



WHO European Ministerial  
Conference on Health Systems:  
"HEALTH SYSTEMS,  
HEALTH AND WEALTH"

Tallinn, Estonia, 25–27 June 2008

BACKGROUND DOCUMENT

# Health systems, health and wealth: Assessing the case for investing in health systems

Edited and Written by  
Josep Figueras, Martin McKee,  
Suszy Lessof, Antonio Duran,  
Nata Menabde

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**Josep Figueras, Martin McKee, Suszy Lessof,  
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## Keywords

DELIVERY OF HEALTH CARE - organization and administration - standards

HEALTH ECONOMICS

HEALTH CARE REFORM

PROGRAM EVALUATION

EUROPE

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## List of contributors

### Editors

**Josep Figueras** is Director of the European Observatory on Health Systems and Policies, Brussels.

**Martin McKee** is Head of Research Policy at the European Observatory on Health Systems and Policies and Professor of European Public Health at the London School of Hygiene and Tropical Medicine.

**Suszy Lessof** is Director of Management at the European Observatory on Health Systems and Policies, Brussels.

**Antonio Duran** is Chief Executive Officer at Tecnicas de Salud, Sevilla and Consultant at the WHO Regional Office for Europe, Copenhagen.

**Nata Menabde** is Deputy Regional Director of the WHO Regional Office for Europe, Copenhagen.

### Contributors

**Sara Allin** is Research Officer at the London School of Economics and Political Science Hub of the European Observatory on Health Systems and Policies.

**Reinhard Busse** is Associate Head of Research Policy at the European Observatory on Health Systems and Policies, and Professor and Department Head for Health Care Management at Berlin University of Technology.

**David B Evans** is Director of the Department of Health Systems Financing at the World Health Organization, Geneva.

**Anton E Kunst** is Assistant Professor at the Erasmus Medical Centre, Rotterdam.

**Joseph Kutzin** is Regional Advisor, Health Systems Financing, and Head of the WHO Office in Barcelona.

**Johan P Mackenbach** is Professor of Public Health at the Department of Public Health at Erasmus University Medical Center, Rotterdam.

**Claudia Maier** is Research Fellow at the European Observatory on Health Systems and Policies, Brussels.

**José M Martin-Moreno** is a Professor of Preventive Medicine and Public Health at the Medical School and Hospital Quality Assurance Coordinator at the Clinical Hospital, University of Valencia, Spain.

**David McDaid** is Senior Research Fellow at the London School of Economics and Political Science (LSE) Health and Social Care and European Observatory on Health Systems and Policies.

**Ellen Nolte** is Senior Lecturer at the London School of Hygiene & Tropical Medicine and Honorary Senior Research Fellow at the European Observatory on Health Systems and Policies.

**Charles Normand** is Edward Kennedy Professor of Health Policy and Management at the University of Dublin, Trinity College and Chair of the Steering Committee of the European Observatory on Health Systems and Policies.

**Willy Palm** is Dissemination Development Officer at the European Observatory on Health Systems and Policies, Brussels.

**Irene Papanicolas** is Research Associate at the London School of Economics and Political Science (LSE), England.

**Govin Permanand** is Programme Manager, Health Evidence Network, at the WHO Regional Office for Europe, Copenhagen.

**Amit Prasad** is Technical Officer at the World Health Organization Kobe, Japan.

**Lorenzo Rocco** is Senior Lecturer of Economics at the University of Padova, Italy.

**Richard B Saltman** is Associate Head of Research Policy at the European Observatory on Health Systems and Policies and Professor of Health Policy and Management at Rollins School of Public Health of Emory University, Atlanta, United States of America.

**Regina Sauto Arce** is Consultant at INFYDE (Información y Desarrollo, SL) in Bilbao, Spain.

**Peter C Smith** is Professor of Economics and Director of the Centre for Health Economics at the University of York.

**Marc Suhrcke** is Policy Development Officer at the WHO Regional Office for Europe, Venice.

**Phyllida Travis** is Health Systems Adviser at the World Health Organization, Geneva.

**Nicole Valentine** is Technical Officer in the Department of Ethics, Equity, Trade and Human Rights at the World Health Organization, Geneva.

**Ewout van Ginneken** is Researcher at the Berlin University of Technology.

**Matthias Wismar** is Senior Health Policy Analyst at the European Observatory on Health Systems and Policies, Brussels.

## List of abbreviations

AIDS	Acquired immunodeficiency syndrome
BRC	Breast cancer
CEE	Central and eastern Europe
CHOICE	CHOosing Interventions that are Cost-Effective (WHO project)
CIS	Commonwealth of Independent States
DALY	Disability-adjusted life year(s)
ECHP	European Community Household Panel
EU	European Union
EU10	Member States joining the EU in May 2004
EU12	Member States joining the EU in May 2004 and January 2007
EU15	Member States belonging to the EU prior to May 2004
EU25	EU10 plus EU15
EU27	All EU Member States up to and including January 2007 accession
Eur-A	WHO subregion – countries of western Europe (Andorra, Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, United Kingdom)
Eur-B	WHO subregion – CEE countries (Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Poland, Romania, Serbia and Montenegro, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Uzbekistan)
Eur-C	WHO subregion – CIS countries (Belarus, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Russian Federation, Ukraine)
GDP	Gross domestic product
GP	General practitioner
HiAP	Health in All Policies
HIV	Human immunodeficiency virus
HSAF	Health Systems Assessment Framework
HTA	Health technology assessment
LLH	Living Standards, Lifestyle and Health (survey)
NHS	National Health Service (United Kingdom)
NICE	National Institute for Health and Clinical Excellence
NIS	Newly independent states
NPM	New Public Management
OECD	Organisation for Economic Co-operation and Development
QALY	Quality-adjusted life year(s)
R&D	Research and development
RLMS	Russian Longitudinal Monitoring Survey
SHI	Social health insurance
WHO	World Health Organization
WTP	Willingness to pay

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## Key messages

### Health is central to well-being and wealth

- Health is valued in and of itself
  - The governments of the European Region are committed to better health, equity and solidarity
  - The people of the European Region place a high value on good health
- Health reflects the progress of societies. Measures of social development must include health
- Healthier people are more productive
- Better health reduces demands on health care now and in the future
- Health and wealth reinforce each other. Health systems are a catalyst for both

### Health and health systems work across sectors

- Health systems go beyond health care
- Health systems have a key stewardship role influencing interventions in other sectors that impact on health
- Ministries of health should be accountable for the health created by health services and across sectors

### Health systems investment brings real benefits

- Societies can choose 'how' and 'how much' to invest in health systems despite all the competing demands for resources
- Appropriate investment in health systems is an effective way of improving health and wealth
  - Health systems support healthier more economically active societies
  - Health service interventions save lives
  - Well targeted public health interventions make a difference
  - Health systems help create societal wellbeing, not least by promoting equity and responsiveness

### Policy makers can make health systems and health system investment work better

- Explicit strategies for improvement are key. They work best if they
  - Reflect the burden of disease and risk factors, combining prevention and cure accordingly
  - Address the whole system and health in all policies not just services delivered by the sector itself
  - Draw on the wealth of comparative evidence on the impact of reforms and those, like strengthening primary care, which work best
  - Fit the national context
- Health system performance measurement captures what is happening and what can be done better.
  - It is central to improving performance and to justifying further investment
  - Performance data must be fully aligned with governance systems and linked to management levers that can deliver improvements



## Policy summary

### A new paradigm

Health policy-makers have been under enormous pressure in recent years over concerns about financial sustainability and cost-containment. The resources available to any society are finite, but emerging evidence is recasting health systems not as a drain on those resources but as an opportunity to invest in the health of the population and in economic growth. Health systems, health and wealth are inextricably linked in a set of mutually reinforcing and dynamic relationships. This new paradigm offers an opportunity for a fundamental reassessment of the role of health systems in society. It poses three key questions.

- How can we improve health, wealth and societal well-being by investing in health systems?
- How can we ensure that health systems are sustained in the future?
- How can we monitor, manage and improve performance so that health systems are as effective and efficient as possible?

This background document to the WHO Ministerial Conference on Health Systems (Tallinn, Estonia, 25–27 June 2008) explores this evidence. It makes the case for appropriate investment in health systems because they can improve health and impact positively on economies and because they reflect core values that underpin European societies.

### Defining a health system

The definition of health systems adopted here builds on that put forward by the *World Health Report 2000 (20)* and combines three elements:

- the delivery of health services (both personal and population based);
- activities to enable the delivery of health services (specifically finance, resource generation and stewardship); and
- those stewardship activities that aim to influence what other sectors do when it is relevant to health, even where the primary purpose is not health.

This approach emphasizes the scope of health systems beyond health care. It is the role of ministries and ministers, as the stewards of the health of their people, to take responsibility for all three and to be accountable for the health sector and for action – across sectors – that influences health.

### Health systems, health and wealth: A conceptual framework

The complex relationships between health systems, health and wealth are represented in a conceptual framework that features a dynamic interaction between health systems and health, health systems and wealth, and health and wealth. The model also shows that these three elements together impact on the central goal of societal well-being. Finally, it recognizes that the socioeconomic and political context is crucial in determining how all of these interact with each other (Fig. 3.1). The framework can help policy-makers to:

- systematically review how health systems produce health, impact on wealth creation and help to create societal well-being;
- marshal the evidence for discussions with other sectors; and
- make the case for investment in health systems.

### Re-examining cost pressures

As pressure on health expenditure seems to rise inexorably, health services are all too easily portrayed as a burden, absorbing increasingly more resources. The ageing of Europe's population, the emergence of new and more expensive technologies and the growth of citizens' expectations all add to the upward pressure on health care. However, it is increasingly clear that this assessment is too simple; demographic (and other) trends do not necessarily or inevitably translate into higher societal costs.

Ageing need not pose a huge challenge to health systems, particularly if the health system and those outside it that influence health adopt evidence-based policies which promote healthy ageing, and if societies arrange their employment policies (including retirement age) in ways that ensure that older people can remain economically active. While simple cross-sectional analyses suggest that health care costs increase with age, this does not mean that ageing populations will be more expensive. It is now clear that cost is a function of proximity to death and not simply being older. There is now evidence from several countries that older people are healthier than ever and experience compressed morbidity in part as a result of healthier lifestyles and in part due to access to safe and effective treatments.

The introduction of new technologies *can* be managed in ways that secure their benefits while limiting aggregate costs. Proactive and adequately resourced health technology assessment systems, coupled with mechanisms such as regulation and payment systems, to ensure compliance, can reduce the risk of inappropriate

use of technology and promote cost-effective care. Similarly, initiatives to engage with citizens can manage expectations, offsetting some of the pressures to provide potentially inappropriate technologies, and balancing responsiveness with efficiency.

In summary, increased expenditure on health systems is not inevitable. Governments can control it and with the judicious use of policy levers and management tools, ameliorate the impact of spending pressures.

### **The contribution of health to wealth and societal well-being**

Health has a value in and of itself. It matters to individuals and societies across the European Region. This value can be expressed in monetary terms, based on the decisions that individuals make in their everyday lives, such as whether to undertake a dangerous job for a higher salary. Methods such as this do have drawbacks, but nonetheless, the evidence demonstrates conclusively that people attach huge importance to the notion and enjoyment of health, regardless of cultural or economic differences.

Health also has a significant impact on economic productivity. Development economists have long recognized the importance of the right mix of physical and human capital. However, when thinking about the latter they have traditionally focused on education and not health. This changed with a publication by the Commission on Macroeconomics and Health, which found that, in developing countries, poor health dragged down economic growth. Later work showed how the same was true in high- and middle-income countries. People in poor health are less likely to work and, when in work, are less productive. They are less likely to invest in their own education or to save for retirement, and so to support the wider economy. The economic position of countries today owes much to the extent to which they were able to achieve better health historically. The current economic and labour market context, social security arrangements, retirement age and the interactions between them will need to be taken into account in addressing the economic benefits of better health in the future. The evidence is clear; a healthy population including healthy older people can contribute very substantially to the economy.

Health status also clearly influences health expenditure. If no-one was ill there would be no need for health services. Analyses undertaken in several countries suggest that policies which promote healthy lifestyles and early use of preventive care may be able to reduce future demands on the health system. As already noted, ageing populations need not necessarily place greater demands on health systems. This does not, however, offset all the pressures to increase overall spending, nor does it reflect the likely increases in demand for social care.

Finally, health inequalities have high economic costs. They undermine economic performance, increase social costs and diminish societal well-being. If the existing gaps could be narrowed, there would be substantial gains in national income, coupled with reductions in the costs of health care as demands for ambulatory and inpatient care reduced. Similarly, there would be substantial savings in unemployment and disability benefits. Societal well-being and social cohesion would also increase as health was distributed more equitably.

### **Assessing the impact of health systems**

Policy-makers must demonstrate that health systems have a discernable and positive impact on health if they are to justify investment in health systems in annual budget rounds. The evidence is unequivocal: ill health has a cost and, crucially, much ill health can be tackled by health systems. Preventive and curative health services and broader public health interventions do improve health, while at the same time enhancing equity and responsiveness.

The burden of disease in the European Region is dominated by noncommunicable diseases, particularly cardiovascular disease, mental illness, injuries and cancer; each has enormous costs that fall within and beyond the health system. The burden of disease needs to be understood in light of the main risk factors in European countries. These include diet-related risks, physical inactivity and addictive substances (particularly tobacco) and together explain the bulk of morbidity and mortality in the Region. Many of the most burdensome diseases are amenable to medical care or to action across sectors but policy-makers can only tailor and combine interventions effectively if they understand the evidence on risk.

Health services themselves do make a difference. The evidence of this is complex but consistent, showing that around a half of life expectancy increases in recent decades stem from improved health care. What is more, there remains significant mortality from causes amenable to health care, suggesting that appropriate investment will have direct and tangible benefits.

At the same time, there is compelling evidence of the value of wider public health interventions both within the health sector and across sector boundaries. Moreover, the cost-effectiveness of these often compares favourably with clinical services. There is particular scope for interventions on key risk factors, such as legislation on salt and saturated fats to address diet-related risks, fiscal and regulatory changes to influence tobacco use or traffic control measures to prevent accidents. These demonstrate how important it is that public health action takes place across sectors. Furthermore, health systems need to have a comprehensive perspective and combine “upstream” and “downstream” measures so that macro-level

initiatives shape determinants, while downstream measures help individuals to modify behaviours.

There is still debate around which measures are the best value for money or how exactly to bundle them most effectively, to reflect the national context of disease burden and risk. What is no longer debatable is the major impact of health systems on health status. They do make a difference and there is a powerful case for investing in them.

Well-targeted health system investment can also enhance equity both within and between countries. Life expectancy at birth is over 15 years longer in the best performing country in the European Region than in the worst. There is also a gap of 10 years in life expectancy within countries, including in the wealthier ones. In many countries, inequalities are widening as those that are better off benefit from lifestyle changes and improved health care, while the poor are left behind. This calls for effective action on the social determinants of health and in particular upstream interventions, such as changes in taxation and benefits. It is, however, essential to link these policies with downstream ones, directly tackling risk factors, such as smoking and poor diet. This will often involve taking on powerful vested interests. Finally, there is a need to ensure that health systems promote equity, by removing the barriers to access and to effective and responsive care that are faced by those who are already disadvantaged. In these ways health systems can reduce the health gap within countries, uphold the values of European societies, and make inroads into the economic costs of the unequal distribution of health.

Equity in the distribution of health must be accompanied by fair finance. This means the financing function both guarantees an equitable distribution of the burden of financing according to ability to pay (equity of financing) and protects people against impoverishment as a result of having to pay for health care (financial protection). Financial protection feeds directly into the wider conception of health systems, health and wealth and forms a direct link between health systems and the anti-poverty agenda.

Responsiveness, like equity, is a goal of health systems. It includes all the interpersonal aspects of care. It is not, however, easy to capture because patient expectations vary according to culture, age and class, and because it is difficult to disentangle their experience from other factors that affect their perceptions of the health system.

Policy-makers have a range of tools they can use, from training staff to respect patients' dignity and autonomy, to improving facilities. They may use the levers of pay, regulation or contracting to specify what is expected and afford patients defined rights through service guarantees or Ombudsman schemes. They need, however, to be clear about the trade-offs involved. The

issue of choice highlights the potential tensions between responsiveness and other health system goals. While "choice" may be politically attractive, it favours the knowledgeable and articulate and may increase inequalities. Similarly, while it may promote patient autonomy, choice can also allow for ineffective therapies or fragmentation of care, both of which will impact adversely on health. Those responsible for health policy have to balance these tensions. While challenging, helping populations to access and interpret transparent, valid and meaningful data related to performance can support an informed debate, provided that there are effective safeguards against manipulation of data or patients' behaviour.

Health systems can impact positively on individuals' health and income, both of which strengthen societal well-being. However, health systems also have a direct and significant impact on national and local economies. The health sector is typically one of the biggest service industries (if not the biggest) in European countries. It is very labour intensive, thus impacting directly on employment, but also indirectly, in terms of job mobility, labour market flexibility and indirect labour costs, all of which affect international competitiveness. In addition, health systems contribute to research and development in areas such as biotechnology and pharmaceuticals.

The fact that health systems are significant to the economy of Europe does not on its own justify investment in them in preference to other sectors. Investment choices will depend on the relative rates of return of competing options. Nonetheless, it is acknowledged that where there is significant underemployment, the health sector can form part of a strategy of demand stimulation or be a prerequisite for inward investment, particularly in the context of regional development.

### **Improving health systems performance**

There is an important distinction to be drawn between the capacity to make an impact and actually making it. If health systems are to secure the investment needed to realize their potential, they must be seen to be efficient and effective, and it is here that performance measurement is crucial. Whereas policy-makers in the past often reformed without critically evaluating their efforts, they now need to define expectations, track resources and demonstrate outcomes. Performance measurement makes possible a structured assessment of how health systems are doing and flags up what can be done better.

The European Region has experienced waves of *health system reform*. No countries have been exempt. Reforms have reflected wider societal debates, the search for efficiencies and, in many cases, wholesale political and social change. They have also consistently sought to enhance the performance of one or more health system functions.

Reforms of health services delivery have often been prompted by concerns about costs or efficiency, but may also reflect concerns about responsiveness and equity. They have sought to integrate care, to substitute across levels of care and to strengthen primary care, including giving it more responsibility for public health programmes. Some reforms have focused on quality, introducing a wide range of initiatives at all levels. Others have been linked to new public management strategies that blur the boundaries between public and private. The more effective reforms have been aligned with corresponding adjustments in resource generation and financing.

Reforms of resource generation try to secure the right mix of human resources, fixed capital and technology. Human resource policies have been developed against a background of staff shortages and typically seek to match skills to new types of service delivery, to give increased emphasis to primary care, public health and teamwork, and to ensure quality through continuing education and certification. Generation of physical resources has undergone less extensive reform; examples include the use of private financing to construct hospitals. Investment in new technologies, particularly pharmaceuticals, has been shaped by health technology assessment, regulatory measures and the promotion of generic products.

Financing reforms have perhaps been the most dominant and apparent because of concerns about costs and the levers that funding offers for improving other functions. Challenges to sustainability and solidarity have been met with reforms of revenue collection and pooling, while efficiency has been tackled by reforms of purchasing. In broad terms, collection and pooling reforms have involved the introduction of health insurance, particularly in eastern Europe, or have tried to strengthen links between revenue collection and expenditure by decentralizing responsibilities, or seeking to shift the burden of financing to individuals through co-payments or complementary insurance. The issues of fragmentation of funds, risk selection, and funding for population health have been addressed, in part, by regulation, improved public pooling mechanisms and the creation of dedicated health promotion funds. Funding long-term care remains a challenge.

Purchasing reforms address the issue of how to allocate pooled resources in order to lever the changes that policy-makers want. They often involve more explicit market elements that allow fund holders to specify volume, timeliness and quality of care. These include strategic purchasing, the introduction of a purchaser-provider split, contracting, case-based or performance-related payments, and sometimes more explicit market elements such as provider competition or selective contracting. These mechanisms give purchasers leverage over priorities but have associated risks, not least that providers will focus only on specific targets to the

detriment of other areas. The success of purchasing reforms and management of potential adverse affects depends heavily on information to assess what is being purchased and on performance measurement.

Stewardship reforms have sought to ensure better governed, more accountable and more responsive health systems. Nonetheless, the stewardship function still faces significant challenges, if only because of the complex overlap between health system functions and goals. The environments within which health systems exist are highly complex, demanding coordination between branches of government (executive, legislature and judiciary), levels of government (central and regional) and increasingly between the public and private sectors. Decision-makers are also accountable for a wide range of issues, ranging from those that are considered "broad brush" to the very specific. The reforms enacted have sought to designate responsibility explicitly, to strengthen policy formulation, to make regulation effective but flexible, and to take on board the fact that many of the key determinants of health are outside the health sector and so require well-coordinated intersectoral action. Again, and importantly, success depends on effective information and performance measurement systems that allow decision-makers to assess what is – or is not – happening.

The capacity to *measure health system performance* has increased in some countries in recent years, although from a very low starting point. Information technology (if successfully implemented) can facilitate data collection and analysis and allows better scrutiny of costs, outputs and outcomes. However, the way information is marshalled and presented can usually be improved, particularly in terms of integrating findings with governance mechanisms. If performance measures are to improve performance, information must be readily accessible at the level where decisions are made.

Systems must be designed to take basic data, interrogate them and present them for different audiences so that patients and planners can both find what they need when they need it and in good time. Achieving this is not straightforward, particularly given the need to track a range of functions and to link inputs and outputs. Selecting indicators that are valid, reliable and (crucially, if they are to guide management action) responsive to change is vital, but very challenging. There have been attempts to combine disparate indicators into a single composite index to show overall performance, but these have not been successful. Such efforts do succeed, however, in flagging up the importance of transparency. They also touch on the value of intermediate or instrumental objectives in signposting (and measuring) progress towards ultimate goals. Well-chosen and defined indicators, provided that they are specific and amenable to action, can map how far a function is moving along a critical pathway and can help to signpost the steps that are to be taken to improve performance.

The effectiveness of performance measurement depends on how far it helps to achieve health system objectives, and it must therefore be linked to policy levers that promote real improvement. Public reporting of performance is a tool that can be effective, if undertaken with great care, whether by informing the public or by prompting providers to react to the implied threat of scrutiny. Explicit financial incentives to reward providers achieving predefined standards can also act as levers for change, as can health system targets which lend themselves to work across sectors. As there is a risk in all these approaches that providers will focus on narrow goals without enhancing patient care, vigilance is required. Vigilance is also needed in the design and application of performance measures to avoid a short-term focus or a stifling of innovation. Policy-makers need to take an active role in ensuring that the whole approach to performance measurement is embedded in governance systems. This means aligning it with the political context, and providing for the proper integration of financing mechanisms, market structures and regulation. It is also part of the stewardship role of ministries of health to foster the collection of relevant and appropriate data, ensure transparent analysis, promote the systematic application of evidence in planning and evaluation, and to encourage an informed public policy debate. The combination of all these factors can best support the achievement of health system goals and the managing of any trade-offs between them. Health system stewards are responsible not just for assessing performance but ultimately for ensuring that performance measures lead to better performance.

There is no correct level of health system investment; it is for societies to choose how and how much to invest. However, the weight and range of evidence makes it clear that societies should be investing in health systems as part of societal efforts to enhance health and wealth and to achieve societal well-being. Health policy-makers can therefore be assertive in arguing for resources, provided of course that they have the performance measurement systems in place to demonstrate that they are using investment efficiently and to good effect.

## 1. Introduction

This report takes a fresh look at investment in health systems, drawing on a body of new evidence. It shows that health systems are not, as so often portrayed, a drag on resources, but rather part and parcel of improving health and achieving better economic growth. The relationship between health systems, health and wealth is complex but the three are inextricably linked and investing cost-effectively in health systems can therefore contribute to the ultimate goal of societal well-being.

The policy debate on health systems has been dominated in recent decades by concerns about sustainability and the ability to fund health systems in the face of upward cost pressures. Health expenditure in many European countries is growing at a faster rate than the economy, accounting for an increasing percentage of gross domestic product (GDP) and creating unease about production costs and competitiveness in an increasingly globalized economy. Containing costs has thus become a major priority for most health systems in the World Health Organization (WHO) European Region and beyond. Typically, policy-makers have sought to find a balanced combination of different strategies acting on both the supply and demand sides of health services (Box 1.1).

There is however, a new wave of thinking that seeks to re-examine the long-standing focus on cost-containment. It draws on new understandings of the interdependency between health and wealth; of the

value attached to health by citizens and societies; and of the role health systems play in improving health.

This re-examination of the contribution health makes and the value attached to it has been termed the “health and wealth” debate (1, 2, 3). It has brought to the fore the interrelationships between health status, health systems and economic growth. Increasingly, better health is now hailed as a driver of economic growth. This is in no small part due to the seminal work of the Commission on Macroeconomics and Health (4), which, while focusing on developing countries, did much to bring evidence of the impact of health on economic development to a global policy audience. Three more recent studies have further developed this approach, looking at the European Union (EU) Member States before May 2004 (EU15), the Russian Federation, and countries of central and eastern Europe (CEE) and the Commonwealth of Independent States (CIS), respectively (5, 6, 7). They have demonstrated its relevance to high- and middle-income countries, explored the pathways by which improved health leads to economic productivity in the European Region and illustrated the magnitude of its impact.

At the same time as the utilitarian “case for health” has been strengthened, Member States have also restated the fundamental value of health as a human right. They have committed to the principles of universal access, equity and solidarity as core values of European societies in a number of pan-European policy initiatives (2, 8, 9, 10). Health is seen as a key indicator of social development and well-being, as well as a means to increasing social cohesion.

