialects. Economists have developed a language of their own as well. Sometimes they share this language with non-economists. The word "scarce", for example, means the same to almost everyone. At other times economists use a term from everyday language to mean something very specific in their own language. “Efficiency”, for example, means something very specific to economists. In fact, economists believe that there are three types of efficiency.

This module is primarily concerned with key concepts in health economics. It is secondarily concerned with introducing the language of economists (i.e. the terms that economists use when referring to these concepts). In defining and providing examples of these key concepts, we draw heavily on two documents that we have previously written (1,2). We begin with the big picture.

*Economics* is the study of how individuals and societies choose to allocate scarce productive resources among competing alternative uses and to distribute the “products” from these uses among the members of a society. Health care and health are universally seen as two important products to
which all societies commit resources. *Health economics* can be thought of as the discipline of economics applied to the topics of health care and health (3 pp. 1–13, 4). More specifically, health economics is the study of how scarce resources are allocated among alternative uses for the care of sickness and the promotion, maintenance and improvement of health. It further includes the study of how health care and health-related services, their costs and benefits, and health itself are distributed among individuals and groups in society.

The term “resources” means the basic inputs to production: the time and abilities of individuals; land and other natural resources such as water; facilities, equipment and other types of capital; and knowledge of production processes. Money, although an important medium of exchange and a very useful measuring device, is not defined by economists as a resource in itself. The importance of financial budgets, for example, stems from the command over resources which they confer upon those who control the budgets.

A fundamental problem facing all societies – and the reason that economics exists as an area of study – is that resources are scarce. *Scarcity* means that there are not, and can never be, enough resources to satisfy all human wants and needs. This observation is acutely clear every day when it comes to matters of illness and health, but it is equally true of other areas of human activity. There exists a constant conflict between alternative uses of resources, and a constant need to choose among alternative allocations. Therefore, economists define the real cost of an activity (such as hospital services) as the other outputs that must be given up (for example, other health services such as immunizations, non-health services such as defence, or commodities such as cars) because resources are committed to it. Economists refer to this important basic concept as the *opportunity cost*.

Decision-makers in all societies face decisions about trade-offs on a daily basis. For example, a request from a hospital doctor to begin providing magnetic resonance imaging (MRI) scans for the 20 patients each year who are suspected of having multiple sclerosis could virtually preclude all other new initiatives at a hospital that does not own and operate an MRI scanner already. In some jurisdictions the same amount of money could pay for a 10% reduction in the post-operative infection rate if disposable needles were consistently available for use and instrument sterilization machines were purchased. Trade-offs can also be considered across sectors. For example, in the 1990–1991 fiscal year, the government of the Canadian province of Ontario granted a US $350 million budget increase for hospital services. A public health researcher pointed out that these funds could have been used to provide 70 000 publicly subsidized housing units for low-income families or 547 000 publicly subsidized day-care places for children, both of which he considered to be alternative investments in health (5). Both the request to introduce an MRI scanner at a hospital and the decision to increase hospital budgets have high opportunity costs.

Two fundamental characteristics of economic analysis follow from the concept of opportunity cost. First, economics is concerned with evaluating and choosing among alternative courses of action, whether or not they are explicitly identified. Second, in doing so it examines both the costs and consequences of the alternatives.

**Efficiency**

The primary criterion that economics uses to organize and conduct these analyses is that of *efficiency*. The basic concept of efficiency, as the word is understood in common usage by almost everyone, is quite simple: to get the most out of scarce resources. But beyond this intuitive advice it is not always
clear what this involves, or how to achieve it, and – a word of warning at the outset – economists attach a very precise set of meanings to the concept of efficiency. Some of these meanings may not be obvious, agreed to or understood by everyone (6, 7).

Before considering these meanings in more detail, it is worth pausing to reflect on the magnitude of the resource allocation problem facing societies once the implications of resource scarcity, competing uses for resources, and conflicting needs and wants are taken into account. This is illustrated in Fig. 1 with particular reference to the role of health care and health. Fig. 1 shows how resources can be used in alternative ways to “produce” health care services, health and general wellbeing. The concept of efficiency and its meanings discussed below can be applied to each of these (2). Because efficiency is an instrumental concept, it is always necessary to specify clearly the outcome being sought or the output being produced. (A more detailed discussion of these “outputs” is contained later in the module.)

In Fig. 1 resources can be used for a variety of purposes, divided here into three groups labelled Health care services, Other determinants of health, and Other determinants of wellbeing. Health care services contribute to general wellbeing through their effect on health, as do other determinants of health such as education, income security programmes and safe workplaces. These other determinants of health may also have a direct effect on general wellbeing. The third category, other determinants of

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**Fig. 1. The magnitude of a society’s resource allocation problem**

![Diagram showing resource allocation and its impact on health and wellbeing](https://via.placeholder.com/150)
wellbeing, in general has only direct effects on wellbeing, although there may be some consumer products – food, for example – that can affect wellbeing indirectly through an effect on health as well.

The three main elements of efficiency (3, 8) may be summarized in everyday language as follows:

- do not waste resources
- produce each output at least cost
- produce the types and amounts of output that people value most.

An efficient allocation of resources is one that simultaneously meets all three of these requirements. The first two requirements relate only to production; the third introduces consumption, thereby bringing together the supply and demand sides.

The first element of efficiency above requires that for any given amount of output the amount of inputs used to produce it is minimized. (The requirement may also be stated such that maximum output is produced from any given combination of inputs.) If this condition is not met, then it is possible either to obtain more output through a different configuration of resources, or to release some of the resources to alternative uses without sacrificing any current output. This element of efficiency is termed “technical efficiency”. Hospitals that are larger than they need to be to serve their communities are an example of technical inefficiency. In general, there will be several technically efficient combinations of inputs (for example, combinations of labour and capital) for a given level of output.

The second element of efficiency builds on technical efficiency but takes into account the relative cost of different inputs. It requires that, in addition to technical efficiency being attained, inputs be combined so as to minimize the cost of any given output. (Alternatively, the requirement may be stated such that output is maximized for a given cost.) For example, if labour is abundant and inexpensive relative to capital in one economy compared to another, then least-cost production methods will employ relatively more labour in the first economy. This element of efficiency is termed “cost–effectiveness”. Although the cost-effective way of producing an output can vary from setting to setting, for any given output in a particular setting there will normally be only one combination of inputs that will be cost-effective. (It is only possible to claim that a specific combination of inputs is cost-effective in producing a particular output if it has been compared to one or more alternative combinations of inputs used for the same purpose.) Note also that, while cost–effectiveness can inform the question of how to produce an output at least cost, it does not address the question of whether the output should be produced. If something is not worth doing, it’s not worth doing well!

The third element of efficiency links the supply of outputs to the demand for them by extending the analysis to consider the preferences and values of the members of society who consume the outputs. It requires that, in addition to achieving technical efficiency and cost–effectiveness, resources be used to produce the types and amounts of outputs which best satisfy people, i.e. which people value most highly. The term used by economists to describe this all-encompassing concept of efficiency is “allocative efficiency”. It is possible for an allocation of resources to be both technically efficient and cost-effective but allocatively inefficient, if producers are supplying too much or too little of a good or service relative to consumers’ wishes. For example, if patients who have had heart surgery want counselling services for lifestyle modification instead of organized exercise classes, then allocative efficiency might be improved by changing the mix of secondary prevention services even if the exercise programme was being provided cost-effectively.

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5 The authors of economics texts do not always make the distinction between technical efficiency and cost–effectiveness. Some use the term technical efficiency to include both concepts (9).
In common language, then, efficiency means both “doing things in the right way” (technical efficiency and cost–effectiveness), and “doing the right things” (allocative efficiency). To take health care services as an example, there is no single, correct, international solution for their efficient provision. Although all countries in theory have access to the same production knowledge, the relative cost of different inputs (e.g. nurses versus doctors, drugs versus hospital days) varies across countries, and consumers in different countries have different preferences and values. Therefore, it is possible (indeed expected) that countries will differ in how they provide services, which services they provide and to whom they are provided, independently of any differences in efficiency which may exist.

**Exercise 1**

Consider one of the four main strategies for action in Health21 (10): to develop “integrated family- and community-oriented primary health care, supported by a flexible and responsive hospital system”. Imagine that your country already has the beginnings of a national network of primary health care centres. Before you are willing to consider expanding this network as part of your country’s commitment to the health for all strategy, you want to be certain that the existing centres are operating efficiently. The following information has been collected:

- some medical services provided in the centres have not been found to be effective;
- staffing levels of physicians and nurses are high relative to anticipated levels of communities’ needs for primary care (in fact, physicians and nurses are idle for extended periods of the day);
- physicians perform routine services such as immunizations and well-child check-ups that nurses could perform to the same level of quality (and physicians are paid considerably more than nurses);
- some communities with existing centres have reported that families feel there are too few (and sometimes no) reproductive and child health services to give their children a healthy start in life (as recommended in Target 3) and that there are too few quality services for people with mental health problems (as recommended in Target 6), even though they would prefer these services to some others that are currently provided.

Use the three elements of efficiency (technical efficiency, cost–effectiveness, and allocative efficiency) to examine the proposal more closely, paying particular attention to how each observation relates to one of the three elements of efficiency.

Now consider how you would develop “integrated family- and community-oriented primary health care ...” in your country and what information you would need to inform your decision.

By necessity, statements about allocative efficiency involve value judgements about which criteria will be used to judge whether a particular resource allocation “best satisfies” people, or is the “most highly valued”, or gives “too much or too little” of some goods and services. The standard criterion in economics comes from a branch of economic theory known as welfare economics. The criterion is known as the Pareto criterion (named after a nineteenth century sociologist and economist, Vilfredo Pareto), and states that allocative efficiency has been attained when it is not possible to change the allocation of resources to make any one person better off without making at least one other person worse off (11).

There are at least two other important characteristics of efficiency based on Paretian criteria (3,11). First, such a notion of efficiency is centred on the individual: social “welfare” is assumed to be
a function only of individual welfare, each individual is assumed to be the best judge of his or her gains and losses, and individual welfare is assumed to depend only on the goods and services the individual consumes. In the real world, all of these assumptions are problematic. People care about the welfare of each other, their social groups and their communities. Individuals must often make decisions on behalf of others. And even when they only consider themselves, people care about other things than just the goods and services that they consume, such as the characteristics of the societies in which they live.

Second, the efficient outcomes realized under this concept of efficiency depend very much on the distribution of income and wealth among individuals in the society. In other words, under the Pareto criterion there is no unique allocation of resources that is the (one and only) efficient allocation. Rather there is a set of efficient allocations, one for every different distribution of income and wealth. In practice, this difficulty can be avoided by accepting the existing distribution of income and wealth, although this is a very important value judgement that should be (but seldom is) made explicit in discussions of efficiency.

These characteristics of the standard economic approach to allocative efficiency mean that it may be possible for a society to prefer an “inefficient” (in a Paretian sense) resource allocation to an “efficient” one if, for example, the members of society judge it to be fairer in some way \cite{3,7,12}. A policy change that removed public subsidies for private hospitals in favour of expanding free public clinics might be an example of this. Another way to state this is that the choice among several allocatively efficient resource allocations must be made on the basis of criteria other than efficiency \cite{9}.

The usefulness of the Pareto criterion is very limited in practice, because most changes in resource allocations do in fact make some people worse off. That is, for almost any policy, there are both gainers and losers. In an attempt to extend the scope of the criterion, it has been proposed by some economists that a sufficient condition for viewing a change in resource allocation as an improvement in (allocative) efficiency is that those who gain from the change value their gains enough to, in principle, be able to compensate the losers for the value of their losses, thereby leaving the losers as well off as before the change \cite{11}. This “potential Pareto” criterion does not require that the compensation actually be paid, which many observers, including some economists, find ethically unacceptable \cite{6,7,13}. For example, suppose a policy of user fees improved access for the wealthy but reduced access for the poor. If the gains to the wealthy were sufficiently large to be able to compensate the poor, the potential Pareto criterion would deem this policy efficient, even if the rich do not in fact compensate the poor for their reduced access. Nevertheless, it is this potential Pareto criterion for allocative efficiency which is the basis for the economist’s measurement technique of cost–benefit analysis, one of the techniques described in Module 5.3.1 on methods of economic evaluation.

Allocative efficiency as defined above does not necessarily imply social desirability, except under a very specific and controversial value judgement. Specifically, unless compensatory policies are implemented, allocative efficiency implies social desirability only if ability-to-pay and willingness-to-pay are considered appropriate criteria on which to base access to goods and services. That is, allocative efficiency implies social desirability if the existing distribution of income and wealth, which facilitates purchases and consumption, is considered acceptable. Because value judgements and ethical principles are such an important part of the criteria for allocative efficiency in the real world of policymakers, the measurement of equity or fairness is often inextricably involved in the measurement of efficiency. Equity considerations were discussed in Module 3.2.1.
An application of efficiency concepts

With the three efficiency concepts now clear, these concepts are applied to the production of health care, health and wellbeing – three potential outputs of HEALTH21 policy. Two of the four main strategies for action in HEALTH21 involve health care services: primary health care, supported by a flexible and responsive hospital system (as mentioned above), and “health outcome-driven programmes and investments for ... clinical care.” Parts of the latter strategy, as well as the other two strategies, involve things other than health care. One might therefore ask “Can we have too much health care?” Elsewhere we have addressed this question (2) and parts of that answer are repeated here because it demonstrates how technical efficiency, cost–effectiveness and allocative efficiency can be applied to the outputs of health care, health and wellbeing.

In Fig. 2, a simple framework is provided to answer the question “Can we have too much health care?” The rows of the framework ask the questions: “Is production technically efficient?” “Is production cost-effective?” and “Is production allocatively efficient?” The columns itemize what is being produced: health care, health and wellbeing. Some of the eight resulting cells are combined to generate six ways in which there can be too much health care:

(i) health care that is not effective
(ii) effective health care that is more costly than it need be
(iii) health that is more costly than it need be
(iv) health care that is valued at less than its cost
(v) health that is valued at less than its cost
(vi) wellbeing that is more costly than it need be.

Health care that is not effective. If health care is not doing what it is supposed to do (i.e. restore, maintain or improve health) then the resources devoted to it are wasted. Some programmes or services may actually harm patients or do more harm than good. Others may be ineffective. It may also be the case that an otherwise effective service is rendered ineffective because it is applied in the wrong clinical circumstances (i.e. when it is not clinically warranted). For example, although coronary artery bypass surgery can dramatically improve the length and quality of life for selected patients, it would have no effect (and may even be harmful) in patients who do not have a type or severity of heart disease for which coronary artery bypass grafting has been found to be effective.

Fig. 2. A taxonomy of ways in which too many resources can be devoted to health care

<table>
<thead>
<tr>
<th>Is production efficient?</th>
<th>What is being produced?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health care</td>
</tr>
<tr>
<td>Technical</td>
<td>2</td>
</tr>
<tr>
<td>Cost-effective</td>
<td></td>
</tr>
<tr>
<td>Allocative</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Lavis & Stoddart (2).
Effective health care that is more costly than it need be. Health care becomes costly when the same quantity of services could be produced with fewer inputs (i.e. with fewer personnel, less equipment or less know-how) or with lower expenditure (i.e. with less expensive personnel, equipment or know-how compared to more expensive ones). As examples of the latter, consider the possibility of substituting nurse-practitioners for physicians in many routine clinical encounters or the possibility of providing more non-acute care outside hospitals, i.e. in nursing homes or ambulatory care facilities. By the same reasoning, health care becomes costly when more services could be provided with the same number of inputs or with the same level of expenditure.

Health that is more costly than it need be. If a specific level of health could be produced by reducing expenditure on some types of health care relative to others or by spending less on health care and more on other contributors to health (such as those outlined in Fig. 1), then too many resources may be devoted to health care. Coronary artery bypass surgery when applied to the right patients, for example, can buy more years of life than the same amount of money spent on monitoring low-risk patients in coronary care units (14). In addition, the early initiation of prenatal care (a health care intervention) and supplemental food programmes (an intervention traditionally considered to be outside the health care sector) can both reduce infant mortality rates more cheaply than neonatal intensive care units (15). Monitoring low-risk patients in coronary care units and neonatal intensive care units may therefore produce health in more costly ways than necessary.

Health care that is valued at less than its cost; and health that is valued at less than its cost. The fourth and fifth ways in which too many resources can be devoted to health care move us beyond the production (supply) side of the economic ledger to the consumption (demand) side. Here the focus is on benefits as well as costs. The benefits of health care (as determined by those receiving or paying for health care) must be valued in relation to its costs (i.e. other things foregone), and it may be that some types of health care are not valued as highly as other outputs that could have been produced. Similarly, the benefits of health must be valued in relation to its costs. In other words, it may be possible to improve the mix of different types of health (both quality of life and length of life, for example) or the mix of health compared to other things (such as consumer goods, education, security and justice).

Wellbeing that is more costly than it need be. Just as health care is only one determinant of health, so health is only one determinant of wellbeing. Wellbeing can be produced in more and less costly ways. If overall wellbeing could be increased by “less” health (produced by health care) and correspondingly more of the other contributing factors, then too many resources are being devoted to health care.

Exercise 2

In your role as the ministry of health official charged with implementing the 21 targets from HEALTH21, you are visited by the head of the medical staff of the largest hospital in your country. He is lobbying for a new programme to expand lung transplantation facilities. He shows you several clinical research studies – all well done, randomized controlled clinical trials – which demonstrate the cost–effectiveness of a new transplantation technique compared to the old technique and to maximally intensive medical therapy. His claim is that, because he has “proof” of cost–effectiveness, it is obvious that his initiative should be funded without further delay. How would you reply?

The head of the medical staff is not satisfied by your reply. He in turn replies that you should at least agree that additional funding be given to his hospital because you are responsible for ensuring “health for all”; then he and others at the hospital will work out which programme inside the hospital
should get increased resources. Other programmes within his hospital will therefore be able to compete with the transplantation programme. What is your reply now?

The margin

The general conditions for allocative efficiency under the potential Pareto criterion can be described in a technical way, using the economist’s concept of the “margin”. Economists define the “marginal cost” of an output as the additional cost incurred in producing the last (or next) unit of that output. Similarly, the “marginal benefit” is the additional benefit obtained by consuming the last (or next) unit of an output. In an efficient world, marginal cost and marginal benefit are equal for each output, although they may vary across outputs. For example, if a hospital wishes to expand its diagnostic imaging programme, a consideration of allocative efficiency requires that it not be expanded past the point where the extra resources required (personnel, space, supplies and equipment) would create more benefit if used instead in another of the hospital’s programmes.

Individuals use a similar rule every day in deciding how to allocate their time and money. Individually, we constantly make judgements about whether the extra benefit of doing something (e.g. buying another belt, drinking more coffee, visiting relatives more often) is worth the extra cost involved. We tend to stop doing things when the extra costs exceed the extra benefits. So, too, for societies pursuing their health care activities and health goals. For allocative efficiency, each activity or output should be pursued or produced only until the extra benefits from pursuing or producing it just equal the extra costs. In other words, the value of the extra benefit that individuals and societies derive from the last unit of any output consumed is just equal to the opportunity cost of the resources (i.e. their value in their next best use) used up by producers to create that unit of output.

Of course, this is a difficult determination to make in practice. An important contribution of economic theory has been the demonstration that this requirement can be satisfied (i.e. for each good or service produced, the marginal social cost equals the marginal social benefit), and a stable allocation of resources can be identified through a system of prices and markets. This solution to the economic problems of what goods and services to produce (and in what quantities), how to produce them, and how to distribute them applies only under some very specific conditions, however (as outlined towards the end of Module 3.2.1). When these conditions are violated, markets are said to fail in that they do not lead to an allocatively efficient distribution of resources. As mentioned previously, unless compensatory policies are implemented, a system of prices and markets implicitly accepts two value judgements. The first is that both ability-to-pay and willingness-to-pay are appropriate criteria on which to base access to goods and services, while the second is that the existing distribution of income and wealth is acceptable. In the case of health care, market failure is common (16) and the above two value judgements are frequently rejected for certain categories of service.

Exercise 3

In your role as minister of health, you have a meeting with the minister of the environment to discuss water quality. You point to Fig. 1 and make the case that the quality of the physical environment is an example of the category of “other determinants of health”. You believe that firms are making decisions to minimize their production costs at the expense of the physical environment in general, and water quality in particular, by dumping effluent into rivers and streams. You want the minister of the environment to do something. The economic adviser to the minister of the environment replies that
the problem has two parts. First, at the level of the firm, the extra benefits of disposing effluent in this way far exceed the extra costs. At a social level, however, the reverse is the case. The minister of the environment argues for a price system that would sell pollution rights as the simultaneous solution to both problems. As minister of health, do you see this proposed solution as an efficient one?

References

10. Health21: the health for all policy framework for the WHO European Region. Copenhagen, WHO Regional Office for Europe, 1999 (European Health for All Series, No. 6).
Further reading


3.3 Overall reform

3.3.1 The expenditure ≡ income ≡ revenue framework (identity)

Greg Stoddart

Key messages

- The same national income–expenditure accounting principles that apply to other economic sectors also apply to the health sector.
- Every item of expenditure on health care is also an income to someone in the health care industry, and it must be financed somehow through revenue of one type or another.
- Examining these three dimensions of proposed or actual health care reforms is often a useful aspect of health policy analysis. It can provide important insights on issues such as the redistributive income effects of policy changes, or the likely impact of such changes on the levels of expenditure and the real availability of health care services.

Tutors’ notes

This module describes a basic analytical tool of economics, the expenditure ≡ income ≡ revenue framework or identity, and its application to the health care sector, especially in the context of health care reform. As such, it is intended to develop skills in appraisal and analysis of health policies.

The identity can be used by a variety of audiences. Indeed, stripped of its algebra or symbols and reduced to its basic idea (key message 2), it can be appreciated by even the least experienced audiences, including members of the general public. Perhaps those most involved in debates over health care reform (politicians, ministry of health officials, and leaders of health care institutions or professional associations) will find it most useful and relevant.

There is a wide range of possibilities for applying the identity to specific reforms. The key thing in Exercise 1, for example, is to ensure that the participant attempts to trace the effects of his or her chosen reform in all three parts of the framework. Another source for reforms to be analysed using the framework is European health care reform: analysis of current strategies (1).

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Introduction

Few subjects generate as much debate as health care reform. This seems to be the case in all countries and, although the debate may follow a cyclical pattern in any one country, significant debate over health care reform appears to be a constant feature of the international scene. The debates are frequently intense, and claims or counter-claims in one country often have spillover effects, prompting similar debates in other countries.

One reason for the ongoing debates is that the stakes are perceived to be high, in several dimensions. Perhaps the one of most concern to the average person is that of health. If health care systems are not organized, financed and managed to deliver effective services at the right time and in an efficient and compassionate manner, the basic needs of individuals will go unmet.

Governments must also consider other dimensions such as the level of expenditure on health care versus other spending priorities and how to finance public expenditure, as well as the extent to which they can (or should) rely on private financing. Governments must also consider carefully the political consequences of their health care policy decisions. Few issues will mobilize opposition constituencies as quickly as a perception of neglect or poor management of health care.

Health care providers too have a direct economic stake in health care policy. After all, expenditure on the health care “industry”, whether public or private, is also the income of those who work in the industry. It is not a coincidence that health care providers are everywhere at the forefront of lobbying efforts to fight controls on health care costs or to expand the provision of health services.

The economic issues involved in health care reform are complex, and cannot be condensed into one module. The purpose of this module is to provide a relatively simple economic framework which draws on the observations above and some concepts of economic theory in order to assist participants to begin to analyse and understand some of the most frequent policy debates in health care reform. It continues the emphasis in this series of WHO Regional Office for Europe learning materials on providing participants with analytical and conceptual tools for health policy analysis.

The module begins by presenting and explaining the analytical framework. Next, examples of typical health care reforms are briefly discussed in order to illustrate the use of the framework and, in particular, its ability to clarify issues regarding the distributional effects of health care reforms. The module concludes with an exercise for participants to apply the framework to health care reform in the contexts of their own countries.

The expenditure = income = revenue identity (framework)

Evans (2–4) outlines a useful analytical framework for the economics of health care reform based on national income–expenditure accounting principles (which apply to all economic sectors). He emphasizes that every expenditure on health care is also an income to someone in the health care industry, and must be financed somehow through revenues of one type or another. Thus, there exists the following expenditure = income = revenue framework (Fig. 1). The relationship is an identity, which means that the three items must be equal mathematically.
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Fig. 1. The expenditure = income = revenue framework (identity)

<table>
<thead>
<tr>
<th>Total EXPENDITURE on health care goods and services</th>
<th>=</th>
<th>Total INCOME earned from the provision of health care goods and services</th>
<th>=</th>
<th>Total REVENUE raised to pay for health care goods and services</th>
</tr>
</thead>
</table>

Each of the three individual items can be separated further into its basic components as follows:

EXPENDITURE = P x Q Where P is the unit price and Q the quantity of each type of health care good or service.

INCOME = W x Z Where W is the rate of payment per unit of input and Z represents the various types of input or resource that are combined to produce the health care goods or services.

REVENUE = TF + SI + UC + PI Where TF is taxation, SI is social insurance contributions, UC is direct charges to users and PI is private insurance premiums.

These are the three main channels through which revenue may be raised to finance the provision of health care goods and services.

The identity may therefore be written in symbols as follows:

P x Q ≡ W x Z ≡ TF + SI + UC + PI

Using the identity

Although simple, the identity is quite a powerful analytical tool. For example:

- If total health care expenditure (P x Q) increases, then it must be possible to trace the corresponding effects in the income and revenue items. For income, either the amount of inputs (Z) has increased, or the rate of payment per unit of input has increased, or some combination of both has occurred. This must be the case, or the identity will not balance.

- For revenue, either taxes (general taxes or social insurance premiums) have increased, direct charges to users have increased, private insurance premiums have increased, or some combination of the three effects has occurred if total health care expenditure has increased. Again, this must be the case, or the identity will not balance.

The definition of what constitutes a health care good or service will vary from country to country. However, in principle Q is a list (vector) of all of a country’s health care goods and services, including hospital, medical, pharmaceutical, ambulance, dental and laboratory services. There is, therefore, a long list of types of health care goods and services under the symbol Q, and a corresponding long list of their unit prices under the symbol P. Note that non-marketed services, such as care provided by family members in the home, are typically not included, although technically they could be. To include them would require measurement of the quantities of services and time spent by family members, followed by imputation of values for the prices of services, the wages of family caregivers, and the out-of-pocket contributions by users’ families.

Similarly, under the symbol Z, there is a long list of individuals who derive their incomes from the provision of health care goods and services. The obvious ones are health care providers such as physicians, nurses, dentists or physiotherapists. Another group includes the non-clinical employees of

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7 This presentation uses symbols for convenience, but they are not required. Some users of the learning materials may be more comfortable with an entirely verbal treatment. Other participants may prefer an algebraic treatment, which can be found in (2).
health care firms, such as the administrative and support staff of hospitals, clinics and government agencies. But the symbol Z includes all individuals who derive income from the provision of health care goods and services. Therefore it includes other, less obvious individuals such as the employees, shareholders, lawyers and accountants of private insurance firms, pharmaceutical firms, medical equipment suppliers and for-profit managed care firms. In other words, the symbol Z includes not just the health care providers, but also the individuals deriving incomes from the management and overhead components of health care systems. Consequently, under the symbol W there is a corresponding long list of rates of payment per unit of input for each type of individual.

The revenue item in the identity could also be expanded in detail. Under the symbol TF would be a list of all types of taxes (personal income, corporate income, sales, excise, payroll, etc.); under the symbol SI would appear social insurance premiums; under the symbol UC would appear the various types of direct charge (deductibles, coinsurance, per-service fees, etc.); and under the symbol PI the different premiums would appear for any types of private insurance which existed.

The picture can be made quite complex, but the basic point is simple. Any change in one of the three items in the expenditure - income - revenue identity of necessity implies a change in the other two. To take a simple example, suppose that the only change that occurs is that a nurses’ union successfully negotiates a wage increase with its governmental employer in a publicly-financed hospital system. Then W increases and, if the same number of nurses remain employed, then both the expenditure item \(P \cdot Q\) and the revenue item \(TF + SI + UC + PI\) must increase. If there is no change in the amount of hospital services supplied \(Q\), then there has in effect been an increase in the unit price \(P\) of hospital services. If there is no change in the mix of public and private financing, and no increase in direct charges to users, then government must raise taxes or social insurance premiums in order to pay for the wage increase if it wishes to avoid creating or adding to a fiscal deficit.

**Extensions to the identity**

Several more complex extensions can be made to the identity (2). Evans introduces four types of additional relationship:

(i) a health production function linking the output of health care goods and services \(Q\) to the health status of members of the population;

(ii) a health care production function linking the output of health care goods and services \(Q\) to the levels of inputs and resources \(Z\);

(iii) a demand relationship linking the level of direct charges paid by users \(C\) to the level of health care utilization \(Q\);

(iv) a capacity relationship linking the levels of health care goods and services provided \(Q\) to a maximum available stock of inputs and resources.

Participants interested in more advanced analyses may wish to study the articles by Evans (2,3). Although reference may be made to some of the concepts in (i)–(iv) above, for the purposes of this module the basic framework of the identity will be sufficient.

**Retrospective use of the identity**

The identity can be used to record and understand retrospectively the changes that have occurred in a country’s level of total health care expenditure and to investigate, for example:
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- whether changes in expenditure levels were primarily the result of changes in the level of utilization of services or changes in the cost of the services;
- how changes in the reimbursement of health care providers have affected overall expenditure and, in particular, the availability and utilization of services;
- how changes in the supply of health care providers have affected their remuneration, overall expenditure, the availability and utilization of services, and fiscal pressure on government;
- the effects of increasing direct charges to users on utilization of services and the incomes of health care providers; and
- the effects of introducing or reducing reliance on social insurance as a financing mechanism.

**Prospective use of the identity**

Perhaps an even more important use of the framework, however, is to examine prospectively the likely consequences of health care reform. Three examples are discussed below concerning the control of health care expenditure in a publicly financed system, real or perceived shortages of physicians, and pharmaceuticals, respectively. The framework could also be used to analyse the implications of greater privatization of health care financing, a topic which is discussed in the next module (on the evaluation of health care reform options).

Controlling or reducing the rate of growth of health care expenditure is an important policy objective for many governments. Since expenditure on hospital services typically represents the largest single component of total health care expenditure, attention often focuses on it. Consider first the case of a government committed to reducing total expenditure by reducing hospital expenditure. One of the most frequent strategies for accomplishing this objective is to reduce the number of hospital beds in operation, with the goal of forcing the more efficient use of the remaining beds and possibly increasing the amount of care provided in the community or on an outpatient basis.

In terms of the expenditure ≡ income ≡ revenue identity, the main effect of the policy is to decrease that portion of Q devoted to inpatient hospital care and thereby decrease the item P \( \cdot \) Q. (There may be a small increase in the portion of Q devoted to hospital-based outpatient care, but this must be less than offsetting if the goal of reducing overall expenditure is to be achieved.) Achievement of the goal also means that TF decreases, assuming that the hospitals are only financed through taxation. But what about the income item in the identity? Assuming that policies that would lower W, such as lower rates of remuneration, job-sharing or reduced hours of work for, for example, physicians, nurses or hospital support staff, are not introduced, then unemployed hospital workers are the anticipated result, as Z decreases and balance is maintained in the identity. In practice, both W and Z may decrease to maintain the identity. The policy therefore not only has an effect on the public budget, it also redistributes the incomes of health care workers.

Real or perceived shortages of physicians are another policy “crisis” which frequently arises in health care systems. Consider a government committed to “holding the line” on total health care expenditure (i.e. holding the item P \( \cdot \) Q, and presumably also TF + SI + UC + PI, constant) but feeling politically constrained to do something about the shortage of physicians. If it increases the number of doctors, Z increases and so will P \( \cdot \) Q and the need for revenue. One option might be to increase the supply of physicians but simultaneously reform their remuneration so that W is lowered, although this will generally be a difficult strategy to implement. Another option might be for the authorities to embark on a longer-term strategy to reduce reliance on physicians by increasing the use of family health nurses or nurse-practitioners. In this case, the eventual goal is to decrease that portion of Z
representing physicians, while increasing it for physician substitutes. But as the identity makes clear, the payment rate for these substitutes will have to be carefully structured so that the item $W \times Z$ for physicians and their substitutes does not increase overall.

In recent years, the increase in the cost and use of pharmaceuticals has been one of the driving forces behind increased health care expenditure. (The effectiveness of the utilization of pharmaceuticals is a major issue requiring attention, although that is not the issue being addressed in this example.) In terms of the identity, the shares of both $P$ and $Q$ representing pharmaceuticals have been increasing, with accompanying increases in the shares of both $W$ and $Z$ for individuals associated with the pharmaceutical industry, including executives and shareholders in multinational corporations.

To the extent that payment or insurance for pharmaceuticals remains largely outside the publicly-financed health care system in many countries, this means that either UC or PI, or both, have been increasing. They may continue to do so given the cost-control record of the private sector of health care systems. (It also has the interesting effect of making a health care system look more “private” over time as expenditure on pharmaceuticals becomes a larger share of total health care expenditure. This occurs even though no structural changes to the system or the boundaries between public and private services have occurred.)

For a government that is holding the line on total health care expenditure while paying publicly for all or most pharmaceutical use, recent experience shows that there is an implicit reallocation occurring among different types of $Q$ – more of pharmaceuticals and less of other types of health care goods and services – unless the unit prices ($P$) of the other services can be lowered. It is possible to imagine cost-reducing efficiencies being instituted for other types of service (e.g. hospital care) that lower their $P$s, thereby leaving overall $P \times Q$ constant in the face of rising $P$ and $Q$ for pharmaceuticals. However, in practice this is both difficult and unlikely. Accompanying the reallocation among types of service will be a reallocation of incomes away from the providers of non-pharmaceutical services, involving decreases in (some combination of) $W$ and $Z$, and towards the providers of pharmaceutical services.

**Exercise 1**

Identify and describe at least one health care reform which is currently being proposed or considered in your country. Discuss what effect you think it will have on total health care expenditure, and give the reasons for your view. Then trace the possible implications of the reform in each of the income and revenue items of the identity.

**Exercise 2**

Compare and contrast the implications of the expenditure $\times$ income $\times$ revenue identity in a contracting economy, where the resources available for health care are declining, with those in a growing economy. For example, what are likely to be the similarities and differences in terms of the redistributive income effects of policy changes, their likely impact on the levels of health care expenditure, and the real availability of health care services?

Also, consider the similarities and differences from the point of view of the four separate groups of users of these learning materials: national or regional policy-makers; managers of health facilities or services; health care practitioners and consumers; and people with an interest in, concern for and perhaps involvement with the health sector.
References


Further reading


3.3.2 Evaluation of health care reform options

Panos Kanavos and Elias Mossialos*

Key messages

- Policy-makers face dilemmas in the reform of health systems and the incompatibility of different reform objectives, for example extending cover or providing more choice on the one hand, and keeping within a tight budget.
- Policy-makers and practitioners need to be aware of the limitations of their decisions, based on an analysis of financing, regulatory and provision implications.
- A tailor-made cost-containment strategy addresses issues for payers, providers and consumers. Strategies related to provider payment methods that encourage efficiency, cost-sharing options, information on prices and utilization reviews, as well as efforts to reduce administrative costs (among other things) are discussed and placed in the context of the reform process.

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• An efficient approach to quality assurance in health care requires a means of monitoring performance, setting up and following a number of indicators, and a feedback system.

• Administrative reforms, cost-containment strategies and infrastructure changes need to be analysed regarding the anticipated sources of financing and the expected level, distribution and timing of savings.

• To pursue ways of improving efficiency, changes may be needed in provider payment mechanisms, the potential introduction of market elements, the role of incentive structures in addressing stakeholder behaviour on the demand side, and the role of consumers/patients.

• An appreciation is needed of how the different stakeholders and professions interact in the face of reform and what their respective roles are. An appreciation of the decision-making process and consensus-building is provided.

Tutors’ notes

• The module can be used with two main groups of professionals: (i) senior staff in ministries of health and health/sickness fund directors/managers, and (ii) (placing the emphasis on slightly different material) hospital directors, clinical directors and other health care practitioners. The first group would benefit by exploring broad policy issues in terms of cost control, quality, financing and financing reform, incentives, and improving efficiency at the macro level. The second group would be keen to learn how specific aspects of incentive structures (e.g. cost-containment or budgets in general practice) would affect their behaviour and their clinical freedom.

• It is important for participants from both groups to understand some key economic terms, such as scarcity of resources and opportunity cost, and the implications that these may have for the decisions they make. The best way to do that would probably be through the exercises, where they will be asked, for example, to discuss what they would be prepared to sacrifice for “additional units of benefit” (more cover, better care, etc).

• It would be a good idea to try to apply the key messages to a geographical region with specific characteristics and a given legacy, for example when dealing with different types of professional in eastern European economies in transition (both in central and eastern Europe and the Commonwealth of Independent States (CIS)).

• Beyond the teaching of concepts and what international experience suggests, participants should be encouraged to think strategically with regard to what is desirable and what is feasible within their operational environments. Again, exercises (based on some available empirical evidence) may help to transfer some useful experience from other settings and contextualize it in the setting where the training takes place.

• The list of further reading at the end of the module should be adequate, but tutors and participants are invited to make use of the resources and case studies that can be found on the website of the European Observatory for training purposes, in order to promote a comparative element in the application of the training material.

Introduction

There are two main issues that should be borne in mind by policy-makers wishing to adopt reform measures. The first relates to the fact that the majority of health care reform programmes involve an imprecise definition of defects of the system and vague articulation of policy goals. Governments/reformers are often reluctant to confront the issue of trade-offs between policy goals, for example,
how much efficiency should be sacrificed to achieve equity goals; whether efficiency can be achieved only with relaxation of cost control; how can cost controls be elaborated to facilitate the achievement of equity, for instance, by using weighted capitation budgets; and how provider incentives and user charges can be used to influence the behaviour of key actors. Quite often this is deliberate; for instance, the British government did not wish to be “confused” by evaluation of the NHS internal market reforms. Consequently, the effects of the purchaser–provider split and GP fund-holding hospitals are largely unknown, with advocates marketing these structures worldwide as a success and opponents denigrating them as failures. Neither advocates nor opponents have any robust evidence base to sustain their claims. Often, the political dimension is the key to initiating and implementing reform. This has been shown by the market-oriented reforms in the United Kingdom initiated and implemented by the Conservative government, and the 1997 “modern-dependable National Health Service” reforms, initiated and implemented by the Labour government.

The second main issue relates to the import and transferability of reform ideas from other countries, often with markedly different socioeconomic conditions and stages of development. If such a transfer takes place, it needs to take into account national, economic, political, cultural, historical and social trends and be adapted accordingly to meet objectives such as extending access, containing costs, implementing quality assurance mechanisms, and improving system efficiency through an improved infrastructure.

**Extending access to health**

For many politicians and citizens, the defining objective of health care reform is to create more uniform, secure and effective access to health care and health insurance. The focus is understandable. Millions may be uninsured or otherwise lack reasonable access to health care. Millions more fear that an illness, an employer’s decision to cut health benefits, or some other event beyond their control could deprive them of coverage. Even voluntary actions, for example, a job change, are increasingly constrained by concerns about continued health coverage. What was once perceived as largely a problem for low-income people is now a growing concern for middle-income people as well.

It has been argued that health care costs must be contained before major steps to extend health coverage can be undertaken. Such a two-step reform strategy underestimates the foreseeable costs of not extending access, in particular the extent to which the lack of universal health coverage produces costly distortions in the way care is provided and financed and in the decisions made by employers, employees and others. These distortions include delays for patients in getting needed care, “job lock” (which occurs when a worker refuses an otherwise better job because it does not include any acceptable health benefits), and cost-shifting (when providers try to recover costs related to charity care and underpayments from public payers through higher prices to private payers).

It is expected that expanding health coverage will be associated with higher health care spending – both public and private – in the short term. Although a phased-in strategy for broad reform, including a phased-in approach to improved access, is reasonable, such an approach should include early steps to achieve broader and more predictable health coverage. Expanded access should not become a second-hand contingency.

The primary barriers to access stressed in most reform proposals are financial, especially non-existent, inadequate or unreliable health insurance. Reform proposals regarding access should also be grounded in a realistic understanding that access to effective health services is more than a matter of
money. Other barriers to access also require attention. In transition economies, in particular, the economic issues of defining an adequate insurance base and maintaining it are key for the coverage of the population.

Key issues in extending coverage, therefore, may include the following.

• All or virtually all persons, whether employed or not, ill or well, old or young, must participate in a health insurance/benefits plan. Specific provisions must be made for households or individuals that do not participate in the official sector of the economy, or are self-employed or employed in the primary sector. Provision must be made to cover employees and their families and for adequate funds for those not active in the official sector.

• Whether a single or multiple insurers are envisaged, a uniform package of core or basic health benefits must be defined and periodically updated. The package should include services that are thought to be valuable in improving health. To limit inequities in access, the core package or standard plan needs to be reasonably comprehensive.

• If multiple health insurance plans are permitted, policies should minimize barriers to initial and continued health coverage (such as waiting periods and restrictions on coverage for pre-existing health problems) for those who move, change jobs, fall ill, start or stop receiving public assistance, or face similar changes in their circumstances.

• Requirements that individuals share in the cost of health coverage and health services should not create barriers to needed care for low-income individuals.

• To reduce incentives for health insurance plans to compete for healthy individuals and avoid the ill (adverse selection), payments received by health insurers (from governments, employers, employees or other sources) should be adjusted to reflect important differences in the distribution of low-risk and high-risk individuals across such plans. Correspondingly, what individuals pay for health coverage should not be linked to their health status (past or anticipated), age, gender, occupations or similar factors. Thus, what an individual pays into the system for health coverage may differ from what is paid out to a health plan for enrolling that individual.

• Critical cover, funding and other health insurance features should be made consistent across plans, more reliable and predictable over time, and less of a barrier to continuity of health care and job mobility.

• Proposals for reform should include specific provisions for benefits that cover all, or virtually all, the cost of services that are critical to the health and wellbeing of children and mothers, especially those at high risk.

• Proposals to extend health insurance should define where coordination is needed with other public and, potentially, private initiatives that target non-financial barriers to improved access and health status.

• Equal access is by no means the same as equal outcome and reform proposals need to consider policies to counter socioeconomic inequalities by intersectoral action.

• Policies to improve access to the health services go hand-in-hand with the concept of geographical equity and the extent to which resources are allocated optimally throughout a given country. Distribution (allocation) formulas must be developed where they do not exist and incentives must be given to professionals to practise in remote areas.

• Because reforms, once adopted, cannot just be assumed to be successful in meeting their objectives, policy-makers need to monitor changes in access over time.
Exercise 1

Why undertake reform? On what basis are priorities selected? Who makes this selection? How are proposals for reform defined? Who benefits and who pays? Who decides?

Cost-containment

Given the many pressing demands on finite national resources and the rapid increase in the share of those resources devoted to health care, policy-makers, employers and ordinary citizens must be concerned with both the overall costs of health care and their rapid rate of growth relative to the overall economy. Cost concerns have been a major obstacle to efforts to expand access to health care for those who are uninsured or underinsured. High health care costs are also a major contributor to growing anxiety among the middle classes about the adequacy and continued availability of their health cover.

To serve health and access as well as cost-containment objectives, policies to limit the rate of cost escalation need to be grounded in the concepts of:

• value: how health care spending relates to the achievement of desired outcomes;
• affordability: how health care spending relates to individual and societal resources; and
• equity: how the financing and distribution of health services affects different groups.