This shift in the debate, and with it our views on the value of health in our societies, has shed new light on the role of health systems and the challenges they give rise to. Health systems, to the extent that they produce health, could be seen to be a productive sector rather than a drain on our economies, which would in turn force a re-examination of concerns about financial sustainability. Increased spending on effective health systems could be recast as a contribution to a bigger (and more productive) economy, as well as a way of achieving health improvement and higher levels of well-being, which themselves are societal objectives. In the EU context, this places health systems firmly at the centre of measures to further the Lisbon agenda, pursuing its twin goals of economic competitiveness and social cohesion (11), and challenges the simplistic view that rising health expenditure is a threat to financial viability.

Some analysts have gone further in arguing that investing in appropriate health system interventions may result in reduced growth of health care expenditure in

### Box 1.1 Cost-containment strategies

Policy-makers have, for years, sought to contain costs using a combination of strategies that act on the demand and the supply sides of health systems.

Demand-side strategies have focused largely on shifting the cost of health care from statutory sources to health service users by increasing cost sharing and/or by rationing access to publicly funded services. Consequently, in some countries, services have been taken out of the statutory benefits package or more often, new, expensive types of care have not been included but are payable “out of pocket” or through voluntary health insurance. These measures are often highly regressive and tend to undermine social solidarity by decreasing access to those with the greatest need.

Strategies acting on the supply side have tried to secure more or better value for money. They include the introduction of strategic purchasing; market mechanisms introducing competition between providers to improve efficiency; performance-related payments; health technology assessment (HTA); better integration between levels of care; and strengthening the role of primary care. These have commanded broad support among policy-makers and some have resulted in efficiency increases.



the future. The two Wanless reports commissioned by the United Kingdom Treasury are a case in point. They examined the financial sustainability of health services in the United Kingdom and recommended further investment to strengthen the National Health Service (NHS) (12) and, in particular, its contribution to public health (13) as a means of achieving long-term sustainability. There is also considerable interest in ways that appropriately targeted interventions by health systems might mitigate the health (and expenditure) consequences of population ageing, when coupled with coordinated action on retirement age and pension policies. Effective investment can be instrumental in securing longer life expectancy, and crucially, healthier life expectancy, by preventing and/or treating premature or avoidable morbidity. This has been termed “compression of morbidity” (14, 15) and can already be observed in some European countries with well-developed health systems. This could create a virtuous health systems cycle by which healthier older people use fewer services, retire later and contribute to the economy for longer, drawing less from pension funds and generally reducing the potential challenge to sustainability.

However, while these arguments are pertinent and do create a strong case for investment in health systems, they are far from justifying automatic additional investment. There are inevitable concerns about value for money and competing calls for investment in other sectors, some of which may themselves contribute to health. Claims for health spending need to be seen in the context of substantial and, in many cases justified, concerns about the appropriateness of current health interventions and technical inefficiencies in many parts of Europe’s health systems. In some countries many treatments provided are not supported by evidence, which at best provides no benefit for the patient and at worst does actual harm. Whichever is the case, such treatments waste scarce resources and have a real opportunity cost. There also needs to be consideration of the way priorities are set and resources are allocated between alternative or competing interventions and programmes, so that the choice between expenditure on areas such as mental health, primary care, prevention, secondary care and so on relates to outcomes and maximizes health gains.

It is just as important to consider the opportunity costs of investing in health services rather than acting on determinants of health through action in other sectors. It is important to recognize the work on the social determinants of health (16) and the renewed emphasis on Health in All Policies (HiAP) (17, 18), which demonstrates that investment in the physical

environment, education or transport systems may yield higher health returns than investment in health systems. By the same token, health policy-making must acknowledge that additional expenditure in other areas of government activity may result in higher societal well-being, which is, after all, the ultimate societal objective in most, if not all, countries of the European Region. The case for health systems investment therefore needs to be supported by strong and transparent performance assessment, demonstrating cost–effectiveness as well as its strengths relative to other competing expenditure areas.

This document aims to support policy-makers as they assess the case for investment in health systems. It was prepared for the WHO Ministerial Conference on Health Systems, Health and Wealth (Tallinn, June 2008) (19) and synthesizes the available evidence, undertaking a systematic exploration of the various issues involved and the interaction between them. It can help policy-makers to marshal the information available and to work their way through a complex set of issues so as to understand health and wealth dynamics better. It cannot, of course, provide definitive answers on how or to what extent policy-makers should invest in individual health systems.

This report is divided into a number of sections, each of which draws on a chapter or group of chapters in the main volume.<sup>1</sup> The first four sections set the scene; the next three (the core of the document) explore the main thrust of the arguments for investing in health systems; and the final section draws some relevant policy conclusions.

Section 1: (this section) seeks to introduce the document and set it in policy context.

Section 2: explores what we understand by health systems, setting out a definition and a set of functions.

Section 3: presents and discusses the conceptual framework that underpins the study and that has helped structure the evidence collection and analysis.

Section 4: outlines and re-examines the main cost pressures and their impacts.

Section 5: focuses on the evidence for health as a driver for economic growth and societal well-being.

Section 6: examines the impact of health systems on health and on other societal goals.

Section 7: reviews mechanisms to address performance improvement.

Section 8: summarizes the main issues and suggests new ways of thinking about investment in health systems.

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1 Throughout this document, the “main volume” refers to Figueras et al. (19), whereas the “accompanying volume” refers to Smith et al. (186).

## 2. What is a health system?

Policy-makers seeking to lever investment for health or to assess the impact of investment in health systems over investment in other areas need to be able to define and delineate what they mean by “health system”. So, what is a health system? This question seems straightforward, yet there does not seem to be a simple answer. The definitions of health systems put forward by analysts and organizations vary enormously, with particular differences in the way that health system boundaries are determined. At one end of the spectrum are narrow definitions which focus on medical care with “patients, clear exit and entry points and services regarding disease, disability and death”. At the other end are broad approaches that encompass all those determinants that contribute directly or indirectly to health. We need to find a balance between the narrowest definitions that only cover curative services and the all-embracing notion of a health system which includes everything that might improve health (not least housing, education, and environmental policy). This process of establishing a balance or “manageable boundaries” is particularly important when it comes to making definitions operational, as well as managing and overseeing health systems and their performance in practice.

### Definitions and functions

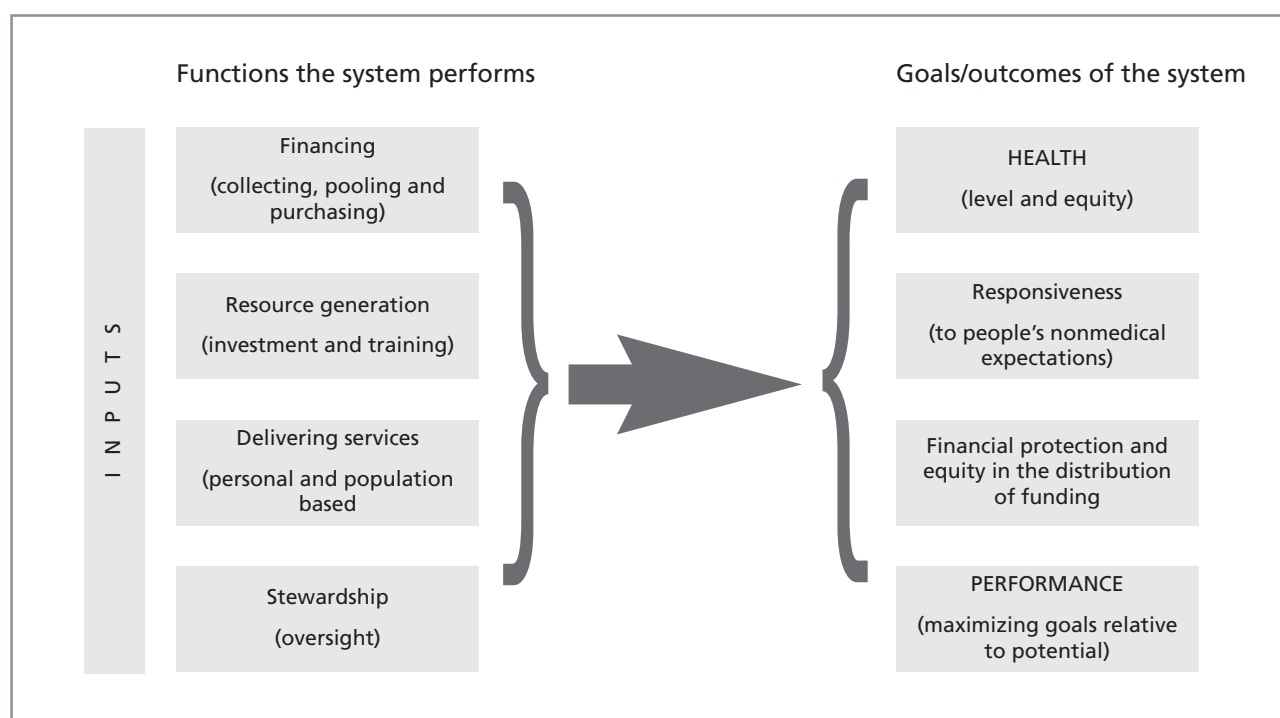
The health system definition put forward by the *World Health Report 2000 (20)* forms (along with later work) the basis for our approach here. The *World Health Report* defines a health system as “all organizations, people and actions whose primary intent is to promote, restore or maintain health”. This definition incorporates “selected intersectoral actions in which the stewards of the health system take responsibility to advocate for improvements in areas outside their direct control, such as legislation to reduce fatalities from traffic accidents.”

This definition underpinned the Health Systems Assessment Framework (HSAF) (Fig. 2.1), which provides for the review of the performance of health systems against three major societal goals (Box 2.1).

Performance is then understood as the attainment of these goals relative to the resources invested in them, which in turn implies a fourth goal, namely efficiency or productivity. In order to achieve these goals, all health systems have to carry out four core functions, regardless of how they are organized, or of the terminology they use (Box 2.1).

The HSAF, with its goals and functions, is discussed in

Fig. 2.1 Health Systems Assessment Framework: functions and goals



Source: Adapted by P Travis from World Health Organization 2000 (20).

**Box 2.1 Health system goals and functions****Goals**

To improve:

- the health status of the population (both the average level of health and the distribution of health);
- responsiveness to the nonmedical expectations of the population, including two sets of dimensions, respect for persons (patient dignity, confidentiality, autonomy and communication) and client orientation (prompt attention, basic amenities, social support and choice);
- fairness of financing (financial protection, that is, avoidance of impoverishment as a consequence of health payments, along with equitable distribution of the burden of funding the system).

**Functions**

- financing (revenue collection, fund pooling and purchasing)
- resource generation (human resources, technologies and facilities)
- delivery of personal and population-based health services
- stewardship (health policy formulation, regulation and intelligence).

more detail in Chapter 2 of the main volume (21) and is used later in this report as the basis of discussion on the impact of health systems and strategies (Section 6), and mechanisms to improve performance (Section 7).

This approach can be refined and taken further. A health system would then include, in practical terms, the following items:

- first, the delivery of (personal and population-based) health services, including primary and secondary prevention, treatment, care and rehabilitation;
- second, activities to enable the delivery of health services, and specifically the functions of finance, resource generation and stewardship; and
- third, stewardship activities aimed at influencing the health impact of “relevant” interventions in other sectors, regardless of whether the primary purpose of those interventions is to improve health.

This approach relies on the understanding that the health system functions of financing, resource allocation and delivery relate directly to health services, while the stewardship function (above all others) has an additional role in other sectors beyond health services, influencing the determinants of health.

**Steering health systems: the role of the Ministry of Health**

The above definition asserts the responsibility of ministries of health beyond health care. It emphasizes the crucial message that those responsible for health systems are accountable for exercising stewardship in other sectors to ensure that health objectives are considered in their policies – what has been termed HiAP. The corollary is that it also acknowledges that the funding, provision and management of many health-relevant interventions are the responsibility of other sectors. It is implicit in this approach that the Ministry of Health is the “steward of the stewards” and has a stewardship function assessing performance across sectors and influencing the allocation of resources to maximize health gains and allocative efficiency. Ministries of health are, therefore, to be held accountable not only for health services but for the stewardship they exercise over other sectors.

This method of capturing health systems points to a practical way forward with clear distribution of responsibilities. However, it is more normative than descriptive, particularly with regard to the role of ministries of health. While it might be desirable that ministries exercise stewardship across sectors, in practice many share responsibility even for the formal health sector and have only limited authority beyond it. Furthermore, health ministries are sometimes relatively weak, both technically and politically. Context is all-important and the level of decentralization, models of finance or delivery, and the role of other actors, among other factors all complicate the Ministry’s own role. Moreover, exercising influence across sectors is far from easy. It requires a certain leverage, and there are not always the appropriate intersectoral tools, mechanisms or implementation capacity available. Nor is it easy to hold other ministries accountable for the health impact of other sectors. Nonetheless, despite the complexities of shared stewardship and implementation, as well as the normative nature of the assertion, the Ministry of Health must seek to develop a central role in the health system, as defined here. This means it must see itself as primarily accountable for the whole health system and take steps that will empower it to steer the system effectively.

This section has sought not simply to assert the accountability of the Ministry of Health for the whole of the health system, but additionally to enable health policy-makers to exercise stewardship. It sets out where health system boundaries lie and how health stewards must look beyond health care. This is vital if ministries are to be able to secure investment in health systems in partnership with other sectors.

### 3. A conceptual framework

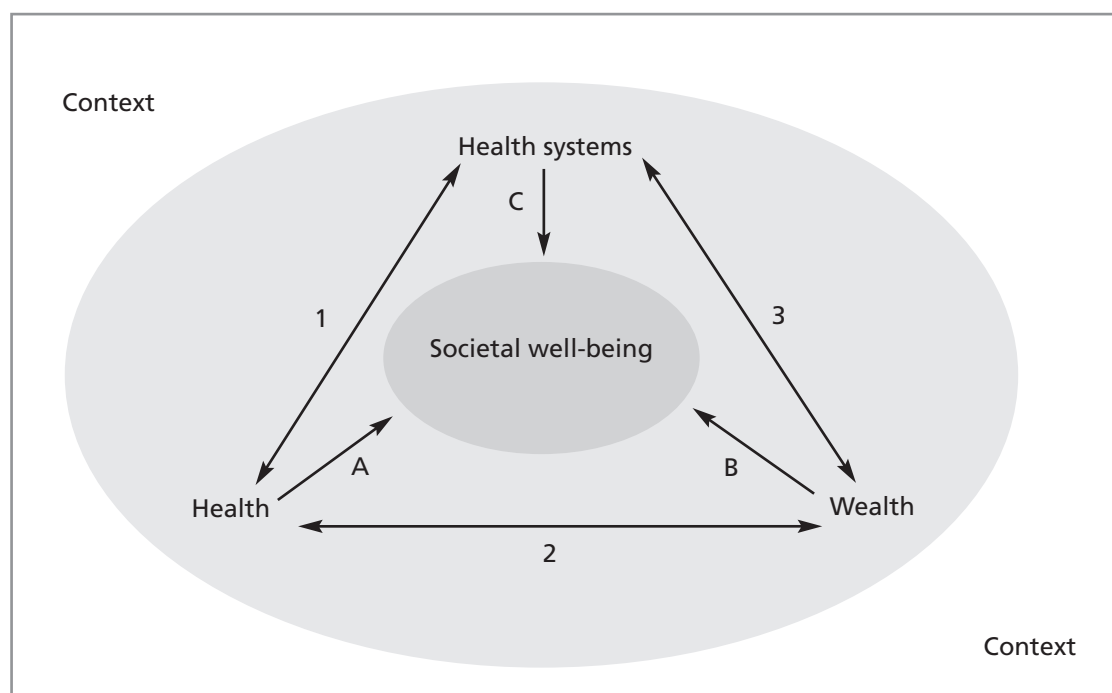
The case for health systems investment rests on the understanding that health systems are intricately linked to health and wealth. The relationships between them are complex and dynamic. This section therefore puts forward a conceptual framework that can guide policy-makers in articulating the links between issues, and is thus the backbone for this review. The framework links health systems (as defined in Section 2) to health, wealth and societal well-being, with the causal, direct and indirect relationships between the key elements captured (at least in part) by the “conceptual triangle”<sup>2</sup> shown in Fig. 3.1. It serves to support a systematic review of the issues and also, crucially, positions health system investment in direct relationship with the ultimate goal of all social systems: societal well-being.

The notion of societal well-being requires some explanation. It is generally accepted that health, despite its importance to the public, is not viewed explicitly as the ultimate goal of organized societies. Rather, societies strive towards a positive and sustainable state of well-being. This is a multidimensional concept and a very difficult one to pin down, not least because so many disciplines and experts have used overlapping but

slightly different language to explore it. For the purposes of this review, societal well-being stands for the total well-being of the entire society and touches on notions of happiness and quality of life. It can also be taken to reflect many other elements, such as quality of the environment, levels of crime, access to essential social services as well as the more religious or spiritual aspects of life. It is not, however, the purpose of this document to give a detailed definition, although the main volume does discuss the issues and the complexities involved in defining and measuring well-being in more depth (22). “Societal well-being” has been chosen in preference to “social welfare” to avoid any potential misunderstanding, as social welfare is also understood to be primarily about welfare services.

The understanding captured by the framework in Fig. 3.1 is that health systems contribute to societal well-being in three main ways. First, and above all, health systems produce health (see (1) in the diagram), which is both a major and inherent component of well-being ((A) in the diagram) and through its impact on wealth creation (see (2)), an indirect (yet key) contributor to well-being (see (B)). Second, although to a much lesser

**Fig. 3.1 Health systems, health, wealth and societal well-being: a triangular relationship**



<sup>2</sup> This conceptual triangle was developed in a seminar at WHO Regional Office for Europe in Copenhagen in 2007, with the participation of Rifat Atun, Antonio Duran, Josep Figueras, Joe Kutzin, Nata Menabde, Elias Mossialos and Gerard Schmets (in alphabetical order).

extent, health systems have a direct impact on wealth as a significant component of the economy (see (3)), which again impacts on societal well-being (see (B)). Third, health systems contribute directly to societal well-being because societies draw satisfaction from the existence of health services and the ability of people to access them, regardless of whether or not services are effective or indeed whether or not they are used (see (C)). One final point must be raised here – that of context., which refers to the country-specific social, economic, cultural and political environment in which the triangular relationship between health systems, health, wealth and societal well-being is embedded. Fig. 3.1 seeks to reflect the importance of different contexts in determining the nature and the extent of the individual causal relationships shown.

There are “lesser triangles”, nestled within the main triangle. These relationships are not all of equal importance and not all are covered in equal detail here. Nonetheless, the most important are addressed in the subsections that follow, including health systems and their contribution to health and societal well-being; health’s contribution to wealth and societal well-being; and health systems’ impact on wealth.

### **Health systems: their contribution to health and societal well-being**

In reality this is the subset of relationships that is uppermost in the thinking of most health policy-makers. Most important of all is the impact that health systems have on health improvement (see (1) in Fig. 3.1) and this is also central to the analysis in this report. The impact of health systems on health includes all the goals and functions of the HSAF, outlined in Fig. 2.1, namely health (levels and equity); responsiveness; and fairness of financing (financial protection and equity in the distribution of funding) that are not explicitly captured by the triangle. We illustrate the impact of health systems on some of these goals in Section 6, including health (Subsections 6.2 and 6.3), health inequalities (Subsection 6.4) and responsiveness (Subsection 6.5).

We also look extensively at how health systems can be improved (Section 7) and efficiency maximized through reform strategies and performance assessment, recognizing not only that value for money is absolutely indispensable for sustained investment but also that there is a significant potential gap between the “what health systems can do” in theory and the “what they achieve” in practice, which policy-makers have to address when competing for resources.

It should also be noted that the relationship between health systems and health is bi-directional and that levels and patterns of ill health will feed back into the health system, shaping its priorities and the allocation of resources between interventions.

In addition to their impact on health, health systems

make a direct contribution to societal well-being (see (C) in Fig. 3.1) by virtue of the value that citizens attach to them as guarantors of health protection. The right to health protection is not to be understood as the right to be healthy. Most societies attach a distinct value simply to the fact that an organized health system exists and can be accessed – these are held to be truly important and are de facto a fundamental component of social cohesion and well-being (8, 23).

### **Health: its contribution to wealth and societal well-being**

A second set of key relationships link health, wealth and well-being. These form the “inner triangle” at the base of the main triangle, shown in Fig. 3.1. They also encapsulate the argument at the heart of this report (see Section 5). The contribution of health to societal well-being can be characterized as follows. Health constitutes a major component of well-being in its own right (see (A) in Fig. 3.1). Citizens draw satisfaction from living longer and healthier lives and value health regardless of whether or not they are economically productive. As already noted, health also plays an important role in increasing economic productivity and thus national income (see (2)), which in turn makes a key contribution to the dimension of societal well-being (see (B)). Health has an additional impact on wealth (see (2)), as it allows for economic gains from savings on health expenditure.

Any discussion that touches on wealth demands that figures be produced as evidence. Quantifying wealth and the value of health and well-being in economic terms is of course complex, not least because health is not a normal, traded commodity. Some of these concerns are detailed in Box 3.1.

While the focus of this analysis is on the impact of health on wealth, it should be noted that this relationship is also bi-directional. Wealth has a major effect on health in its own right, both collectively and individually. Its impacts are direct, through the material conditions that improve biological survival and health, as well as indirect, through its effects on social participation and people’s control over their life circumstances. It should be possible, then, to establish a virtuous circle, or cycle, of better health improving economic performance and better economic performance improving health. This makes it all the more important that health systems exercise stewardship of relevant public health interventions and interventions in other sectors, addressing the socioeconomic determinants of health (Subsection 6.3).

### **Health systems: their contribution to wealth**

The third relationship explored here, albeit far less significant, refers to the direct contribution of health systems to the economy (see (3) in Fig. 3.1), irrespective of their impact on health improvement. Health services

### Box 3.1 Gross domestic product as a measure of wealth and well-being: some concerns

There are at least three major sets of caveats relating to the use of gross domestic product (GDP) per capita both as a measure for wealth and as a proxy for societal well-being.

- First, GDP per capita is no more than the sum of monetary transactions in the economy. It pays no attention to the use of resources and does not differentiate between expenditure that increases well-being, such as on many consumption goods, and that which diminishes it. Yet the true purpose of economic activity is to maximize social welfare or societal well-being, not solely to produce goods.
- Second, it does not capture the important economic benefits from people who are not formally employed or paid, but who provide significant support, for instance in terms of caring for older and younger people.
- Finally, it pays no attention to those elements of the economy that are not monetarized, whether negative, such as pollution or fear of crime, or positive, such as happiness or, indeed, health itself. There are concerns about capturing the contribution of health to wealth too narrowly through foregone GDP income which tends to privilege those in employment over the rest of the population. This can be partially addressed by translating the contribution of health to social welfare or societal well-being into economic terms and thus attributing a monetary value to health – and indeed, this is done routinely when individuals demand income premiums to undertake jobs associated with a risk of death. Following this approach, and in spite of the methodological challenges involved, a number of studies have calculated what is termed the value of statistical life through “willingness to pay” (WTP) methodologies and developed “full income” measures (see Subsection 5.1).

are an important economic sector in many countries, often being the largest employer and playing a significant role as a driver of and consumer of technological innovation, research and development (R&D). A note of caution is needed at this point, as the sizable impact of health systems on the economy does not alone create an automatic justification for investing in health systems (Subsection 6.6), since investments in other sectors may yield better returns. Finally, as with the other relationships discussed, this “third side of the triangle”, linking health systems and wealth, is also bi-directional. There is a widely held view that health care spending increases inexorably with national income. Recent research has shown that the debate is complex. The impact of economic growth on health care expenditure is therefore addressed in more detail in Section 4.

Finally, although we believe that it has valuable explanatory power, this conceptual framework must be treated with a degree of caution. There are certain issues to be considered that relate to its deceptively normative outlook; the strength of causality of its various relationships; the bi-directional nature of some of those relationships; variation in meaning and terminology; the

### Box 3.2 The triangular relationship “health systems, health, wealth and societal well-being”: some concerns

The triangle shown in Fig. 3.1 is an effective graphical representation of the main relationships between health systems, health, wealth and societal well-being. However, as an image it is almost deceptively simple and could be misleading. There are therefore a number of caveats that need to be borne in mind.

- First, while the model may come across as normative, it is positive/descriptive in its conception, describing a series of causal relationships but without any value judgment as to their relative importance or appropriateness. The only normative position refers to the achievement of societal well-being (the “bubble” in the centre of the triangle) as the ultimate goal; a position that nonetheless commands widespread acceptance in most European societies.
- Second, even when there is common ground about the importance of well-being, there are significant differences about what aspects are included (or indeed how to measure them), because this involves social preferences and underlying value judgments. What constitutes the maximization of welfare will therefore depend on the objectives and unstated ideals of a particular society.
- Third, the causal relationships between these components are not clear cut or linear, nor are they easily measurable. There needs to be a full discussion and proper exploration of the nuances, strength and nature of these links, as the triangle tends to imply that all the relationships have the same weight.
- Fourth, context matters enormously – all the relationships in the triangle are context specific and depend on the particulars of, among other things, the understanding of societal well-being, the economic, social, cultural and political situation, or the model of health system organization in the given setting. It is therefore clear that the model will need to be applied with full consideration of how context will determine specific relationships, and bearing in mind all that this implies for drawing conclusions and positing policy lessons that are relevant across countries.

role of context; and the values associated with societal well-being. These are outlined in Box 3.2 and explored in more detail in the main volume (19).

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Second, even when there is common ground about the importance of well-being, there are significant differences about what aspects are included (or indeed how to measure them), because this involves social preferences and underlying value judgments. What constitutes the maximization of welfare will therefore depend on the objectives and unstated ideals of a particular society.

Third, the causal relationships between these components are not clear cut or linear, nor are they easily measurable. There needs to be a full discussion and proper exploration of the nuances, strength and nature of these links, as the triangle tends to imply that all the relationships have the same weight.