For these objectives to be achieved and sustainable, cost-management tools and monitoring structures are required which should encourage and emphasize individual, professional and organizational accountability. Detailed efforts to regulate prices, services and other aspects of day-to-day health care delivery run two major risks. First, some professionals and health care providers, health insurers and consumers may be preoccupied with manipulating the system rather than achieving more efficient and effective health services. Second, such manipulation may inspire ever more complex and voluminous rules that would ultimately defy sensible management or compliance by even the most well informed participants.

The following specific policy elements should have a role in a strategy for health care reform that promotes cost-containment.

• Movement toward provider payment methods that encourage efficiency and economy in the provision of health care services as well as quality of care and good outcomes.
• Some cost-sharing by most patients.
• Better information on prices, quality and expected outcomes of medical services.
• Methods for quality and utilization review that help practitioners, patients and others learn how actual care conforms to criteria for appropriate care and why care varies in effectiveness and efficiency.
• Further movement to standardize many administrative practices and eliminate many costs associated with the immense diversity of billing, payment, audit, reporting and other practices.
• A pragmatic mix of regulatory and market strategies. Some degree of local flexibility and discretion is also desirable.
• Efforts to reduce administrative costs, may in some cases, conflict with efforts to collect more data for monitoring access and quality, and educational and other purposes. The key criterion
for judging the appropriateness of administrative tasks and costs is whether the costs they impose are justified by the degree to which they serve desired objectives related to access, quality, equity, efficiency and information.

- Reform should discourage health insurers from competing on the basis of risk selection rather than effective management of care and costs. Proposals for reform should include provisions for standard benefit packages, risk-adjusted payments to health insurance plans (but not risk-adjusted individual premiums), special provisions for very high risk individuals (e.g. reimbursable or separate risk pools), monitoring of marketing and other health plan practices, and similar measures.

**Exercise 2**

How can health care costs be contained? How does the concept of cost-containment relate to the concept of microeconomic efficiency?

**Quality assurance**

Health care reform proposals must aim to maintain and improve the health and wellbeing of the entire population, including groups with special health or access problems. At the same time, reform planners must design and organize policies and programmes to strengthen the value of health care expenditure — that is, what can be achieved, in terms of health and wellbeing of individuals and populations, through health care spending. Reform must be implemented so that expanding access and containing costs does not lead to unintended reductions in the quality of health care.

Reform plans can achieve these objectives only with explicit attention to quality, which includes defining, measuring, assuring and improving the quality of care. A set of quality-related principles and policies for health care reform proposals must, therefore, be on the policy-makers’ agenda. The emphasis on practice guidelines from this debate seems unavoidable.

By way of context, two major changes in medical care should be noted. First, care is being evaluated increasingly on the basis of its processes and outcomes, rather than on its structural aspects, such as the credentials of health care professionals. Second, with the advent of better research methods and computer technology, clinical medicine is becoming more science- and information-based. These two shifts should yield better and more cost-effective care in the future. Health policies and reform packages should not create incentives that retard these promising developments. In the light of this, an agenda that focuses on quality includes the following points.

- Proposals for reform should explicitly acknowledge three central issues that quality assurance and improvement efforts should address: (i) the use of unnecessary or inappropriate care, as well as over-provision of otherwise appropriate services; (ii) under-use of needed, effective and appropriate care, and (iii) lapses in technical and interpersonal aspects of care.
- Proposals should define an approach to quality assurance that will be meaningful, efficient and acceptable to those with a stake in the process.
- In considering outcomes, proposals should provide for the use of a wide range of health-related quality of life measures.
- Proposals will need to reflect both concern with the quality of care provided by individual insurance plans and practitioners and attention to the quality of care across the entire system.
- Proposals should be clear about organizational structures, procedures and divisions of responsibility and make explicit provisions for both internal and external monitoring of quality of care.
The quality assurance and improvement programme outlined in the proposals should include specific responsibilities for identifying and overcoming system and policy barriers to improved performance.

Proposals should mandate that quality assurance and improvement programmes track the effects of certain cost-containment processes.

Practice guidelines are an important element of reform and are related to appropriateness of care, while at the same time they may serve the objectives of cost control, benefit package design, rationing, competition and administration. Emphasis should be placed on the development of such guidelines by involving all necessary stakeholders. The issues of compliance and clinical audit are key for the adoption and implementation of such guidelines by clinicians.

The active implementation of quality assurance and good clinical practice indicators necessitates adequate investment in information systems throughout the health sector, so that effective monitoring of practitioners, hospital activities, budget management and prescribing, among other things, can be carried out.

A formal, non-judicial mechanism by which individuals can voice grievances and obtain assistance should be available to all. Proposals for health care reform should mandate an additional responsibility for a quality assurance and improvement programme, namely to serve as a focus for consumer complaints or as an ombudsperson.

Exercise 3

When evaluating various options for health care reform what are the key factors to take into account? How? What impact might environmental factors or the historical context have on this debate?

Reform of financing

Many steps proposed to improve access can be expected to add significant new financial burdens for employers, governments and some individuals (e.g. those who moved from low-risk insurance pools to average-risk pools). Whether a given country will accept such burdens and how they will be distributed are clearly political decisions. Policy-makers may need sufficient popular support for increased taxes or insurance premiums that may be necessary to protect more individuals against the financial consequences of ill health. Consequently, financing policies will be influenced by several considerations, including equity and efficiency arguments.

Proposals for reform should move the health care system toward more broad-based, efficient, equitable and transparent financing arrangements. They should be grounded in realistic estimates of expected expenditure and revenues and their distribution across population groups.

Proposals for health care reform should explicitly:

- describe anticipated sources of financing and also their expected level in absolute terms and in terms of covering the entire population;
- identify the expected level, distribution and timing of savings expected from administrative reforms, cost-containment strategies, infrastructure changes and other provisions;
- estimate the level and distribution of public and private expenditure (including tax expenditure) needed to implement the reform proposal over a period of several years and state the assumptions, modes, data and similar elements used in developing these estimates;
- describe financing not only for health care services but also for basic elements of the health care infrastructure including public health, research, education and capital investments;
• make sure that projections of revenues and expenditure should be subjected to review and audit by independent, nongovernmental sources.

Exercise 4

Once the objectives of health care reform in a particular context are identified, what implications do they have for reform of financing?

Improving the infrastructure for effective change

Making policy is not the same as implementing it. The necessary conditions for effective short- and long-term implementation of a proposal for health care reform should be considered in the design of the proposal. Some of the conditions for successful change involve matters beyond the scope of a reform proposal per se, for example, political leadership and the general condition of the economy. Proposals should, however, discuss how certain broad features of the government and health care delivery infrastructure would be designed or shaped to support the objectives of reform. Four important elements of this infrastructure are:

• **governance and administration**, which involve the transformation of statutes into regulations, enforcement and oversight mechanisms, and other public and private action needed to implement reforms;

• **human and physical capital**, which includes the appropriate level, mix and distribution of health care professionals, facilities and equipment;

• **development of knowledge**, that is, the biomedical, clinical and health services research and the health data systems that create, aggregate, analyse and disseminate information that practitioners, administrators, consumers and others need continuously to improve health and meet other objectives of reform; and

• **public health policies and programmes** that focus on the community rather than on the personal health services that are the central concern of health care reform.

In addition, other elements may be considered part of the administrative apparatus necessary to promote the goals of health care reform in the longer run or to advance other important social goals. Among these are, for example, the definition of clinical malpractice, the creation of better legal responses to clinical errors, and the protection of the privacy and confidentiality of sensitive patient data that reside in computer-based records and databases.

• Reform packages should be clear and realistic about the timetable expected for full implementation. Monitoring mechanisms will be needed to detect inadequate implementation, unanticipated negative effects, and positive results that should be built upon.

• Any proposal should make clear how issues of human and physical capital supply and distribution will be dealt with.

• Proposals should describe policies and priorities that determine the roles of various providers, including nurses and physicians, and the settings from which they should deliver care. Particular emphasis must be given to primary care providers and how the shortfall in such clinical disciplines can be overcome in both the short and long term through changes in methods of payment for practitioners, educational programmes, and improvements in the attractiveness of the primary care function.

• Proposals should include a specific mandate for the development and continued support of comprehensive databases in the health field.
• Steps must also be taken to improve survey and statistics capabilities, particularly by instituting a national health care survey that can track progress and identify problems in the implementation of efforts to reform.

• Proposals should promote universal implementation of computer-based patient records (CPRs) and CPR systems among providers. The same holds for information services for health services research and health technology assessment.

• There must be an absolute increase in support for a range of research and information activities if reform activities are to be implemented and evaluated satisfactorily, particularly in the area of clinical evaluation sciences and health services research.

• An improvement in a country’s capacity to carry out effective technology assessment efforts is needed. Proposals must be explicit about how technological innovation and the diffusion of health technologies will be dealt with over time.

• Proposals should encourage a partnership between the personal health services system and the population-based activities of the public health system, as well as occupational health activities.

Exercise 5

What are the main factors to be considered in order to ensure that the implementation of health care reforms is effective and sustainable? How can it be ensured that the incentives encourage desirable action by participants and promote the objectives which are intended in the longer term?

Efficiency and effectiveness

To measure efficiency, the cost of efforts must be related to results and the ratio between the two assessed. However, measuring results is very difficult in many policy areas. It is often equally difficult to assign costs to particular results, even if those results were measurable. For much the same reasons, equal difficulties may arise in attempting to measure effectiveness. Surrogate measures of the intended results are frequently developed for public programmes and policies, but all require the suspension of disbelief to be accepted as valid and reliable descriptions of what is occurring in the reform process.

As a consequence of these difficulties in measuring the substantive sequence of government actions and plans for reform, much of the assessment of performance in government depends on the evaluation of procedural efficiency, i.e. not so much what is produced as how the agencies go about producing it. The efficiency of public agencies may be assessed by determining the speed with which certain actions occur or by ensuring that every decision goes through all the appropriate procedural stages specified for a process. The important point here is that goals may be displaced when evaluations are made on a basis that posits the process itself, rather than the services that it is intended to produce, as a measure of all things. Concern for measuring efficiency through procedures may, in fact, actually reduce efficiency in producing results for citizens, because of a proliferation of procedural safeguards and associated “red tape”.

Improving efficiency

Improvements in efficiency have featured quite strongly in most countries’ efforts to reform their health services over the past twenty years. Efficiency can be thought of in terms of macroeconomic and microeconomic efficiency. The former relates to the concept that the costs of health care should not exceed an acceptable share of national resources. The latter refers to the fact that the mix of
services chosen should secure health outcomes and consumer satisfaction at minimum cost. Macroeconomic efficiency has been examined under the umbrella of cost-containment and policymakers’ efforts to control total expenditure on health as a proportion of national resources. Microeconomic efficiency is a more complicated notion, since it seeks to address different objectives: to satisfy consumers, to grant incentives to providers, and to induce payers to behave optimally.

While macroeconomic efficiency is a more general concept, achieving microeconomic efficiency certainly contributes to it. The pursuit of microeconomic efficiency should include the following:

- five key dimensions, which can subsequently be pursued at a more decentralized level:
  - lowering the cost of achieving a desired outcome;
  - providing greater consumer satisfaction for patients and their relatives;
  - reducing the time and travel costs for patients and their relatives;
  - reducing the costs of administration and regulation; and
  - encouraging technological and organizational advances to raise productivity;
- measures at the macro- and micro-level to address problems in the current methods of paying providers and to improve incentives that would, in turn, lead to greater efficiency;
- at the macro-level, a shift from an integrated or command and control model to a public contract model with the introduction of competition into the health care markets has been shown to contribute to greater system efficiency, although a number of issues still need to be addressed:
  - both buyers and sellers being public bodies;
  - oligopolistic behaviour of health professionals;
  - conflict between consumer choice of provider and “third-party” choice of best buy;
  - the extra administration costs of contracting and whether these counterbalance efficiency gains;
  - avoiding cream-skimming;
  - protecting quality of care; and
  - whether there will be adequate disclosure of information to make the market work as intended;
- the issue of market competition and where it should occur – several options are available:
  - enabling practitioners to be responsible for the care of their patients, both clinically and in terms of managing their total cost;
  - introducing competition between insurers, although this also necessitates action regarding regulation;
  - separating purchasers from providers, which should ensure that there is adequate scope for competition between providers; and
  - encouraging self-governing hospitals with the objective of improving micro-efficiency through innovation and less bureaucratic control;
- the issue of provider payments (professionals and hospitals) and decisions about policies that improve efficiency while at the same time save on costs;
- policies that would increase the flexibility of the health system and the kind of services it offers, for example developing alternatives to hospital care such as stand-alone facilities, day care and community-based services.
Exercise 6

How can (a) the development, dissemination and use of knowledge, and (b) monitoring, evaluation and (when necessary) modifications to health care policy and practice be harnessed to ensure that health care reforms are appropriate, evidence-based and adjusted appropriately as new knowledge becomes available?

Implementing funding/financing reforms in central and eastern Europe and the CIS

Many of the countries emerging from socialism rejected the Semashko model in favour of the Bismarck model. The centralized model of general taxation with government control (i.e. the Beveridge model) was not politically feasible at the time so, instead, social insurance was embraced as the preferred choice. Most countries have encountered difficulties in making this model work successfully in a period of rapid economic decline.

While the context and the options reviewed and analysed in the previous chapters are relevant to the debate about health sector reform in central and eastern Europe and the CIS, some elements that could be examined in this context (bearing in mind the agenda defined in the previous chapters) can be addressed in the following exercise.

Exercise 7

• How does the size of the informal economy, the agricultural labour force and the self-employed, and the collection of contributions, affect the feasibility of social insurance as the main source of finance?
• What are the implications for the efficiency and equity of the health sector as a whole when highly segmented systems are implemented, providing cover for only part of the population (as occurs in Latin America)?
• Have single or multiple fund systems performed better? Why?
• What difficulties have emerged because of different systems of management or public/private ownership?
• What systems of regulation and administration have proved most successful?
• Consider how successful the process of decentralization has been in the countries of central and eastern Europe, and how devolution to local insurance funds has operated in practice.

Further reading


Individual country case studies from both EU countries and the rest of Europe can be downloaded from the web page of the European Observatory for Health Care Systems http://www.euro.who.int/observatory/TopPage (accessed 6 November 2002).

### 3.3.3 Economies in transition

*Yannis Yfantopoulos*9

**Key messages**

- The economic principles for a command economy and a market economy differ substantially, and these differences have major implications.

- The major issues of health reform policies in the transition countries are discussed and the trends are analysed with reference to structural, political, economic, social and health transformation.

- The economic crisis in the Russian Federation has brought a series of negative economic effects in the newly independent states (NIS), such as a fall in production, spiralling inflation, increasing unemployment, poverty and social deprivation, which all lead to violence, increased alcohol consumption, and a significant deterioration in health status outcomes.

- Restrictions in data sources and problems envisaged in time trends analysis are highly relevant when changes in outputs and inputs over time are being considered. In a planned economy, a net material product-based system is used for the measurement of output, whereas in a market system, national accounts are used for the measurement of macroeconomic variables.

- The changing role of government in transition economies has wide-ranging implications, including for the health care system and for health outcomes.

- The reform of health care from a state bureaucratic system to an insurance-based system is critically evaluated, particularly in relation to the quality of services, access to care, the efficiency principle and the financial sustainability of reforms.

- The increasing trends towards activities in the underground economy are explored, together with their implications.

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9 This module was prepared by Professor Yannis Yfantopoulos from the National and Capodistrian University of Athens (e-mail: yyfa@otenet.gr). The author is grateful for a number of comments by experts in central and eastern Europe and the newly independent states, notably Dr Eva Bondar (e-mail: bondar_eva@s16.kibernet.hu).
Tutors’ notes

Given the breadth and complexity of the subject, considerable background material based on economic analysis is included. Tutors are also encouraged to supplement the material with appropriate case studies. The audience needs some familiarity with the overall health context and some appreciation of the economic tools, such as Module 5.4.1 Economic Modelling and Forecasting. It is nevertheless intended that a more general audience can – with appropriate tutoring and using the research conclusions – tackle the exercises.

Introduction

The purpose of this module is to discuss issues related to health economics for the economies in transition. The term “transition” is used here to portray the structural, political, economic, social and health transformation of the post-communist societies in southern and eastern Europe, and to understand the major determinants that have influenced the evolutionary changes in health status and expenditure on health there.

The end point of the transition is likely to differ between countries for a wide variety of reasons. Indeed, a given point may never be reached, as other changes may occur first. The process of transition may be more amenable to consistent discussion than the final destination, and changes in the health care sector may interact, positively or negatively, with changes in other sectors. It does not need to be emphasized that the learning process can be mutual, based on respect and an openness to a range of learning opportunities: it need not necessarily operate in a single direction (west to east). The socialist health care systems were often quite successful with, for example, some important basic tasks, such as vaccinating all citizens, reducing mortality from infectious diseases and addressing maternal and infant mortality.

Inevitably, the model-like approach focuses on a limited number of (major) factors. The reality is much more complex, varying between countries and over time. As Saltman & Figueras say: “Drawing conclusions about current patterns in European health care reform can be a complicated process” (1). Similarly, McKee & Healy comment that “one of the pervasive messages in this book is the need to take account of different contexts” (2). While this is recognized, not all factors can be included in this brief module or lend themselves particularly to the approach adopted here.10

Some points should perhaps be emphasized. First, many of the countries of central and eastern Europe did not voluntarily choose the political or economic systems from which they are now changing. In many cases they are seeking to make the best of situations. Their past conditions and the present can, however, influence their future through attitudes, incentives and expectations, as well as through more specific manifestations, such as the health care resources of money, skilled labour and knowledge. For example, the lack of experience with market-based systems can result in unrealistic expectations, underdeveloped complementary structures and arrangements, and a failure to take full advantage of emerging opportunities. Any sort of independent economic entity may be seen as private, because it is not part of the previously dominant state complex. The countries in transition also vary greatly, whereas the module takes a broad and general overview.

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1 For more detailed information on health care reform in Europe see Saltman & Figueras (1) and Saltman et al. (3). For more specific studies see Mossialos et al. (on funding options) (4), Saltman et al. (on the regulation of European health systems) (5), McKee & Healy (on hospitals) (2), McKee et al. (on health care in Central Asia) (6), and Mills et al. (on the challenge of health care reform) (7).
Secondly, the module generally considers the public sector at the level of the national state. In fact, collectives can assert and pursue public purposes, in health care and in other sectors, through many forms such as regions, cities, communes and even voluntary, religious and charitable organizations.

Thirdly, the demographic and epidemiological processes which are occurring in many of the countries of central and eastern Europe do not reflect a uniform structure of health development. Broad comparisons, for example of overall levels of health status for health expenditure, can obscure these important differences, but they need to be kept clearly in mind.

Fourthly, there are problems associated with the transition process itself, quite apart from the starting point and the likely eventual outcomes. For example, resources can be suddenly reduced, often widely, at the same time as new, sophisticated and often relatively expensive foreign drugs, equipment and medical technologies become increasingly available. Since 1989, several radical discontinuities have been observed in health inputs and outcomes that have influenced the transition process of the economies in question. In the newly independent states which have emerged, the transition from centrally planned to open-market economies introduced many problems and tremendous imbalances in countries that had been highly dependent and heavily subsidized by the economic authorities in Moscow. The Leontief-type of predetermined production and distribution plans provided little space for exports and economic transactions with the rest of the world. The economic crisis in the Russian Federation brought a series of negative economic effects in the NIS, such as a fall in production, spiralling inflation, increasing unemployment, poverty and social deprivation which lead to violence, increased alcohol consumption and significant deterioration in health outcomes.

In the NIS economies as a whole, the inflation rate was around 349% by 1995 and production fell by half between 1991 and 1995. In 1993 the highest inflation rates were recorded in Ukraine (4735%), Armenia (3732%) and Turkmenistan (3102%). In 1994 the highest price increases were in Georgia (15 606%), and Armenia (5273%). By the end of the decade, in 2000, prices were fluctuating around 28% in Ukraine, 10% in Turkmenistan, 4.4% in Georgia and -0.2% in Armenia (8). Poverty in the Russian Federation reached its highest level in July 1992, affecting 46% of the children under 15 years of age. The economic decline brought a significant reduction in health and social expenditure that further influenced the health and social outcomes. For example, public expenditure on health fell in Turkmenistan from 5.5% of gross domestic product (GDP) in 1988 to 2.8% in 1994. Similar reductions in expenditure, absolute and relative to GDP, have been observed in all the transitional economies. Increasing trends in infant mortality were recorded during the period 1989–1993 in the Russian Federation (from 17.8 to 19.9), Kazakhstan (from 25.6 to 28.1), Tajikistan (from 43.2 to 47.0), Azerbaijan (from 26.2 to 28.2), Ukraine (from 13.0 to 14.9) and Bosnia-Herzegovina (from 18.4 to 22.7), followed in all cases by significant reductions.

A comparative analysis can be helpful, examining trends in health status and changes in health resources among different groups of countries. The analysis explores both macro- and microeconomic aspects. The data are the best available and are derived from WHO, the World Bank and the United Nations. Twenty-two Member States of WHO are classified as transitional economies, representing 7% of the world’s population.

**Planned versus market economy**

Because resources are scarce in any society, whether communist, socialist or capitalist, politicians, administrators, producers and consumers have to make choices concerning three basic questions in any economic system.
1. **What** goods and services should be produced and in what quantity? For example, how many hospital beds, and primary health centres, should be developed? How much public or private care should be provided?

2. **How** should the production of the health goods and services be organized. For example, what techniques and what input mix will the health system use to produce a certain level of health for the society? Should a society produce more primary health and preventive services compared to hospital services?

3. **For whom** should services be provided? For the elderly? For the young? For the rich or for the poor?