Fourth, context matters enormously – all the relationships in the triangle are context specific and depend on the particulars of, among other things, the understanding of societal well-being, the economic, social, cultural and political situation, or the model of health system organization in the given setting. It is therefore clear that the model will need to be applied with full consideration of how context will determine specific relationships, and bearing in mind all that this implies for drawing conclusions and positing policy lessons that are relevant across countries.

This section has explored the complex interactions between the four components of a dynamic model (health systems, health, wealth and societal well-being). Clearly, this model cannot establish a set of quantitative functions or tools which will lead policy-makers automatically to the optimal investment decisions. Nor does it argue that increasing investment in health systems is necessarily “the right choice” automatically. Rather, it constitutes a framework for policy-makers that will help them to balance the key elements in decision-making. While it acknowledges on the one hand the inexact nature and limitations of measurement, it also emphasizes on the other hand the need to measure, evaluate and assess performance in order to improve decision-making.

## 4. Re-examining cost pressures

Before policy-makers can even begin to make a case for health systems investment they must first address the widespread, but exaggerated concern that health care expenditures are rising uncontrollably. There is an undeniable and significant rise in health care costs across Europe and this is often, and justifiably, a concern for policy-makers. The picture is, however, more intricate than it appears at first and it is worth considering cost pressures before continuing to the core of the discussion in this report. There is a consensus that the ageing of the population, or the demographic transition; medical progress through new technologies; and higher population expectations are “inflationary”. Together with the impact of economic growth and higher relative prices for health care inputs, these factors push costs upwards. However, these challenges, their effects and the interplay between them are not particularly well understood. The policy debate, as a result, has been shaped by myths and misunderstandings.

This section draws on Chapter 3 of the main volume (24) to re-examine and clarify the role and the impact of the drivers of health expenditure. It first provides some estimates on the impact of demographic change combined with the other cost pressures on health expenditure. This is followed by a brief discussion on the role played by each factor: ageing, new technologies, citizens’ expectations, economic growth and relative prices of health care inputs.

A number of studies across various countries have sought to forecast future health expenditure, in light of the known demographic factors and in combination with other cost pressures and economic aspects. For instance, Organisation for Economic Co-operation and Development (OECD) projections (2005–2050) (25) foresee a significant increase in health and long-term care public spending from almost 7% to between 10% (cost-containment scenario) and 13% (cost pressure scenario) of GDP. A European Commission (EC) study (26) based on the EU Member States belonging to the EU before January 2007 (EU25) predicts that the combined effects of health and long-term care will account for an additional 1.1–3.8% of European GDP, while World Bank research indicates an increase in GDP for the majority of CEE and CIS countries, although to a smaller extent than in the EU25 (27). However, these figures should be treated with some caution. Not enough is known about the implications of emerging evidence on some important areas: utilization levels and the likely changes that will come with new technologies; age-related health expenditure and the probable impact of compression of morbidity and death-related costs; or, indeed, the complexities of projecting GDP growth, especially in transition countries.

### The ageing of the population

Despite the complexities of measuring and modelling, all demographic projections agree on one issue: Europe’s population is ageing. This means shrinking populations in some countries and major increases in dependency ratios across Europe (see Box 4.1).

#### Box 4.1 The ageing population in Europe

The European population will change dramatically in the coming decades. Projections developed for the European Union (EU) Member States before January 2007 (EU25) suggest that its fertility rates will remain well below the natural replacement rates; life expectancy will rise by six years; and the elderly population will increase sharply, with old-age dependency ratios doubling so that if the retirement age remains unchanged by 2050 there will be only two people of working age for every elderly citizen (26). Inward migration is expected to only partially counterbalance the ageing trend and low fertility. Trends in the Commonwealth of Independent States (CIS) and the countries of central and eastern Europe (CEE) are very similar, with the median age projected to increase by 10 years by 2025, and population numbers shrinking in 18 of the 28 countries. It is expected that the number of people over 65 years old will rise to one person in every five in most countries of the region (27).

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Population ageing poses two (potential) sets of pressures for financing health care: on utilization of health care services on the one hand, and in terms of decreased income linked to the falling proportion of the population that are economically active on the other hand.

On the utilization side, the widespread belief that health care use and, more critically, expenditure increases with



age is challenged by a growing body of evidence. First, it seems that proximity of death (28) is a more important predictor of increased health care expenditure than ageing itself. Evidence shows a large share of a lifetime's health care costs fall in the last year of life, whenever that may be, and the "costs of dying" are lower in older age groups (since the elderly receive less intensive treatment at the end of their life). Living longer and dying at an older average age will, therefore, lower the average costs of dying. Secondly, a stagnation of utilization rates is evident (along with falling levels of utilization) in older age groups, with use peaking at 80 years of age, which suggests that the increase in numbers of the very elderly is not such a cause for concern as often believed. Finally, the impact of ageing on health care expenditure is increasingly challenged by the "dynamic equilibrium" and "compression of morbidity" (14) theories, which hypothesize that as people live longer morbidity and disability will affect people for shorter periods of time in absolute terms (compression of morbidity) and/or in relative terms (dynamic equilibrium), resulting in longer and healthier life expectancy. These concepts are addressed in more detail in Subsection 5.3.

On the funding side, as the dependency ratio increases, the burden of funding the health system will fall on fewer individuals. In other words, the intergenerational transfers from the young to the old will need to increase dramatically. Immigration, which adjusts the age structure of populations, will not necessarily be able to address the problem, particularly given the decline in the labour force, which, in the EU15, for instance, may be as high as 14% by 2050 (29). However, an increase in retirement age would effectively reduce the dependency ratio and increase contributions. A scenario characterized by healthier longevity is defensible and would go some way to mitigating the pressures on health and social expenditure. For instance, Oliveira Martins, Duval & Jaumotte (30) argue that adjusting "working age" (currently 15 to 64) by a fairly modest increase of 1.2 years every 10 years, in line with the expected increase in longevity, could stabilize the size of the working population relative to that of the economically inactive.

It can be argued, with some assertiveness and contrary to popular belief, that ageing is not an inevitable and unmanageable drain on health care resources. It will, it seems, explain a much smaller part in increasing health care expenditure than is sometimes predicted, while a more effective health system can help to address and minimize the cost pressures of ageing, not least by ensuring healthy ageing and allowing older people to remain economically active.

### **Medical innovation and new technologies**

It is common for analysts to identify innovation, new technology and medical progress in general as major

drivers of rising health care spending (25, 31, 32, 33, 34). While commentators all note the methodological difficulties in defining and assessing the impact of technical and medical developments, it is argued that they have accounted for an average of 50% of the historical increase in health expenditure (34, 35). Some suggest that this may increase again in the future as new technological innovations are adopted, but this does not need to be the case in all areas. For instance, there are now few new pharmaceuticals for common conditions in the development pipeline, while some of those that are being developed offer little advantage over what is already available. Furthermore, prices of a number of widely used pharmaceuticals are likely to fall as they become off-patent medicines.

It is crucial, when we consider the impact of new technologies, to distinguish between the effects of technology on overall costs and the increase (or otherwise) in health system effectiveness or cost-effectiveness. So, while in general the medical innovations of the last decades have improved effectiveness, substituting for or improving the existing arsenal of treatments and diagnostics and (often) lowering unit costs, they have often not reduced overall costs at aggregate level. There are a number of reasons for this. On a positive note, medical innovations have extended the scope and range of treatments available, allowing previously unmet health needs to be addressed and extending quality and length of life. Less appropriately, treatment has sometimes been extended to a wider set of indications, even when it does not add to the overall health gain of society. This has been the case both when new technologies offer only marginal improvements over previous therapies and when medical progress is applied inappropriately, for example to patients or conditions where there is no extra, even marginal effect, or real cost benefit. This is typically associated with perverse supply-side economic incentives such as skewed payment systems that create supplier-induced demand.

This suggests that the policy focus should be less on the cost of technological developments per se than on ensuring that new technologies are appropriate and cost-effective. Policy action ought therefore to address the most appropriate introduction and utilization of technology, and in particular encourage the use of health technology assessment (HTA) (36) and more appropriate tailoring of payment systems. These issues related to improving health systems performance are addressed in Section 7.

### **Citizens' expectations**

One of the factors fuelling the (sometimes inappropriate) introduction of technology and upward pressure on costs is the weight of citizens' expectations. Given that responsiveness is now recognized as a central goal of the health system in its own right, health

systems are under ever greater obligation to respond to people's concerns and indeed demands (discussed in more detail in Subsection 6.5). It means that the health system cannot ignore patients' expectations but must strive to meet them or, rather, to understand and accommodate them as appropriately as possible. In many countries in the WHO European Region, there are indeed high expectations about the range of treatments and quality of services that "should" be available. Patients have better access to information and patient organizations seek to influence decision-making processes. In some countries they are empowered through a policy emphasis on consumer choice. Medical technology and pharmaceutical industries also seek to influence decision-makers directly and through their support to patient groups. Health care professionals and decision-makers sometimes face intense pressures to adopt the latest available medical innovations, often without reference to cost-effectiveness or indeed the potential for waste.

The policy focus must therefore be on how to inform citizens, involving them in an evidence-based debate so that their expectations can reflect not only the legitimate desire to secure the best treatment possible but also an understanding of the issues of effectiveness and cost-effectiveness. The goal must be to make responsiveness sustainable by agreeing with citizens to invest in innovation cost-effectively and with no loss of societal welfare.

### **Economic growth as a cost pressure**

The level of economic growth, as measured by the level of GDP, is widely regarded as an important explanatory variable for higher expenditure, both in terms of total amounts spent per capita, as well as in relative terms or the percentage of GDP devoted to health (33). It is widely argued that health is a luxury good rather than a necessity, which implies that as national income or wealth increases, so expectations will rise and health care spending will rise too, inexorably, regardless of need and while making little contribution to population health. The OECD estimated that 2.3% of the 3.6% growth per year in public health spending per capita in OECD countries between 1981 and 2004 was due to income effects (25). However, there is no consensus about the income elasticity of health expenditure or whether or not health care is a "luxury good". More sophisticated analyses that address earlier methodological weaknesses (cross-sectional versus longitudinal studies, controlling for price inputs and true price effects) have shown how results are conflicting, with significant variations linked to year, country, methodology, level of aggregation and health system model.

### **Price increases of health care inputs**

Finally, another often-mentioned but poorly understood factor influencing health care expenditure is the relative price increase of key components of health care spending, such as pharmaceuticals, capital investment and, particularly, wages. Wages are especially important in health care as the sector has many of the characteristics of a "handicraft industry", being heavily reliant on human resources and less amenable to labour-saving technological developments than other industries. This is further exacerbated by labour shortages. Labour productivity growth is therefore slower than for other sectors (37) and wages are likely to rise more rapidly than productivity. This is borne out by Baumol's model of "unbalanced growth", which is supported by empirical evidence from 19 OECD countries showing that health care expenditure is driven by wage increases in excess of productivity growth (38).

This section has illustrated the various dimensions of the cost pressures on health services and shown that the magnitude of these impacts can be ameliorated through judicious investment in health systems and appropriate management tools and reform strategies (Section 7).

## 5. The contribution of health to wealth and societal well-being

This section addresses the “inner triangle” at the base of the main triangle, the geometrical and conceptual base of the model (see Fig. 3.1, Section 3) and the central tenet of this study. The core proposition is that health (its level and equity dimensions) is directly, in and of itself, a major contributor to societal well-being. In addition it makes an indirect contribution to well-being through its impact on wealth creation. This justifies major investment in health and, to the extent that health systems improve health, in health systems.

This section summarizes the results of a comprehensive review of the evidence on the economic consequences of ill health (39) that was also prepared for the WHO European Ministerial Conference on Health Systems, Health and Wealth in Tallinn, June 2008. The evidence is grouped in four categories; the direct contribution of health to societal well-being; the effects of ill health on economic productivity; the impact of health on health care expenditure; and the economic consequences of health inequalities.

### 5.1 The direct contribution of health to societal well-being

Any decision on health investment is underpinned by the value that individuals and societies attribute to better health (as a major component of societal well-being), regardless of the immediate economic consequences of ill health. However, quantifying this or comparing it to the value attached to other components of societal well-being is far from straightforward. Health does not, for example, have a market price like many other goods and services, so determining its value involves complex methodologies and indirect mechanisms. While an economic value of statistical life can be derived, there is considerable variation between studies, so caution and sensitivity analyses are needed, particularly given the differences in the valuation of individual lives in distinct cultural and socioeconomic contexts.<sup>3</sup>

GDP has already been shown to be an inadequate way of capturing societal well-being (Box 3.2, Section 3), only giving a limited picture of the economic costs of ill health and premature death. Initiatives to remedy this allow the value of mortality reductions to be introduced into national income accounting through “full income” measures. These “add” the “full” value associated with the years of life expectancy gained to the sum of growth in GDP, reflecting the overall impact of health on social

welfare or, in the terminology of this report, societal well-being. Usher, in a study of high-income countries, attributed some 30% of the growth in full income to declines in mortality (40). Nordhaus, in the United States, found that the economic value of increased longevity in the last century has approximately equalled growth measured in non-health goods and services (41), with other studies finding impacts on a similar scale. Suhrcke et al. (5) adopted this approach to estimate the monetary worth of recent increases in life expectancy in selected western European countries and showed that between 29% and 38% of notional GDP increases from 1970 to 2003 could be attributed to gains in life expectancy. This illustrates the very substantial value attached to health. They also applied this model to a sample of CEE and CIS countries, showing a decrease in life expectancy and a consequent welfare loss of between 16% of per capita GDP in Moldova and 31% in the Russian Federation between 1990 and 2003. This illustrates the scale of the negative health impacts of transition in some parts of the European Region and makes clear that the implications of ill health go far beyond the health system.

Clearly these valuations of welfare gains from longer life are highly simplified, but they are nonetheless indicative of the impact of health on wealth, when the importance of non-monetary elements are acknowledged. If only a fraction of life expectancy gains are the result of health interventions, the benefits are huge. Health expenditure through health systems and other sectors that impact on health can then be shown to achieve “social productivity” many times greater than that associated with other forms of investment.

### 5.2 The effects of ill health on economic productivity

There is a sound theoretical and empirical basis to the argument that human capital contributes to economic growth. Human capital is demonstrably interlinked with economic outcomes and since health is an important component of human capital, it follows that health is linked with economic outcomes. Health contributes (at both the individual and the country level) through higher productivity, securing labour supply, through skills and the savings that become available for investment in physical and intellectual capital (5). These assertions are supported by a significant volume of evidence both at the microeconomic (individual and household) and

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<sup>3</sup> Willingness to pay (WTP) methods are an example of how the complex issue of attributing an explicit value to health has been tackled. WTP methods assess how far people will trade off health against things for which a known price exists, for instance the premiums paid for undertaking hazardous work. This makes it possible to calculate the value of a statistical life that in turn allows a value to be placed on changes in life expectancy and supports comparisons with other measures of economic activity, such as GDP.

macroeconomic (country) levels, as discussed in the following sections.

## Microeconomic consequences

### Productivity

At the microeconomic level there is a wide range of studies showing that poor health negatively affects labour market productivity, as measured by earnings and wages.<sup>4</sup> For instance, evidence from the Russian Longitudinal Monitoring Survey (RLMS) shows that (self-reported) good health, compared to less-than-good health “increased” the wage rate by 22% for women and by 18% for men. Similarly, a workday missed due to illness reduces the wage rate by 3.7% for men and 5.5% for women (7). An analysis of the European Community Household Panel (ECHP) reveals similarly large differences in personal earnings dependent on the general health of people in wealthier European countries. People reporting “very good” or “good” health had earnings about four times higher than those with “poor” or “very poor” health (42). There is also extensive evidence on the negative impacts of risk factors such as obesity, smoking and alcohol consumption on labour market outcomes in terms of productivity, earnings and labour participation, (43, 44, 45) although the picture is complicated by the overlapping relationships between ill health, poverty and poor health behaviours.

### Supply

There is also ample evidence confirming that ill health reduces labour supply, measured, for example, by labour force participation or hours worked. Much of the available evidence relates to labour force participation in people over 50 years old. This is particularly relevant given that the lower rates of labour force participation in Europe are a significant factor explaining the comparatively sluggish economic performance of Europe compared with other regions.

A large number of studies in high-income countries find a significant and robust role for ill health in explaining the decision to retire from the labour force and exclusion from it (Box 5.1). However, the importance of health in predicting exit from the labour force is influenced by the employment and benefits regime in place. Some countries, for example, have policies that encourage people to register as unable to work through illness rather than as unemployed, which complicates the interpretation of data.

#### Box 5.1 Health and exclusion from the labour market

Garcia Gomez (46), using European Community Household Panel (ECHP) survey data for nine European countries, shows that individuals who suffer a “health shock”<sup>5</sup> are significantly more likely to leave employment, and will often also experience a significant reduction in income. While the magnitude and significance varies, the largest effects are seen in Denmark, the Netherlands and Ireland, where health shocks reduce income by over 7%. Other studies in Germany and Ireland show that becoming disabled reduces the probability of being employed by about 10% (47). Hagan et al. (48), using the same data, found that a medium acute health shock would, all else being equal, increase the probability of retiring by 50%, while a larger health shock would increase this likelihood by 106%. Even having suffered a severe condition in the past significantly lowered the probability of labour force participation in four countries by between 11% and 28% in women and between 13% and 31% in men (49).

Suhrcke, Rocco and McKee (6), using data from the Living Standards, Lifestyle and Health (LLH) survey in eight Commonwealth of Independent States (CIS) countries show how self-reported poor health and limited activity decrease the probability of being employed. The range is from 6.9% lower than for individuals without such limitations in Georgia, to 23% in the Russian Federation and 30.4% in Kazakhstan. These results are also confirmed in a number of studies for countries of central and eastern Europe (CEE). In Estonia, for instance, ill health increased the probability that a man would retire the following year by 6.4% compared to a healthy counterpart (50).

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Suhrcke, Rocco and McKee (6), using data from the

4 The magnitude of impact differs across studies (given different health proxies and methodologies) and direct cross-country comparability is therefore limited.

5 Many studies using panel data to examine labour supply look not only at health at one point in time but also sudden changes in health status (so-called health shocks). These prove to be particularly good at capturing the impact of exogenous variations in health over economic variables.

Living Standards, Lifestyle and Health (LLH) survey in eight Commonwealth of Independent States (CIS) countries show how self-reported poor health and limited activity decrease the probability of being employed. The range is from 6.9% lower than for individuals without such limitations in Georgia, to 23% in the Russian Federation and 30.4% in Kazakhstan. These results are also confirmed in a number of studies for countries of central and eastern Europe (CEE). In Estonia, for instance, ill health increased the probability that a man would retire the following year by 6.4% compared to a healthy counterpart (50).

### Macroeconomic consequences

Turning to the effect of health at the macroeconomic level, historical studies have shown that a large share of today's economic wealth can be attributed directly to past achievements in the health sphere. It has been estimated, for example, that about 50% of the economic growth experienced by the United Kingdom between 1780 and 1980 can be attributed to improved health and nutrition (51). Many studies have shown that health helps to explain economic growth differences between poor and rich countries. These findings can be used to predict future trajectories of per capita income on the basis of a country's reduction in mortality. The outcome of such an exercise in five low- and middle-income countries in CEE and the CIS showed that even relatively modest scenarios bring substantial increases in GDP. When compared with the base scenario of no change, an annual reduction in mortality of just 2% would increase GDP by 26% in Kazakhstan and the Russian Federation and by 40% in Georgia and Romania over 25 years (52).

In studies limited to high-income countries, health has not always been associated with economic growth and, in some cases, a negative relationship was found. This gives rise to the view that when both health and income are high, the scope for further gains is limited, as a consequence of the law of diminishing returns. Suhrcke et al. (53) have argued against this, showing that the failure to detect an effect may be attributable to the use of health indicators such as life expectancy that vary little among high-income countries. They show that if cardiovascular disease mortality is used as a health proxy, health also has a substantial impact on economic growth in high-income countries (53).

The question then is this: does better health make a positive contribution to economic growth in the countries of the European Region? The detailed answer is complex, but the evidence does suggest that a healthy population improves productivity and labour supply, which leads to economic growth. Clearly, this is not a simple, linear relationship and much depends on the state of the economy and the labour market, levels of unemployment, the existing institutional setting, and welfare and social security arrangements. For instance,

when retirement age is fixed and low, it may act as a constraint on the contribution better health can make to the economy. However, when healthier ageing is accompanied by changes in the retirement age, improvements in health can contribute very substantially to the active labour market (see earlier discussion in Section 4).

### 5.3 The impact of health on health care expenditure

This subsection looks at how ill health affects what we spend on health. For many years, commentators have debated whether investing in better health now will save money in the future. It has been suggested that healthier people will need less care and so will cost less. This thinking underpinned the influential 2002 Wanless report (12) on the financial sustainability of the NHS in the United Kingdom. Others have suggested the opposite, and argue that better health status will increase future health care spending (54). This view sometimes gives rise to bizarre arguments about the economic benefits to societies (or the young people in them) and to ministries of finance if people died before becoming too old and costly. The evidence in this area is not definitive, but the impact of improved health status on health care expenditure raises four important possibilities, discussed here.

First, less disease and disability at any given point for a given population, or at a given age, could lead to lower health care use and expenditure. For instance, Dormont et al. (35) calculated that the improvement in health status of the French population between 1992 and 2000 reduced health care expenditure in 2000 by 8.6%, although, somewhat predictably, other pressures, such as technological progress, cancelled out this gain.

Second, and in contrast, longer life as a result of better health status could increase the number of years during which health care costs accumulate, increasing total lifetime health care expenditure. In fact, the evidence on lifetime health care costs is mixed, with studies showing contradictory results. Crucial here is an understanding of three alternative hypotheses: the expansion of morbidity, dynamic equilibrium and compression of morbidity. The first and bleakest of the three scenarios (expansion of morbidity) argues that health care prolongs the survival of people with chronic illness without improving their health state, and that longevity increases vulnerability to chronic diseases, which in turn act as additional risk factors for further ill health. These factors result in people living longer with ill health while making greater calls on health services. The dynamic equilibrium approach proposes that as life expectancy grows the number of years spent in ill health will remain constant (55, 56), with relatively neutral cost consequences. The compression of morbidity theory (14, 15) hypothesizes that the onset of morbidity and disability will be delayed to a greater extent than life is prolonged. Hence, the

years spent with disability and disease will decrease, not only as a proportion of the whole but also in absolute terms, cutting back on demands on health services (see also costs of dying, discussed in the next paragraph). There is growing evidence in support of both the “dynamic equilibrium” and “compression of morbidity” scenarios.

Third, evidence on the cost of dying suggests that better health care and better health throughout a lifetime can contribute to savings overall. A large proportion of lifelong health care expenditure is spent in the last year of life and indeed in the last weeks before death. Since death in Europe tends to occur in (relatively) old age, the costs of dying are often and inappropriately attributed to ageing, which distorts the picture of health care expenditure for older age groups (57, 58). Rather, the evidence suggests that the cost of dying at older ages is lower than the costs of dying in youth or middle age, as older people tend to be treated less intensively as they near death and so incur fewer costs (59). This challenges the contention that ageing will result in higher total lifetime expenditure, since longer life expectancy may decrease the costs associated with the most expensive period of a person’s lifetime – the last year of life. Furthermore, there is some evidence that people who have been healthier in earlier life actually consume fewer resources when they do come to die. Thus “prevention” (and longer life) might actually decrease lifetime costs though the positive impact of improved health on the costs of death and lower costs in the last year of life of those dying at older ages (60, 61).

Finally, and importantly, decision-makers in the health system must recognize the evidence that expenditure on long-term care increases with both age and proximity of death. While many of the costs of long-term care fall on the social care sector or on individual carers, they are indisputably significant in terms of wealth and societal well-being. The fact that savings in the health system may fall to the social care sector should therefore be borne in mind, when the impact of health on longevity is considered.

Notwithstanding the implications for non-health system care, the evidence as a whole undermines the claim that longer lives will inevitably result in increased overall health spending. It suggests a more intricate picture, with healthier ageing reducing some health expenditures and, in some circumstances, even reducing overall spending on health, given an otherwise cost-neutral environment. Other cost pressures exist, however, and the savings from healthier ageing are unlikely to be sufficient to offset the impacts of new technologies or rising expectations (Section 4). These will remain challenges for health system policy-makers. Improvements in population health could, at best, be expected to diminish the rate of increase in health expenditure.

## 5.4 The economic consequences of health inequalities

The previous three sections looked at the economic and welfare effects of improving overall levels of health. In this section the distribution of health within populations is addressed, drawing on Chapter 7 in the main volume (62) and on a recent EC publication (42).

Health equity is a fundamental societal goal and one of particular importance for health systems. The arguments for investing in interventions to address health inequalities are essentially the same as those outlined above. Health inequalities undermine economic performance, increase social costs and diminish societal well-being.

First, the impact of health inequalities on overall economic performance is clear. The analysis of the ECHP data (Subsection 5.2) showed how the deleterious effects of health on labour force participation and on earnings were greater among those with lower levels of education. These findings were used in a “levelling up” exercise, in which the prevalence of “very good” or “good health” in lower educational groups was assumed, to increase to the level of higher educational groups in the same country. In the resulting model, income losses attributable to health inequities were estimated at about 1.4% of GDP, or €141 billion per year for the EU25 as a whole (42).

Second, the ECHP data confirmed that health inequality has an impact on health care and social security expenditure. Poor health was consistently associated with higher levels of ambulatory (general practice and specialist) visits as well as hospitalization rates. A “levelling up” scenario would decrease ambulatory visits by 16% and hospitalization rates by 22%, yielding a cost saving of €26 billion and €59 billion, respectively. If these findings were applied to all health services, the impact of health inequalities on health care costs would amount to approximately 20% of total spending in the EU25. A similar approach shows that education-related health inequalities account for 25% of the costs of disability benefits and 3% of costs of unemployment benefits, amounting to a total of 15% of the total costs of social security systems (42).