However there are considerable differences between economic systems in the way that they tackle the above questions. For instance, *in a totally planned or a command economy* (usually associated with a socialist or a communist society) the government or the central planning committee is responsible for taking decisions. The production factors of land and capital are collectively owned. The process of satisfying human wants is predetermined by a committee which is responsible for allocating resources. Fig. 1 presents the three-sided relationship between the state, the producers and the consumers. A Leontief-type of input–output analysis is used to determine the output produced in the society and the resources required for such production. Outputs of one sector can be used as inputs in other production activities. By this process the state creates the general framework of a planned economy.

**Fig. 1. The process of a command economy**
At the other extreme lies the free market system which is associated with a capitalist system (Fig. 2). There is much less government intervention and decisions are taken by the consumers and producers. The consumers aim at the maximization of their utility and the producers aim at the maximization of their profits. The free market ensures that an optimum allocation of resources is achieved when certain assumptions are fulfilled such as perfect knowledge among consumers and producers, no uncertainty, constant returns to scale, and perfect mobility among the factors of production.

**Fig. 2. The free market system**
However, in the health care sector the classic thesis of Arrow (9) revealed that the market itself fails to produce an optimal distribution of resources for a number of reasons: externalities, such as infectious diseases and altruism; social and historical controls, such as the prohibition of illicit drugs; the existence of uncertainty in the incidence of disease and the efficacy of medical interventions; asymmetry in information between doctors and patients; incomplete coverage of all risks; non-increasing returns to scale; and monopolistic tendencies. Interestingly, he also stated: “I propose here the view that, when the market fails to achieve an optimal state, society will, to some extent at least, recognize the gap, and non-market social institutions will arise attempting to bridge it.” (9)

In reality, in the majority of health care systems, a mixed economy is observed where decisions are taken partly by the government and partly by the competitive forces of supply and demand.

Exercise 1

In an economy which is in transition from a centrally planned to a more decentralized system, with a greater role for market forces and the independent interactions of producers and consumers, and with a political system which is in transition from a centralized to a more pluralistic and democratic set of arrangements:

• What effects do these have on the priority attaching to health care compared to other important social objectives?
• What implications do these have for the relative weight given to efficiency and equity objectives (specifically in relation to the health care system)?
• What role is played by the underground economy and the incentives it embodies, both in the short term and in the longer term?

Political and economic transition

The transition

This section considers the theoretical link for the societies in transition between the political and economic spheres and assesses critically the changes implemented during the period from 1989 to 2000. Emphasis is given to macroeconomic issues (such as output, investment, inflation, unemployment) and microeconomic issues generated by the liberation of prices. Other issues, including the underground economy and corruption are discussed briefly.

After the post-war period many European countries witnessed substantial social and economic transformations, mainly attributed to economic growth and political reforms aiming at more democratic and competitive electoral systems. In the central and eastern European countries, the fall of the Berlin Wall in November 1989 signified a new era, which was accompanied by peaceful political transformations to democratic societies and economic transitions to market economies. Free and fair elections have led to democratic changes in the Czech Republic, the former Yugoslav Republic of Macedonia, Hungary, Poland and eventually the Russian Federation. New multiparty systems have emerged after the collapse of bureaucratic socialism. The previous authoritarian socialist systems have been replaced by a new elite of politicians who have emerged from a politically competitive system promoting parliamentary democracy.
In the economic sphere marked changes have been observed, not only between the countries in transition but also within these countries among social classes and regions. The more advanced countries, after rapid liberalization, have managed to achieve macroeconomic stabilization and gradually introduce sustainable institutional changes. In the less developed countries, the privatization and liberalization of the economic systems have been jeopardized by unfavourable legacies of the previous communist regimes, which slow down the process of economic transformation. Nevertheless, even small-scale privatization has yielded significant benefits in terms of employment and growth. The variation in implementing reforms across the transition countries is mirrored in their macroeconomic performances.

**Macroeconomic performance**

During the decade 1990–2000, the key challenge confronted by the economies in transition involved the restructuring of their entire economies. This involved moving away from a command economies and opening up to a modern, dynamic and more competitive environment. Inevitably, the composition of GDP was totally restructured as a result of substantial changes in the production process and in the utilization of the factors of production. In particular, the production of output is no longer predetermined and dictated by the central planners, but is defined by the competitive forces of supply and demand. Enterprises produce only what the consumers are willing to buy. The new system transformed the previously socialist society and had a profound impact on the quality of products and the welfare of consumers.

In addition, the demand for new factors of production totally reshaped the factor markets for capital and labour. In relation to capital, new technological advances were introduced and new investment programmes launched, financed by privatized banks and credit institutions. In the labour market new skills were in demand, and the changing demands also created large-scale job losses and high levels of unemployment. Poverty, crime and alcoholism increased, partly as a result of these changes, and there was a substantial deterioration in the health status of the population. The *World development report 1996* (10) emphasized the growing inequalities in the Russian Federation and eastern European countries.

Inequality increased most rapidly in eastern Europe and the countries of the former Soviet Union after the collapse of Communism. In the Russian Federation, the number of people living in poverty (on less than US $4 per day) soared from about 2 million in 1987 to 66 million – four out of ten Russians – by 1995 (11).

These changes were accompanied by new methods of measuring output. The approach changed from a material-based measurement to a national accounts basis, which is common in market economies around the world.

During the transition period the volume of production fell, which was reflected in the growth rates of GDP for the societies in transition. However, this fall in production and the annual rates of economic growth were far from uniform in the various economies. Fig. 4 presents the annual rate of growth for the Commonwealth of Independent States and the Baltic countries from 1989 to 1999. After the first years of substantial negative economic growth, a weak recovery was achieved by the mid-1990s. In 1996 the rates of economic growth in Latvia, Poland and Slovakia were above 6% and in Lithuania just under 6%, but more modest in the Czech Republic and Hungary.
Fig. 3. Issues in the political and economic sphere

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Political sphere</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political model</td>
<td>Autocratic</td>
<td>Pluralism</td>
</tr>
<tr>
<td></td>
<td>Communist rule</td>
<td>Political elite</td>
</tr>
<tr>
<td></td>
<td>Party control</td>
<td>Elections</td>
</tr>
<tr>
<td></td>
<td>Nomenclature</td>
<td>Political competition</td>
</tr>
<tr>
<td><strong>Economic sphere</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic model</td>
<td>Command Leontief Economy</td>
<td>Market/competitive economy</td>
</tr>
<tr>
<td>Ownership</td>
<td>Collective</td>
<td>Private</td>
</tr>
<tr>
<td><strong>Macro-economy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output growth</td>
<td>Low</td>
<td>Declining/increasing</td>
</tr>
<tr>
<td>Investment</td>
<td>State/no foreign investment</td>
<td>International involvement</td>
</tr>
<tr>
<td>Inflation</td>
<td>Low/stable wages/prices</td>
<td>Hyper-inflation</td>
</tr>
<tr>
<td></td>
<td>Economic instability</td>
<td>Very high</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Low/unpaid wages</td>
<td>Explosive</td>
</tr>
<tr>
<td><strong>Micro-economy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choices</td>
<td>No choices</td>
<td>Yes</td>
</tr>
<tr>
<td>Market</td>
<td>No market</td>
<td>Restructuring of markets</td>
</tr>
<tr>
<td>Liberalization of prices</td>
<td>No</td>
<td>Price liberalization</td>
</tr>
<tr>
<td><strong>Specific issues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground economy</td>
<td>Existing under-reported</td>
<td>Growing</td>
</tr>
<tr>
<td>Corruption</td>
<td>Covered</td>
<td>Extensive</td>
</tr>
</tbody>
</table>
Microeconomic prospects

To achieve sustainable economic growth, liberalizing reforms should be complemented with institutional changes aiming at the restructing of markets. During the first phase of transition the old large-scale industrial complexes were faced with great challenges. Many had to close, due to inadequate labour skills, technological infrastructure and managerial competence. Rapid industrial downsizing led to massive unemployment, social upheavals and stress. Over the medium term the transition economies developed new labour skills, attracted foreign investments and rapidly improved their productivity. New products which were introduced to the market strengthened the competitive spirit of enterprises, consumers and the wider society. The choices available to, and the welfare of, many consumers improved substantially, although inequalities increased sharply.

The role of the state was of vital importance during the transition period. Politicians and administrators faced serious challenges in changing the form of government from planned bureaucratic economics to market-oriented systems. New legislation was enacted to promote economic reforms aiming at the development of markets and the establishment of private enterprises. However, despite the impressive achievements in the liberalization of the system, the quality of government and state intervention in the economic system still varies widely across the different economies in transition. In many cases the transition phase was accompanied by a growing underground economy and corruption in the civil service. Ensor & Denan discuss corruption as a challenge to effective regulation in the health sector (5).
Exercise 2

To what extent is the situation in your country (a) similar to, and (b) different from, the broad picture outlined in the module and the particular aspects which are emphasized there?

To the extent that there are differences, what implications do they have for:

• the priority given to health care compared to other social objectives
• efficiency and equity in health care
• the possibilities for intersectoral action
• the relationships between the official and the underground sectors in health?

Consider the similarities and differences in relation to:

• the processes of transition
• the end point to which transition is directed – indeed, is there any such point?

Health reforms

This section analyses the issues relating to health economics in transition economies with reference to decision-making, management, health objectives, resource development and financing of the system. The characteristics of the traditional Semashko health care model are analysed and compared with the health care reforms implemented after 1989. Table 1 portrays the changes implemented after 1989 in various fields of the health economy.

The need for health reform

The need to implement health care reforms in the countries in transition may be attributed to the following reasons:

• collapse of the soviet Union and the consequent political, economic and social crisis
• transition from state-managed to market systems
• new social risks related to the economic crisis (unemployment and poverty)
• decline in living standards
• increasing inequality in the distribution of income
• high rates of poverty and social exclusion
• increasing incidence of alcoholism, crime and smoking
• more recorded cases of drug addiction and AIDS.

Numerous empirical studies have documented the negative impact of the above factors on people’s health.

In these countries a sharp deterioration in health status has been recorded since the transition began. Life expectancy continued to decline during the whole decade and remains far below European Union levels. Infant and perinatal mortality have shown a similar gap compared to western European societies. The incidence of tuberculosis and other infectious diseases has increased substantially.

Since the first stage of transition, the newly independent states and the countries of central and eastern Europe have begun to assess health outcomes more carefully and to discuss critically innovative avenues for reform. Many aspects of the reforms introduced in these countries have had to follow a different path from those observed in western Europe. The latter had already reached a high level of
health outcomes, and since the share of GDP devoted to health was more than 8%, cost-control and cost-containment policies were introduced to control costs. The countries in transition, which confronted increasing mortality and declining life expectancy, adopted a more expansionary model. They aimed to increase their low levels of health expenditure, both in absolute terms and as a percentage of GDP.

However, it was evident that expansion should be pursued on a cost-effective basis and in an equitable way. New management techniques and economic evaluation were considered as appropriate tools to monitor changes and assist decision-making. In the first phase of introducing health reforms the major objective was to move away from a state-controlled bureaucratic system, based on the principle of state monopoly, and gradually to develop a more pluralistic network of public and private insurance initiatives, financed from public and private sources.

**Provision of services**

The traditional Semashko model was based on the maximalistic principle of:

- large hospitals, often with more than 1000 beds;
- very large numbers of facilities;
- large numbers of doctors with very low salaries (much lower than civil servants); and
- large numbers of nurses with low salaries and low education.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decision-making</td>
<td>Centralized</td>
<td>Signs of decentralization and regionalization (St. Petersburg Region)</td>
</tr>
<tr>
<td>2. Management</td>
<td>State-managed comprehensive system</td>
<td>Towards an internal market managed system</td>
</tr>
<tr>
<td>3. Objectives</td>
<td>• Efficiency: Low</td>
<td>Increasing</td>
</tr>
<tr>
<td></td>
<td>• Effectiveness: Not assessed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Equity: Emphasis on per capita distribution of services</td>
<td>Some cost effective therapies</td>
</tr>
<tr>
<td></td>
<td>• Quality: Low</td>
<td>Problems with vulnerable groups, aged, poor, unemployed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increasing</td>
</tr>
<tr>
<td>4. Resources</td>
<td>• Doctors: Oversupply/mainly specialists, low productivity, no incentives</td>
<td>Declining trends</td>
</tr>
<tr>
<td></td>
<td>• Nurses: Oversupply</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Beds: Oversupply</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Medical technology: Lack of infrastructure</td>
<td></td>
</tr>
<tr>
<td>5. Financing</td>
<td>• Public:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. State: Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>2. Region: Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Health insurance</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>1. Private insurance</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. Out-of-pocket payments</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Under-the-table payments: Limited</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Inevitably the result was low quality of services, low medical productivity, no incentives to produce more, and under-the-table payments to medical personnel.

The lack of advanced medical technology, combined with the shortage of health economists and administrators, contributed to large inefficiencies in the delivery of services.

In the process of reform many positive changes have been observed:

- introduction of decentralization of decision-making;
- exploration of new management techniques
- changes in the ownership of health care facilities
- privatization in primary care services
- large-scale privatization introduced into the pharmaceutical sector
- privatisation of small hospitals
- reduction in the number of hospital beds
- introduction of medical technology improvements in hospitals
- substantial increase in the application of health economics and medical management
- development of quasi-autonomous sickness insurance funds.

It is widely accepted that significant progress has been achieved during the last decade towards greater cost–effectiveness and improvements in efficiency.

**Financing**

Financing issues are explored here in the context of the changing public/private mix in the health care systems of the economies in transition. The important role of the public sector in the financing of health services has often been discussed in the literature of health economics under the theory of public goods and market failure. Private goods (such as personal health services) with substantial externalities and where there was a significant collective interest could also be publicly subsidized. For private goods with exclusive personal benefits, such as cosmetic dentistry, it has often been argued that the individual should be responsible for covering the cost. OECD, World Bank and WHO reports reveal that in all countries of the world there are public and private initiatives in health. The key question concerns the optimal proportions of public and private involvement in the health sector to ensure efficiency in the utilization of resources and equitable access to a certain spectrum of services for all citizens.

Health insurance has been proposed as a method of providing services in a cost-effective way, because it reduces the overall risks accruing to society by pooling all the risks. The countries in transition have implemented health reforms aiming at the introduction of compulsory health insurance, and the separation of state budgets from employers’ and employees’ contributions paid directly to insurance funds.

Various forms of health insurance have been introduced or are in the process of implementation, as in Bulgaria and Romania. In some countries, compulsory health insurance has been introduced covering the whole population, whereas in others (e.g. Albania) health insurance only covers part of the population.

The financing mechanisms also present many dissimilarities. For instance, in Estonia a tax collection system has been introduced which is based on contracts between the insurance agencies and the tax authorities. In Poland all the insurance contributions covering health, pensions and unemployment benefits are collected by the insurance agencies.
Several problems have been recorded, including in the collection of payroll insurance contributions. Changes in employment status have created uncertainty for many insured people. A number of countries declared significant problems in collecting contributions, even from workers who were employed in large industrial complexes and in successful enterprises. In Hungary, some insurance funds went bankrupt and never paid their debts.

The role of the state

Despite the changes, public involvement in the financing of health services has remained substantial. The forms of public intervention vary significantly from country to country. In the majority of the countries in transition (for example, the Czech Republic, Poland and the former Yugoslav Republic of Macedonia) the state acts in a manner which is complementary to the insurance system and undertakes to cover the insurance contributions for some vulnerable groups such as the elderly, the unemployed and the poor. In other cases the role of the state is more targeted to the poor and disadvantaged by providing a minimum package of public health services. It is widely evident that, because of the reforms which have been introduced and the emergence of fee-for-service arrangements in hospitals and primary health care, the poor and the unemployed, who represent a high share of the population (around 20–35% in a number of these countries) cannot afford to pay the higher costs of care. As a result they have been pushed out of the health system. In some countries, such as Albania and Latvia, the government has introduced a minimum package of health care for the uninsured in order to ensure that their basic needs are covered. Recent experience reveals, however, that in times of economic crisis the sustainability of such systems can become uncertain.

Expenditure

There are problems in assessing trends in health expenditure in the countries in transition, because the existing sources are scarce and the data are not fully comparable. Notwithstanding, an attempt is made to establish some international comparisons between these countries. It has often been argued in the literature of health economics that the proportion of GDP devoted to health rises with the economic prosperity of the country. Hence, richer countries tend to spend more on health than less developed ones.

Fig. 5 presents the relationship between GDP per capita and the share of GDP spent on health for the economies in transition. A linear and a logarithmic form are both explored to approximate the above relationship. The coefficient of the double logarithmic equation shows an income elasticity of 0.82. The logarithmic relationship is used to investigate the existence of diminishing returns to scale in the expansionary process of health expenditure. This hypothesis is often supported by the fact that as GDP rises, more cost-effective techniques are introduced in order to achieve a more efficient utilization of resources. For instance, in the case of the Czech Republic, the share of GDP devoted to health increased from 5% in 1990 to around 8% in 1994. Following the introduction of cost-control measures, the share of GDP devoted to health fell to 7.3%. Similar patterns of expenditure have been identified in other European countries.
The percentage of GDP spent on health in the countries in transition suggests that they can be divided into two broad groups. The first group includes the richer countries (Croatia, the Czech Republic, Hungary, Slovakia, Slovenia and the former Yugoslav Republic of Macedonia) which spend a higher proportion of their GDP (6–8%) on health. These countries introduced economic and social reforms at an early stage of their transition process. In the health sector, early changes from state to insurance-based systems financed by a payroll tax contributed to sustained development. The second group includes the countries with delayed health reforms such as Albania, Bulgaria, Latvia, Poland and Romania. They spend around 3–5% of their GDP on health.

**Underground economy**

The role of the private sector in the finance and delivery of health services has been increasing around the world. Although there is no harmonized methodology for recording private expenditure among the developed and least developed countries, some recent estimates suggest that average private expenditure on health represents 2–3% of GDP in the developed countries. In the economies in transition, the corresponding share of GDP is 1.1%. However, this figure does not include a large underground economy in health care, which takes the form of unofficial charges paid for outpatient specialist consultations, surgery and other inpatient services. Fig. 6 shows informal payments in some selected eastern European countries. The highest per capita payments are for inpatient care followed by drugs expenses.
In addition several anecdotal studies have provided similar information on the underground economy:

- An anecdotal study in Turkmenistan revealed that over 50% of the people interviewed paid unofficial charges for health care. Another study conducted in a hospital in Kazakhstan showed that around 45% of hospital expenditure per patient was accounted for by under-the-table payments. Other studies conducted in the economies in transition have revealed under-the-table payments to medical personnel who receive low official salaries.

- In Mexico, a recent household budget survey revealed that private health expenditure as a proportion of GDP was 3.2%, whereas a previous study had provided an estimate of 1.6%.

- In Poland, many patients make under-the-table payments to doctors in the state system in order to receive preferential treatment. However, a system of co-payments has been proposed, and it is hoped that this, together with the integration of private services within state-owned facilities, will eliminate the need for the “brown envelopes”.

From an economic perspective, the underground economy in health care may be a mechanism bringing demand and supply into a closer relationship in a situation of pervasive disequilibrium. It can also generate important incentives, with both positive and negative consequences, including in the longer term. It is often argued that reforms should be introduced in the financing structure of health services and in the payments made to health care workers to reduce the number of under-the-table payments. In addition, improvements in the quality of services could contribute to eliminating the existing differences. Medical auditing and quality control would also contribute to the minimization of inefficiencies and inequities created by the underground economy.
Exercise 3

What are the likely implications of a sizeable underground economy for:

• the equity and quality of the delivery of health services
• the management and reform of the health care system?

How would your response differ in a country where:

• the economy is in decline and society is undergoing substantial stress
• the economy is growing and society is vibrant and confident?

Case study – Russian health reforms

Some indicative empirical findings with regard to equity and efficiency

The terms equity and efficiency may imply different things to different researchers and policy-makers. It is important then to investigate the current situation in the Russian Federation and identify whether these objectives could be evaluated using the available data sets.

In the Russian Federation the objective of social equity was developed theoretically and implemented in a large spectrum of health activities. Under Soviet rule the allocation of resources among the oblasts (regions) was based on a series of norms established by the Semashko research institute in Moscow. The Ministry of Health in Moscow was responsible for health policy development and for the allocation of resources according to predetermined standards. The regional administration at oblast level was responsible for implementing the centrally designed policies.

Overall the system was primarily concerned with numerical targets without taking into account quality standards and technological improvements. Patient satisfaction tended to be low and much ineffective treatment was reported. Clinical and financial management was often lacking at national and regional levels, which led to inefficient utilization of resources.

The general impression was that an equitable distribution of resources was achieved in per capita terms, but that the overall system was wasteful and ineffective. There was a need for reform, including a redefinition of objectives.

Equity in per capita health expenditure

The theory on equity in per capita health expenditure argues that the public sector should have some concern with the allocation of resources on a per capita basis. Le Grand, using data from the 1976 British Household Survey, presented evidence of a roughly equal distribution of health expenditure in the United Kingdom on a per capita basis. Similarly, perhaps the per capita distribution of health expenditure in the Russian Federation should be equated with regional needs. Table 2 presents the per capita distribution of public health expenditure per region in the Russian Federation in 1990 and 1993, together with the standardized mortality rates for each region in the two years.