Finally, the impact of inequalities on societal well-being is considerable, both in terms of the direct damage to overall health levels and in terms of the value that many European societies attach to equity in itself. The number of life years lost due to inequalities in mortality and the statistical value of the years lost have been assessed using a different approach to that described above, but a consistent methodology, nonetheless. The resulting estimate suggests that the losses have a huge economic impact of the order of €1000 billion a year or 9.4% of the GDP of the EU25 (42).

Taken together, all the evidence reviewed in Section 5 shows clearly that ill health acts as a drag on the economic situation of both individuals and entire countries, and exerts upward pressure on health expenditure. It demonstrates how better health levels and greater equality can produce tangible micro- and macroeconomic benefits and help to reduce future health care costs. Although the benefits are not captured adequately by conventional economic measures, European people and societies attribute real and very significant monetary value to good health. The gains in terms of societal well-being are therefore enormous. By the same token, the benefits that could be derived from investing in health systems are also very significant.

## 6. Assessing the impact of health systems

The evidence reviewed in previous sections demonstrates that improving population health, including both its levels and its distribution, benefits national economies and societal well-being. It supports the proposition that societies should invest in health. However, if policy-makers are to make the case for significant investment, they need to go beyond this to show to what extent health systems have an impact on health and to demonstrate the concept of value for money.

The discussion in this section focuses on the “left side” of the conceptual framework and the “inner triangle” that links health systems and health and societal well-being. It also includes all the goals and functions of the HSAF, which include health (levels and equity), responsiveness and fairness of financing (financial protection and equity in the distribution of funding), although they cannot be covered exhaustively. Rather, the discussion focuses on the impact of health systems on health and on the cost–effectiveness of some of the interventions available, as well as illustrating some of the other equity and responsiveness issues.

The section:

- addresses the nature of health problems in Europe, outlining the burden of disease of the main health conditions, along with the underlying risk factors, and illustrating their concrete economic impacts (Subsection 6.1);
- looks at the role of health services (both at individual and population levels) in producing health (Subsection 6.2);
- assesses the contribution of preventive and public health interventions within health services and in other relevant sectors, acknowledging again the role of the health system as steward of health determinants in other sectors (Subsection 6.3);
- tackles the impact of health systems on health inequalities (Subsection 6.4); and
- discusses the role of health services in increasing responsiveness (Subsection 6.5).

Taken together, these elements will illustrate the impact that a well-run health system can have on desirable societal objectives and highlight some of those interventions that function well, thus asserting the very major potential for investment in health systems. This report cannot, however, give an exhaustive account of available health system interventions and their relative effectiveness. Moreover, the value of alternative investment options can only be assessed in national context and will, of course, depend crucially on the performance of the health system and its ability to

deliver. This key issue is addressed in Section 7 *Improving health systems performance*.

### 6.1 The nature of health problems in Europe

Policy-makers need a good understanding of the main health problems in Europe and their socioeconomic consequences before they can decide how to invest in health system interventions that can improve health. This section draws from a policy brief prepared for the WHO Ministerial Conference on Health Systems (Tallinn, June 2008) (63), and looks at the burden of disease; risk factors (which fall within the scope of public health interventions); and the economic impacts of some main health problems in the WHO European Region.

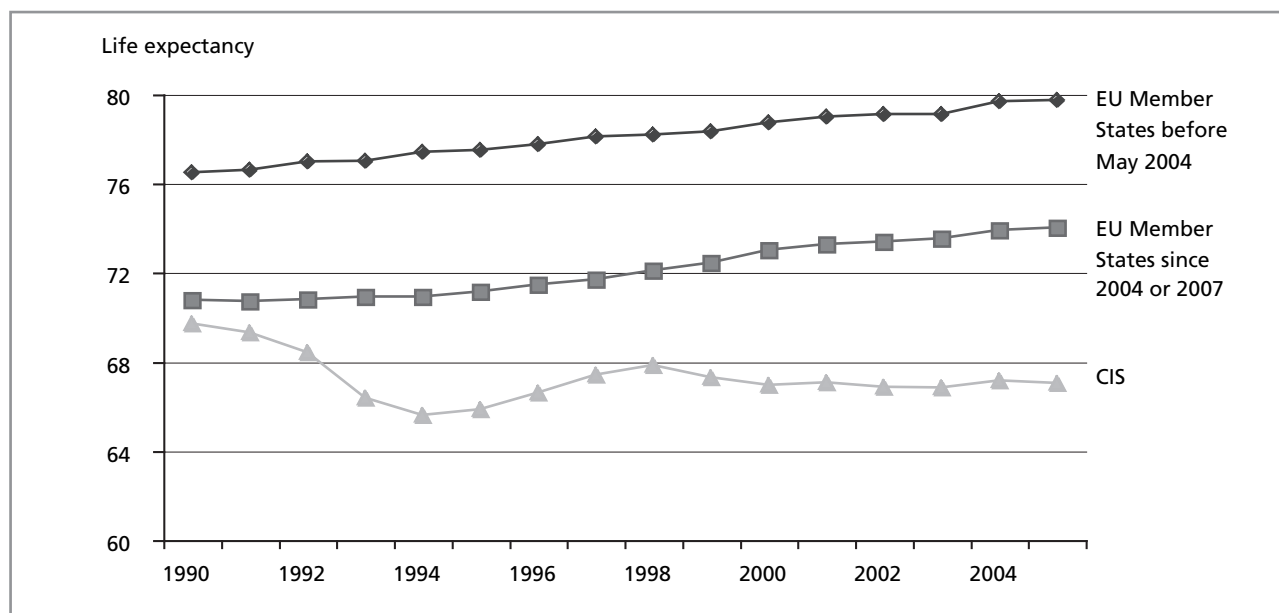
The debate is set in a “positive” context, as health has been improving across much of Europe over recent years, with average life expectancy at birth reaching 74 years by 2005 for the whole of the WHO European Region. However, this masks significant variations across the Region, with life expectancy ranging from just 65 years in the Russian Federation to 81 in Iceland. In general, health status is poorer in many of the countries in the central and eastern parts of the Region. In those countries that were EU Member States prior to May 2004 (EU15), life expectancy in 2005 was 79 years, compared with an average of 74 years in the post-2004 new EU Member States and just 67 years for countries in the CIS (64) (see Fig. 6.1). Moreover, even where life expectancy is high, morbidity poses major challenges for societies, in terms of their economic and societal well-being.

#### The burden of disease

The burden of disease in the WHO European Region, which includes both morbidity and mortality, is dominated by noncommunicable disease, which accounts for 77% of the total disease burden. External injuries and poisoning contribute a further 14% and communicable disease just 9% (65). Table 6.1 further illustrates the composition of the burden of disease, showing the top 10 contributors at regional and subregional levels in Europe. At subregional level, there are much higher rates of injury and communicable disease in the countries of CEE (Eur-B) and the CIS (Eur-C) than in the more affluent western Europe (Eur-A) but nonetheless the top four contributors to the country's disease burden are the same (albeit in a different order). Table 6.1, while it emphasizes how the European Region as a whole faces common challenges of cardiovascular disease, mental health, injuries and cancer, also shows the need to implement different population health strategies adapted to local circumstances and local needs. The same is also true in respect of sex, as despite the similarities in the burden of ill health overall, there



Fig. 6.1 Trends in life expectancy at birth, 1990–2004



Source: WHO Regional Office for Europe 2007 (64).

Notes: EU: European Union; CIS: Commonwealth of Independent States.

are significant differences between men and women. Similarly, the data in Table 6.1 fail to capture the often increased burden of disease in particular population groups (migrants, adolescents), nor in people with particular health-compromising behaviours (such as intravenous drug use) or with particular conditions (such as HIV) that are of great importance both in particular countries or regions and in terms of inclusion and societal well-being.

### Addressing the risk factors for ill health

The caveats on the burden of disease also apply to risk factors. Table 6.2 reports estimates made by WHO of the shares of mortality and disability-adjusted life years (DALYs) lost that can be attributed to the main risk factors in the developed world. These measures allow decision-makers to look at the overall impact of particular risks and to tailor their preventive or intersectoral interventions accordingly. However, as noted above, it is essential to be aware that these figures are simply averages. As discussed above, practical policies will always need to be based on a detailed assessment of the burden of disease in the country in question and, at least in the larger countries, on the regional situation. It is also necessary to take

account of how this burden is changing over time and by age cohort.

Table 6.2, despite these caveats, does give a sense of the risk factors that “matter” most for European countries: diet-related risks, physical inactivity and addictive substances (especially tobacco) account for by far the highest share of DALYs and mortality. This, when used with national or regional data, should form the basis for prioritizing and implementing promotion and prevention interventions.

### Economic impacts of major health problems

As shown earlier (Section 5), poor health has major negative impacts on societal well-being, economic costs and health expenditure. Here, the impact of the major causes of poor health in the WHO European Region are discussed again in light of these three economic dimensions, but with disease-specific costs drawn from key studies on cost of illness.<sup>6</sup> While cost-of-illness studies face a number of major methodological challenges,<sup>7</sup> they give some sense of the economic impact of some major health problems. Thus, together with evidence on the cost-effectiveness of available interventions, they might help policy-makers to set priorities for investment.

<sup>6</sup> These studies follow broadly the three categories above, separating the costs of illness into three components: direct costs falling on the health sector (health expenditure); indirect costs typically measuring productivity lost due to illness (economic costs); and intangible costs or the psychological dimensions, such as pain and suffering (well-being), as well as expressing all these in monetary terms.

<sup>7</sup> Cost-of-illness studies, despite unifying categorization schemes, can differ enormously in how and what costs they are actually measuring. They also fail to identify the direction of causality in the relationship between health and economic outcomes.

**Table 6.1 Top 10 contributors to disease burden in the WHO European Region and subregions**

Eur-A		Eur-B		Eur-C		Region	
Cause	% DALYs	Cause	% DALYs	Cause	% DALYs	Cause	% DALYs
Neuropsychiatric conditions	26.55	Cardiovascular diseases	21.69	Cardiovascular diseases	28.58	Cardiovascular diseases	22.90
Cardiovascular diseases	17.09	Neuropsychiatric conditions	18.71	Injuries	21.03	Neuropsychiatric conditions	19.52
Malignant neoplasms	16.53	Injuries	10.77	Neuropsychiatric conditions	14.06	Injuries	13.93
Injuries	7.89	Malignant neoplasms	8.72	Malignant neoplasms	8.74	Malignant neoplasms	11.42
Respiratory diseases	6.59	Infectious and parasitic diseases	5.41	Digestive diseases	5.06	Digestive diseases	4.92
Sense organ diseases	4.77	Digestive diseases	5.04	Infectious and parasitic diseases	4.49	Respiratory diseases	4.48
Digestive diseases	4.67	Perinatal conditions	4.22	Sense organ diseases	3.56	Sense organ diseases	4.14
Musculoskeletal diseases	4.25	Sense organ diseases	4.21	Musculoskeletal diseases	3.16	Infectious and parasitic diseases	3.77
Diabetes mellitus	2.14	Respiratory diseases	4.10	Respiratory diseases	2.93	Musculoskeletal diseases	3.75
Infectious and parasitic diseases	1.72	Respiratory infections	4.04	Respiratory infections	1.48	Respiratory infections	2.07

Source: WHO 2004 (65).

Notes: Percentage of DALYs by WHO subregion (Eur-A: western Europe; Eur-B: CEE; Eur-C: CIS countries); DALY: Disability-adjusted life year(s); CEE: countries of central and eastern Europe; CIS: Commonwealth of Independent States.

The single greatest cause of poor health in Europe, cardiovascular disease, has been estimated to cost more than €168 billion per annum in the EU25 alone, of which more than 60% falls on health care systems (68). Studies looking at the economic impact of common risk factors for cardiovascular disease and other health problems have estimated that illness related to obesity accounts for between 1.5% and 4.6% of total health care expenditure in France (69), 1.9% of total health care expenditure in Sweden (70) and 4.6% of health care expenditure in the United Kingdom (71). This gives some sense of the scale of the problem and the potential benefit of appropriate and effective investment in this area.

Similarly, depression is now a major problem in Europe, with unipolar depression in the EU25, accounting for the majority of costs (64%), estimated at €118 billion per annum. In this case the bulk of costs fall outside the health care system due to the high rates of absenteeism from work and premature retirement from the labour force (72). In fact this estimate may be conservative; United States studies include the cost of “presenteeism” due to depression, that is, of reduced performance of those continuing to work while affected, and suggest

this may be five times or more greater than the costs of absenteeism (73, 74). Again, this is a factor of real relevance in determining where to invest societal resources.

Another leading cause of poor health in Europe is alcohol disorders. Such disorders have been conservatively estimated to cost European economies around 1% of their GDP (75) and to account for 115 000 deaths annually in the EU25, at a total cost of €125 billion. Even allowing for the beneficial effects of moderate alcohol consumption for those at risk of cardiovascular disease, this is significant and as with depression, and the burden falls largely outside the health care system, in terms of lost productivity, crime and violence (76).

Finally, turning to the economic costs of unintentional and intentional injuries, road traffic injuries have been estimated to be equivalent to 2% of European GDP or €180 billion per annum (65). They are the leading cause of hospitalization and death for people under the age of 50 years in the EU. Data are sparse and therefore these costs are likely to be even higher in the east of the region because of the higher injury rate. The same

**Table 6.2 Attributable mortality and DALYs, 2000, by selected risk factor and sex in “developed” regions<sup>8</sup>**

	Mortality (%)		DALYs (%)	
	Male	Female	Male	Female
Diet-related risks and physical inactivity				
Blood pressure	20.1	23.9	11.2	10.6
Cholesterol	14.5	17.6	8.0	7.0
Body mass index	9.6	11.5	6.9	8.1
Low fruit and vegetable intake	7.6	7.4	4.3	3.4
Physical inactivity	6.0	6.7	3.3	3.2
Addictive substances				
Smoking and oral tobacco	26.3	9.3	17.1	6.2
Alcohol	8.0	-0.3	14.0	3.3
Illicit drugs	0.6	0.3	2.3	1.2
Occupational risks	1.8	0.3	2.3	0.7
Sexual and reproductive health risks	0.2	0.6	0.5	1.2
Environmental risks	2.1	2.0	2.0	1.7
Childhood and maternal undernutrition	0.2	0.3	1.0	1.5
<b>Total deaths or DALYs (thousands)</b>	<b>6 890</b>	<b>6 601</b>	<b>117 670</b>	<b>96 543</b>

Sources: McDaid, Suhrcke & Shiell 2008 (in press) (66); WHO 2002 (67).

Notes: DALY: Disability-adjusted life year(s)

might also be said of self-inflicted intentional injuries, although again, data are only available from western Europe. Evidence from Ireland and Scotland suggests that each completed suicide has a cost to society of around €2 million (77). Again, these figures demonstrate clearly that if the health system can act on such issues, there is likely to be a real case for investing in them.

## 6.2 Do health services save lives? The contribution of health services to population health

If policy-makers are to make a case for investment, they need to demonstrate that health systems can deliver the ultimate goal of improving health. While health systems play a stewardship role across sectors, this section focuses on the particular role of health services in improving health. Health services<sup>9</sup> are understood as including all preventive, curative, rehabilitative or palliative interventions, whether directed at individuals or populations (Section 2). The subsequent subsection (6.3) follows on from this one and addresses public

health in and beyond health services, taking forward the discussion of preventive interventions.

The key question is: do health services save lives? This may seem flippant but it reflects a long-standing and controversial debate. In the 1960s, commentators such as McKeown and Illich (78, 79) argued that health services made little meaningful contribution to population health. They saw major health advances as the result of social, environmental and economic progress and portrayed the role of health services in health improvement as negligible or harmful (79). The argument that health care made little difference was probably correct at the time they were writing, referring to data only up to the mid-1960s (80). However, since then the scope and quality of health care have changed almost beyond recognition, as has its impact on health. Nonetheless, the influence of these authors is still felt today. This section goes some way to challenging their relevance. It provides estimates of the overall contribution of health services (personal care and population interventions) to health. It draws on the relevant chapter in the main volume (19) which itself builds on much relevant work from the same authors (81, 82).

8 This is an abridged version of the table published in the chapter based on McDaid et al. (66). When grouping countries into regions by their economic development level, WHO (2002) (67) distinguishes three regions: low-mortality developing countries, high-mortality developing countries and developed countries. The latter category includes the entire WHO European Region.

9 Here we use the terms health services, health care and health care services interchangeably.

### Attributing indicators of population health to health service interventions

Stewards of health systems can and should be assertive in defending the contribution of health systems to population health. However, attributing population health gain to health care interventions is far from simple. In specific cases (for example, vaccination for smallpox, use of insulin for type I diabetes, or chemotherapy for testicular cancer) the role of health services is self-evident. In many other instances, however, the situation is less clear, particularly as outcomes are rarely attributable only to health care. Factors beyond the health sector, such as education, housing and employment, also impact on premature mortality.

Data on “avoidable mortality” (83, 84) or “mortality amenable to health care” (85) can help to separate out the scale of the impact that health services alone have on health, although recognizing this gives an indicative or illustrative picture, rather than a definitive one. This measure captures “unnecessary untimely deaths”, arising from conditions from which death should not occur in the presence of timely and effective health care. Examples include deaths under the age of 75 years from conditions such as breast cancer, asthma or appendicitis. The approach does have limitations. It requires robust estimates regarding large populations, it focuses on mortality rather than other health care outcomes, and by default it attributes outcomes to health services activity. Nonetheless, the concept is extremely valuable as a tool for capturing how health services impact on health, for communicating the value of health services and for assessing performance and making comparisons between countries and over time.

A further iteration of this approach has attempted to expand the scope of “avoidable” mortality so that it captures both causes of mortality that are “amenable to health care” (cure and prevention) and those that are “preventable”, that is those that are considered responsive to interventions that are mostly outside the direct control of the health services. These include, for example, lung cancer and liver cirrhosis (which are preventable by policies that reduce smoking or hazardous drinking). This makes it possible to distinguish improvements in health care from the impact of policies outside the health care sector (see below).

The “tracer” concept (86) complements the “avoidable mortality” approach. It is based on the premise that tracking a few selected health problems can both indicate how health services are performing and identify functions that might be improved. Tracer conditions and the health service area they reflect include vaccine-preventable diseases (soundness of public health policies); neonatal mortality (access to health care); diabetes (quality of health care delivery) and survival from selected cancers (coordination between levels of care). Again, this concept is closely allied to performance measurement and is addressed in more detail in the section

of the accompanying volume that deals with performance (186), but here it allows some sense of impact.

### How much difference do health services make?

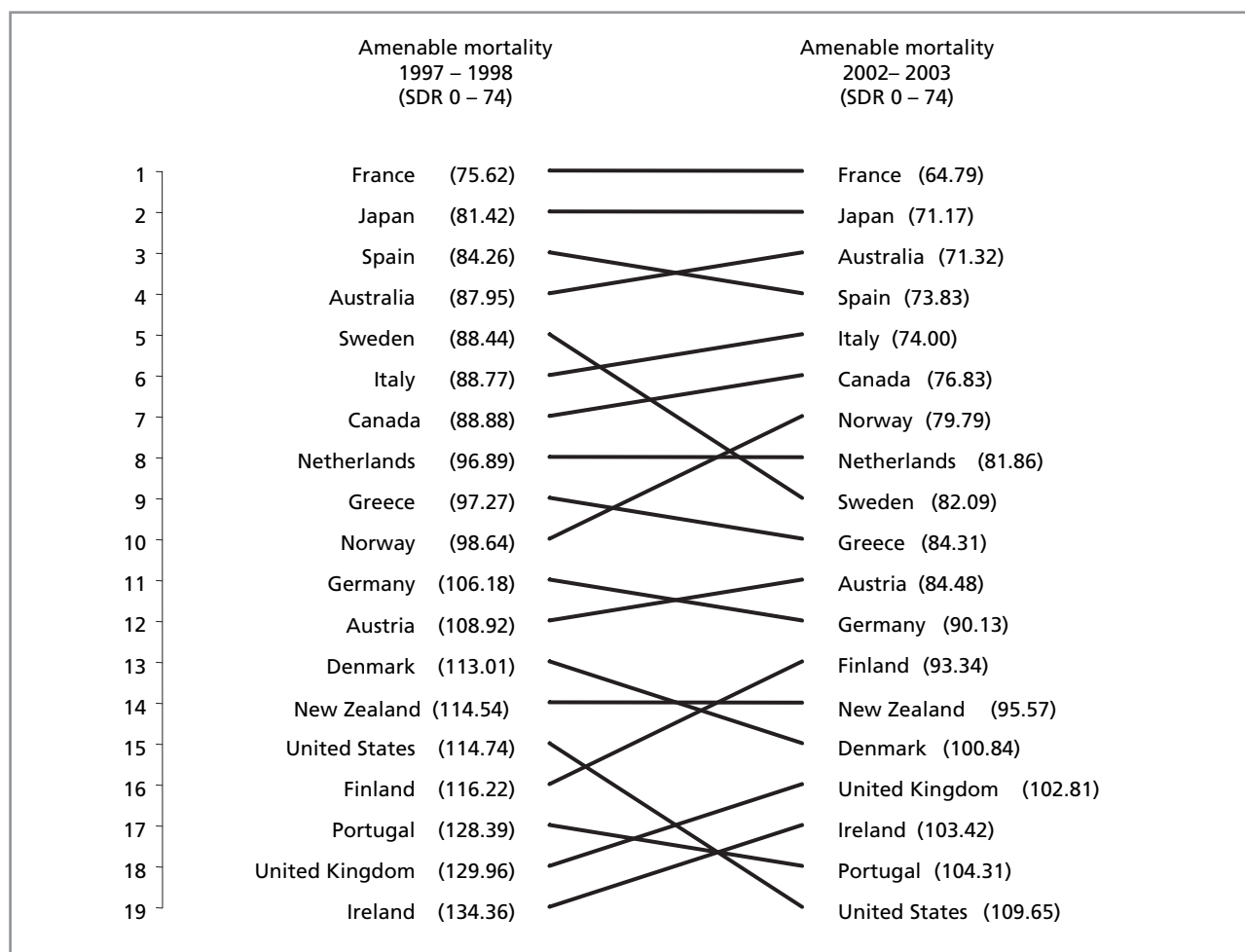
Amenable and preventable mortality data and the tracer concept show that population health can now be attributed at least in part to health services. It is logical, then, to ask how much of a difference health care actually makes. An early study on the effectiveness of “key” health service interventions argued that about half of the total gain in life expectancy in the United States (some 7.5 years in the 40 years from 1950 to 1990) could be attributed to clinical (secondary) preventive and curative services (87).

Further studies have used deaths from ischaemic heart disease, one of the most significant causes of mortality in Europe, to assess the impact of health services. A study in New Zealand showed that 42% of the decline in deaths from ischaemic heart disease between 1974 and 1981 could be attributed to advances in medical care (88). A study in the Netherlands over a similar period claimed that 46% of the observed decline in mortality could be attributed to specific medical interventions, such as coronary bypass grafting, while an additional 44% was attributed to primary prevention efforts, such as smoking cessation campaigns (89). Overall, there is broad agreement that between 40% and 50% of the decline in ischaemic heart disease may be attributable to improvements in health care.

Nolte & McKee have studied “amenable” mortality in Europe (81). They provide clear evidence that improvements in access to effective health services (defined as primary and hospital care as well as secondary prevention) have made a substantial contribution to changing life expectancy between birth and age 75 since the 1980s in most countries. The largest contribution was from falling infant mortality, but there have also been improvements among the middle aged, for example in Denmark, France, the Netherlands, Sweden and the United Kingdom. It is important to note that the rate of decline in amenable deaths has begun to slow in many countries in the 1990s, and at the same time, rates continue to fall, even in countries that had already achieved low levels, as demonstrated by 19 industrialized countries between 1997–1998 and 2002–2003, although the scale and pace of change varied (82). The largest reductions were seen in countries with the highest initial levels of amenable mortality, including Finland, Ireland, Portugal and the United Kingdom. The figures are significant, despite the wealth of the countries included, and they account for an average of 23% of total mortality under the age of 75 for males and 32% among females. The decline in amenable mortality averaged 17% for all countries over just five years. Fig. 6.2 illustrates the trends for these 19 countries.

A similar study (90) looked at changes in avoidable

**Fig. 6.2 Comparison of amenable mortality rankings based on age-standardized death rates per 100 000<sup>a</sup> in 19 OECD countries, 1997–1998 and 2002–2003**



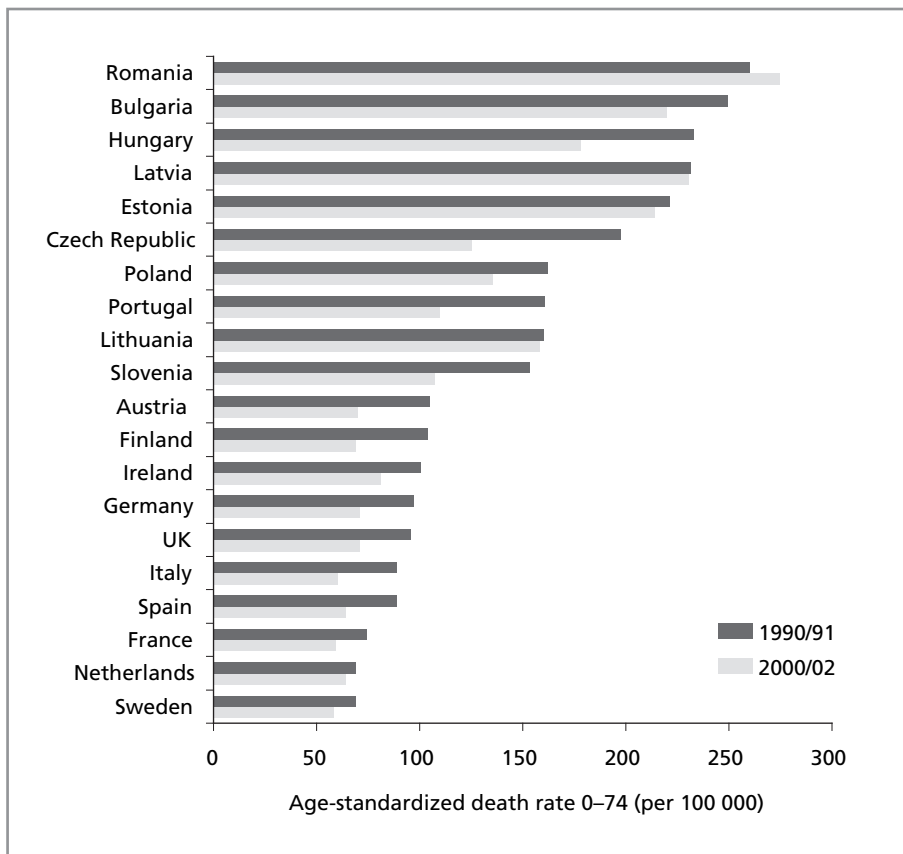
Sources: Authors' compilation based on data from the World Health Organization mortality database; Nolte & McKee 2008 (82).

Notes: <sup>a</sup> Both sexes combined; SDR: standardized death rate; Denmark: 2000–2001; Sweden 2001–2002; Italy, United States: 2002.

mortality in 20 EU Member States between 1990 and 2002. This supplemented the notion of “amenable” conditions (reflecting cases that are responsive to health care) by adding “preventable” causes which, as noted, are considered responsive to interventions that are usually outside the direct control of the health services (82). It showed that many EU countries experienced substantial declines in amenable (Fig. 6.3) and preventable mortality (Fig. 6.4). The study also shows the significance of amenable mortality, which accounted for between 13% and 30% of mortality of men under 75 years (Netherlands and Bulgaria, respectively) and between 26% and 44% in women (Sweden and Romania). In terms of preventable mortality, the relevant figures were between 10% and 21% for men (Sweden and Italy) and between 4% and 11% for women (Bulgaria and Hungary) (90). This study serves as a reminder of the high levels of both “amenable” and “preventable” mortality in parts of eastern Europe,

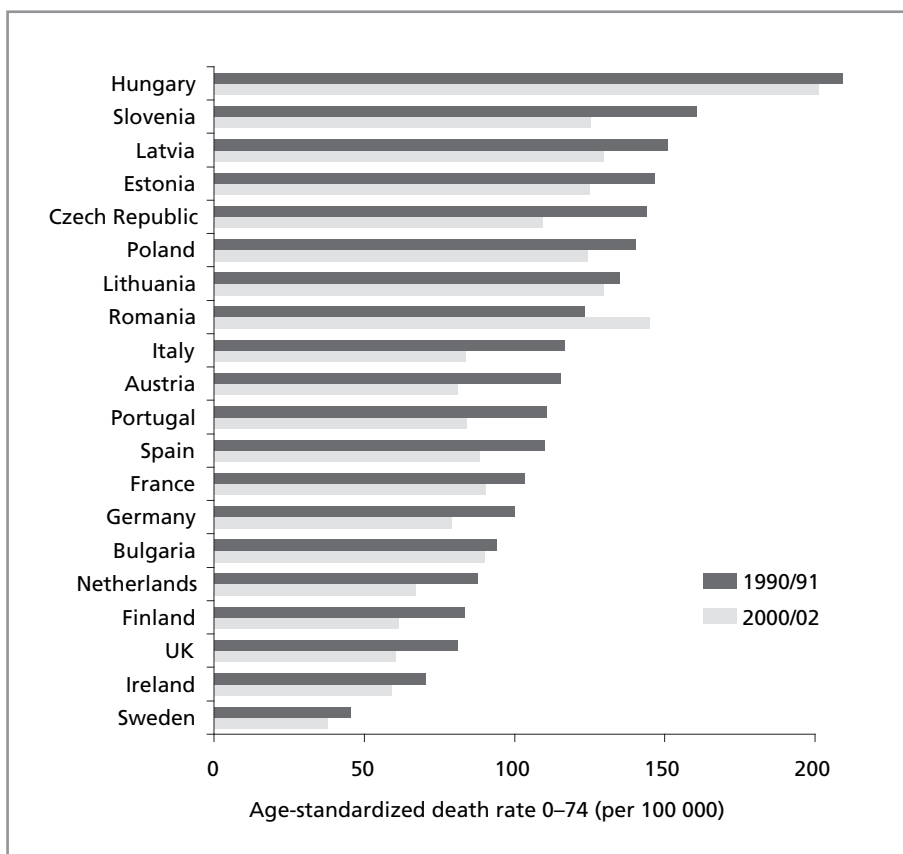
highlighting a persisting disparity between east and west (90). In a number of countries the situation is particularly worrying as they have seen no significant decline over the period of study since the mid-1990s.

Again, it is worth emphasizing that the data detailed above illustrate the potential of health services to impact on health. (At the same time, the figures also reflect the influence of other parts of the health system and other sectors, and these are addressed later). Similarly, the examples given flag up impact, even though they are not exhaustive in any way, and touch upon research in particular countries at particular times, rather than reflecting the whole of the European Region or the multiplicity of contexts and challenges faced. Still, overall and even given the methodological caveats, these findings support the argument that effective health care and improvements have a significant and measurable impact on health status. They confirm the



**Fig. 6.3 Mortality from amenable conditions among men age 0-74 years in 20 EU countries, 1990-1991 and 2001-2002**

Source: Newey et al. 2004 (90).



**Fig. 6.4 Mortality from preventable conditions among men age 0-74 years in 20 EU countries, 1990-1991 and 2001-2002**

Source: Newey et al. 2004 (90).

potential gains from investment in health services. This in turn leads to the next question: what areas of health services could we usefully invest in?

### Are there “best buys”?

Policy-makers look to “best buys” to maximize the health gain they can lever from any additional resources invested and because highlighting effective interventions can strengthen the case for investing additional resources. Their considerations can now be informed by cost-effectiveness analyses (91). This approach has been institutionalized in several countries, typically to guide decisions about funding of pharmaceuticals (92, 93) but, in a few cases, also to examine other types of interventions, as, for example, in the United Kingdom, with the National Institute for Health and Clinical Excellence (NICE) (94). Such organizations assess the costs and effects of new options, arguing – sometimes implicitly – that they are cost-effective if the costs per unit of health outcome are lower than a specified threshold. NICE, for example, has used a threshold of between €26 000 and €39 000 per quality-adjusted life year (QALY) gained (94).

It is, however, necessary to ask additional questions.<sup>10</sup> One is where the funds required for cost-effective innovations might come from, another is how to put in place mechanisms to disinvest in interventions discovered to be ineffective, and a third relates to the potential impact of any intervention at population level. More may be gained, in aggregate terms, by an intervention that yields a small gain among large numbers of people (particularly if it is inexpensive), than

by an intervention yielding a large benefit among a few (again, particularly if this is more expensive). Examples might include treatment of mild and severe hypertension, respectively (95), where the less “dramatic” intervention yields greater aggregate benefits. Furthermore, it is important that stewards looking across health systems do not consider interventions in isolation. There may be economies of scale and benefits from creating a package of interventions, for example, blood pressure reduction, nicotine replacement therapy, and advice on exercise and diet, that would not be achieved through implementation of each in isolation (96, 97, 98, 99).

To address these challenges, WHO has developed the CHOICE project (CHOosing Interventions that are Cost-Effective) (100). This recognizes that the information needed to evaluate all possible interventions, at different levels of coverage and with different types of interactions, is beyond the capacity of many countries, and so seeks to provide a set of “priors” that countries can use. It has analysed over 800 interventions so far, taking into account scale and interactions. It has also sought to assess whether the most cost-effective mix of interventions is currently being undertaken, at the same time as assessing what would be appropriate if more resources became available. Calculations were made for 14 different subregions, broadly following WHO geographical boundaries, but taking into account different levels of child and adult mortality. Tools have been developed to allow countries to modify and adjust the subregional estimates to their own epidemiological and cost structures. An example is shown in Table 6.3 and serves to illustrate the kind of information policy-makers

**Table 6.3 Incremental cost-effectiveness analysis of treatments for breast cancer (Eur-A)**

Code	Interventions	Cost per 1 million population per year (international \$)	DALYs per 1 million population per year	Average cost per DALY
BRC-1	Partial mastectomy + axillary dissection + radiotherapy	758 464	1 010	751
BRC-2	BRC-1 + endocrine therapy	856 525	406	2 111
BRC-3	BRC-1 + endocrine therapy + chemotherapy	1 912 371	451	4 241
BRC-4	Chemotherapy + endocrine therapy + palliative treatment	725 996	21	35 148
BRC-5	BRC-1 + BRC-4	2 699 960	1 913	1 411
BRC-6	BRC-1 + BRC-4 + biennial screening	4 458 312	5 630	792

Source: WHO 2008 (100).

Notes: Eur-A: WHO Region, western Europe; DALY: Disability-adjusted life year(s); BRC: Breast cancer.

<sup>10</sup> The questions tackled here all concern securing best value for money. In addition, governments could usefully address information on effectiveness and iatrogenic effects, particularly given the general public’s increasing use of the Internet and role in shaping treatment choices. Providing reliable information, regulating and providing incentives and disincentives that discourage the use of harmful and ineffective medical technologies are all important government roles, but this goes beyond the scope of this section.

need if they are to choose where to invest resources.

Clearly, there are no simple answers. Contextual factors, such as underlying health status or the value attached to different health states will shape each country's decision-making. Similarly, the scale of resources will make a huge difference, given that the European Region includes countries with total health expenditures lower than US\$ 30 per person per year (2006) (101, 102) with others spending in excess of US\$ 5500 per person each year on health. Still, all health systems face cost pressures and pressure to ensure value for money and must deal transparently with the issue of what is bought with the resources available.

### 6.3 The contribution of public health interventions

This section addresses the contribution of public health interventions to population health and the extent to which health systems investment should include (effective) health promotion and primary and secondary prevention activities. This includes activities delivered by health services, as well as those of other sectors that impact on health and that health systems ought, legitimately, to influence. The discussion draws on the chapter covering this topic in the main volume (66) as well as on the related policy brief (63) prepared for the Ministerial Conference in Tallinn in June 2008.

There is now considerable evidence that substantial reductions in mortality and morbidity can be achieved through preventive measures, such as vaccinations or better control of hypertension, that are delivered through individual health care services. At the same time, as is the case for hypertension, it is increasingly clear that interventions are most effective when bundled together with related population-based actions. Moreover, and crucially here, the socioeconomic environment in which individuals live has a substantial impact on the risk of premature mortality and avoidable morbidity. Any comprehensive strategy to promote population health needs therefore to take a broad perspective and to involve actions within and beyond health services.

Such an approach will require a combination of "upstream" and "downstream" measures. Upstream action may include measures where health benefits are secondary to other policy goals (such as fiscal redistribution, housing improvements, or extending the school leaving age) and much will be delivered (and funded) outside the health service's domain. Nonetheless, those benefits that are related to health are part of the health system and health stewards still play a critical role, liaising with other sectors to identify health impacts, advocating positive change and, crucially, where impacts are adverse, in addressing this.

Downstream interventions have promotion of health and prevention of disease as their primary goal. They

include initiatives such as providing diet and lifestyle advice, interventions to reduce tobacco and alcohol consumption, along with vaccination campaigns and cancer screening programmes. In several cases they will be under the direct control of the health system. To be effective, downstream interventions often need to be aligned with upstream action and should certainly combine measures targeted at individuals, along with societal interventions (for example, nutritional advice in the primary care setting would be coupled with restrictions on advertising unhealthy products). A balance is essential, as health system advice on lifestyle or behaviours by health professionals will be futile if people are bombarded with contradictory messages as soon as they leave the health facility, or if the tax system encourages them to consume unhealthy products, for example.

#### What do we know about effectiveness of available interventions?

Evidence on the effectiveness of many public health interventions has been frustratingly weak, particularly in contrast with the evidence on curative interventions and those involving pharmaceuticals. This is beginning to change, although there is still relatively little evidence on the economic justification for intervention (103). The WHO CHOICE project, described in the earlier section on "best buys" (100) (96) is helping to address this. However, like other recent reviews (104, 105), it shows a heavy bias towards evaluations of individually focused interventions, such as the prevention of communicable diseases, the use of pharmaceuticals such as statins to prevent disease onset, as well as mechanisms to detect disease early, such as cancer screening. There has been much less focus on upstream health-promoting interventions and there is therefore a very real (and perverse) danger that a focus on cost-effectiveness evidence will lead to upstream policies being overlooked, even though they are likely to be much more effective and, in many cases, more cost-effective. A programme of individual counselling backed by nicotine replacement therapy might be funded in preference to a ban on smoking in public places because the evidence on the former is more readily available, despite the fact that the latter would yield greater benefits.

This situation is unsurprising. Public health research capacity in Europe is relatively weak. Also, and in contrast to the United States, basic data on the health of the population, its behaviours and risk factors over time, are only available in a very few countries. Furthermore, the necessary research is complex and poses major methodological challenges, not least how to handle the long time lag between intervention and outcome; attribution and the plethora of concurrent changes; and the political difficulties regarding randomizing populations. Much of the available research is from North America and Australia and, although these



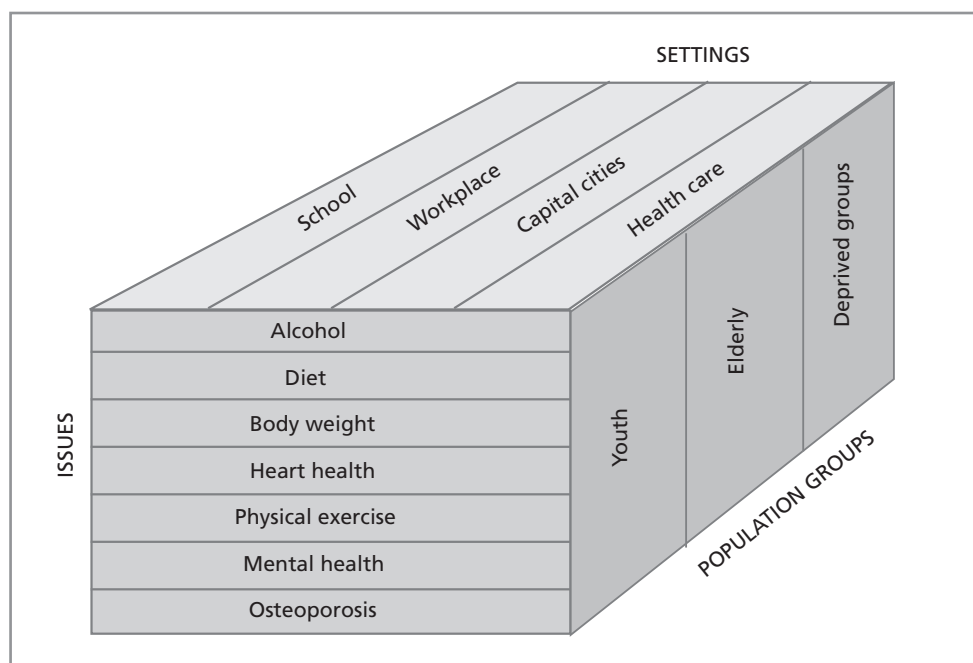


Fig. 6.5 Public health matrix

Source: European Commission 1998 (106).

results can be used to inform decision-making elsewhere, there are further difficulties in the modelling involved in transferring findings, particularly those on cost-effectiveness, to new settings.

It is not possible for these reasons to present figures on the cost-effectiveness of interventions at anything other than a very high level of generalization (see Table 6.4). The cost-effectiveness of any given intervention will depend on the scale of the problem being addressed in the particular country (such as the initial rate of smoking), the effectiveness of the chosen intervention in the particular context, the costs of inputs, and the values placed on outcomes. All of these may vary considerably. For the WHO European Region as a whole this means analysts will have to draw on evidence specific to their own circumstances to calculate the relevant figures for their own country.

Despite all these complexities, there is evidence to support many policies. This evidence, while limited, shows that interventions to promote population health compare very favourably with many personalized clinical interventions in terms of effectiveness and cost-effectiveness. Furthermore, it is possible, in very general terms, to identify measures that should be taken, if they are not already in place.

### Applying the evidence: some priority issues

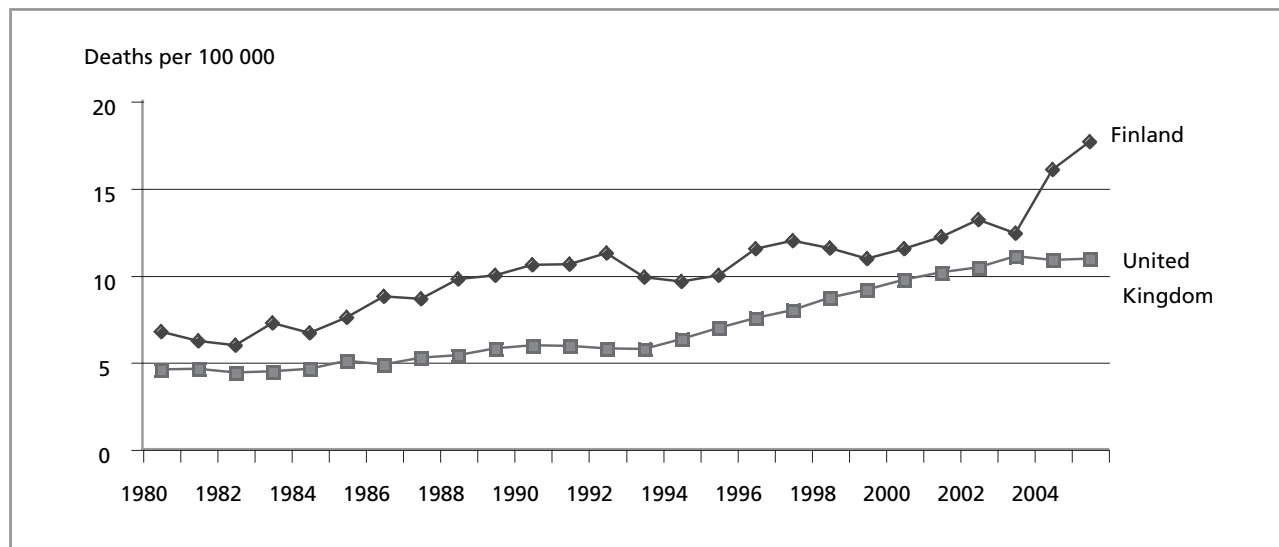
The evidence of effectiveness and cost-effectiveness of public health interventions may still require further development. It is already clear, however, that the interventions themselves are enacted in complex settings which typically involve actors from a range of sectors and cut across established boundaries. Each public health policy or programme can be characterized along a

number of dimensions. A widely used model is a 3-dimensional matrix, originally developed by the EC (106) (see Fig. 6.5). This considers policies as “interventions addressing one or more issues, in one or more population groups, in one or more settings” and allows a better understanding of who is involved and who will respond to particular evidence or particular kinds of intervention. Coalitions can then be developed according to the appropriate set of primary interests. Thus, interventions to improve adolescent health may involve those with an interest in schools, in adolescents, and in sexual health, alcohol, tobacco and drugs. In the following subsections we outline some main priority issues, together with available public health interventions to address them, thus highlighting their very significant impact in improving the health of our populations.

### Tobacco

This is arguably the most straightforward problem to address, given that tobacco will kill 50% of those who smoke, 50% of whom will die before retirement age. About 26% of mortality and 17% of DALYs in males can be attributed to this risk factor (see Table 6.2). Almost all countries in the WHO European Region have acceded to the Framework Convention on Tobacco Control, which commits them to implementing a range of measures to reduce smoking, including banning tobacco advertising; large health warnings; measures to protect non-smokers; and action on smuggling. The evidence suggests that the most effective approach is a comprehensive one, including fiscal, regulatory and educational measures, with progressive increases in price through higher taxation (typically a price increase of 10% leads to a fall of 3–5% in consumption (107) and bans on smoking in public places. Growing experience

Fig. 6.6 Standardized death rates from chronic liver disease and cirrhosis, all ages, per 100 000, 1980–2004



Source: WHO Regional Office for Europe 2007 (64).

with the last of these is showing that the health benefits are substantially greater than previously thought, reflecting biological research on the toxicity of second hand smoke. In several places, bans on smoking in public places have been associated with rapid reductions in heart attacks of around 20%. Health service interventions are also effective when in the form of brief interventions by health professionals, supported by easy access to nicotine replacement therapy.

Some superficially attractive measures are not appropriate. These include those educational campaigns directed at adolescents and promoted by the tobacco industry in some countries. They state that smoking is not for children, while subtly conveying the message that it is acceptable for adults.

### Alcohol

Although alcohol can be beneficial to health when drunk in small quantities by those at moderate or high risk of cardiovascular disease (such as those over age 40), it exacts a large toll in terms of premature death, especially among men. Approximately 8% of mortality and 14% of DALYs can be attributed to this risk factor (see Table 6.2). The problem is greatest in the CIS and the Baltic states, and research in the Russian Federation has shown that alcohol accounts for 40% of deaths among working age men (108). The precise nature of the problem varies. In some western European countries (Finland, United Kingdom), liberalization of alcohol sales, coupled with lower prices, has been associated with increases in deaths from cirrhosis (see Fig. 6.6). In the CIS and Baltic states, a major factor is the widespread and easy availability of inexpensive surrogate alcohols, such as aftershaves and firelighting liquids (109, 110). Since 2006, a change in the law in the Russian

Federation has reduced availability of some of these substances, with accompanying reductions in alcohol-related mortality. Clearly, in all of these countries, the policies that are needed will reflect the nature of the problem. In the former case, increases in taxation may work best; while in the latter, controls on liquids containing alcohol and the addition of emetics to technical alcohols will be more effective. There is some scope for health service interventions, with growing evidence emerging to support the use of techniques such as motivational interviewing. However, even this can achieve little without a comprehensive and coordinated programme of preventive interventions.

### Diet and physical activity

Experience demonstrates that the food and soft drinks industries' products are central to this rapidly increasing problem. Government-funded campaigns to educate the public will employ a fraction of the amounts spent on advertising calorie-dense foods and cannot compete with promotions that tie in with film characters or downloadable ringtones that send promotional messages to adolescents, for example. Policies will therefore be more effective if they can genuinely engage industry. Alternatively, governments may opt for regulation in place of cooperation and enact controls on marketing of unhealthy foods. In addition, legislation on reduction of salt content or replacing trans fat in manufactured foods, as well as on food labelling, have proven to be effective.

However, the greatest challenge in this area is that, over the past few decades, many countries have, unconsciously, created "obesogenic environments" (111), that is, environments in which people are discouraged from walking and where energy-dense fast

food is both cheap and easily available, thus promoting obesity. Any effective policy response requires a coalition of a broad range of sectors, especially engagement by, among others, urban planners, finance ministers and public health professionals, as well as industry actors.

Again, there is some role for downstream interventions. A Swiss review of economic studies in the area of obesity found that investment in programmes targeted at promoting physical activity and healthy eating was highly cost-effective (112), although, as always, evidence cannot be transferred between settings without caution.

### **Traffic injuries**

Traffic injuries also account for a large part of burden of disease, especially in the CIS. Again, the most effective influence will be upstream, through measures to change the environment on the roads, introducing legislation on seat belts and crash helmets and reducing speed limits, better lighting and the use of traffic calming measures, particularly in residential areas. However, many of these important steps are often already in place but are ineffective if they are not implemented routinely. There is an issue regarding enforcement in some countries, with efforts undermined by police corruption, where incomes are low and the local culture is permissive. The solution, whether this includes increasing police pay or introducing automatic speed cameras and collecting fines centrally, is beyond the scope of this report.

Evidently, actions outside the health service itself are particularly important here. The case for health system stewardship, however, is clear. For instance, research in Australia shows a cost–benefit ratio for road safety programmes of at least 3:1, including only government costs and without taking into account the impact on the economy or in terms of “human suffering” (117).

### **Mental health**

Poor mental health has many causes. Some, such as economic turmoil or urban decline, are clearly upstream. They might respond to policies on economic or urban regeneration and community strengthening, although these will tend to be undertaken primarily with an economic or housing focus, rather than a mental health one. Downstream interventions are more likely to be health focused, although a review on promoting mental well-being and preventing mental health problems found the most compelling evidence of effectiveness was in interventions targeted at children in their early years and their parents and on interventions aimed at primary-level prevention of depression and suicide (116). Again, health system stewardship is important here, but implementation is likely to cut across sectors.

As noted, the aim here is to outline some of the main public health issues and interventions available, without a comprehensive overview and not attempting to provide a priority list. For instance, HIV/AIDS prevention strategies are not covered here, but have been shown to be highly cost-effective strategies in terms of reducing transmission and reducing the harm associated with risk behaviours. HIV/AIDS is a good example of the complexity of priority-setting and of how important it is that health system stewards play an effective role in translating evidence on burden of disease and cost–effectiveness into appropriate action plans that meet public health and public policy priorities.

### **Applying the evidence: some data on cost–effectiveness**

As stated earlier, it is not possible to provide data on the cost–effectiveness of public health interventions which would be readily applicable across the different countries in the WHO European Region. However, it is still possible to provide approximate estimates which illustrate the impact of some of these interventions. Thus, Table 6.4 draws on data collected for the WHO CHOICE project and the Disease Control Priorities Projects that focus on low- and middle-income countries, and demonstrates that there is some relevant evidence supporting interventions that would be highly cost-effective, even in the least affluent countries of the WHO European Region (117, 118, 121). Again, these include the use of fiscal policy measures to influence alcohol and tobacco use, legislation to restrict salt and saturated fat content in foods and a whole range of traffic accident prevention measures that also apply in high-income countries.