It is evident that the most deprived regions receive the lowest per capita public health budgets and that resources are concentrated in the major urban regions. The distribution of per capita health expenditure does not appear to take much account of the variations in the regional needs of the population. Unfortunately, epidemiological studies and clinical surveys are lacking in the Russian Federation, which presents difficulties in conducting a more sophisticated analysis of regional needs and the degree to which public health expenditure is allocated with reference to them.
Table 2. Health expenditure and health status (1990, 1993, regions of the Russian Federation)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Federation</td>
<td>95.52</td>
<td>95.30</td>
<td>11.20</td>
<td>14.50</td>
</tr>
<tr>
<td>North Region</td>
<td>117.76</td>
<td>127.67</td>
<td>9.10</td>
<td>13.30</td>
</tr>
<tr>
<td>North West</td>
<td>99.02</td>
<td>89.76</td>
<td>12.70</td>
<td>17.90</td>
</tr>
<tr>
<td>Central</td>
<td>92.54</td>
<td>96.54</td>
<td>13.00</td>
<td>16.60</td>
</tr>
<tr>
<td>Volga</td>
<td>84.94</td>
<td>92.36</td>
<td>11.90</td>
<td>14.60</td>
</tr>
<tr>
<td>Chemozemny</td>
<td>84.16</td>
<td>75.01</td>
<td>13.70</td>
<td>16.30</td>
</tr>
<tr>
<td>Povolzsky</td>
<td>93.57</td>
<td>88.24</td>
<td>11.00</td>
<td>13.40</td>
</tr>
<tr>
<td>Caucasus</td>
<td>77.20</td>
<td>57.40</td>
<td>11.10</td>
<td>13.60</td>
</tr>
<tr>
<td>Urals</td>
<td>91.06</td>
<td>106.30</td>
<td>10.40</td>
<td>13.80</td>
</tr>
<tr>
<td>West Siberia</td>
<td>105.76</td>
<td>113.65</td>
<td>9.60</td>
<td>13.00</td>
</tr>
<tr>
<td>East Siberia</td>
<td>103.01</td>
<td>97.97</td>
<td>9.50</td>
<td>13.00</td>
</tr>
<tr>
<td>Far East</td>
<td>138.28</td>
<td>152.39</td>
<td>8.20</td>
<td>13.80</td>
</tr>
<tr>
<td>Kaliningradskaya</td>
<td>86.44</td>
<td>73.14</td>
<td>9.80</td>
<td>13.50</td>
</tr>
</tbody>
</table>

Equity in health status

Several studies have shown the presence of inequalities in health status between social classes, and that they can remain significant over time despite substantial health reforms. In the case of the Russian Federation there are important difficulties. First, mortality data are not available by occupational class. Second, the classification of employment is different from that in some other countries, so that valid comparisons cannot be drawn. Furthermore, social classes in the country cannot be distinguished by occupational groups, because a relatively large segment of the active population has a second job or other activity which is not statistically recorded. The picture becomes even more difficult if account is taken of the black economy (which is relevant under different forms for all socioeconomic groups).

Epidemiological studies in the Russian Federation are scarce, and valid comparable data across social classes, sex and age are lacking. Table 3 presents standardized mortality ratios (SMRs) for the ten administrative regions of the country for the years 1990 and 1993. It is worth considering the absolute inequalities (i.e. the levels of SMR per region at a given time) as well as the relative changes over the period 1990–1993. With regard to absolute inequalities there is a change in the hierarchical order of regions.

Table 3. Health inequality indexes in the Russian Federation

<table>
<thead>
<tr>
<th>Indexes</th>
<th>Health expenditure 1990</th>
<th>Health expenditure 1993</th>
<th>SMR Crude 1990</th>
<th>SMR Crude 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of Variation</td>
<td>0.165</td>
<td>0.250</td>
<td>0.151</td>
<td>0.108</td>
</tr>
<tr>
<td>Logarithmic variance</td>
<td>0.024</td>
<td>0.063</td>
<td>0.023</td>
<td>0.011</td>
</tr>
<tr>
<td>Gini Coefficient</td>
<td>0.014</td>
<td>0.010</td>
<td>0.086</td>
<td>0.055</td>
</tr>
<tr>
<td>Atkinson 1</td>
<td>0.012</td>
<td>0.030</td>
<td>0.013</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Source: Yfantopoulos (15).
For analytical and empirical purposes some inequality indexes have been estimated, which are shown in Table 3. Each index has specific mathematical properties. Some of the estimated indicators are more sensitive in the measurement of extreme values of the distribution and other indexes are more sensitive in the middle values of the distribution. (Detailed discussion of the advantages and disadvantages of each measure is beyond the scope of this paper.) All four indicators reveal that the inequality in the distribution of per capita health expenditure has increased during the period 1990–1993. Opposite results are shown with regard to SMR mortality indicators, revealing that inequalities in health status between the Russian regions have been reduced during the period 1990–1993. There appears to be scope here for more detailed research in the area of inequality, which may yield interesting results.

The relationship between SMR and health expenditure

Auster et al. (16), using cross-section data for the year 1960 across several states in the United States, estimated a negative relationship between SMRs and health expenditure; they also included other variables, such as cigarette consumption. The new analysis here is restricted to a quantitative approach showing the relationship between SMR and health expenditure across the regions of the Russian Federation for the years 1990 and 1993. The estimated linear models for the year 1990 and 1993 are:

\[
\text{SMR (1990)} = 7.48 - 0.0678 \times \text{HEX} \\
(7.76) \quad (-2.97) \\
R^2 = 0.446 \\
F = 8.86
\]

\[
\text{SMR (1993)} = 15.83 - 0.0146 \times \text{HEX} \\
(8.4) \quad (0.78) \\
R^2 = 0.053 \\
F = 0.612
\]

Health expenditure (HEX) in 1990, was found to be a statistically significant variable (t ratio = 2.97). According to the above estimate, it had a substantial impact on the reduction of SMR. In 1993, the relationship becomes weaker and not statistically significant. The difference may be attributed (assuming the data are correct) to the transition phase in the market economy having had not only an economic effect, but also serious effects on the production of health. This is supported by the decline in general living standards over the same period and changes in lifestyle and attitudes towards unhealthy habits, such as alcoholism.

References


Further reading


3.4 Major special issues

3.4.1 Implications of financing systems

Panos Kanavos

Key messages

- The interaction of different agents is important for understanding health policy.
- There are often conflicting objectives of health policy and various choices can be made to satisfy these objectives.
- The module highlights the relative merits of different ways of funding health systems, different methods of financing health services and different approaches to the remuneration of health care providers.
- The module discusses how different methods of funding health systems and financing services work and in what environments.
- Different methods of remuneration (including of agents – such as physicians, of services – such as hospital services, and of goods – such as pharmaceuticals) are analysed, together with their implications for health policy. Each method has its advantages and disadvantages and is more suitable for some circumstances than others.
- Incentive structures for providers (agents, goods and services) are critical when considering provider performance.
- There are interactions between the funding of health care, the purchasing agents and the providers of health services.

Tutor’s notes

- The module aims to educate stakeholders in decision-making processes concerning the methodology and feasibility of different methods of funding health care, the allocation of health care resources, and the policy implications of different ways of remunerating health care providers. It can be used in conjunction with other modules, such as 3.3.2, and linked to the material in other modules such as 2.3.1 and 2.3.2.

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The contents of the module are relevant to a range of health care decision-makers, including the following.

- Legislative and public sector decision-makers, such as those in health, finance and other ministries and in parliamentary parties and committees, as well as concerned academics and researchers. It would be helpful if tutors made it clear that the health policy environment, as other policy areas, involves many stakeholders (often with conflicting interests and approaches), and is characterized by constant change, so that learning, adaptability and flexibility are essential.

- Leading health care and public health professionals, local community leaders, representatives of the voluntary, religious and non-profit sectors, commercial interests in health care (such as pharmaceutical companies and for-profit hospitals), patients and their advocates. One useful focus here can be to raise awareness of the health policy implications of different methods of funding systems, allocating resources and remunerating providers.

- All participants would benefit from understanding some key economic terms, such as the scarcity of resources and opportunity cost, and the implications these can have for health care decision-making and quality in health care. Tutors may find the exercises helpful for this purpose. International comparisons can also be stimulating for participants.

- Tutors are asked to encourage participants to think strategically within their operational environments about what is desirable and what is feasible. The exercises (plus any available empirical evidence) help transfer useful experience from other settings and contextualize it in the particular settings of participants. However, tutors are also asked to recognize any unique features of a particular operational environment (e.g. the extent of the underground economy), and the impact these can have on health policy options there at macro- and micro-levels.

- Tutors and participants are invited to supplement the references at the end of the module by using the resources and case studies on the website of WHO’s European Observatory http://www.euro.who.int/observatory/TopPage (accessed 6 November 2002). They particularly facilitate the introduction of a comparative element into the training materials.

Introduction

The process of generating, allocating and managing resources to fund health care raises important questions for policy-makers and planners, who are faced with the challenge of designing and operating systems consistent with broad social policy objectives and compatible with economic realities. The generation of resources to fund health care is subject to macroeconomic constraints, and the allocation of resources to health is guided not only by need, but also by scarcity. The context in which most, if not all, developed countries are operating is characterized by continuous attempts to control rising health care costs and fine-tune health system arrangements and practices. The European economies in transition are operating in similar, though more difficult, conditions.

In addition to fine-tuning the systemic operational environment, many countries in the European Region of WHO are faced with an adverse macroeconomic environment and, equally importantly, their health systems are frequently in great need of reform in terms of physical and human capital infrastructure. Adverse macroeconomic conditions imply difficulties in raising adequate resources to fund health care in a sustainable manner and limit the ability of these countries to invest in much needed infrastructure. At the same time, the way in which health care services are financed and health care providers are remunerated often needs considerable change and can be subject to local cultural traditions pertaining to medical practice and the provider–patient relationship.
To provide an analysis of different methodologies of funding health services, allocating resources and remunerating health care providers and goods within a dynamically evolving policy environment, this module combines empirical evidence with theory by providing background in two main areas. First, there is a brief analysis of theoretical concepts, which are important for understanding the complex relationship between health purchasers, providers and patients (e.g. market failures, government failures, quasi-markets and agency relationships in health care). Secondly, the module analyses the interrelationship between the broad objectives of health policy and the tradeoffs that are so frequently required between cost-containment and microeconomic efficiency, equity, quality, responsiveness and choice. It is against this background that the various funding mechanisms at the macro- and micro-levels, methods of remunerating providers and allocating resources are analysed.

**Theoretical concepts**

**Agency relationships**

In order to understand the complex relationships between purchasers and providers of health care and patients, usually analysed within a principal–agent relationship, it is essential to place them in context. In this respect it is important to identify:

- what agency relationships are
- how agency relationships work
- what the caveats of principal–agent relationships are, and
- what a perfect agency relationship is.

Analysts stress that there are frequently conflicting interests between principals and agents, and that agents may act on behalf of principals who hold different objectives. For instance, contracted physicians are agents of health insurance funds that reimburse their services and they are also expected to act on behalf of their patients. While the patients may be seeking to maximize their health, the insurance funds may be seeking to minimize costs. The differing objectives of the respective principals are likely to have an impact on the quality (and quantity) of care that is actually provided to individual patients.

Information and knowledge are critical for understanding agency relationships in the health care context. For example, the informational asymmetries that can exist in agency relationships often give rise to the phenomenon of supplier-induced demand. Here, providers use their superior knowledge to influence the patient’s demand for health care, for purposes that are influenced by the provider’s own self-interest rather than the welfare of the patient.

**Market failure**

To address the issue of market failure in health care the reasons for it need to be analysed. This involves, among other things, consumer moral hazard, where “excess” demand is placed on health services because costs to consumers are zero or very low, and provider moral hazard, where the providers do not bear the full cost of their treatment decisions, resulting in potential over-treatment for patients. In addition, there can be significant problems associated with private insurance markets, such as adverse selection arising from information asymmetry. Again, the role of information is central for the analysis of failures in health care markets.
Private markets, however, are not the only ones that fail; and it is important to understand why public provision can also be problematic. This involves consideration of issues such as inefficiency (also referred to as x-inefficiency), where the level of output produced by particular combinations of inputs (say doctors, nurses and high technology equipment) is not as high as it could be; loyalty, which can result in poor quality care continuing to be delivered to patients by health care providers; lack of resources, in total or in terms of distribution; and whether consumers really have the opportunity to exit from unsatisfactory health care facilities and services (especially in the public sector) and exert their consumer power by getting treatment elsewhere (in some cases the alternative may effectively be unavailable to them, for example in terms of location or cost).

Quasi-markets

As markets are often associated with failures in health care and public provision is not always optimal, quasi-markets have been proposed to encourage competitive relations between providers and a separation of purchasing from provision. In theory, the latter can create an environment where near-market decisions and solutions take place. Quasi-markets, in theory, also promote competition between providers which could be based on better quality of services and/or price. In practice, however, there can also be problems with quasi-markets. For instance, competition may not occur in practice, due to a limited number of providers in a given geographical area and the unwillingness of patients to travel further afield for treatment, or the reluctance of health authorities to favour providers outside their geographical borders. There is also the issue of whether an effective purchaser–provider split can take place within a single insurer system.

Objectives of health policy

All decision-makers have to confront and resolve the identification of health policy objectives and their ranking in order of priority. It is assumed that policy-makers in all health care systems aim to control the total costs of health care (cost-containment, sometimes referred to as macroeconomic efficiency); achieve microeconomic efficiency, in terms of resource allocation; and promote equity. Additional policy objectives are likely to include freedom of choice of provider, quality of the service provided, responsiveness to consumer/patient need, and the overall feasibility of implementing change.

Cost-containment

The concept of cost-containment, or the total amount of resources spent on health care (usually expressed as a proportion of national resources to GDP), has dominated governments’ behaviour in health care systems internationally. Over the past two decades, growth in health care expenditure has exceeded the growth of retail prices, and often the rate of growth of health care spending has exceeded that of other sectors of the economy. Analysis of cost-containment may include:

- the income–expenditure identity;
- an extension to discuss resource allocation and microeconomic efficiency;
- a systems approach to cost-containment;
- the extent to which some methods of financing are preferable to achieve this compared with others; and
- the conflicts that arise between cost-containment on the one hand and microefficiency and equity on the other.
Microeconomic efficiency

Efficiency at the micro level requires the minimization of opportunity costs and maximization of health benefits. If resources were deployed inefficiently, reallocation would improve the total level of benefit achieved. The costs and benefits of competing health interventions need to be compared and resources allocated to maximize health gains. The efficiency criteria were discussed earlier in module 3.2.2.

A distinction should be drawn between allocative and technical efficiency. Allocative efficiency involves the division of scarce resources between competing needs to maximize benefit and, therefore, seeks to determine whether the activity is worth undertaking. Technical efficiency is defined as the production of a good or service at minimum cost. From that one can arrive at the notion of cost-effectiveness, namely the production of health benefits for patients at least cost. Efficiency concepts are precise in terms of economic theory, but measuring efficiency in health care in practice can be difficult. It has been noted that the scientific basis for many health care interventions is weak or unproven (1,2). At the same time, policy standards on efficiency need to be explicit and capable of enforcement.

Two main areas captured by the concept of microeconomic efficiency are of special interest here. First, there is the issue of whether resources are being used to their maximum effect in terms of the benefits they generate. In this context, it may be desirable to explore the operationalization and the likely impact of such matters as: how to offer cost-effective treatments, how to reduce wasteful lengths of stay, adopting innovative approaches to health care that reduce costs without reducing quality, and whether by focusing on system efficiency only, unequal access to health care and health inequalities result (and, if so, how can these be counteracted).

The second main area concerns the ability to operationalize measures which provide incentives to stakeholders in the health care system, and which encourage them to operate in desirable ways, such as more efficiently, more equitably or more transparently. These approaches through incentives can be compared with approaches that rely more on command and control measures in the delivery of health care and their implications for equity and efficiency in both the immediate term and the longer term.

Equity

Equity is important on both the financing side and the delivery side. On the financing side the benefit principle is relevant. This requires that those who benefit from a health-related service should pay for it, and that the payment amount should be related to the benefit received. The ability-to-pay principle is also relevant. This requires payment to be organized, not according to the benefit received, but so that individuals pay according to their means.

On the delivery side of health care, equity relates to access (the extent to which different social groups and individuals have access to health care facilities and services), geography (relating to the geographical distribution of health resources) and outcomes (relating to differing needs by different social groups). For example, even in highly developed societies such as Australia, Canada, New Zealand, the United States or some of the Scandinavian countries the health care outcomes of indigenous populations are much worse than those for the population as a whole.

An additional aspect relates to the trade-off between equity and efficiency. This includes consideration of the ability to benefit from different policy initiatives or practice changes in health
care, which can vary between different social groups. It also includes the many arguments that have been put forward by policy-makers to divert or ration resources between social groups.

Quality

Improving the quality of health care has several aspects, one of which concerns what might be termed the output of the system, i.e. its impact on the health of the individuals it treats and, through them, its impact on the health of the nation as a whole. Measures of such quality include “throughput measures”, such as the number of patients treated, or “input indicators” such as the number of physicians or hospital beds per 1000 population.

Another dimension stresses the need for greater attention to the entire structure of the delivery system. In this context, improvements in quality need to address a wide range of issues relating to the reduction of medical errors; and the overuse, misuse and underuse of medical technology (including pharmaceuticals, devices and procedures). In this context, it can be worth exploring how to reduce uncertainty about decision-making in individual cases and, more broadly, the establishment of criteria for determining the appropriateness of care in particular circumstances and for particular individuals or groups.

Swift access to appropriate health care, good procedural management and a pleasant environment may be important process measures. Ultimately, however, it can be argued that quality in health care relates to improvement in health status, and is thus measured as effectiveness. Others might argue, for example in relation to long-term care for the elderly, that the quality of care is as important as cure, the process compared to the eventual outcome.

Choice and responsiveness are also surrogate indicators of quality in a given health care system. Choice can be associated with patient choice in selecting a given provider, being entitled to an additional clinical opinion (perhaps at the expense of the taxpayer) or wider aspects of choice. The cost implications of allowing relatively unlimited choice can generate considerable public discussion. Responsiveness reflects the ability of the system to respond to the wide variety of patient needs appropriately, promptly and without undue difficulty. Long waiting lists have been used as one indicator of poor responsiveness. Clearly there can be trade-offs between a highly responsive system and one that focuses more on cost control.

Feasibility

The feasibility of different systems depends heavily on the country’s social, political and economic context, as well as its historical and cultural traditions. Many established systems developed out of particular social conditions and historical circumstances. For example, in central and eastern Europe and the Commonwealth of Independent States, the historical precedent of the Semashko model has influenced the successful establishment of decentralized systems. Political and technical feasibility both need to be analysed when considering health care financing in particular contexts.

Political feasibility is mainly concerned with stakeholders, their interests and relative power to influence the successful functioning of the system. It includes such factors as the influence of voters, particular interest and professional groups and providers of health care services compared to health care consumers and citizens more generally. Political feasibility also embraces the notions of affordability and sustainability of the system (both in economic and political terms). For example, is a particular system of funding feasible both in the short and the long run?
Technical feasibility is concerned with the capacity of the country to support and operate a particular financing system for health care. This includes factors such as the structural and administrative capacity within government, the professions and industry. It also includes other factors, such as the development of information systems and the availability of sufficient human resources with appropriate training and skills. All these factors affect the technical feasibility of operating different systems of funding health care.

Exercise 1. Objectives of health policy

Over the past decade or so health care reform in several European countries has focused heavily on cost-containment. Should the emphasis be on cost-containment or allocative efficiency? Discuss the issues either generally or with a specific focus on one or two countries.

How can quality in health care be measured? Discuss various indicators of quality and the trade-offs that exist between quality, the other objectives of health policy and wider societal objectives.

Methods of funding health services

This section discusses the relative advantages, disadvantages and problems associated with different methods of funding health care. Each method is discussed separately here, but it is acknowledged that most countries fund health care through a combination of the methods.

General taxation

A tax-based system is relatively easy to administer, has no risk selection (because everyone is covered) and no risk-related premiums. It provides stable levels of financing. Where there is global budget capping there tends to be tighter control over total costs compared with other systems for funding health services. Such funding through general taxation can take the form of an integrated model, a command and control model, or a public contract model with several purchasers (in terms of location) and competition between providers. In theory, a monopsony situation might be expected to result in good microefficiency; in practice, however, the lack of incentives for providers tends to result in inefficiency (e.g. waiting lists). Tax-based systems are characterized by universal coverage, with the capacity for the principle of equity in delivery to be upheld. Although tax-based systems enjoy considerable public support, for example in Sweden and the United Kingdom, there is rationing (explicit or implicit) of services and frequently a lack of transparency.

Increasing health expenditure through rising levels of taxation has become more difficult in many countries, with growing public resistance. Within each country there is, however, considerable variation as to how the taxation system is organized and managed. These variations can have implications for the feasibility of increasing taxes to finance growth in health care expenditure.

In tax-financed systems, taxes may be raised centrally or locally, as is the case in Denmark and Sweden. Raising revenue locally may result in higher local visibility and political interest in health care spending. Localized tax-raising powers for health may also result in greater geographical inequities in the level and quality of services provided. Similarly in federal countries, the volume of health care expenditure is influenced by the respective responsibilities for health care and taxation of the different levels of government. It is important to consider the internal efficiency of particular administrative tools and methods of tax collection, i.e. how much does it cost (financially and in terms of political

\[^12\text{A market situation with only one buyer.}\]
resistance) to raise revenue in alternative ways and what impact does the tax have on other production and consumption decisions?

Taxes may be levied on earnings, income or expenditure (i.e. a sales tax) with different implications for progressiveness and equity, for savings and investment, and for other decisions by producers and consumers. Another method of raising revenue, hypothecated taxation, has the advantage of visibility. However, it is generally opposed by finance ministries as it can lead to a lack of flexibility at the macro level. Earmarking may be applied in a strong sense (i.e. revenue determines spending) or in a weak sense (i.e. purely formal labelling of expenditure for political visibility). Other variations include the “sin” taxes levied on alcohol and tobacco; in most countries these are not clearly earmarked for health although they form a substantial proportion of tax revenue. There is potential for greater use of hypothecated taxes in European health systems, either as a complement to existing arrangements or as an alternative.

**Social insurance**

Social insurance is usually related to a stable source of income, in principle independent of the ministry of health and with fee-for-service payments for providers. Contributions are mainly based on wages and are shared between employers and employees. Nevertheless, there may be important differences relating to:

- the uniformity of the rate
- the distribution of contributions between employers and employees
- the existence of an upper contribution ceiling, and
- the existence of additional non-wage-related contributions.