In spite of the large contextual differences between countries, the limited evidence on cost–effectiveness and the methodological complexities involved in interpreting it, this section shows that there are a number of interventions to promote population health that have a high return in terms of health gain and that would benefit from additional investment.

### **6.4 Promoting equity? The impact of health systems on health inequalities**

Health equity constitutes one of the main goals of the health system (see details of the HSAF, Section 2). It is defined here as “the absence of systematic and potentially remediable differences in one or more aspects of health between social, geographic or demographic groups of people” (120). This section looks at how health system interventions can reduce inequalities in health and thus promote equity.<sup>11</sup> It draws on chapter seven in the main volume (62) and

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11 In this section we refer to health inequalities rather than health equity. The latter reflects one of the main health system goals and thus is more normative and value laden as well as more difficult to measure in objective terms. By contrast the term “health inequalities” is more descriptive, and lends itself to objective measures of the extent of the problem to be tackled.

**Table 6.4 Selected population-based interventions**

Condition	Intervention	Incremental cost-effectiveness (\$/DALY)
Alcohol abuse	50% increase in excise tax	Eur-A : 258* Eur-B : 489* Eur-C : 156*
	Excise tax plus advertising ban	Eur-A : 570* Eur-B : 466* Eur-C : 209*
	Excise tax, advertising ban, and brief primary care advice	Eur-A : 2 359* Eur-B : 616* Eur-C : 593*
	Excise tax, advertising ban, brief primary care advice, random breath testing	Eur-A : 2 690* Eur-B : 5 070* Eur-C : 1 168*
Coronary artery disease	Legislation substituting 2% of trans fat with polyunsaturated fat at a cost of US\$6 per adult (Assuming 7–40% reduction in disease)	48–838
Diabetes, ischaemic heart disease, stroke	Legislation with public education campaign to reduce salt content	1 937
	Media campaign to reduce saturated fat	2 617
Tobacco addiction	Excise tax 600% of supply price (double the regional rate)	Eur-A : 32* Eur-B : 21* Eur-C : 5*
	Excise tax at 600% of supply price, plus advertising ban	Eur-A : 859* Eur-B : 163* Eur-C : 53*
	Excise tax at 600% of supply price, advertising ban, clean indoor air law enforcement, plus information dissemination	Eur-A : 1 909* Eur-B : 251* Eur-C : 82*
Traffic accidents	Increased speeding penalties, enforcement and speed bumps, combined with media campaigns and better law enforcement	21*
	Enforcement of seat-belt laws, promotion of child restraints and random driver breath testing	2 449*

Sources: Laxminarayan, Chow & Shahid-Salles 2006 (117); Chisholm et al. 2004 (118); WHO 2003 (119).

Notes: DALY: Disability-adjusted life year(s); Eur-A: WHO Region, western Europe; Eur-B: WHO Region, CEE; Eur-C: WHO Region, CIS; Figures all use 2001 prices, US\$ and are unweighted for age, except those marked \*, which are 2000 prices, use international \$ and are age weighted.

builds on the discussion of the economic consequences of health inequalities (Subsection 5.4 in this report), which shows that economies, health expenditure and social well-being are all negatively affected by inequality.

Inequalities in health are substantial throughout Europe, and represent one of the main challenges for public health policy across the WHO European Region. A recent EU study argues that inequalities in mortality according to education account for some 707 000 deaths per year in the EU25, corresponding to about

11.4 million life years lost (42). Reducing these inequalities by improving the health of people with lower levels of education, occupational class or income, would therefore lead to substantial improvements in population health overall and a significant drop in avoidable mortality.

Differences in healthy life expectancy between rich and poor typically amount to 10 years or more (121) in those European countries with available data. These inequalities in general health (are linked to education

level and occupation and) are roughly the same size in all parts of Europe (122, 123). There has been no clear narrowing of this gap over the past two decades and indeed, it has widened in some countries. This is explained by the fact that where mortality has declined in all socioeconomic groups, the decline has been proportionally faster in higher socioeconomic groups, exacerbating inequities. Certainly people with higher levels of education prove better able to protect themselves against increased health risks, both in terms of moderating their health-related behaviours (involving smoking, diet and exercise) and in securing benefits from effective health service interventions (especially detection and treatment of hypertension). In addition to these differences within countries, there are also substantial health inequalities between countries in the WHO European Region, with life expectancy at birth differing by up to 13 years.

### **Can health inequalities be reduced?**

The (large) scale of the variations in the magnitude of health inequalities between countries demonstrates by extension that there is real scope to narrow the differences that exist. For example, the very small inequalities in ischaemic heart disease mortality in some southern European populations show that similarly equitable outcomes are attainable in northern Europe and indeed in all countries. This makes it all the more important that investment decisions reflect the extent to which the programmes or expenditure involved reduce health inequalities and promote equity.

Good progress has been made in unravelling the determinants of health inequalities and in providing policy-makers with the information they need to tackle the issues involved. A number of specific determinants (particularly material and lifestyle factors, with some evidence also suggesting a role for psychosocial factors) have been found to contribute to health inequalities and to be – largely – amenable to policy action. Although further research is necessary, current understanding already makes significant reductions in health inequalities feasible. The question, then, concerns which interventions are most effective.

### **Effectiveness of interventions**

Governments face a scarcity of evidence on cost-effectiveness in determining which strategies to pursue in order to reduce health inequalities. Furthermore, the stage of policy development in this area varies enormously across the WHO European Region. Countries have responded differently, for example, in England political windows of opportunity created the conditions for implementation of policies on health inequalities, while the Netherlands, Norway and Sweden worked through comprehensive and systematic plans (which are now at various stages of implementation). Other initiatives have sometimes been opportunistic and

based on the plausibility of proposed interventions rather than on rigorous evidence, and on occasion these have failed or had adverse effects (124). This section reviews some of the interventions that have been tested or are being appraised and these are reviewed in three “groups”, discussed in the following paragraphs.

The first group comprises upstream strategies on taxation and benefits linked to universal welfare services that aim to narrow inequalities in income and wealth. These clearly involve actors outside the health sector, although health system stewardship has an important role in highlighting the adverse consequences of inequalities. It is also clear that this approach responds to much that is known about the roots of health inequalities. However, the persistence of large health inequalities in countries with universal welfare systems emphasizes the need for caution. A sweeping approach using progressive tax and benefits policies has not on its own been sufficient to eliminate health inequalities, suggesting that additional policies running in tandem and addressing more specific risk factors are also needed.

The second group includes policies that are directed at health-related behaviours, particularly smoking, alcohol and poor diet (and as discussed in Subsection 6.3). Global policies, such as smoking bans in public places and increased taxes on alcohol, have been shown to be effective in bringing about behavioural change. However, they too may need to be accompanied by more targeted interventions, such as community development schemes, as well as downstream interventions with individuals. Evidence from Finland shows how universalist welfare policies that act at the collective (mid-stream) level can be effective, with subsidies for healthy meals at school and in the workplace improving healthy eating and contributing to a narrowing of socioeconomic inequalities in nutrition. There is, however, an unfortunate paucity of evidence on how well interventions that are targeted specifically at lower socioeconomic groups work.

The third group of interventions tackle access to effective health care, since lack of access to good quality health care is part of a causal chain from low socioeconomic position to premature mortality, aggravating inequalities in health or even causing them. This is illustrated by the striking difference in the burden of conditions amenable to medical intervention by socioeconomic status (125, 126). This corresponds to evidence of disparity in health service utilization, with lower socioeconomic groups more often reporting that they have foregone health care and prevention (127) because of associated costs or because services were not accessible to them (128).

The most significant barrier to access relates directly to financing systems (although barriers and the inequitable experience of them are complex). Interventions that promote financial protection and universal access to

health services by dissociating ability to pay from utilization will reduce health inequality. By contrast, interventions which allow direct out-of-pocket payments (including informal co-payments) at the point of use will sever the link with need and result in inequitable use of services, contributing to health inequalities. While most European health services are based predominantly on public or statutory sources and rely on insurance contributions and/or general taxation, rather than out-of-pocket payments, policy-makers must be mindful of the economic and social impacts of any reforms (including those that seek to contain costs) and their potential to exacerbate inequality.

Further barriers relate to service design and delivery, and strategies that address delivery, for example those that make primary care more effective, have been successful in reducing inequalities (129). Reforms that have had a major impact on inequalities include those ensuring that first contact care had a personal focus, providing continuity of care, building in a comprehensive approach and supporting coordination between providers. These directly tackled the needs of the socioeconomically disadvantaged, who otherwise experienced particular difficulties in negotiating their way through complex systems. Health services can also reduce health inequalities by targeting programmes at the disadvantaged, for example managing cancer screening programmes, to monitor uptake by different (socioeconomic) groups and to remedy low uptake in disadvantaged populations. This offsets the (more common) opportunistic and unmonitored approaches in place in many countries that allow the more vocal to secure services, while those in most need (and with the least voice) may be overlooked. Health services can also usefully take the lead in working with other agencies, such as local authorities in comprehensive intersectoral (pro-poor) intervention programmes to reduce health inequalities.

In all three cases there is some (but not wholly sufficient) evidence on the effectiveness of particular interventions in reducing inequalities, but there is also clear evidence that pro-equity policies can work and should be pursued.

### **Economic benefits**

Evidence that greater equity has direct economic benefits would be highly supportive of policy-makers promoting the uptake of pro-equity strategies. However, not enough is known about the impact of socioeconomic inequalities in health on the economy of EU Member States. Nonetheless, the economic implications are likely to be substantial (Subsection 5.4), so investing in strategies to reduce health inequalities has potential and major economic benefits. For instance, anti-tobacco policies that consciously looked at equity reduced the prevalence of smoking by 33% in lower socioeconomic groups (as opposed to 25% in higher

groups) could both reduce inequalities in health (mortality and morbidity) and have a substantial economic impact of between €9 billion and €75 billion, depending on whether health is seen as a capital good or as a consumption good. Whichever estimate is used, and they do vary enormously, the potential contribution to societal well-being is immense.

Taken together, the evidence outlined here shows that health systems can play a major role in reducing health inequalities and that this will benefit economies, health and societal well-being.

The evidence also suggests that policy-makers have a distinct and valuable role to play, not least because the energy with which governments pursue the reduction of inequalities in society (or even whether or not they recognize that inequality exists) is intrinsically a political matter. Health system stewards might contribute to a virtuous circle whereby they foster pro-equity policies and support the development of an evidence base that benchmarks the magnitude of inequalities in health and economic terms, thus further supporting (and shaping) equitable initiatives. Certainly, a base line of comparable information would serve as a tool for enhancing performance, as well as supporting comparisons across countries and offering a powerful way of communicating across sectors, leveraging resources for equity in health.

Policy-makers' inputs might be channelled in line with the roles of the health system (Section 2), for example delivering personal and population health programmes and behavioural interventions that are pro-poor and reflect the needs and culture of the disadvantaged; ensuring that financing, resource generation and stewardship promote comprehensive and accessible health services; and influencing the health impact of other sectors. Leading and coordinating intersectoral action is particularly important, given that so many of the social determinants of health inequality are shaped beyond the health system. If those working in health systems are supported by the information described above, they will be well placed to influence wider welfare and redistribution policies.

### **6.5 Responding to citizens' expectations? The role of health services in responsiveness**

Responsiveness is included in the fundamental health system goals of WHO (Section 2) and in some (although not all) countries, health services do place increasing emphasis on meeting citizens' expectations (Section 4). This section looks at responsiveness, and how users derive satisfaction (or not) from their interactions with the health system. It offers a working definition of responsiveness, outlines strategies policy-makers can use to enhance it and flags up the trade-offs with other health system objectives. This section draws on chapter eight of the main volume (130).

## What is meant by responsiveness?

While health systems are primarily intended to achieve health improvement, the way people interact with the health system involves many dimensions that do not relate directly to clinical or health outcomes, not least the interpersonal aspects of the care process. Responsiveness includes all the non-technical aspects of how people are treated by the health system (see Box 6.1).

A wide range of methods has been used to attempt to measure responsiveness over the last two decades, for instance, the introduction of consumer satisfaction questions in Eurobarometer surveys (133), the development of satisfaction surveys, such as those by Blendon (134) and by the Picker Institute (135), as well as the recent Euro Health Consumer Index (136). All have faced conceptual and practical challenges, many of which have proved difficult to resolve. Three overlapping sets of concerns are briefly highlighted here (130) (137).<sup>12</sup>

### Box 6.1 Responsiveness in the *World Health Report 2000*

This study uses “responsiveness” as the most apt term for the combination of dimensions defined by the *World Health Report 2000* (20), which saw responding to citizens’ expectations as a central health systems’ goal and a desired outcome in its own right (see details of the HSAF in Section 2).

Responsiveness is therefore all (non-technical) “aspects of the way individuals are treated and the environment in which they are treated during health system interactions” (131) and includes two sets of dimensions, subdivided into eight domains (132):

- **Respect for persons**
  - patient dignity
  - autonomy
  - confidentiality
  - communication
- **Client orientation**
  - prompt attention
  - quality of basic amenities
  - access to social support networks
  - choice of institution and care provider.

Cultures and expectations: adjusting for variations in expectations between countries is extremely difficult, particularly given differences in wealth, public expenditure or cultural norms. The same holds true for variations within countries given the differences in “sense of entitlement” between genders and social classes.<sup>13</sup>

Objective and subjective: balancing expert opinion with users’ experiences is far from straightforward, and is complicated by the range of perspectives of different user groups.

Combining measures: reaching an “overall” judgement on the level of responsiveness of a system is fraught with difficulty because it means combining judgements on different dimensions into a single composite index (see Subsection 7.2, later), which is an all-but-impossible task.<sup>14</sup>

Table 6.5 illustrates the problems involved in setting side by side the results of different assessments (using three different methodologies). It shows the rankings for EU15 countries using WHO responsiveness surveys (for both inpatient and outpatient care), the Eurobarometer (question 57.2 on satisfaction) and the Euro Health Consumer Index of 2007.

The results of these assessments are sometimes inconsistent or contradictory and are very difficult to interpret. The differences between the three rankings may be explained by insufficient adjustment for cultural expectations (Eurobarometer or the Responsiveness Index), the use of value laden indicators (Euro Health Consumer Index), or the fact that measures may be capturing very different phenomenon. More detailed analyses provide even more evidence of problems; surveys in the United Kingdom consistently find a low level of satisfaction with the health system in general but a high level of satisfaction with the actual experience of care among those who have recently used it. It has been suggested that this reflects the impact of widespread adverse media coverage. In other countries there is evidence that negative perceptions reflect a more general dissatisfaction with the government.

Overall, therefore, it is impossible to draw from these surveys any clear conclusions about the differences involved in the degree of responsiveness between health systems and even less about the health system strategies that may explain these differences. However, they do

12 For a detailed discussion of these methodological issues see Busse et al. (130) in the main volume and in particular Chatterji et al. in the accompanying volume on performance (186).

13 WHO initially used a “vignette” methodology to correct for different cultural expectations, but due to the complex data requirements, the approach was dropped in subsequent work.

14 The Euro Health Consumer Index is a case in point. It uses criteria such as “generosity” of the system, which assesses access to non-essential interventions or new pharmaceuticals. However, the notion of generosity is highly culturally bounded and its relevance in less affluent health systems is unclear, while many questions on the efficacy and efficiency of new or non-essential treatments remain unanswered (133).

**Table 6.5 Rankings of the EU15 countries in selected recent surveys**

	WHO Responsiveness Inpatient 2000–2001 <sup>a</sup>	WHO Responsiveness Outpatient 2000–2001 <sup>a</sup>	Eurobarometer Satisfaction (% satisfaction) <sup>b</sup>	Euro Health Consumer Index <sup>c</sup>
Austria	n/a	n/a	2 (67)	1
Belgium	5	4	3 (65)	8
Denmark	n/a	n/a	6 (52)	7
Finland	9	4	1 (73)	6
France	5	4	4 (64)	3
Germany	8	2	8 (47)	4
Greece	13	13	14 (19)	15
Ireland	2	1	13 (20)	11
Italy	11	11	12 (31)	13
Luxembourg	2	9	5 (58)	9
Netherlands	5	4	9 (46)	2
Portugal	11	11	12 (14)	13
Spain	9	10	10 (46)	10
Sweden	4	4	7 (48)	5
United Kingdom	1	3	11 (31)	12

Sources: <sup>a</sup> Valentine et al. 2003 (138); <sup>b</sup> European Commission 2002 (139); <sup>c</sup> Health Consumer Powerhouse 2007 (136).

Notes: EU15: Member States belonging to the EU prior to May 2004; n/a: Not available.

exist, and often attract considerable media attention. Policy-makers have to deal with the pressures exerted by league tables and cannot simply dismiss the data as unreliable, even in cases where they are used to call for ineffective additions to the package of care.

### Health system strategies to enhance responsiveness

Policy-makers might begin work to enhance responsiveness simply by addressing some of the concerns detailed above and by taking steps to improve the quality and comparability of assessments. Certainly, ensuring transparency in the composition of indices and the attribution of weights; flagging up underlying values; and promoting rigour in interpretation of results are all areas in which health stewardship could (and should) take a lead and which will support efforts to improve the way health services treat citizens.

Strategies to increase the first four WHO dimensions of responsiveness (dignity, autonomy, confidentiality and

communication) tend to be centred on changes in organizational and policy development. Staff education and training can be refocused to promote greater respect for human dignity; to ensure health system staff communicate effectively; and to foster appropriate application of confidentiality policies. Information sharing can be made more effective and mechanisms put in place to allow patients a more autonomous role and to participate more in clinical decision-making, as the legitimate “co-producers” of care. Improvements in these dimensions can be secured without necessarily requiring significant additional investment.

Perhaps more challenging is the task of creating a climate that encourages health services personnel to treat patients well. Health workers typically value professionalism, but where pay fails to meet legitimate expectations they may become de-motivated and fail to deliver the highest quality care. Those that are paid particularly badly may raise money illicitly, responding only to informal payments and creating barriers to



access. Maintaining responsiveness therefore implies providing adequate resources, which is a potentially challenging proposition. However, while increasing pay may be expensive, it does create an opportunity to refocus management and specify expectations. Health system managers must recognize, however, the evidence that policies seeking to micro-manage clinical behaviour can lead to a loss of professional identity and undermine autonomy and motivation, so that health workers do exactly what they are meant to, but no more.

The other dimensions of responsiveness, those that improve client orientation of services, are also likely to require commitment of considerable resources. This is particularly the case if capacity is to be increased to reduce waiting times or facilities are to be improved, but also if there are to be new client information systems and new complaint procedures.

Overall, policy-makers may advance the responsiveness agenda directly by including explicit requirements to meet clients' expectations in contractual arrangements, where these apply, or by building them into service delivery strategies. They can also take an indirect approach to influencing provider behaviour through broader regulatory initiatives such as the creation of patient rights legislation or patient charters or by specific service guarantees (for example on waiting times), or by setting up an Ombudsman function. These initiatives empower consumers and enable them to demand greater responsiveness.

In addition, and in light of Subsection 6.4 above, policy-makers may usefully include equity considerations in responsiveness initiatives. There is explicit evidence on disparities in responsiveness, particularly towards ethnic minority populations. One of the best documented examples is the widespread discrimination against Roma populations. Direct and indirect strategies on equity in responsiveness will tend to improve access and so reduce health inequalities. Strategies that overlook the ability of different population groups to benefit from responsiveness initiatives, such as choice (see discussion below), may exacerbate those inequalities.

### **Are there trade-offs between responsiveness, efficiency and equity?**

Policy-makers addressing responsiveness must therefore consider the ubiquitous yet critical issue of trade-offs (140). As always, investing in one area has impacts on others and responsiveness raises particular challenges for the other health system objectives of efficiency, health gain and equity.

The right to exercise a degree of choice between institutions and care providers is a case in point and

illustrates well the kind of trade-offs that policy-makers face. Choice is often portrayed as a core issue touching on fundamental rights and instrumental in increasing responsiveness.<sup>15</sup> Yet, in countries where choice has been extended or there is essentially a free choice of provider (141, 142, 143) there are concerns about the resulting fragmentation of care and duplication of investigations when, for example, consumers chose different primary care and ambulatory care providers for the same episode of care. While this responds to the expectations of users, it may be clinically undesirable, result in poorer health outcomes and lead to overutilization of services, which undermines efficiency. There are also "treatments", therapeutic interventions and medicines that are neither efficacious nor cost-effective but which are valued by patients, posing a direct conflict between responsiveness and efficiency. Policy-makers need to manage these trade-offs, although there is growing evidence that they overestimate the importance patients attach to unlimited choice. In France, they have recently done so through the introduction of gatekeeping schemes coupled with some disincentives, while Denmark, in which the majority of its population are registered with a general practitioner (GP), offers a "doubling up scheme", through which a small percentage of the population opts to choose a GP for each episode of care by paying a fee-for-service payment.

Equity is another key consideration in the review of trade-offs with potentially very significant conflicts between it and responsiveness. Measures aimed at increasing responsiveness (and again, those that focus on choice are a case in point) may privilege those segments of the population who are better able to compare and chose between options, as recently experienced in the United Kingdom (144). This tends to benefit the younger, healthier, more affluent and better educated, who can negotiate the services that they want – what has been termed the inverse care law (145) – widening the equity gap. Again, policy-makers need to be explicit in how they balance competing issues and to be proactive in pursuing equity, widening access to information about services and through positive discrimination strategies to increase access and choice for the socioeconomically disadvantaged.

All trade-offs need to be considered in light of the wider context within which they are situated. This is an area where culture plays a very significant part in shaping perceptions, making it particularly difficult to extrapolate from one country or one population group to another. Policy-makers need to adjust the priority they attach to responsiveness and the measures they take to achieve it, to reflect societal norms and expectations as well as the availability of resources. However, resource constraints

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15 Choice has also been used to undermine provider monopoly. The objective of these strategies has been to increase efficiency through the introduction of competition and not to enhance responsiveness per se.

(and a commitment to equity) do not lead inevitably to levelling down to the lowest common (responsiveness) denominator.

In sum, responsiveness is a value in and of itself and a dimension of health systems that is genuinely valued by patients and citizens. It is something that can involve significant extra expenditure, which begs the question: how much extra are societies prepared to pay for responsiveness, and how much will they pay for equity of responsiveness? However, many strategies that increase responsiveness are also cost-effective in terms of health gains. For instance, responsiveness leads to better compliance with treatment, which is especially significant for chronic disease treatments. The role of health system stewards then must be to promote (as always) good governance, transparency and accountability, to refine the use of existing resources to enhance responsiveness and to manage the trade-offs between goals when these arise. They will also need to play a role in offering and interpreting information on responsiveness, empowering populations to take an appropriate part in decision-making, including on trade-offs and in assessing the opportunity cost of investing in responsiveness rather than other health goals.

## 6.6 Health systems' direct contribution to the economy

The previous five subsections have addressed the impact of health systems on health (personal and public) and the goals of responsiveness and equity, which in turn contribute directly to societal well-being. Health systems also have direct and significant impacts on the economy. This section addresses very briefly the "right side" of our conceptual triangle (see Fig. 3.1). It is tackled here as it relates so closely to the discussion of investment and its policy implications.

The health system "matters" economically if only because of its size. It represents one of the most important sectors in developed economies, and is, typically, one of the largest service industries. Estimates of its output vary, but it accounts for approximately 7% of GDP in the EU15, which is more than the financial services sector or the retail trade sector (at 5% each) (146). The economic importance of the health sector is further illustrated by its direct labour market effect. It is much more labour intensive than, for example, manufacturing or information services and 9.3% of all people (aged 15–64 years) currently employed in the EU27 work in the health and social sector (147). Furthermore, health sector employment in Europe has been growing over recent decades, with an average

growth rate of 1.7% a year from 1990 to 2001 for the EU15, albeit with significant variations between countries (146).

In addition, the performance of the health sector affects the competitiveness of the overall economy through its effects on labour costs, job mobility and labour market flexibility. Moreover, increased health expenditure is mainly funded by increases in taxation and/or insurance contributions that will affect labour costs and thus international competitiveness. It is therefore important that increased spending is offset by better health outcomes which can increase productivity.

The health system may also contribute to the economy through R&D. Biotechnology, medical devices, pharmaceuticals and eHealth<sup>16</sup> (148) all involve high-level innovation with considerable market potential. R&D may also have "spillover" or multiplier effects, whereby the impact of one discovery increases the research endeavours and productivity of others (149). Biotechnology developments in health care may, for example, have benefits for other sectors, such as the food industry, and this is one of the reasons why many developed countries have an explicit policy goal of increasing R&D expenditure in health.<sup>17</sup> A total of 18.7% of all domestic R&D expenditure in 2004 in the EU25 governmental and higher education sectors was in medical sciences (150), exceeded only by natural sciences, engineering and technology. Nevertheless, there is thus far little clear evidence that health-related R&D has significant economy-wide benefits in Europe, or indeed globally.

The size of the health sector and its commercial potential are not, however, sufficient grounds for investment in the health sector as an explicit strategy for growth. Certainly, if health expenditure increases, all else being equal, GDP will also grow, just as it would if there was increased spending on video games or sports cars. The key is the statement "*if all else remains constant*". In most cases this condition does not – and cannot – hold true. If a government increases expenditure on health, it will have to cut spending on something else, thereby drawing labour and/or capital from other sectors, especially if the available resources are already fully employed. The critical question is whether investment in the health sector will, in the long term, achieve better returns than investments elsewhere. The situation will be different, however, where there is substantial underemployment, as the costs of additional health spending – in terms of displacing resources from elsewhere – will be low or even close to zero. Public health spending might then be seen as a strategy of

16 For example, eHealth has been identified by the EU as one of the six markets with the highest growth potential and at the same time providing high societal value.