Social insurance systems are characterized by a form of competition in that purchasers are separated from providers and there are multiple purchasers and providers. Social insurance systems tend to be characterized by equity in delivery (in terms of need and access), and with the insurance premium based on income, rather than risk. The advantages of social insurance need to be evaluated carefully and balanced against its disadvantages, especially for economies in transition. For instance, social insurance systems have higher administration costs and are relatively more expensive than tax-based systems in terms of total commitment of resources, because doctors commit resources in ignorance and there is usually no price sensitivity. Systems of this kind may be associated with moral hazard when combined with a fee-for-service payment system. Social insurance may be unjust in those countries where the parallel economy is a significant proportion of national income. In political terms the practice of raising premiums imposes disadvantages on employers as overall labour costs increase, the export position weakens and inflation rises. France and Germany provide interesting case studies of social insurance systems with a single dominant sickness fund or several funds, respectively.

There is considerable variation among different social insurance-based systems. Some countries operate with multiple funds (e.g. the Czech Republics and Slovakia). Others have a single fund (e.g. Croatia, Hungary, Poland) with several regional branches. The experiences of Germany and the Netherlands in the organization of funds and the potential for the introduction of competition between funds are worth examining. In the Netherlands, where the multiple insurance funds have started to compete with each other, attempts have been made to allocate resources to insurers on a capitation formula based on their age and gender and the location of their membership. These risk-adjusted
payments are intended to reduce the incentives for cream-skimming. However, the problems of calculating individual risk mean that, on the whole, these risk-adjusted payments have not been successful. There are also questions relating to what choice of fund exists for consumers in different countries, and the level of collusion and/or competition that actually exists between “competitive” insurance funds.

It can be argued that social insurance is effectively an earmarked tax, and in this case revenue is determined by the level of contributions, usually set as a percentage of earnings. This means that revenue levels fall during an economic recession. In order to meet rising expenditure, levels of contribution would have to be raised, but as is the case in tax-financed systems, public resistance to this is strong. Part of the burden of payment in social insurance-based systems tends to fall on the employer and this could be a possible source of economic inefficiency, affecting productivity adversely (and levels of external investment). Increases in insurance contributions may also be passed on to the employee in the form of lower wages (or unemployment).

Voluntary, supplementary and private health insurance

In most countries, voluntary or private health insurance exists in parallel with statutory health insurance systems. In some countries, the top decile or quartile of the population may be (voluntarily) excluded from social insurance and contract their own private insurance. The fundamental difference between social insurance and voluntary health insurance lies in that the former pools risks across the whole of society and the insurance premium is income-related, whereas the latter covers only part of the population and the insurance premium is arranged on an actuarial basis. The advantages and disadvantages of voluntary health insurance need to be explored vis-à-vis the different agents in the system: payer, provider and consumer. The cost of the system and the potentially inequitable access to services resulting from voluntary health insurance may have to be counterbalanced against increased choice for consumers, greater quality and responsiveness, more flexibility and sharper incentives to efficiency. Moral hazard and adverse selection are two key problems of a voluntary insurance system, together with high administration costs. The Netherlands, the United Kingdom and the United States provide interesting examples of private insurance funding in addition to statutory social health insurance (the Netherlands), universal health coverage through taxation (United Kingdom) or as the main means of obtaining health insurance (United States).

Private insurance markets operate differently in different countries. In some countries, such as Switzerland, they are the predominant system of financing under a compulsory system. In other countries, such as the United States, they are the predominant means of financing under a voluntary, employer-based system.

In addition, there are different types of voluntary insurance, not necessarily provided privately. There may be voluntary insurance as cover for those who are ineligible or choose to opt out of the public universal system. In such circumstances the voluntary insurance is a substitute for statutory health insurance (e.g. Germany, Ireland and the Netherlands). Voluntary insurance can also be a secondary supplementary form of cover in predominantly publicly-financed systems provided by non-profit or for-profit organizations. Insurance offered by the mutualités in Belgium and mutuelles in France for co-payments, and extra cover for better quality hospital facilities and quicker treatment for elective surgery, as offered in the United Kingdom, illustrate this situation.
Hypothecated taxation

Hypothecated taxation is a form of social insurance, and offers an alternative method of financing health services. Two alternatives exist. The first alternative involves taxing incomes and earmarking the resulting revenues specifically for health services. The other alternative relates to the taxation of goods classed as “bads”, such as tobacco and alcohol (“sin” taxes). Hypothecated taxation has advantages if consumers dislike paying taxes in general, but are willing to pay higher taxes specifically for the health service (3). The revenue raised from hypothecated taxation can be used for specific health services or for the health service in general.

The proceedings from hypothecated taxation may be heavily dependent on consumption patterns and the overall rate of growth in the economy. Earnings from hypothecated taxation may therefore fall considerably in times of economic recession and increase in times of economic recovery. If so, the fluctuation in the available funds would not provide a solid base for long-term financing of health services. There may also be equity issues if the hypothecated tax falls especially heavily on those who are disadvantaged, e.g. the poor, the ill educated or those living in disadvantaged regions.

The implementation of hypothecated taxation may be subject to two important technicalities. First, policy-makers need to ensure fairness in that contributions should be levied across the whole range of incomes and that those with lower incomes pay no more proportionately than those with high incomes. Secondly, if health care necessitates the redistribution of income not only across time, but also between high- and low-risk groups in the population (e.g. the unemployed), policy-makers should ask themselves whether a hypothecated tax is the best way of effecting such redistribution.

Medical savings accounts

Medical savings accounts (MSAs) have been proposed as a way to avoid some of the problems of voluntary health insurance, especially adverse selection. MSAs are a system whereby funds are placed in a personal savings account from which the individual can draw to meet medical expenses up to the amount in the account. MSAs have advantages and disadvantages that are similar to those of voluntary health insurance, except for adverse selection. It is a system that encourages choice of provider by the consumer.

MSAs also present unique challenges to policy-makers regarding their implementation for the benefit of consumers. Thus, monitoring of payments must be safeguarded, particularly in economies with high unemployment and a significant underground economy. Funds must be invested so that the best yields to individual savings can be achieved. While this necessitates developed capital markets, it also requires regulation regarding the types of investment made (e.g. in terms of risk pursued). Competition may have to be fostered in order to reduce over-reliance on an institutional investor, increase the pool of available investment opportunities and promote stability. At the other end of the spectrum, if several funds are permitted, then marketing costs may increase.

Analysis of the technical feasibility of medical savings accounts has been extensive. However, less attention has been paid to the implications of the lack of universal risk pooling or any redistributive effect between high and low risks and between high- and low-income contributors. Such assessments of MSAs should include analysis of the feasibility of managing the investments and the problems experienced with low-yield government bonds compared to higher-yielding but higher-risk private investments. Other concerns include the possible need for additional catastrophe insurance (called
Medishield in Singapore); the degree to which MSAs are appropriate for preventive care; and the mechanisms for dealing with bankruptcy, financial underwriting and funds management.

**User charges**

Another significant contribution to the funding of health care is the range of formal and informal out-of-pocket payments. Direct charges to the consumer or patient are increasingly common in many European countries, either in the form of co-payments and deductibles in insurance markets or out-of-pocket payments. The debate about user charges is quite old. Considerable arguments exist in favour of user charges: they bring in more revenue, make patients more cost-conscious and deter frivolous demand. Arguments also exist against them: they hit the poorest hardest (and therefore are against the principle of equal treatment for equal need), and are liable to have perverse effects on costs and health care outcomes by deterring people from seeking early treatment and discouraging preventive medicine. Delayed care may even prove to increase health costs.

Policy-makers can consider different types of user charges, ranging from patient co-payments, co-insurance and flat rates to deductibles (or a combination of them). Although the revenue yield, incidence and equity implications of each method varies considerably, policy-makers need to consider the services to which user charges apply, the level of user charges and exemptions from user charges, due, for example, to chronic illness, age, income level, or a combination of these factors.

The evidence suggests that unless user charges are carefully set they may deter genuine need, especially among low-income and other disadvantaged groups, raising concerns about equity and the impact on health gain. The suggestion that equity problems could be overcome through exemptions has been found to be quite difficult to implement in practice. Evidence from the RAND health insurance experiment showed a relationship between increased out-of-pocket payments and reduced drug consumption and medical care utilization, though the methodology employed has been criticized.

**The role of the underground economy**

The extent of the underground economy can have a significant impact on the ability of countries to fund their health services. First, it can result in statutory insurance contributions or taxes not being paid. This affects the financial resources from which health care facilities and services are provided. The tax authorities cannot obtain some revenues, due to their underground nature. Such activities may be legal, for instance, a second job the income from which is not declared to the authorities; or illegal, such as drug trafficking and prostitution. There may also be systemic difficulties and weaknesses in identifying sources of revenue and collecting the respective contributions. Economies with large agricultural sectors, which can also be characterized by cyclical events which affect revenue-raising capacity, and large self-employed populations, tend to face particular difficulties in this regard.

Second, there can be problems arising from under-the-table and, therefore, illegal, payments to health care providers. Such payments can form part of the local culture and have become institutionalized in several countries. Doctors can come to view such payments as a legitimate means of supplementing their income, especially if other sources, such as health insurance funds and the public authorities, pay them relatively little.

From a policy-making perspective, it is important to discuss ways of counteracting the above.
Exercise 2. Methods of funding

Outline the main advantages and disadvantages of the various methods of funding health services, noting:
1. the criteria being applied in comparing them, and
2. the context in which the funding methods are to be applied.

Outline the main advantages and disadvantages:
1. in theory, and
2. in the context of a particular European country.

Methods of remunerating providers of health goods and services

Remunerating doctors

How different providers in the health care system are paid can have a significant impact on their behaviour and, therefore, on the achievement of the objectives of the health care system. The central economic problem inherent in devising a payment system is to provide the right incentives (or disincentives) to encourage (or discourage) certain types of behaviour, and therefore allow stated objectives to be pursued (4). This part of the module discusses the incentive structures for physicians; the agency relationship between themselves, payers and patients; and the issue of supplier-induced demand and the circumstances under which it occurs.

Three main methods of paying doctors and other health care professionals are identified: fee-for-service, salary and capitation. The resource-based relative value scale methodology used under Medicare in the United States and the relative value scale of fees in Germany highlight some of the problems associated with over-servicing.

- The perverse incentives present in fee-for-service payment systems limit the achievement of cost-containment and efficiency. If a fee-for-service system is implemented, additional regulation is likely to be required as well to limit activity, e.g. the resource-based relative value scale, which reduces the value of the fee as activity increases. The issue of bureaucracy and associated transaction costs also needs to be considered.

- Salary payments do not contain incentives to overtreat, but may contain incentives to undertreat or shift costs. Hospital doctors paid on a salary basis may choose, with a given availability of beds, to have a longer average length of stay, thereby reducing overall workload, rather than encourage faster throughput, which would increase work without increasing income (4).

- Capitation at primary care level and fee-for-service at secondary level provides a built-in incentive for over-referral. The implications of cost shifting and referrals to other levels of care should thus be considered when designing payment systems.

Incentives (financial and non-financial) affect the behaviour of health care professionals, and this behaviour is likely to affect cost control, equity and efficiency. Salary payments, for instance, facilitate cost control but may not contain incentives for efficiency. Fee-for-service payments can increase efficiency, if activities are well defined and desirable, but they can also lead to incentives to overtreat and, therefore, to cost inflation.
Some countries, such as Germany and the United Kingdom, have adopted systems of budget-holding for physicians, to encourage cost-consciousness, either by directly manipulating their income or by allowing any budget surplus to be retained within a practice and used for the benefit of patients. France has adopted a controlled fee-for-service system; Germany has preferred a fee-for-service system that incorporates an inverse relationship between individual fee levels and the volume of the relevant service; and the United Kingdom uses capitation payments.

The enforcement of regulations also requires consideration. An unenforceable regulation is equivalent to no regulation. Societies that have a large underground economy, for example, may tend not to be notable for their effective enforcement of efficient and equitable regulations.

**Remunerating hospitals**

As is the case with physicians, there are several methods of paying hospitals. Each alternative payment mechanism can create different incentives for the service provider, and the effects observed will be influenced also by local, non-monetary incentives. This section discusses the mechanics of the alternative systems in the light of incentives that are prevalent in each system of payment and in relation to the broad objectives of health policy, namely equity, micro-efficiency, quality and cost-control. There are two broad methods of paying for hospital services: retrospective remuneration (usually on a fee-for-service basis), and prospective remuneration, which can be done either through overall prospective budgeting or prospective budgeting by individual cases.

Retrospective payment exists when the payment is determined and agreed after the services have been provided. Charges are usually calculated on a fee-for-service basis. They do not necessarily reflect costs if there is cross-subsidization within the hospital finance system. In these systems, a charge may be invoiced for every service provided, or there may be “bundling” of service units, with payments being provided for the overall group of services as a whole. The key feature of retrospective fee-for-service as a reimbursement mechanism is that there are few incentives for efficiency and cost-minimization. Providers can maximize their revenue and profits by increasing the volume of their activities, i.e. by providing more services.

In a prospective payment system, payment per case is determined in advance of the services being provided. This can be done by global budgeting or on a per case basis. Global budgeting is defined as an overall constraint imposed, nearly always prospectively, on providers, limiting the price and the quantity of services provided. Provider payments are agreed in advance, and designed to cover expenditure on a range of services during a fixed period of time. Global budgets are a relatively straightforward method of budgeting and allow local managers to be flexible about the use of resources and the methods of giving care, while removing the incentive to maximize certain types of input (such as the number of beds). Where possible, it is desirable to link budgets to capitation rather than to historical levels of activity. Assuming that budgets are fixed, global budgeting may be an efficient means of cost-containment (5). However, there are potential inefficiencies associated with global budgeting, such as incentives to minimize resource use and to cut costs at the expense of quality. Contracts should therefore specify quality standards, at least in terms of process if it is too difficult to contract for outcomes, and these standards should be monitored closely.

A variant of global budgeting is line item budgeting, which exists when providers are given a fixed budget for specific cost items, such as staff, food, laundry, drugs and maintenance. Line item budgeting is always more difficult for managers than global budgeting, since it limits their capacity to reallocate resources in the light of emerging needs, new knowledge or changing priorities.
Prospective payment by case is determined in advance of the services being provided. The care provided has therefore to be paid for out of a predetermined charge per case, with the payment rates for each type of case being determined in advance. Patients are categorized into an illness or disease category to facilitate billing and reimbursement. The use of diagnostic-related groups (DRGs) in the United States and similar methodologies elsewhere are important examples of per case prospective reimbursement. Significant issues arise from the pricing of services, activity volumes, reimbursement negotiations between purchasers and providers and the regulatory requirements for setting up a DRG system. Particularly from a longer-term perspective, the DRG approach can reduce the incentives to maximize treatment, shorten lengths of stay and reduce the number of diagnostic tests that are undertaken. However, DRGs can also have perverse incentives, such as cost-shifting, changes in the pattern of care, case-mix selection, DRG creep, and the potential effects on outcomes arising from earlier patient discharge.

**Paying for pharmaceuticals**

Pharmaceutical policy brings together different elements of public policy, namely health policy and industrial policy. It also brings together a wide range of agents in the organization and delivery of health services, such as the statutory insurer, the treasury, the ministry of health, the physician, the pharmacist, the wholesaler, the industry and the patient. Health policy is involved in pharmaceuticals since safe, efficacious and effective drugs are needed to treat different conditions. The commercial interests of the pharmaceutical industry enter the debate regarding the availability and affordability of medicines and of the industry’s promotion of jobs, exports and, where applicable, research and development. The cost of pharmaceuticals is an important element of health policy, particularly as the proportion of pharmaceuticals in total health spending has been rising. In this respect, pharmaceutical policy comprises elements of supply-side control, proxy demand-side control, and demand-side regulation.

The discussion here comprises a critical appraisal of supply-side, proxy demand-side and demand-side measures which influence pharmaceutical expenditure; and their implications for cost-containment, efficiency and quality.

*Supply-side measures* include, mainly, the following:

- methods of price or profit regulation applying to pharmaceutical products and their relative merits for health policy and industrial policy (e.g. free pricing, average pricing, international price comparisons, profit controls, reference pricing, compulsory price reductions after an initial control-free period, cost-plus pricing or basic cost pricing);
- the establishment of (positive and/or negative) lists and formularies as part of reimbursement policy and consideration of their implications for cost-containment, quality and efficiency;
- the use of economic criteria in either pricing or reimbursement, such as requiring adequate evidence on cost—effectiveness before listing new pharmaceuticals on the schedule for public reimbursement (as in Australia and the Canadian Province of Ontario);
- direct controls on pharmaceutical manufacturers, such as controlling advertising outlays and detailing;13
- examination of industrial policy considerations, such as incentives for pharmaceutical firms to locate in certain countries.

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13 See Module 4.2.1, under “A tool for understanding the implementation of clinical policy”, for an explanation of this term.
Proxy demand-side measures seek to influence agents acting on behalf of patients, namely physicians and pharmacists. These can be analysed in detail from the perspective of cost-containment, efficiency and health care quality. Measures applying to physicians include, among other things:

- the possibility of managing budgets (both overall budgets for their patients or pharmaceutical budgets, providing that either of them are “hard”); the measures can incorporate incentives (e.g. to keep savings) or penalties (e.g. pay any excess back to the insurance fund);
- policies to prescribe generically, as well as policies that influence the prescribing behaviour of physicians through practice guidelines, vignettes for good clinical practice and prescription monitoring through information systems;
- the method of remunerating physicians can also affect their prescribing behaviour (and can be associated with supplier-induced demand).

Measures applying to the behaviour of dispensing pharmacists include:

- incentives for generic substitution – remuneration methods need to be examined in this context, including the extent to which they are progressive, regressive or a flat fee;
- overall policies that encourage generic substitution – here, the overall relationship between physicians and pharmacists can be particularly important;
- the role of pharmacists in the community – the advisory role of the pharmacist is significant in some European countries, and in several countries of central and eastern Europe patients can acquire medications without a prescription.

Demand-side measures comprise action on the consumer of pharmaceutical products. These include:

- cost-sharing and its variations, including the implications of different cost-sharing methods for equity, efficiency and revenue-raising capability;
- switching certain products to over-the-counter status, where there are issues relating to consumer safety and the possible requirement to amend existing regulatory frameworks;
- launching health promotion campaigns, which includes consideration of the health areas and target groups where such campaigns can best be focused, together with their medium- to longer-term results.

Exercise 3. Remunerating providers

Outline the various methods of remunerating those who provide health care services (such as health workers, health institutions or pharmacists); the incentives or disincentives the remuneration methods establish to encourage desirable behaviour or to achieve health goals; and how monitoring, evaluation, learning and progressive improvement can be encouraged.

Consider the methods of remuneration used in your country, the degree to which such approaches are determined solely by reference to factors within the health care system, and how the remuneration methods might be improved.

Allocating resources

The discussion in this section relates to discussion in other modules, such as 2.3.2, which presented a conceptual framework for considering possible reallocation of resources for health.
Budget allocation formulae

Allocating resources is a crucial issue in the organization and delivery of health services. Often, incremental financing decisions perpetuate historical inequalities and serve political rather than health needs. When resources are being allocated, consideration should be given to the resulting incentives and their longer-term implications at each level of decision-making: central, regional, and local. An equitable budget allocation formula could be capitation-weighted and risk-adjusted by measures of relative need, including consideration of variations in mortality, morbidity, costs, income, employment and age.

Resource allocation and purchaser–provider split

There has been a tendency in some countries for state-financed health care systems to redirect their policy focus from cost-containment (which they can achieve through global budget control) to the improvement of efficiency. Purchasers in this respect are faced with two tasks. Their first task is to identify what actually works, namely what interventions are efficacious (shown to improve patient health status in carefully designed randomized controlled trials), which interventions are effective (those which improve patient health status when used in routine medical practice) and which interventions are efficient (those which maximize improvements in health status at least cost). The role of information, its availability and an evidence-based medicine approach are critical for ensuring that this first task is fulfilled. The second task facing the purchasers is to induce health care providers, particularly physicians, to review their practices, change them where appropriate and deliver care as efficiently as possible.

Information needs for efficient purchasing

Information systems are essential for the effective delivery of health services to a given population. The efficient purchaser needs to invest in the development of the following skills:

- appraisal of population health needs and their ranking in relation to the availability of cost-effective interventions;
- monitoring of activity rates and outcomes by institution and clinician and the reduction of inefficient variations;
- monitoring of the costs of provision by contracted providers and their rivals; and
- design of incentive-compatible contracts that encourage providers to behave efficiently, to respond to changing needs and to adjust in appropriate and sustainable ways over the longer term.

Exercise 4. Funding health services

In evaluating various options for health care funding in a particular country, how might the historical context and political, cultural and economic factors influence the choices that are made? Consider an actual case or a hypothetical example.

Four implications

First, there are many objectives of health policy, including cost-containment, microeconomic efficiency, quality, feasibility, choice and responsiveness. These objectives, all of which are desirable in most societies, can also be in conflict. Thus, various choices generally have to be made in seeking to satisfy the overall objectives for a particular society.
Secondly, there are various methods of financing health services, such as general taxation, social insurance or user charges. There are various methods of paying providers, such as doctors, hospitals and the providers of pharmaceuticals. And there are various methods of allocating resources, including budget allocation formulae, a purchaser–provider split and evidence-based approaches.

Thirdly, each method of finance, payment and resource allocation has advantages and disadvantages; is more suitable for some circumstances than others; and generates incentives to act in particular ways. Also, there are interactions between the method of funding, the purchasing agents and the providers of health care.

Finally, in all health systems a balance has to be struck which enables three objectives to be achieved, either wholly or in part. The first objective is allocation, so that the cost-effective production and procurement of appropriate health goods and services are achieved. The second objective is to achieve an equitable distribution of health-producing goods and services. Relevant considerations here include fair financing, fair access to health goods and services, and fair payment to providers. The third objective relates to sustainable development over the longer term. This element includes sustaining development by the fostering of appropriate policies, continuous learning and the management of change; securing the necessary resource requirements for the health system on a continuing basis; and building in powerful incentives for the improvement of performance and health. While all three objectives tend to be judged as desirable in all societies, the balance to be struck between them, and the reasons for doing so, can vary widely.

References


Further reading

3.4.2 Privatization – overview of issues

Greg Stoddart

Key messages

- The term “privatization” can refer to several different economic functions which occur in health care systems: (i) ownership of facilities and delivery of services, (ii) financing, (iii) management, (iv) administration, (v) regulation and (vi) provision of information. When using the term it is important to point out clearly which functions are involved.

- The functions above are only the means by which countries attempt to achieve important policy objectives or ends, such as improved health outcomes, equity in access to and payment for health services, efficiency in health service delivery, provider and patient satisfaction, and overall expenditure control. The choice of ends requires that important value judgements be made, and these may differ across societies. There is no single “best” way to organize and finance health care systems that “wins” on all performance criteria. All systems have their strengths and their weaknesses.

- More than ever, the public versus private debate in health care policy is becoming blurred by new models of public/private partnership. It is increasingly necessary to conduct analyses not at the level of stereotypes but at the level of specific policy proposals with clearly identified policy objectives.

Tutors’ notes

This is always a controversial topic, and one of the important roles of the tutor here is to separate issues of evidence from those that are matters of value judgement (not always a simple task!).

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14 This module was prepared by Professor Greg Stoddart from the Centre for Health Economics and Policy Analysis, McMaster University, Canada (e-mail: stoddart@mcmaster.ca).
The main purpose of the module is to encourage students to think more carefully about what privatization means in the context of any specific policy proposals that may be occurring in their countries. The purpose is not to argue for or against privatization either factually or ideologically. Much will depend on the underlying social values in the country (it is worth noting that these may differ from those of the analyst) and the specific policy goals being pursued. For example, it does not appear from international experience that privatization of financing assists with control of expenditure – indeed, the opposite seems to be the case; on the other hand, if the policy concern is how to increase the incomes and satisfaction of health care providers – an important issue in many of the economies in transition – then increased privatization of financing may be an effective policy. In all cases, it will also be necessary to examine the impact of the policy on other goals, such as efficiency and equity.

The module could be used at all three levels of skill development, depending on the audience. For those who are relatively unfamiliar with the debate or who are heavily involved in the politics of the debate, the module may increase their appreciation of some of the subtleties and complexity. For those such as bureaucratic staff in health ministries, who have responsibilities for policy development or policy advice, the increased attention to specifying the function and objectives associated with privatization proposals may assist with appraisal and analysis activities.

There will probably be no shortage of examples or cases from the students’ own countries for Exercise 1, but if tutors prefer, they may wish to use examples from European health care reform: analysis of current strategies (1). During discussions in the development of the module it was suggested that the case of the Netherlands might be a particularly interesting example, with merged public and private insurance systems.

**Introduction**

Everywhere in the world, countries struggle with finding the appropriate public/private mix in their health care systems. Even though debates on this subject are often intense, the meaning of the phrase “public/private mix” is often unclear and frequently misunderstood. Similarly, “privatization” of health care systems is a term that is often used without a clear definition of its meaning. Several complex functions go on inside a health care system, and the public/private mix may be different for each. Indeed, not only is it clear that the stereotypical extremes of purely public and purely private systems are in practice meaningless, it is now also the case that some analysts feel that the complexity of relationships inside health care systems make simple public/private distinctions all but impossible.

The purpose of this brief module is to improve the clarity of discussions about privatization by (i) distinguishing different functions and activities to which the term may be applied, (ii) discussing how privatization relates to another frequently used term, “competition” and (iii) illustrating the complexity of making public/private distinctions in some recent cases of health care reform. The module is not intended to provide policy advice. There is no single best way to structure health care systems that is the clear winner on all performance criteria which may be relevant. Moreover, decisions about the structure and operation of health care systems inherently involve value judgements about social goals; each country must make these political judgements within its own culture. There is, however, an extensive body of international experience with different public/private mixes, and some of the key insights from this experience are included in the module.
Learning to live with Health Economics

The module begins with a discussion of six important types of function or activity that occur within health care systems, and notes that each may contain both public and private elements. It then illustrates the complexity of the public/private distinction through discussion of several key issues in common health care reforms. The module concludes with a discussion exercise animated by a set of summary propositions offered by one international expert on the economics of health care reform.

Discussion

To label an entire health care system as “public” or “private” is impossible, because systems contain many different types of functions, each of which may be public, private or mixed public/private. Following a taxonomy used in Canada by Professors Greg Stoddart and Roberta Labelle (2), it is possible to identify six distinct economic functions which occur in health care systems:

- ownership of facilities and delivery of services
- financing
- management
- administration
- regulation
- provision of information.

Each of these may contain a mixture of public and private elements. Hospitals, clinics, physician practices, laboratories, long-term care facilities and even ambulance services are examples of facilities which are privately owned and operated in some countries but not in others. Even within one country there may be a mixture of types of ownership. (Furthermore, although private ownership implies private delivery of services, public ownership does not rule out some private delivery of services, for example in a situation in which private physicians use public hospital facilities.)

Financing – i.e. raising the revenues for the health care system and the terms and conditions implied in that process – also frequently includes a mixture of public and private sources, ranging from taxation (personal income, corporate income, sales and excise, etc.) and social insurance on the public side to private insurance and direct charges (including under-the-table payments) on the private side.

The term “management” is used here in its broadest sense, to refer to activities of strategic planning, policy-making and decision-taking that define the direction of health care systems. Again, this may occur in agencies or departments of governments or in the executive offices of private firms, or both. The term “administration” is used here to denote the daily activities required to carry out and implement management decisions. Some aspects of publicly-financed systems may be administered privately, as is the case if the claims processing activity for a public health care insurance system is contracted out to a private firm.

Regulation, i.e. the setting of rules, usually embodied in legislation, is most often associated with governments, but here too there can be private elements, as in the practice guidelines which international for-profit hospital chains require their clinical employees to follow.

Finally, the provision of information about the cost, effectiveness, necessity and availability of health services is an activity which occurs both publicly and privately in most health care systems.
These functions are the *means* by which countries attempt to achieve important policy objectives or *ends*, such as improved health outcomes, equity in access to and payment for health services, efficiency in the delivery of health services, overall control of expenditure, and patient and provider satisfaction. Therefore the challenge facing each country is to find the mix of public and private activity both *within* and *across* these functions that best achieves its ends, a daunting task when one considers the number of different services to be provided in any health care system. It is important, however, to recognize that privatization (of any function) is only a means; it is not an end in itself. In each specific case of privatization it is important to ask the questions: “What goal will privatization achieve?” and “Are there more cost-effective alternatives than privatization for achieving this goal?”.

One important theme that emerges from the international experience is that public versus private *ownership* of facilities and delivery of services may be one of the less important aspects of the debate, especially when compared to the financing, management and regulation functions. These latter functions contain the capacity to define critical terms and conditions on which health care systems will operate (e.g. universal coverage of the population, supply of health professionals, standards of quality and cost-effectiveness), regardless of whether the services are delivered by public or private employees in public or private facilities. The financing, management and regulation of health care systems can provide the *control* over expenditure and utilization patterns which appears to be necessary for the achievement of public policy objectives.

All models for organizing health care systems have their respective advantages and disadvantages, however. While private ownership and service delivery are often associated with greater flexibility, adaptability and innovation, when services are delivered privately the motivation of those making management decisions is an important consideration. Private firms which operate on a for-profit basis can be expected to behave differently from those operated on a non-profit basis. Again, the structure of the management function is more important than the ownership function itself.

This is not meant to imply that the motivation of public managers, who face no profit motives, is unimportant. Indeed, relating reward to performance is perhaps even more difficult in the public sector, especially in large bureaucracies which may lack flexibility in labour agreements or have difficulty maintaining managerial skills and training. However, the for-profit motivation typically conflicts with public ends, at least in the provision of clinical rather than non-clinical services.

Similarly, different financing models each raise their own sets of issues. Financing through private insurance or direct charges is highly regressive, placing a disproportionate burden of the cost of health care, relative to income, on the poor, and creating significant problems for access to services. International experience also suggests that this model has difficulty controlling overall health care expenditure.

Tax-based public financing performs much better on expenditure control and in most countries is mildly progressive. It does, however, create a constant political debate between governments and health care providers over the appropriate level of services (and incomes), since governments must live within their means as provided by the growth and performance of their economies. This model also requires an effective tax collection system, which can be a problem in some countries.

Social insurance models of public financing are a common alternative to tax-based models and also perform relatively well on expenditure control (though not quite as well as tax-based models, it appears). They are frequently employment-based and can be regressive if workers’ contributions are...
a fixed proportion of earnings up to some limit, as is typically the case. They may also be less transparent than tax-based systems, which seem to be constantly under scrutiny, and some analysts feel that this may undermine the incentive for cost-effective management.

In view of this array of performance characteristics of different models of financing and ownership/delivery, countries proposing to change from one model to another must be particularly careful to examine the potential for new problems. For example, a move from a tax-financed to a social insurance model may increase the need for managerial and actuarial skills. A move to private insurance from either tax-finance or social insurance may require government to initiate supplementary coverage to address equity and access concerns. A move from a public to a parallel public and private delivery system will require new policies to govern physicians and to prevent physicians working in both systems from directing public patients to their own private practices. Each situation will be different; it is important to realize, however, that there are no simple solutions to the question of how to structure health care systems.

Another theme which emerges is that it is a dangerous oversimplification to equate “private” with “competition”. The words “private” and “public” refer to a status. Competition is a process. “Private” does not imply “competition”, as illustrated by the existence of private monopolies. Nor does “competition” imply “private”. Competition may be used within the publicly-owned and/or -financed components of systems as well as in the private components, or indeed between the two components. As Professor Richard Saltman and WHO policy analyst Josef Figueras have pointed out (1), competition is most successful in advancing public ends when it is focused directly on and restricted to the supply side (contracting non-clinical services, performance contracts for clinical service providers, substitution in pharmaceuticals, etc.). It is problematic when focused on individual patients, making treatment or insurance coverage choices as if they were consumers of other everyday products on which they are typically much better able to inform themselves. Nevertheless, given the present state of limited knowledge in this area, it should be acknowledged that it is difficult to draw any definitive conclusions, and that value judgements about the relative merit of different policy objectives will heavily influence any conclusions which are drawn.

A third theme, which emerges from recent health care reforms in several countries that have created purchaser-provider splits, is that the complexity of modern health care systems renders it sometimes impossible to make public/private distinctions. In some cases, the difficulty lies in deciding how and whether to apply the term “public” to purchasing bodies which may be quasi-public, nongovernmental organizations or corporations operated on a non-profit basis. In other cases the public and private elements are interdependent, even within a service category. There is a variety of purchaser–provider ownership models. Further, complexity arises from the public/private arrangements made in capital markets to finance new facilities; for example, joint-venture models involving public/private cooperation are increasingly being used to add new facilities or augment and update old ones (3).

The result of recent trends is that, more than ever, the public versus private debate in health care policy needs to be carried on at the level of specific policy proposals, judged against explicit social policy objectives. It is only at this level of detailed analysis that some of the newer, more complex proposals may be fully understood. “Public versus private” is not a particularly clear or helpful way in which to frame current policy debates; rather these debates should focus on performance.
Exercise 1

Identify one policy option in your country which involves “privatization” of the health care system. Which of the six functions described in this module does it involve? Give your view (and the reasons for it) of how the policy would perform on the criteria of:

• improved health outcomes
• equity in access to and payment for health services
• efficiency in the delivery of health services
• overall control of expenditure
• patient and provider satisfaction.

Exercise 2

Privatization (especially in relation to the financing function) is sometimes linked closely with market-based reforms. Annex 1 presents eight summary propositions about such reforms from an article by Professor Robert Evans (4). Do you agree or disagree with Professor Evans? Use the propositions as the basis for a discussion of the status of market-based reforms in your own country. Under which conditions do you think countries can introduce market systems? What evidence is there for your answer? What objectives are best achieved by market systems? What value judgements are involved in decisions about market systems?

Note: For an audience familiar with the concept introduced in Module 3.3.1: The expenditure \equiv income \equiv revenue framework, Annex 2 may be used to illustrate key issues.

Annex 1. Summary propositions from Going for the gold: the re-distributive agenda behind market-based health care reform by Robert G. Evans

Summary propositions

1. There is in health care no “private, competitive market” of the form described in the economics textbooks anywhere in the world. There never has been, and inherent characteristics of health and health care make it impossible that there ever could be. Public and private activities have always been interwoven.

2. The persistent interest in an imaginary private competitive market is sustained by distributional objectives. These define three axes of conflict:
   (i) the progressivity or regressivity of the health care funding system: who has to pay, and how much?
   (ii) the relative incomes of providers: who gets paid, and how much?
   (iii) the terms of access to care: can those with greater resources buy “better” services?

3. The real policy choices fall into two categories:
   (i) the extent of use of market-like mechanisms within publicly funded health care systems;
   (ii) the extent to which certain services may be funded outside the public sector, through quasi-markets, and under a mix of public and private regulation.
4. Proposals to shift towards more use of quasi-markets through the extension of private funding mechanisms are driven by distributive considerations. They reflect the fact that, compared with public funding systems, privately regulated quasi-markets have to date been:
   (i) less successful in controlling prices and limiting the supply of services (more jobs and higher incomes for suppliers);
   (ii) supported through more regressive funding sources (the healthy and wealthy pay less, and the ill and wealthy get preferential access);
   (iii) off-budget for governments (cost-shifting in the economy looks like cost-saving in the public sector).

5. Market-like mechanisms within publicly-funded health care systems constitute a particular set of management tools that might be used along with other more established mechanisms to promote the following generally accepted social objectives:
   (i) effective health care, efficiently provided and equitably distributed across the population according to need;
   (ii) fair but not excessive reimbursement of providers; and
   (iii) equitable distribution of the burden of contributions according to ability to pay, within an overall expenditure envelope that is consistent with the carrying capacity of the general economy, or rather of its members’ collective willingness to pay.

6. These general objectives seem to be widely shared internationally. Their specific content is of course much more controversial: they are fundamentally political statements and, as usual, God and the devil are in the details. But the key point is that these social objectives have their origins prior to, and at a higher level than, the choice of any particular set of mechanisms for trying to attain them. They are ends; the mix and blend of public and private actions are means to those ends. (Markets were made for and by men, not vice versa.)

7. Market-like mechanisms, as a class, have no inherent or a priori claim to superiority as mechanisms for achieving these public objectives. Nor is there, to date, any overwhelming empirical support for their widespread use. There are a number of interesting examples, in different countries, of the use of economic incentives to motivate desired changes, and these bear close watching. But this is still very much an experimental technology for system management. Moreover, there are grounds for serious concern about negative side effects from transforming the structure of motivations and rewards in health care.

8. The central role of governments remains that of exercising, directly or more traditionally by delegation, general oversight of and political responsibility for each country’s health care system. Governments are increasingly acting as “consumers’ cooperatives”, or prudent purchasers on behalf of their populations. They should choose whatever managerial tools seem to work best for this purpose, subject to the political constraints created by the fundamental conflicts of the distributive interests detailed previously. In particular, they may delegate some parts of this role, but they should not be permitted to divest themselves of it. In the one country where a coalition of private interests has prevented government from taking up this responsibility, the results have been spectacularly unsatisfactory.

Annex 2. Use of the expenditure ≡ income ≡ revenue framework

Health care systems have an inherent tendency toward expansion (see Module 2.3.1). When faced with the fiscal tension this creates, governments frequently turn toward strategies which increase
reliance on private financing. Two of the most common strategies are to rely more heavily on user charges of various forms and/or to allow an increased role for private insurance. Both have significant redistributive effects which the expenditure = income = revenue framework introduced in Module 3.3.1 can help to illustrate.

In both cases, the objective is to increase the ratio of (user charges – UC, or private insurance – PI) to (taxation – TF plus social insurance – SI) in the revenues item of the framework. Typically, the objective is actually to decrease TF + SI while shifting the fiscal burden to UC and/or PI. Professor Evans notes in his article that although there is often much rhetoric about the intention of using private financing to lower the level of utilization (Q), this seldom occurs in practice. Indeed, international evidence strongly suggests that increased reliance on private financing leads to higher instead of lower levels of total health care expenditure (P x Q), accompanied by higher levels of total revenues (TF + SI + UC + PI), even though the public component of revenues (TF + SI) may be lower. (On this and other issues related to this module, participants may wish to read the detailed analysis in the Evans article (4), and also the WHO Report on the Ljubljana Conference on Health Care Reforms (5) and the Ljubljana Charter (6), which questioned the use of market-based strategies for cost-containment.) Higher total expenditure and higher total revenues must also imply higher total incomes (W x Z) which helps to explain why health care providers are often prominent among the advocates of increased private financing. They correctly perceive that this strategy will increase the resources devoted to, and therefore the incomes to be derived from, the health care system. Health care professionals such as physicians will not be the only ones to benefit from the increased incomes associated with private insurance in particular; the employees and shareholders of the insurance firms themselves constitute another important group of beneficiaries.

Omitted from this analysis, it seems, are the recipients and potential recipients of the health care services, who are also the individual patients and citizens from whom the revenues must be collected, either publicly or privately. It is for this group that the redistributive consequences are potentially the most significant.

Consider first the case of increased reliance on direct charges to users of services in a health care system financed primarily through progressive taxation (such as personal income taxes), which is perhaps one of the most common reform scenarios. Direct charges distribute the financial burden for care away from taxation and onto those who utilize services, for this is their purpose. Assuming that those who utilize services are the less healthy individuals in a society, the financing burden is thereby shifted away from the healthy and towards the sick. (A separate but important issue is that to the extent that direct charges do reduce utilization (Q), the reductions are often concentrated among the poor who are least able to pay the charges and who often most need the services.) If the system is otherwise financed through progressive taxation, then there is an additional redistributive effect; the wealthier individuals in the society gain more from the tax relief provided by the substitution of direct charges for taxation in the revenues item of the framework. The two effects combined mean that the financial burden of paying for health care is shifted away from the healthy and wealthy and towards the sick and poor. For any one individual, whether or not he or she is better off financially with increased reliance on direct charges depends on his or her level of health care utilization and level of income, but the extremes are clear. The relatively wealthy, who are on average also relatively healthy, gain; the relatively poor, who are also on average the relatively sick, lose. This may help to explain the frequent political alliance between health care providers and upper-income individuals in support of an increased reliance on private financing.
Reliance on private insurance (PI) instead of direct charges (UC) is a somewhat more complex analysis (again, participants may wish to refer to the Evans article (4)), but results in a similar picture of redistribution. Furthermore, in practice, much private insurance makes use of direct charges in combination with insurance premiums, and individual risk-rating in private insurance may price coverage beyond the reach of many lower-income individuals and/or deny coverage altogether to very sick individuals.

References


Further reading

Key messages

- Countries in transition, especially the newly independent states (NIS), have to consider very carefully the options, prerequisites and likely outcomes of privatization.
- Policy choices do not lie between a bureaucratic monolithic command-and-control state-run system on the one hand, and a fully privatized, for-profit, private system on the other. There are many gradations in between, involving different types of market.
- There are numerous up and running models for central Asian republics and other newly independent states to examine and consider, change and adapt.

Tutors’ notes

- This module builds on the understanding gained in Module 3.4.2: Privatization – overview of issues. It takes up the issues that are likely to be important in the particular context in NIS and countries at similar levels of development. Indeed, it is based on a consultancy service.
- The module can help policy-makers and advisers to ask for relevant information and studies and to help others to understand some of the issues in practice.

Introduction

This module is divided into two parts. The first develops a set of general principles that is broadly applicable to the countries of central and eastern Europe and the newly independent states (NIS). These principles are not value-free, however, in that they inevitably embody political and social judgements. Each country should, therefore, assess the suitability of these principles in terms of their national history, culture and long-term aspirations. The second part of the module addresses key issues specifically for the NIS and attempts to apply the principles put forward in the first part.

Principles in privatization

This section outlines several general principles, which can be adapted and applied within the context of each country. There is no particular virtue in uniformity of health sector arrangements, whether for

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privatization or anything else, and each country will pursue its own individual path towards whatever goals it sets for itself. There are occasions where the international implications of internal arrangements become potentially important as, for example, when internal arrangements become conditions for securing external grants or loans (in which case, there will be trade-offs to be made and negotiations required to achieve mutually satisfactory agreements), or when financing arrangements are held to bestow unfair advantages in international trade (when the major empirical issue will usually be the distribution of health care costs paid for by owners, employers and employees in exporting industries). The principal objective for the health care sector ought, nonetheless, to be to arrange its affairs so that those public policy objectives which the elected government selects are served by the most cost-effective means compatible with those objectives.

**Principle 1**

The type, scope and degree of privatization in health care in a country ought to be evaluated in terms of that country's objectives for the health care sector, its history of provision and finance, the local culture and local resources (including managerial capacity).

The structure, organization and finance of health care systems vary across countries. Although many countries have similar dilemmas, not all choose to adopt similar solutions. Solutions which may be appropriate in one context may be highly inappropriate in another. They may reflect different priorities placed on equity, or the powerful influence of one or another group of actors in the health system. They may be constrained by the availability of resources, the quality of information systems, or the level of managerial capacity within the health sector. All these factors need to be balanced in determining the scale and scope of privatization.

**Principle 2**

Privatization is not an end in itself, but a means to achieve desired ends.

When suitably designed for local circumstances, privatization may enhance the efficiency with which social objectives are achieved by encouraging creative initiatives within the health care sector. The important element relates to clarity about the policy objectives sought. With an objective established, the test of the appropriateness of privatization will depend upon the extent to which it can assist effectively in achieving the desired objective over time, and the relative effectiveness of alternatives to privatization. In judging the cost–effectiveness of privatization, the analytical framework advocated here (identification of objectives followed by assessment of the effectiveness of privatisation, among other possible options) is an appropriate framework for thinking about the issues but does not remove the scope for policy judgement. On the contrary, this framework serves as an aid to judgement rather than a substitute for such judgement. There is no “scientific” solution to most major policy choices. Decision-makers confront a set of policy trade-offs, each of which has both advantages and disadvantages. The method proposed here has the advantage of making objectives explicit and encouraging systematic thought about the options for achieving them, drawing on available evidence both internationally and internally. This is preferable to “muddling through”, especially at a time when substantial change is needed.
Principle 3

Privatization is a question of determining property rights and should be directly recognized as such.