17 For instance, in the revised version of the EU Lisbon Agenda, one of the very few quantitative goals is about reaching a level of R&D equal to 3% of GDP by the year 2010.

demand stimulation, creating jobs and promoting economic growth,<sup>18</sup> and may be especially important in the context of regional development. Furthermore, investment in health facilities in these circumstances could be an essential prerequisite for inward investment. In the EU, for instance, this issue is recognized in the Commission's health strategy 2008–2013 ("Together for health"), by some regional networks,<sup>19</sup> and through the inclusion of health infrastructure as an area for investment of EU structural funds (151).

The extent to which investing in health systems is justified in economic terms depends, then, on its economic productivity and the opportunity cost relative to investment in other areas. The arguments of parts of the pharmaceutical and medical devices industry against cost-containment (through price regulation and HTA), on the grounds that industry fuels economic growth, need to be carefully balanced against the value of alternative investment strategies and – more importantly – against possible inefficiencies in the health sector caused by the inappropriate use of these technologies.

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18 The alternative strategy would be to cut tax rates in order to encourage more consumer spending. The main difference would be that additional health spending draws more real resources into the production of health care, while tax cuts draw real resources into the production of whatever consumers purchase with their extra disposable income, which may, however, include added production (and jobs) abroad from additional imports purchased domestically.

19 An example is "healthclusternet", a network of 13 European regions that are working together to improve the contribution that health care sector spending makes to regional development.

## 7. Improving health systems performance

The previous section amassed substantial evidence that well-run health systems can have a significant impact on health (in all its dimensions), wealth and the central goal of societal well-being. There is, however, a very important distinction between the capacity to make an impact and actually making a difference. If health systems are to realize their potential, they must be well managed and adequately resourced, and if they are to secure new investment, they must demonstrate that they are indeed effective and efficient.

Policy-makers have long understood this and have sought to ensure that health systems improve through a wide range of reforms touching on all health system functions. However, they have not (typically) been as active or successful in assessing whether functions are actually better as a result. This tendency to “reform”, without critically evaluating the outcome, is changing. Policy-makers and managers increasingly recognize the significance of structured and systematic approaches to measuring performance in defining what is expected of the system, tracking how resources are used and demonstrating what is being achieved. Performance measures on their own cannot, of course, solve all problems facing health systems but, when linked to the right combination of governance tools and incentives, they can be highly effective.

This section describes the main reform strategies used in the WHO European Region to improve health systems (Subsection 7.1), albeit that these have not often been linked to explicit steps to measure benefits in terms of enhanced performance. It goes on to focus on developments in performance assessment and the ways in which it can enhance the design, stewardship and implementation of reform strategies (Subsection 7.2). Ultimately, it argues, health system stewards will only be able to ensure (and be seen to ensure) optimal and efficient performance when appropriate, transparent and accountable performance assessment systems are embedded within health systems at all levels, and that this is the key to securing further health systems investment.

### 7.1 Health system reform strategies

Many health systems in western and eastern Europe are engaged in a process of reform. Countries have been experimenting with a wide range of strategies to improve quality and value for money and to ensure sustainability. This is particularly the case since the late 1980s in western Europe and the late 1990s in eastern Europe.

This section draws on chapter nine in the main volume (152) and the extensive catalogue of comparative research on system reforms generated over the last

decade, including work by the European Observatory on Health Systems and Policies (153). It briefly outlines the main reform strategies that have attempted to address performance and highlights the main guiding objective of each set of reforms in line with the four health system functions (see Section 2, Fig. 2.1). These are:

- delivery of health services (with reforms tackling appropriate and cost-effective delivery);
- resource generation (with reforms seeking to ensure the right level and mix of inputs, particularly human resources, technology and capital);
- financing (with reforms focusing on two subfunctions):
  - revenue collection and pooling (to improve sustainability and solidarity);
  - purchasing (with an emphasis on effective purchasing to improve allocative and technical efficiency); and
- stewardship and initiatives to strengthen governance, accountability and responsiveness.

This section could not hope to assess the impact of the huge range of abovementioned strategies comprehensively, or indeed in any detail. Instead, it attempts to provide a snapshot of the steps that Member States of the WHO European Region have taken in recent years to improve performance, and in doing so it is descriptive rather than normative. It is also necessary to note two additional points. First, there is still in many cases insufficient evidence to evaluate fully the reforms to date. Second, and crucially, many of these reforms are highly context dependent. The history and organizational structures in place and the environment, culture and value systems in which reforms are embedded will determine to a significant extent how far they succeed. This makes it more difficult to generalize about factors that facilitate or block success or to transfer lessons between countries.

#### Delivering services cost-effectively

Curative health services form a major part of the service delivery function, and are highly valued by populations. They also command a large share of health system resources. They have therefore been a major (and logical) focus of health reform activities across Europe. Policy-makers have sought to improve the performance of service delivery, and in particular its cost-effectiveness, through a wide range of reform strategies, particularly initiatives to integrate and coordinate service delivery. There have also been efforts to substitute across levels of care (in many instances replacing hospital services with strengthened primary care provision which

in turn allows rationalization of hospitals); decentralize provision (which has seen the introduction of an array of new organizational models and greater involvement of the private sector); and a series of initiatives to improve quality assurance. Some of these reforms are briefly outlined here.

The ageing of the population in most of Europe (see Section 4) raises the spectre of an increased burden of chronic disease and further challenges for service delivery. Certainly, there are issues around how best to *coordinate and integrate services* across levels and *ensure a continuum of care* (154, 155, 156). Countries have developed a diverse range of new models of service delivery to promote seamless treatment of the chronically ill in the most appropriate setting(s). These include primary care-based networks and nurse-led strategies (especially in countries with strong primary care traditions such as the Netherlands, Sweden and the United Kingdom): explicit mechanisms to coordinate providers such as “health networks” in France or “chains of care” in Sweden; and disease management programmes (Germany, the Netherlands) (157). These are often facilitated by strategies to adapt the skill mix of the health workforce, to foster multidisciplinary teams and to support audit and quality monitoring. Reforms in financing and in incentive schemes have been equally significant in terms of ensuring care is more integrated. Examples included risk-based funding or reallocation to sickness funds (Germany, the Netherlands), exemption from (or reduction of) co-payments and bonuses for patient “recruitment” (France, Germany) and payment for performance (United Kingdom) (157). These have created levers to achieve more integrated service delivery, and although – as with most reforms – the models are highly context specific, they do offer an enormous potential for learning between countries, not least on how to work across functions to achieve reforms.

There has also been a trend towards *health service substitution*, with care being reassigned across tertiary, secondary and primary care boundaries and at the health and social care interface. There has been more emphasis on delivering care in the most cost-effective location, supported by the most appropriate health workers and technologies. In particular there has been a *transfer of inpatient care to other settings*, and so, for example, substituting high-cost inpatient care with the more cost-effective alternative of day care surgery (158); this not only addresses costs but also helps in tackling the challenges of providing care to dispersed populations and of making health services more accessible to the public.

These reforms enable (and have been accompanied by) progress with the *rationalization of hospitals* (159, 160). Again, links between functions facilitate the implementation of new approaches, so the introduction of tailored purchasing mechanisms involving contracts,

selective contracting and performance-based payment mechanisms have helped to achieve change, as evinced by the declining number of hospitals and hospital beds across the region and particularly in CEE and the CIS – these are discussed in the subsection on financing, later.

These reforms (particularly on integration and substitution) have often involved shifting the locus of financial and decision-making power to primary care and strengthening its role in integration across the interface. Indeed *strengthening primary care*, or “putting primary care in the driver’s seat” (161) has been central to many attempts to improve the cost-effectiveness of service delivery (162). One model involves giving some, or all, of the hospital sector budget to primary care providers (municipal health and social boards in Finland, subcounty district health boards in Sweden, Primary Care Trusts in the United Kingdom). Another popular strategy is the introduction and/or strengthening of primary care models based on family practitioners (or GPs) within a broad, multidisciplinary primary care team. Other reforms look more explicitly at increasing the effectiveness of primary care itself, and these include changing (and expanding) task profiles, managing behaviours through payment incentives (see the subsection on financing, later) and introducing new information and communication technologies and quality assurance mechanisms. These link service delivery, financing and stewardship functions. In addition, success in primary care reforms depends heavily on resource generation and the putting in place of appropriate training programmes, such as those for family practitioners (see later).

One further set of reforms that involve primary care and are of particular relevance to this analysis is the integration of a series of health promotion and prevention activities into primary care (whether aimed at the individual or population based). Thus, primary health care has taken on an increasing role in cost-effective public health interventions, such as systematic screening for hypertension, cholesterol and a range of cancers; and the provision of health advice on risks including diet, alcohol and smoking. An important aspect of this process has been a shift of vertical health programmes (such as immunization, tuberculosis control or sexually transmitted infections) into horizontally integrated primary care service structures. This *integration of vertical programmes* responds to increasing evidence that integration increases efficiency and improves outcomes in areas such as HIV, mental health and certain communicable diseases. Despite the management advantages, however, this approach is not without its problems, nor is it applicable across all health programmes or in all national contexts (163).

Some governments are introducing innovative service management strategies (often grouped under the heading *New Public Management*, NPM) in an effort to shift public sector service delivery from a “passive

administration” model to a more “active management” approach. One of the most widely adopted NPM models has been to restructure publicly owned hospitals into *semi-independently managed public firms* (Estonia, Norway, Portugal and United Kingdom, with regional examples in Andalucía (Spain) and Veneto (Italy)). These new models of hospital ownership have a quasi-autonomous management structure (often with its own separate Board of Trustees), while remaining under public ownership and retaining some form of public accountability. The creation of these new organizational models has arisen as a consequence of the separation of purchaser and provider functions, the introduction of strategic purchasing, provider competition and selective contracting – all of which are discussed in the later subsection on financing.

Other NPM strategies that seek to improve standards include *contracting out of the management of primary health centres* to private non-profit-making and profit-making firms (Finland, Sweden) and providing patients with a publicly funded fixed budget with which to pay directly for providers of home or chronic care (Netherlands and the United Kingdom), respectively.

There is growing interest in a number of countries in *strengthening patient choice*, in an effort both to increase responsiveness (Subsection 6.5) and to allow funding flows to be harnessed to patient preferences, thus spurring provider competition (and, by extension, efficiency). In tax-based systems, choice has typically been introduced on the production side of the system (Denmark, Norway, Sweden), while at the time of writing the United Kingdom is in the process of offering patients some choice between private and public hospitals. In countries with social health insurance (SHI), choice has focused on *selecting sickness funds* (Germany, Switzerland) or “insurance companies” (Czech Republic, Netherlands), so discussion of these reforms belongs more accurately under the later subsection on finance. It is important to note, nonetheless, that many of these experiments have not been accompanied by (sufficiently) robust systems of regulation and have had negative consequences for insurance coverage and equity. Experience in several CEE countries demonstrates clearly why strong regulatory systems are needed if such reforms are not to undermine solidarity.

In addition to increased choice, some Member States have put in place a wide range of measures aimed at *empowering the patient*, increasing participation and thus responsiveness of service delivery (Subsection 6.5), including patient rights legislation, formal representation in the boards of purchaser and provider organizations; introduction of ombudsman services and increased participation of patients in decision-making about their own care. The latter is particularly relevant in the context of chronic diseases, as patient participation and self-management has been shown to improve outcomes.

This requires the system to build health literacy, promote patient involvement in treatment decisions and educate patients to play an active role in self-management of chronic conditions (164).

Many of the measures described above reflect a changing stance toward the *differentiation between public and private* in European health systems. The traditionally rigid boundaries between these two sectors have melted, to some degree, and there is now a willingness to combine various forms of public and private within a publicly accountable market structure in some countries. In practice, if not by decree, the 1990s debate as to “whether” to utilize market mechanisms is over and has been replaced by a spirited discussion about “how” to adapt traditional market structures to serve new health sector needs. The range of these public–private mix models and their impact is very wide, but in most cases their introduction has demonstrated the need to strengthen governance arrangements (165), including regulatory efforts and performance assessment (see later discussion on stewardship).

Just as many reforms involve an overlap between the objectives of increased efficiency and enhanced responsiveness (like the initiatives mentioned earlier on choice of service deliverer), so there are reforms that use quality and cost–effectiveness to lever broad improvements in service delivery. Member States have put in place a series of *quality initiatives*, from the broad system level to the clinical setting. These include national legislation and policies on quality of care; comprehensive patient safety strategies; registration and licensing for new technologies and pharmaceuticals; training programmes on quality; accreditation of providers and clinical guidelines; information systems and quality assurance methods (166).

One such key quality initiative is HTA. Many countries have promoted the specific assessment of the cost–effectiveness of pharmaceuticals and other medical technologies, with the conscious aim of ensuring that service delivery avoids inefficacious or iatrogenic interventions and achieves value for money. Formal HTA agencies have been established across Europe from France, Sweden and the Netherlands in the 1980s, respectively; Austria, Spain, Finland, Latvia, the United Kingdom, Denmark and Germany in the 1990s, respectively; and Hungary and Belgium (2001–2003). Most play an advisory or regulatory role in the decision-making process (36) and all have the potential to bring together commitment to quality and efficiency and to enhance health system sustainability. Nonetheless, the use of HTA in practice is often restricted by resource constraints and complicated by ethical, technological and political challenges.

### **Resource generation: appropriate level and mix of inputs**

A second health system function and another major

focus for reform activity is resource generation, which encompasses human resources, capital development and the introduction of (new) technologies.

Human resources are under pressure from demographic changes, including migration, threatening *staff shortages*. Most countries face challenges around the *geographical distribution of personnel* and particularly the inequitable distribution of physicians between urban and rural areas. In addition, new models of care pose challenges for staff, especially in terms of *changes in skill mix* (167, 168).

The shortage of staff is often very significant. Many western European countries have sought to remedy the situation by bringing in physicians and nurses from other EU countries (Polish physicians to Sweden; Swedish nurses to Norway) and beyond (GPs from south-east Asia and Africa to the United Kingdom). In 2005 the United Kingdom and Ireland ranked alongside the United States, Australia, Canada and New Zealand in having the highest shares of foreign-trained doctors of all OECD countries; between one quarter and one third of all practising doctors had trained in another country. The share of foreign-trained doctors is also growing rapidly in France, Switzerland and some of the Nordic countries. A number of innovative strategies have been put in place to *manage migration* and especially to minimize negative impacts in exporting countries and to offset “brain-drain”. These include twinning and staff exchange, educational support, international monitoring, bilateral agreements and international and ethical recruitment codes, as in Norway (169). At the same time, a mix of financial and/or regulatory measures have been put in place to attract physicians to rural and deprived urban areas and to tackle geographical imbalances within countries.

Policy-makers have sought to address skill-mix imbalances (170) through a number of strategies, such as *substitution, delegation and innovation*. These include creating new professional roles, *training and/or retraining staff* and adapting training programmes to new technologies and to reflect new models of care. Measures to train additional primary care physicians (United Kingdom) and to encourage more medical graduates to take up positions in primary care (Finland, Sweden) are common in western Europe. CEE and CIS countries tend to pursue initiatives to transform polyclinic specialists into freestanding GPs in line with reforms that began in the mid-1990s in countries like Estonia and Hungary (although, paradoxically, England is now seeking to create polyclinics). Efforts to accelerate the training of nurses (Netherlands), to retain nurses who were considering leaving the profession and to encourage those who have left to return are also commonplace. National policy-makers have also introduced pilot schemes to develop a range of physician or carer substitutes (particularly nurse practitioners and physician assistants).

In public health, several CEE and CIS countries have put in place a range of programmes to *retrain their former sanitary-epidemiology workers* to take up more modern public health practices, including health promotion and prevention, although with only limited success.

In terms of re-skilling and maintaining skills, as opposed to filling skill gaps, a growing number of countries now require *continuing education* as part of a regular *physician re-certification process* (171). For instance, national regulating bodies may require a certain number of training hours, or specific types of courses or rotations to be provided by an institution or completed by a candidate. These reforms contribute to wider efforts to improve quality of care.

With regard to *capital development*, there has been a rethinking of the importance of public-private boundaries (mentioned earlier). Innovative policies have been tested, creating new models of ownership and allowing the use of private finance to build public hospitals (for example the United Kingdom private finance initiative). This approach is controversial, and the results mixed. Australian hospitals built with this model have had to be taken back into public ownership while those in the United Kingdom have had problems with quality and cost.

With regard to pharmaceuticals, there has been considerable (and universal) growth in the proportion of total health spending in this area, with policy-makers struggling to maintain quality, contain costs and respond to patient expectations. Policy-makers have put in place a wide range of regulatory strategies to increase the quality and efficiency of pharmaceuticals (172). For instance, the substitution of less expensive generic pharmaceuticals for brand name pharmaceuticals once the pharmaceutical patent has expired has become a favoured approach to containing costs in many countries (and is certainly more equitable than the demand-side strategy of increasing cost sharing). Also, and as noted earlier, many European countries have put in place HTA agencies that scrutinize new pharmaceuticals for cost-effectiveness. HTA agencies are also used to review evidence on the introduction of new technologies, but as with all measures to control the uptake of innovation there are countervailing pressures from consumers and industry that can be difficult to withstand.

### **Financing (revenue collection and pooling): sustainability and solidarity**

Health systems can only meet their clinical and social responsibilities if they are able to raise the funds they need to operate. Implementing appropriate systems to pool risk is an essential part of this function, since the cost of services can rapidly outstrip the ability to pay for all but the wealthiest people. Furthermore, these arrangements must be sustainable into the future, without sacrificing social and intergenerational solidarity (itself a core policy commitment). All countries find

revenue collection and pooling challenging, regardless of the main source of funds (for example, general government revenues or earmarked payroll contributions), the arrangements for pooling (for example, through single or multiple agencies, competing or non-competing, etc.), or whether the countries are in western Europe, CEE or CIS. They have adopted a wide range of divergent, sometimes contradictory initiatives, which reflect their economic/fiscal context (for example, formal labour force participation, capacity of governments to collect taxes, etc.) and political choices and, in particular, the extent to which they are pursuing redistributive policies.

Several countries have *changed responsibilities and agencies for pooling funds*. In some cases, the shift was within “budgetary” systems of universal population-based entitlement such as Finland (1990s), Italy, (1997–2001) or Spain (2001), which all decentralized responsibility for pooling (and purchasing) health care from the national level to the regions, and Denmark (2007) where the shift was conversely from regional to national level. There was also a widespread shift within the public sector (most particularly in CEE) from a reliance on general tax revenue and universal, population-based entitlement to dedicated (usually payroll) tax funding and contribution-based entitlement.

Most CEE and the Baltic countries introduced *SHI arrangements* that marked, at least in form, a return to the systems in place in the pre-Communist era. This included eight countries between 1990 and 1999 (Hungary, Estonia, the Czech Republic, Slovakia, Lithuania, Bulgaria, Poland and Romania, respectively). The successor states to Yugoslavia addressed the issue from a different historical and motivational perspective, having inherited a highly decentralized system of SHI dating back to 1948 (173). Most of these countries switched to a centralized single insurance fund approach early in the 1990s (The former Yugoslav Republic of Macedonia, Serbia and Montenegro, respectively, each with its own fund, as well as Croatia and Slovenia). Pooling in Bosnia and Herzegovina remains decentralized, with 13 funds for 3.9 million people. The 12 CIS countries have been less inclined to shift to SHI, with only five countries introducing some form of compulsory health insurance between 1993 and 2004 (including the Russian Federation, Kyrgyzstan and Moldova). The two others (Georgia and Kazakhstan) have since dismantled their SHI funds, although in the latter case some of the changes that were made remain in place (174).

In some countries, the focus has been on *shifting the burden from collective financing to the individual*, whether through the encouragement of private, risk-

related voluntary insurance, as in CEE (although the private market remains limited) or indirectly, through complementary insurance covering statutory cost sharing (France, Israel and Slovenia) (175). Elsewhere, costs have been shifted directly to those receiving care, through increased co-payments, deductibles and no-claims bonuses. *Cost sharing* was introduced in all CEE countries as a means of raising revenue following the widespread and intense economic and fiscal contractions at independence. In CIS countries in particular, this largely reflected necessity (given government spending cuts) and the desire to formalize rampant out-of-pocket payments, rather than explicit policy choices to shift funding from public to private sources. In 2004, for example, out-of-pocket spending constituted over half of total health spending in Armenia, Azerbaijan, Georgia, Kyrgyzstan, Tajikistan and Uzbekistan (176). More recently, cost sharing has been extended elsewhere, including in several EU Member States (Austria, the Czech Republic, Estonia, France, Germany, Hungary, the Netherlands, Portugal and Romania).

Other countries have sought to create or extend competition between funds managing compulsory social insurance revenues (including non-profit-making and profit-making insurers). This has sometimes reflected a desire to improve responsiveness or equity in contributions or entitlements (by introducing choice and risk adjustment) and sometimes a wish to improve purchasing and incentivize greater efficiency and quality (Czech Republic, Germany, the Netherlands, Slovakia and Switzerland). However, this approach faces many challenges, especially in terms of the scope for risk selection, which poses serious threats for equity. While certain types of risk-adjustment mechanisms are in place in these countries to compensate funds for high-risk members, they incur high transaction costs and can be technically and politically challenging. Still, the examples of the Czech reform of 2003–2006 and of German practice (both of which are working towards 100% reallocation) demonstrate that redistribution of health insurance contributions can effectively offset the differences in conditions for people enrolled in different funds and the potential benefits of risk selection by insurers<sup>20</sup> (177, 178).

The Czech and German examples touch directly on the issue of improved *public pooling mechanisms*, which have been a priority for some countries. The goal of these initiatives is to ensure that insurance fund revenue (or those of regions in countries that rely on local taxes) fairly reflect the risk pool they are covering. In other words, they aim to compensate those funds (or regions) with poorer members and/or members at higher risk of ill health, typically older people.

20 Germany currently uses a complex risk-adjustment formula which accounts for age, sex and health risk, but from 2009 it will institute a new national health insurance fund.



Other countries that have introduced insurance funds used them to *reduce fragmentation of pooling*. Certainly, CIS countries such as Kyrgyzstan saw them as an opportunity to move away from the Soviet era link between each separate administrative level of government (central/Republican, provincial/*oblast*, district/city/*rayon*) and the “corresponding” health service delivery and management which had led to overlap and duplication of infrastructure, particularly in urban areas that counted both as both cities and as *oblast* capitals. The Kyrgyz example used the Mandatory Health Insurance Fund as an agent of change over the four years from 2001, pooling general budget revenue from local (*rayon* and *oblast*) governments at *oblast* level and paying (separately administered) providers on the basis of outputs (case-based payment for hospitals) and population need (capitation for primary care). This eliminated the fragmentation that had existed within *oblasts*, and paved the way for the locus of pooling to be shifted to the national level in 2006. This has helped reduce inequalities in government health spending per capita between *oblasts* (177). Similarly, in Moldova in 2004, the implementation of a compulsory health insurance fund managing a single national pool (in place of the previous system in which pooling was decentralized to the *rayon* level) led to improved equity in government health spending across the country (179).

Some areas however, are proving especially difficult, such as *funding for long-term care*. Insurance is best suited to situations where, although everyone is at risk, the actual risk is small and unpredictable. It is more difficult when the risk of “having to” pay out is much higher. Dedicated funding arrangements based on separate insurance funds have been established in some countries with existing social insurance schemes that are now facing particularly acute problems. These include the Netherlands (as early as 1967), followed by Austria, Germany and France. In some countries that rely predominantly on general government revenue or taxation to fund health care, reforms were introduced to provide basic entitlements to long-term care (Sweden, Luxembourg, Scotland and Spain).

Similarly, *funding for population health* is a challenge and one that is especially acute in countries in which funds are pooled in SHI agencies that have historically been oriented towards paying for individual, curative care. Increasingly, however, many sickness funds and others have recognized the need to boost health promotion, prevention and public health activities. A few countries have explored reforms, including having every insured individual pay an additional contribution into a national health promotion agency (Switzerland) (180, 92); setting aside federal support for a national “health” (or health-promoting) fund (Austria) (181); having non-health ministries pay into a national lifestyle programme (Kyrgyzstan); and earmarking health sector revenue to municipalities specifically for (private) primary care physicians, to include work on health promotion

and prevention (Denmark) (142).

All of the abovementioned approaches are complex and depend heavily on national context, values and culture. There are also many challenges for the future, particularly given widespread concerns about the ability of countries to sustain universal coverage and high levels of financial protection in the future. The emerging evidence on the connection between health systems, health and wealth may, however, help to secure the investment needed to move forward, even if this means *diversifying sources of funding* (182, 183).

### **Financing (purchasing for health gain): allocative and technical efficiency**

A critical dimension of financing is purchasing: the allocation of pooled revenue to health service providers. The process of allocating resources should allow health system stewards to influence the services provided and a few countries made tentative moves towards *strategic purchasing* from the early 1990s onwards. These tended to revolve around the separation of purchaser and provider functions, which aim to focus resources on priority areas, give purchasers levers to improve provider performance and allow the introduction of selective contracting and provider competition. The British NHS introduced an “internal market” in 1991, and was followed by Italy, Portugal and some regions in Spain and Sweden, each introducing diverse forms of purchaser–provider split. This approach has also had an influence in some long-established SHI-based countries in western Europe (France, Germany, the Netherlands), which already had a separation of functions but where purchasing was previously a passive exercise to pay the provider(s) (184). Strategic purchasing involves a wide range of mechanisms, including the use of health needs assessment, contracts, quality monitoring and performance-based payment systems. Each brings a different package of incentives (often financial) to bear on the performance of health professionals and institutions (184).