Property rights define the uses to which resources may and may not be used, including the terms on which they may be exchanged. Property is not inherent in the physical characteristics of any asset, but the socially determined uses to which it may or may not be put. For example, a private individual may “own” a piece of land and regard him- or herself as having private property rights in it. However, such ownership will often not include the rights to own and mine minerals beneath the land, or to use the water that flows across it, or to fly aeroplanes through the space above it, or to burn noxious substances upon it, or to hunt over it, or to build tall buildings on it that obscure neighbours’ views and access to light. In addition, others may have the right to walk or drive across the land in question, and there may be public regulations that require only certain types of building or alterations to buildings on the land (as when, for example, these buildings are of historical or cultural importance). Moreover, the enjoyment of such private rights as exist may be subject to a fixed time period (as when the land is leased) and landlords may also set other conditions to which the tenant is obliged in law to adhere. This example makes clear that it may be quite common for an asset to have a number of “owners”, each with defined rights and protected by the law. The scale and scope of the rights attached to the use of an asset have a major impact on its value, both in the commercial sense of value and in a wider social sense. For example, certain estates might not be alienable from their “owners” and therefore may not be marketed, or a publicly-“owned” asset might not be commercially exploitable, or a health care institution might be privatized on terms requiring that it be a non-profit organization.

It follows that there will normally be a number of options that can be selected within the general range of privatization. The uses to which a building, such as a hospital or clinic, might legally be put are not determined by the intent to privatize per se but by the nature of the objective being sought, the range of uses to which it may and may not be put, the time period for which the private rights may be exercised, the question of whether the bundle of privatized rights includes the right to sell the rights of use in the asset, the likely wealth to be created through privatization, and the sale value of the asset to the public sector when it is privatized. There is thus considerable scope within any privatization programme for a variety of types of transfer from the public to the private sector, which are best considered in terms of their likely consequences for public policy objectives. Therefore, even within a privatization programme there is a range of choices, and decisions concerning them should be selected according to which bundle of rights is most likely to deliver the desired objectives at least social cost.

It should also be noted that even if state assets are transferred to the private sector at a zero or near zero price, the contractual terms of the transfer can include consideration of who would share in any net revenue stream should the privatization achieve its objectives. The contract can further make clear the nature of the activity expected of the privatized organization, how this is related to social goals, and how the organization will be made accountable for its activities.

Principle 4

Selective privatization is more likely to work effectively in service provision than in funding.

This principle derives from a combination of practical experience as well as more subjective and more culturally dependent value judgements. Private health care insurance can be defined as providing insurance against the cost of medical expenses rather than insurance against the cost of ill
health *per se*. It may be either monopolistic or competitive. If it is monopolistic, a strong system of state regulation will be essential to control common abuses of monopoly power in the form of unnecessarily high premium prices. One way to exert control in the monopoly case might be to contract out the (public) insurance function for a specific period of time to the most cost-effective private bidder who is also willing to be committed to meet the overall social objectives set by the government. Such a contract is difficult to monitor and enforce. However, weaker forms of regulation may be even less capable of delivering these objectives and will inevitably involve even higher monitoring and enforcement costs. They also require a degree of sophistication on the part of regulators that most countries do not possess.

Competitive private health care insurance often leads to risk discrimination in premiums and, in the case of the very elderly or the chronic sick, typically produces prohibitively high premiums that drive them out of the market altogether. This then requires explicit public insurance programmes (such as Medicare and Medicaid in the United States).

In addition, competition among private for-profit insurers engenders risk discrimination within those groups which private companies will insure. Since in all societies, the incidence of sickness and social status (or income) are inversely related, competition among insurers typically violates the equity objectives set for the health care system. It sometimes also violates efficiency objectives as, for example, when these are set in terms of maximizing the contribution of health care services to health gain in the community.

**Principle 5**

*Consult as widely as possible in setting policy objectives.*

Medical care systems require complicated choices and trade-offs, both at the system level (such as setting a limit to public expenditure on health care) and at the more detailed level (such as denying forms of care to some but not to others). In general, it is better for these decisions to reflect a broad process of consultation and, where appropriate, involve a wider public in their discussion. In this way, the values embodied in the health system will better reflect those of society.

**Principle 6**

*Never let the perfect become the enemy of the merely good.*

The above principles involve values and judgement. The importance of setting clear objectives for the design of health care systems and their supporting systems plays much the same role as setting moral principles for the conduct of one’s own professional and personal life. One may not always live up to them, but it is rather important to know where one is failing, so that steps may be taken to remedy the worst departures from the ideal.

For example, although it may be intended that a health system should treat all citizens equally in their access to health care, it might be more realistic to compromise by allowing a small private sector both for insurance and for health care to cater for certain needs (such as foreign visitors and the wealthiest citizens), or to compromise on the availability of expensive medical treatments by defining limits to entitlement.


Principle 7

Limited small-scale experiments, trials or pilots schemes are often better than trying to implement new policy ideas across the entire health system.

The case for policy experiments (for example, in one region or oblast) is that they enable a ministry to test the feasibility of an idea in the light of the experience gained. Such experiments make it possible to identify best practice and to share it more widely. This does not negate the value of local experimentation for local purposes. Moreover, experiments can and ought to have a bottom-up as well as a top-down motivating force. The ministry should, never the less, be informed about experiments so as to disseminate good practice and discourage bad practice as it is revealed. It may also offer advice on the design and implementation of experiments.

Policy experiments should be designed so as to enable an informed judgment to be reached as to whether the changes observed in the experimental group may, through comparison with the controls, be reliably attributed to the policy changes in question as distinct from other changes going on at the same time. More generally, pilot projects avoid having to put all one’s “policy eggs” into a single basket in a situation where there is doubt as to whether a proposed policy will achieve the objectives sought at a reasonable cost compared to either the status quo or some other alternative.

Pursuing privatization in a central Asian republic

Privatization ought to be part of a broader strategy for overall health care reform

The health care systems that most NIS inherited at independence had substantial advantages but no less substantial disadvantages. The challenge to the central health sector has been to develop and implement policies that can address the disadvantages while not undermining the inherited advantages. Proposed health policy changes need to be evaluated in terms of their probable outcomes, so that policy-makers can be reasonably confident that the changes will indeed reduce inherited disadvantages (e.g. inefficient management of existing institutions, the frequent poor quality of services, and the counter-intuitive combination of under-resourcing health services in general while simultaneously over-investing in institutionally-based care) while not harming the inherited advantages (in particular, the access of all citizens to a fairly full range of health care services). This balancing or trading-off of two different, conflicting, needs requires a fully thought out and comprehensive approach to health sector reform.

An effective reform strategy could include the privatization of ownership of certain health care institutions as a part of a more comprehensive approach towards the whole sector, consistent with movement towards more widespread private ownership in society in general. If introduced through a period of experiment or a pilot project, such a strategy could provide plausible answers to such crucial questions as which institutions to privatize (and why), to whom they would be transferred (and why), the nature and scope of the property rights thus transferred (and why), the price at which they were transferred (and why), the regulatory environment in which the privatized institutions would operate (and why), whether the objective sought was likely to be met, the speed at which the process should go ahead, and how the process should be best managed.

All these issues require careful consideration about the balance of advantage and disadvantage in the inherited system and of the overall goals of the health care sector. Sharp, rapid and ill thought
through privatization is extremely unlikely to satisfy these policy requirements. Indeed, such a process is likely to create as many problems as it resolves. Moreover, ill-planned privatization may not shift the responsibility for solving problems from government, and yet make it more difficult for policymakers to solve them. Inadequately conceptualized and planned privatization schemes will inevitably damage the current and prospective health of the weakest and most vulnerable members of society: children, the elderly and the chronically ill, particularly among the poorest members of society. In short, if privatization is not to undermine the overall objectives of the health care system, it must be part of a clearly defined, broad and comprehensive strategy of health sector reform covering finance, structure, ownership and organization, and long-term objectives.

When privatization was proposed in several NIS in the mid- to late 1990s, such a broad comprehensive strategy did not exist. The impression was one of “privatization for privatization’s sake”, as a universal panacea for the inherited problems of the countries’ health sectors. Indeed, the major objective in some countries seemed to be driven by fiscal rather than health policy considerations, that is, to reduce the ministry of the economy’s budget allocation for health care. This appeared to represent a confusion between means and ends which is particularly dangerous for countries going through massive economic transition, with all the negative health consequences that accompany such transitions.

These privatization proposals appeared to reflect the lack of effective change up to that point within the health care sector, presumably in the belief that shock tactics were necessary to address the system’s problems. However, inappropriate privatization, or privatization on an inappropriate scale and at an inappropriate pace, would generate consequences that run wholly counter to aspirations for what the sector ought to be achieving. Yet the reasons for lack of responsiveness in the sector may have more to do with the absence of a clearly signalled future direction. This leads again to the centrality of a sector-specific strategic vision and the practical plans which flow from it.

One particular structural dilemma in several NIS is the dispersion of health-related responsibilities across several ministries. The development of a coherent health care policy is thus even more difficult to achieve. While several ministries have legitimate interests, there is an urgent need for them to be coordinated and for clearly defined responsibilities to be identified both for a broader health care strategy and for the specific privatization programme.

The need for complementary policies

Privatization is a means to an end, not an end in itself. The objectives of the process of privatization (which should include minimal destabilization and disturbance) are not the same as the objectives of having a sector that is in varying degree privatized. The objective of having a (partially) privatized health sector would be to increase economic efficiency by reducing the cost per unit of output and improving the quality of output.

Privatization is a potential, though not inevitable, threat to equity. Equity objectives are a constitutional matter in all NIS. If threats to equity are not to materialize, privatization needs to be accompanied by a set of complementary policies. Indeed, the greater the extent of privatization, the more important it is that effective complementary policies are put in place.

These complementary policies are, in effect, necessary conditions for privatization to meet efficiency goals and minimize adverse effects on equity. Their nature reflects the point made above, that privatization is a means to an end. Further, privatization ought to be seen as only one element in a broader strategic approach to the health care sector, not itself alone the sum total of that strategy.
There are several essential complementary policies, all of which interact with the others. Some of the factors that might be considered to be particularly relevant in NIS include those listed below.

(a) In choosing what to privatize there are essentially three interrelated factors to consider:
   (i) which institutions?
   (ii) which services?
   (iii) what charges ought to be applied (to which services) and who ought (and ought not) pay them?

   Current patterns of eligibility and the financial contributions required of patients vary considerably in NIS according to the policies of local institutions. There is much to be said for having a national policy in accordance with the equity requirements of the country’s constitution.

(b) One way of approaching these issues is to examine critically those services currently falling into the categories of “guaranteed” or “basic” packages, in order to consider which services might be included in a “core” group of services freely available to all citizens. Obvious candidates include primary diagnosis, emergency care, care for chronic diseases, public health, and health education. Within each category of core services, only those of demonstrable effectiveness ought to be included.

(c) Publicly-insured services need not be provided only in publicly-owned institutions.

(d) Certain categories of person are typically not required to make co-payments (or make them at a reduced rate) for core services, including children, the elderly, the very poor, the disabled, pregnant women and veterans. There is an important distinction to be made between formally agreed co-payments and the informal payments that characterize a good deal of the current systems. Formally agreed co-payments ought to reflect the objectives of policy. Informal payments reflect local decisions and are likely to be arbitrary, inequitable and inefficient.

(e) Privatization does not necessarily equate to “for-profit”. In many countries, hospitals and clinics operate in the private sector as charities or non-profit trusts, operated by either religious organizations or secular ones. In several NIS, the current absence of a sophisticated system to regulate independent sector institutions, and the lack of a tradition of private management, suggests that the way forward would be to maintain a strong public sector presence. This approach harnesses existing and developing national management structures to ensure that the system is as integrated as it can be in pursuing nationally decided priorities. For-profit and non-profit experiments might be conducted through carefully designed pilots and trials. Privatization may take many forms and a simple private/public distinction bears little resemblance to the great variety of options that are actually available.

**Operation of the capital market**

To the extent that there is a limited capital market (private sources of borrowed funds such as bank loans and bonds), state assets transferred to private hands will have a lower value and contribute less to the delivery of efficient service delivery, due to the private sector’s inability to borrow at competitive and relatively low real rates of interest for investment. If borrowing is excessively costly for potential purchasers of state assets, then potential buyers from within the country will be relatively few and the proportion purchased by external agencies relatively high. If borrowing for routine operational purposes (working capital, investment in the enterprise) is excessively costly, adaptation to change, investment in personnel (both hirings and professional training/development) and investment in equipment and buildings will all be sub-optimal and limit the efficiency gains hoped for.
Creation of a regulatory framework

A privatized portion of the health sector will require a sophisticated framework of national regulation. This includes the establishment of national standards for personnel and institutions as well as the monitoring and evaluation of both the providers’ performance and the health outcomes of the system as a whole. The absence of an effective regulatory environment would make it undesirable to privatize provider institutions due to the dangers of abuse of private monopoly power. Regulation of privatized units within the health care sector is also required for other purposes, for example to control professional monopolies, and to preclude health care procedures for whose ineffectiveness or damaging effects there is an evidential basis, such as uncontrolled over-the-counter purchases of antibiotics. It is worth noting that public health care agencies also require monitoring and regulation in these matters.

Training of central experts and managerial cadres

Privatization places high demands on the skills of managers at all levels. Skill development is required not only to manage the process of change itself but also to manage privatized institutions in ways that are proactive rather than reactive, that are innovative and show willingness to take (sensible) risks, that show strategic vision and an understanding of the overall objectives for the sector, and that have the ability to distil practical and operational plans from a broader vision. Such skills cannot be acquired overnight but require training programmes.

Contracting framework

Private health care providers (whether for-profit or non-profit) are all potential contractors with state “purchasers” of services. These might be a compulsory state insurance fund, regional or oblast authorities, or other public agencies which decide to purchase services on behalf of defined population groups. An important element of meaningful competition is competition between private and public providers of care. If this is to be introduced (and it is a model much used in western Europe), a contracting environment needs to be created through which: (a) the public purchasers can specify their requirements (volume, type of service, target clients, quality, cost, terms of access for clients, etc.); (b) potential providers can bid for such contracts; (c) performance can subsequently be monitored; and (d) long-term relationships between contractors can be established. Over time, such contracts can be useful means of securing what is becoming an increasingly important element in North American and European health care systems: the provision of evidence-based medical care. The absence of such a mechanism between purchasers and providers is likely to lead to the isolation of private from public providers, the development of at least two tiers of service (with perceived quality differentials and violation yet again of equity desiderata) and missed opportunities to use the private sector as an instrument for achieving social policy objectives. The contracts do not need to be legally enforceable formal contracts, but are better seen as written expressions of the joint intentions and the chosen means of delivering them of both purchasers and providers.

Creation of purchasing power

A private health care sector confronts three sets of potential purchasers:

(a) public purchasers who contract on behalf of specific population groups (defined, say, by area of residence);
(b) private insurance agencies which may contract for specific services on behalf of their clients;
(c) private individuals who pay out-of-pocket (and preferably not under-the-counter) or via their private insurance cover.
A private sector relying for its income solely on the third of these has an inherently limited market in several NIS and will consequently have a restricted scope owing to the limited purchasing power of most citizens. The present time thus presents a useful opportunity to bring about a coherence of the private and public sectors, whereby private providers have an opportunity to develop through extensive reliance on public contracts, the two parts of the sector can develop mutual understanding of what is expected of each, technology and evidence-based practice can develop evenly in each, and public policy can be directed to the monitoring and control of private health care and private health care insurance.

**Maximizing asset sale prices**

It is relatively easy to divest the public sector of assets. It is harder to do so in a way that maximizes the financial gain to the public sector and thereby generates maximum income to the state to offset budget deficits and reduce public debt. This is not merely a question of the type of bidding procedures to be adopted. It also requires attention to those factors within the economy that create a demand for such assets and that help to determine their value (essentially the current value of positive net receipts from their operation, whether as health care providers or in some other economic activity) and indeed whether they have any value at all. Factors that depress the sale value of state assets include the small number of clients for privatized services and poorly developed capital markets.

It might, even when the capital market is poorly developed, make good strategic sense to privatize selected institutions whose sale would bring little cash into the state budget (other than a possible reduction in a continuing recurrent expenditure drain). The transfer of state assets at a zero or near zero price does not, however, mean that they should be transferred without clear contractual terms specifying the activity to be undertaken in the privatized institution, whether it is to be a profit-making or a non-profit organization, and the nature of its accountability to the state. Nor should it be done without recognizing that, despite a current low asset value, if the privatization is successful in achieving its objectives, privatized organizations represent potential sources of considerable wealth in the future – which should accrue to the public or private sectors according to the terms of the transfer.

**Reconsidering ends and means – alternative policy options**

The interaction between and the mutual reinforcement of the components of the broader strategy outlined above are important. Two points in particular are worth highlighting:

(a) if the overall objectives of efficiency and equity in health care policy are to be achieved, neither the process of privatization nor the subsequent operation of the private sector will be optimized by treating each as a separate issue, nor will overall objectives be realized by failing to ensure appropriate coherence of the public and private sectors once the private sector is up and running;

(b) the equity objectives of the health care system are likely to be seriously compromised if low quality (public) and high quality (private) services develop – a process that would be encouraged were private health care insurance to become significant.

As noted above, privatization should be viewed as simply one possible tool which can be employed to achieve a more fundamental set of policy objectives. The WHO Ljubljana Charter on Health Care Reforms (1), adopted by WHO European Member States (including the NIS) in June 1996, defines these fundamental principles as driven by values, targeted on health, centred on people, focused on quality, based on sound financing and oriented towards primary care. The general principles presented here mesh well with these. The central question for NIS governments thus becomes: what policy interventions provide the most cost-effective means of achieving these six general health sector objectives.
Privatization is often linked with a theoretical view that health care is a commodity, like most other commodities, which ought to be available for purchase and sale on the open market. This may be a tempting view for any country that has inherited a communist health care system. There is, as a matter of fact, no developed country in the world which, in practice, treats health care in so thoroughgoing a commercial manner. Even the United States, which dramatically differs from other OECD countries in dependence on private insurance and for-profit organizations on the provider side, does not apply this theory fully. Over 40% of health care funding comes from compulsory taxation (mainly to support Medicare and Medicaid) and there remains a substantial number of tax-funded hospitals providing services to the indigent poor and military veterans. The for-profit commercialism of the United States system is nonetheless substantial and it carries a high social and financial price. Total health care costs per person in the population are almost double the OECD average and more than double those in the almost wholly public systems of Sweden and the United Kingdom. Moreover, even with 15% of GDP devoted to health care in the United States, fully one third of the entire population is either completely uninsured (43 million citizens) or only partly insured (50 million). Only poor elderly citizens in the United States have the right to tax-financed home care or long-term nursing care. Put bluntly, the notion that health care ought to be treated as a commercial commodity, and the consequent high level of privatization in both finance and provision, are directly linked to the failure of the United States to provide adequate health care for its entire population and to the enormous cost of what it does provide.

The NIS should look, perhaps, to other systems as models for further consideration and adaptation. In western European countries health care is viewed as a social good, one whose benefits accrue not only to those who directly receive its services but also to the public at large and whose equitable distribution is seen as lying at the core of policy objectives. In countries such as Finland, the Netherlands, Sweden and the United Kingdom, and to a lesser degree Italy and Spain, there have been serious and sustained attempts to introduce market-style incentives and more sophisticated management into what have remained publicly-owned, publicly-operated and publicly-accountable health care systems. Public hospitals have not been privatized (although public patients have on occasion been placed in private hospitals) but have instead been transformed into managerially independent public firms which are publicly accountable. They no longer receive a global budget from the state but are instead funded on the basis of contracts or agreements with funding bodies that embody performance targets. In Sweden patients can choose the hospital at which they are to receive care and the money received by the hospital follows the patient. Similar types of “public” or “internal” markets exist between primary care professionals and secondary care, and between social, home-based care and nursing home providers and hospitals. All these arrangements can be characterized as planned markets which are designed to deliver specific public policy objectives and to ensure that the relationship between purchasers (or commissioners) and providers is one that brings stability and mutual understanding and agreement about objectives, thus enabling well targeted long-term investment in staff and other resources over time. Not all these arrangements demand highly sophisticated management and many could be introduced with relatively modest investments in the relevant skills.

A similar set of options exists with regard to the public body or bodies which do the commissioning or which oversee the providers. This need not be the state directly but could be elected regional bodies (Sweden), municipalities (Finland) or specially appointed authorities (the United Kingdom). With these kinds of decentralization, some general framework is required, for example to specify national
objectives for the reduction of mortality from specific causes and for maximum waiting times. Ultimately these bodies are accountable not only locally but also to central government and to national regulatory (sometimes professional self-regulatory) bodies which monitor and control standards.

Thus, the key policy choices at the broadest level do not lie between a bureaucratic monolithic command-and-control state-run system on the one hand, and a fully privatized, for-profit, private system on the other. There are many gradations in between, involving different types of market, and there are numerous models in existence for the NIS to examine and consider, change and adapt.

Exercise 1. Advice on privatization in a newly independent state

The government in a newly independent state (or a country of similar level of economic development) has decided to push for privatization throughout the economy. You are asked to advise on greater privatization of particular aspects of health care or the wider health systems.

- What are the objectives which greater privatization in health might enable to be more efficiently or more equitably achieved?
- If there would be any major disadvantages, are there ways in which they could be countered or minimized?
- What are the likely costs and benefits of greater privatization in the country, and who might gain or lose?
- Would your judgment and advice also hold for another country with a different level of economic development?

References


Further reading

See the lists of references and further reading at the end of Module 3.4.2: Privatization – overview of issues.