Even where the language of markets and market mechanisms are not used, an increasing number of countries have experimented with ways of specifying in contracts what care is to be delivered, as a means of improving the efficiency of hospital care. Typically, there has been a move away from retrospective reimbursement, based solely on numbers of cases and from (prospective) line-item budgets that defined financial flows but not service specifications. Instead, first prospective global budgets, and then case-based payments were introduced (mainly variants of diagnosis-related groups), or some combination of case-based reimbursement within a global budget cap. Currently, many countries use *case-based payments* for hospital care, although the specific goals of the financing reforms vary across countries. Some aim to increase activity and lower waiting times, while others prioritize

cost control and improved transparency in financing. There are also variations in the design of hospital case-based payment systems, for instance the broader Diagnose Behandel Combinatie in the Netherlands includes payment for both specialist physicians and hospitals in one package. However, all approaches aim broadly to create incentives for greater provider efficiency.

There are inevitably risks associated with incentive schemes that fix case payments (not least the possibility that hospitals will discharge patients prematurely, necessitating readmission) and with incentive schemes more generally, so careful monitoring is required. However, well-designed purchasing mechanisms should be able to offset the effects of any perverse incentives by linking funds to compliance with quality indicators. *Provider contracts* have successfully included quality indicators in a few countries, creating an obligation that the provider meets accreditation standards, or follows quality assurance procedures, or achieves quality targets. Similarly, some countries are moving towards *performance-based payment systems* for professionals, with explicit financial incentives to reward certain behaviours and outcomes. The recent contract (and payment) reform for English GPs awards higher rewards to those achieving certain quality targets. However, it also illustrates the well-known and almost universal dangers of individual performance-related pay. The contract reform set targets too low and as a consequence budget expectations were soon exceeded. The subsequent efforts to claw back the unanticipated “over”-spend led to fee increases below inflation, which undermined physician morale.

There also has been considerable interest in the potential of *selective contracting*, although it has yet to be extensively introduced (185). Selective contracting defines explicitly a (narrower) range of providers a patient can use, allowing payers to introduce service and cost specifications. For this approach to work, it requires appropriate regulatory systems accompanied by transparent monitoring of performance and a level playing field between public and private providers. In addition, it encounters major resistance from providers, with often limited “political” leverage of purchasers to implement selective contracts. In the same way that this approach conflicts with the notion of patient choice, it faces the opposition of consumers in countries where they had a wide range of choice of provider.

Performance indicators are crucial to the effectiveness of purchasing mechanisms. Their application is reviewed in more depth in the companion background document (187) and in Subsection 7.2 of this report.

### Strengthening stewardship

Stewardship and governance are used interchangeably, here. They sit at the heart not just of health reform strategies, but of health policy-making in general,

covering both core health service activities and the parts of the health system that lie in other sectors. They signal the obligation of governments to ensure that policy initiatives are well informed and well designed, balance the implications of policy for different constituencies and secure optimal and fair health system outcomes.

### Challenges to stewardship

Stewardship cuts across all health system functions. This means that stewards are accountable for a huge range of issues from the quality and responsiveness of service delivery to the planning of resource generation or the efficient allocation of finances. In addition, they answer for progress towards the goals of equitable health attainment, fairness of financing and responsiveness. The demands in terms of information flows, planning and management skills and evaluation are correspondingly huge. They are made more complex by the fact that “government” is not a monolithic entity. Although the precise arrangements differ, countries typically have an executive that proposes and enacts legislation (such as a Cabinet of Ministers), a legislature that debates and agrees legislation and scrutinizes implementation (such as a Parliament), and a judiciary which ensures actions in accordance with the law (the courts).

Health system stewardship sometimes suffers from wider *governance failures*, particularly when the three elements of government cut across each other or act without sufficient coordination. So, executives may issue decrees that are not supported in the legislature; laws may be passed when there are inadequate mechanisms to implement them; and policies that are contradictory may leave those charged with implementation uncertain about what they should do. This is not a health system problem as such, but undermines the efforts of health system stewards. It also touches on the problems that health system stewards have in trying to ensure that policies which are led by other sectors, but which impact on health, do maximize health gain.

The problems that some governments have in articulating decision-making levels and coordinating between authorities are even more common when it comes to working between ministries.

There are related challenges to governance posed by the *new sets of relationship between central and regional entities*. Some health systems have increased the centralization of political and fiscal decision-making (Czech Republic, Denmark, Ireland, Italy, Norway and Poland); or consolidated regional government into fewer, larger units (Denmark, Finland, Norway, Sweden); while in other instances powers have been devolved from the centre (Spain, the United Kingdom). Similarly, revenue collection has sometimes been centralized through the creation of a national pool (Germany, the Netherlands and Romania) or the merging of regional funds into a national fund (Estonia, Kyrgyzstan and

Poland), and has sometimes been devolved (see section on financing above). This has complicated governance, creating legal ambiguity about the precise division of powers between the different levels.

Similarly, the melting of public–private boundaries has created a significant challenge to governance regarding how best to *manage the increasing public–private mix*. The WHO European Region has seen extensive involvement by the private sector in management of public services, public contracting of private services, and private finance for public institutions (mentioned earlier), often in response to perceived failings on the part of the public sector to manage health care delivery effectively. However, the management of these new arrangements is often more complicated than anticipated. Furthermore, the higher private sector salaries have led in some countries to better qualified public sector staff moving, further undermining governance capacity.

In addition to the structural challenges of exercising stewardship, there is a range of very specific and detailed challenges that touch on service delivery, (human) resource generation and, particularly, finance. The examples here give some sense of the range of issues involved and their importance. For example, the widespread *use of informal payments* in some countries threatens many of the goals of health system. First, informal payments may deter those in need from seeking care, jeopardizing health gain and equity or placing them at risk of catastrophic expenditure, cancelling out financial protection. Second, they may affect the quality of care patients receive, in turn impacting on both responsiveness and health gain. Furthermore, patients may be given unnecessary treatments (including surgical procedures), as health professionals look to generate income, rather than seeking to provide the most appropriate care for the patient, which is damaging in terms of both health and efficiency. Finally, informal payments can act as an obstacle to reform, encouraging staff and professional bodies to resist positive developments that might diminish their informal income.

There are also damaging governance problems surrounding the *over-prescription* of pharmaceuticals and the *prescription of ineffective and overpriced medicines*. In some countries, the price of pharmaceuticals is inflated by multiple mark-ups along the supply chain. This problem is sometimes exacerbated by the practice of pharmacists splitting the fees they earn for dispensing certain pharmaceuticals with the prescribing physicians. There are also industry pressures on physicians to prescribe expensive new products, rather than cheaper generics, which is a particular problem in CIS countries.

A final set of examples of stewardship challenges revolve around concerns regarding *patient satisfaction and responsiveness*. These issues are discussed in detail in

Subsection 6.5, looming increasingly large on the agenda of health system stewards. As they restructure clinical services to meet changing and patient-driven needs, for example, through care guarantees (such as in Denmark and Sweden) or initiatives on choice (United Kingdom), they must address the trade-offs these imply and tackle the equity and sustainability implications.

Weaknesses in governance are not, of course, limited to the health sector. They can reflect more profound constitutional weaknesses or simply the complexity of overseeing a mix of ever-changing services in dynamic and multilayered settings. It is clear, though, that the challenges to stewardship are growing, with developments in health care and as citizens' expectations rise. It is also clear that while there are shared values and principles which apply across Europe, the actual context in which stewardship takes place makes each country and the challenges it faces quite different.

### *Improving stewardship*

The problems health system stewards face are distinct and "solutions" will not transfer easily from one context to another, but there are some common steps that can improve stewardship. It is important, for example, for governments to designate which *agencies and actors are responsible for making, implementing, and evaluating health policy* in a particular country. This includes agreeing *designation of responsibility between national and regional authorities*, which applies particularly where ministries of health do not have full control over the operating decisions of regional or local health service facilities. Another key issue is to ensure that the actors with responsibility can secure access to *adequate information and evidence* to formulate appropriate policies and that they have the means and capacity to implement them.

A second key issue is to put in place an adequate system of *effective but flexible governmental regulation*. New regulation may be needed in light of the increasing role of the private sector, the growing assertiveness of patients, and other reform initiatives touched on earlier. Good stewardship demands that countries re-regulate before they de-regulate, so avoiding lacuna in governance, as evinced by numerous examples of late or ineffective regulation spanning countries from Georgia to Sweden. This, as with good policy-making described earlier, will often require the *development of new information systems*, which allow stewards to assess what is happening (or not happening). Many countries in the WHO European Region have inadequate systems in place to monitor policies or performance. Nor are they all making use of governance initiatives regarding evaluation, such as the systematic assessment of pharmaceuticals and new technologies and procedures (the formal HTA discussed earlier).

Finally, and crucially, the stewardship function is central

in terms of *influencing the determinants of health in other sectors*. The HiAP movement<sup>21</sup> builds on Health for All and the Alma Ata Declaration of 1978, and is leading action in this area. It embodies WHO policy, guides the EC's new health strategy (2) and was recently championed by the Finnish Presidency of the EU and endorsed through the Rome Declaration in 2008 (18). In essence, HiAP calls for a focus on those determinants of health that are largely controlled by the policies of other sectors (17) (4) and which can be improved through joint action with these sectors, to achieve public health gains. There are a range of approaches to implementing HiAP, including through intersectoral government targets (France, Lithuania, Sweden, United Kingdom) (see Subsection 7.2); health impact assessment units at local authority, parliamentary and interministerial levels (Sweden, Wales, the Netherlands and Lithuania, respectively), or by passing "shared" legislation, such as bans on smoking in public places (Ireland, Italy, Norway, Scotland, and Spain). There is also a range of *structures and processes to facilitate intersectoral action*, including horizontal public health committees (England, Sweden), formal consultations and communication between sectors (Wales) and public health reporting with other sectors (Finland, the Netherlands, Wales).

The above description gives a brief sense of the range of challenges for health systems and the diverse sets of responses to those challenges. It demonstrates the role health system stewards have in steering each function, from health services delivery, through to resource generation and finance. It is the task of health system stewards to address all of these areas, and to ensure that each one is balanced (so, for example, achieving an appropriate mix of population-based and personal health services), effective (for example, producing enough staff with the right skills mix and the right client orientation), equitable (funds pooled and risk shared) and efficient (cost-effective purchasing and delivery of services). They are also accountable for responsiveness and equity, and for those elements of health that are determined beyond the health sector. In order to improve health system functions and achieve health system goals, policy-makers and managers need clear and relevant information and levers to promote change. It is in this respect that performance measurement is able to make such a significant contribution.

## 7.2 Assessing health systems performance

Policy-makers and politicians are the stewards of health systems. They have used a range of reform strategies to meet the challenges of health system change and to respond to increasing patient expectations (Subsection 7.1). However, if reforms are to succeed and contribute to societal objectives, then stewards must know how

these reforms are progressing and what impact they are having. Assessing performance is therefore central to the stewardship function, to successful health systems and to making the case for investing in health.

Since the late 1980s significant efforts have been made to measure the performance of health systems. Advances in information technology have facilitated new approaches to data and intelligence and have attempted to address issues relating to cost-containment, accountability and audit (of both health professionals and institutions). They have also sought to meet demands from service users for help in making informed choices. However, the growing number of initiatives has often fallen short of expectations. There are still many unresolved issues regarding how information is collected, analysed and presented. Moreover, there has been a tendency to concentrate on the minutiae of the details of measurement and the presentation of data. Put simply, not enough attention has been paid to how to use the information generated or how to integrate findings into effective governance mechanisms. There is a pressing need to ensure measurement is carried out correctly, but even more so to move from measurement to management that is based on a realistic assessment of performance. This section draws on the accompanying volume (186) and background document (187) regarding performance, to outline some of these issues and to highlight the linkages between performance measurement and stewardship for health systems improvement.

### Performance assessment dimensions, levels and users

The ultimate goal of performance assessment is to enable better performance. This implies fostering accountability by giving stakeholders the information they need to make appropriate decisions. Clearly, different stakeholders with different areas of authority require different levels of detail and different degrees of timeliness. So, while purchasers and patient groups will both seek to hold providers accountable, they do not need the same amount or type of information on cost, average length of stay, health outcome and so on. The challenge is to design information systems that satisfy the very diverse needs of the various stakeholders, without imposing a huge burden of new data collection and analysis. This means using the same data sources but exploiting them and presenting information in different forms. The performance measurement systems developed must be mindful of the providers of information and of the ultimate "audiences" who will review it. They must also reflect and be consistent with the political and organizational context in which they are sited.

21 "Health in all policies is about the health system working proactively with other sectors to identify the impact of their policies on health and health determinants and propose policy alternatives". (17)

**Table 7.1 Dimensions of health performance measures**

Measurement area	Description of measure	Examples of indicators
Population health	Aggregated data on the health of the population	Life expectancy Years of life lost Avoidable mortality DALYs
Individual health outcomes	Individual's health status (whole population/groups) Utility rankings of different health states	Generic measures: Short form 36 (SF-36); EQ5D Disease-specific measures: Arthritis Impact Measurement Scale; Parkinson's Questionnaire (PD-39)
Clinical quality appropriateness of care	Services/care patients receive, to achieve desired outcomes To determine if best practice takes place	Outcome measures: Health status; post-operative mortality rates Process measures: frequency of blood pressure measurement
Responsiveness	Aggregate dimensions: How individuals are treated; the treatment environment  Individual dimensions: Patient dignity; autonomy; confidentiality; communication; prompt attention; social support; quality of basic amenities	Patient experience measures Patient satisfaction measures
Equity	Equity of: access to health care responsiveness financing	Utilization measures Rates of access Use-Needs ratios Spending thresholds
Productivity	Productivity of: health care system health care organizations individual practitioners	Labour productivity Cost-effectiveness measures Technical efficiency (output/input) Allocative efficiency

Source: Smith et al., in press (186).

Performance measures must also reflect the various levels at which health systems act and the way these interact to impact on outcomes. The HSAF (see Section 2, Fig. 2.1) offers a useful structure, since it tackles health systems by function and links these "inputs" to the "outputs" of health system goals (with performance defined as maximizing goals relative to potential). A set of indicators has been developed for each dimension of performance at the various levels involved (see some examples in Table 7.1). However, there remain complex methodological issues surrounding the validity and reliability of indicators, and (of particular importance if indicators are to support improved performance) their responsiveness to change.

These issues become even more problematic when indicators are combined into composite indices. These have the superficial attraction of simplicity and have some value as indicators of overall performance.

However, they are fraught with methodological pitfalls and all too often are imperfectly understood, which may mislead rather than support policy-makers and cause serious failings in decision-making. This makes transparency in the methodology crucial, particularly in terms of the way different elements are selected, combined, and weighted. These issues are dealt with in more detail in the accompanying volume (186) and background document (187).

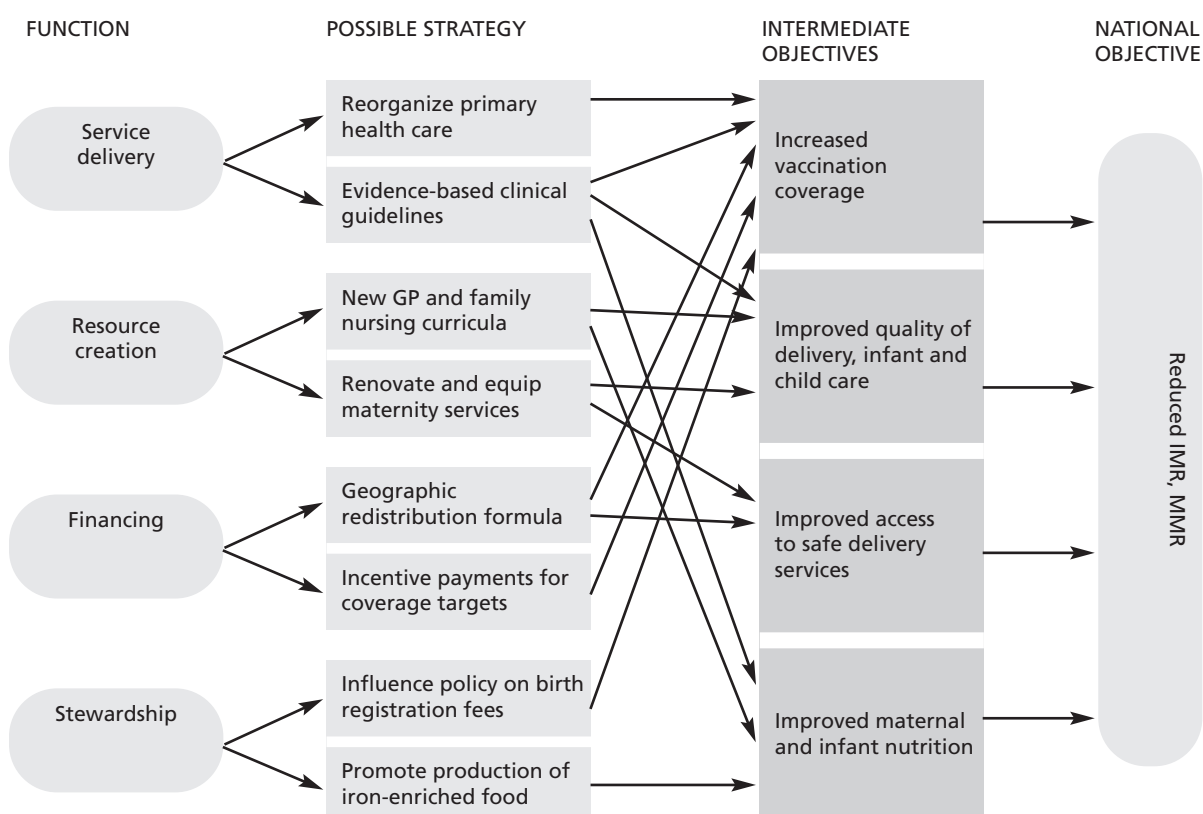
#### **The Health Systems Assessment Framework: assessing and improving performance of functions**

The previous subsection touches both on the HSAF of the *World Health Report 2000* and the problems of composite indices. The HSAF was, initially, best known for its controversial use of a composite index to compare the health system performance of different countries (the Health Systems Performance Index) (188, 20). While

### Box 7.1 Functions, intermediate objectives, strategies and goals: an interface between performance measurement and practice

Health systems are intended to improve health, and reducing infant and maternal mortality may (in specific countries) be a significant step towards achieving that goal. Fig. 7.1 shows how the Health Systems Assessment Framework can help stewards to establish intermediate objectives and strategies to this end.

**Fig. 7.1 Functions, intermediate objectives, strategies and goals: an interface between performance measurement and practice**



Source: Kutzin 2005 (190).

Notes: GP: General practitioner; IMR: Infant mortality rate; MMR: Measles, mumps and rubella.

The model shown in Fig. 7.1 works backwards from the national objective of reduced infant and maternal mortality. It sets out specific and *actionable*, intermediate objectives aiming towards the final objective (for example, increased vaccination coverage or improved quality of delivery). Each intermediate objective then has its own series of measurable indicators to capture performance (for example, immunization rates or compliance with Integrated Management of Childhood Illness guidelines). Policy-makers can then design appropriate health system strategies to address these intermediate objectives. The functional framework acts in effect as a “checklist” to help decision-makers develop a comprehensive approach to meeting their overarching objectives, which includes concrete and specific measures (such as creating incentive payments for immunization). The diagram shows how intermediate objectives can make tangible and achievable the stewardship and management challenges that are implicit in the national objective.

the index was problematic (particularly in terms of some of the data included and its approach to modelling), it was, ultimately, instrumental in taking forward the methodology of performance measurement (186).

One of its main contributions has been the impetus it gave to the development of intermediate or instrumental objectives, plausibly linked to the main goals and able to serve in assessing particular functions.

For example, the performance of the delivery function has been assessed through the intermediate objective of effective coverage, with effective coverage defined as the probability that “individuals achieve health gain from an intervention that they ‘need’” (189). The performance measure sought to establish the extent to which those who needed a particular service were actually able to use it and whether the quality of the

service was good enough to make a difference to that person's health. This approach begins to "unpack" both the function and the notion of performance and to look at aspects that can be influenced by policy-makers. Intermediate objectives then outline (a series of) causal pathways from the particular element being assessed to intermediate objectives, such as equity, efficiency, quality, transparency, accountability or choice, and from these on to the ultimate health system goals. In effect, they provide a bridge between functions and performance measurement.

This approach has also already been applied to a range of functions and subfunctions, including financing (190). In addition, a number of other indicators explored earlier (Subsection 6.1), such as "avoidable mortality" or "tracer conditions" can also serve to assess the performance of a given health system function or a particular strategy. What is important is that goals or intermediate objectives can (and should) be made increasingly specific, so that they identify those barriers to performance that are amenable to intervention. They should also be linked to the strategies (and implementation of strategies) that can achieve the overarching objectives. See an example of the application of this approach in Box 7.1.

### Linking with governance

The ultimate goal of any performance measurement instrument is to promote the achievement of the objectives of the health system (if these have indeed been defined). Its effectiveness should therefore be evaluated in terms of how far it promotes or compromises these objectives, and not solely in terms of its crucial, but narrower, technical performance. However, it is less clear how to deploy performance measurement to promote real system improvement or, more succinctly, how to link it to policy levers. The paragraphs that follow briefly outline a number of relevant experiences that are covered in more detail in the main companion study (186).

*Public reporting of performance* essentially involves placing information in the public domain so that citizens and other stakeholders can see how purchasers and providers perform. Data often take the form of "report cards" or "provider profiles" that summarize measures such as waiting times, patient satisfaction ratings and mortality rates. A number of countries have experimented with these measures (Canada, Norway, United Kingdom, United States) and there is considerable evidence that public reporting can, in some circumstances, lead to performance improvement. Interestingly there is little evidence that patients show much interest in report cards, but rather they seem to bring about changes by providers through the implied threat to their reputation. Caution is required, however, given the very considerable scope for opportunistic behaviour, as providers either find ways to record data

so as to portray themselves in a more positive light, or change their behaviour in ways that improve their ranking without providing better services. An example is how providers avoid taking on complex patients whose outcomes might "damage" their perceived success rate. Considerable vigilance is required to counteract such tendencies.

Performance measurement can be particularly effective when used alongside *explicit financial incentives* to reward provider performance. Clinicians and other "elements" of the health system do respond to financial incentives (191), so this approach offers promising avenues for future policy. However, the use of financial incentives is far from straightforward and results are not always consistent. Countries that have experimented with innovative mechanisms to pay for professionals and institutions have had different degrees of success (Finland, the Netherlands, United Kingdom, United States). Many issues need to be considered, both in the design of performance incentives and in monitoring them. Key design issues include how to set targets, how closely to link rewards to achievement, and how well to reward improved performance. Detailed and often expensive monitoring is required to avoid unintended responses such as "gaming" or "cream-skimming", through which providers manipulate the system.

Some countries have experimented with *health system targets*, which comprise a quantitative expression of an objective to be met in the future (192). Well-designed targets can help organizations and practitioners focus on a manageable number of achievable goals, thereby leading to system improvement. Targets have been used in some countries in Europe as a means of pursuing public health goals (France, Latvia, Lithuania, Sweden, United Kingdom), although with varying degrees of success (192). Targets are most successful when there is broad ownership by key actors; when they are supported by evidence, particularly on what policies work; when they are based on valid data; where there is managerial capacity to act; and when they are linked to resources. An uncritical approach to using targets poses risks, including neglect of those aspects of the health system that are not subject to targets, a focus on short-term targets at the expense of more important long-term ones, and the stifling of initiative and innovation. Excessively aggressive targets may have perverse consequences, encouraging gaming and the misleading collection of data.

These are only a few illustrative examples of how to embed performance measures within health systems and link them to governance strategies. They all underline the same message: for performance measures to bring about positive change they need to be aligned with, and embedded in, a system of governance. This involves integration with financing mechanisms, market structures and regulation. Also, and by extension, performance measurement must pay attention to the

political context within which it is to be implemented. Without full and careful consideration of these broader health system factors, even the best performance measurement system will be ineffective.

### **Steering performance assessment**

Information on performance is a “public good” that can help governments to formulate and evaluate health policy. However, like any public good, it is not something that will occur naturally. Governments need to ensure that integrated systems – that are consistent with the design of the health system – are in place to collect, analyse and use information. Governments play a fundamental role in ensuring that maximum benefit is secured from performance measurement, whether through persuasion or legislation, coordination or regulation. Implementation is not, however, easy and requires strong analytic capacity throughout the health system, linked to sustained political and professional leadership at the highest level, to ensure the evidence generated is acted upon.

One of the specific and key stewardship responsibilities of government, in relation to performance assessment, is to provide and promote a clear and conceptually coherent vision of how to integrate the performance measurement system with accountability mechanisms and with financing, resource generation and service delivery. Policy-makers also need to ensure that the mechanisms they put in place are technically sound and will assure public trust. Thus, governance must be of the highest calibre, with integrated quality control. At the same time, there is a need to find ways to enable users to understand the data, and this may require capacity building amongst analysts so that they can communicate better. It is also essential that the information is acted upon. This means ensuring that the policies, strategies and incentives in place are aligned with each other and translate performance measurement into better performance management. It also implies a proactive engagement in the political process to foster a healthy political debate about priorities and the trade-offs that they imply.



## 8. Making a case for investing in health systems: concluding reflections

This document has tried to marshal the evidence to support health policy-makers in assessing the case for health systems investment. It has not attempted to offer definitive answers or prescribe norms about “how much” to invest or “what” to invest in. These are highly context-specific decisions. Rather, the document sets out a framework outlining the central issues, synthesizes key evidence, and structures it so that policy-makers can systematically review investment decisions, whatever their values or socioeconomic setting. The issues are wide ranging and the evidence, particularly in some parts of the European Region, is still limited.

Nonetheless, the document shows unambiguously that strengthening health systems has the potential to significantly improve the health and well-being of Europe’s people, provided of course that investment is underpinned by evidence on cost–effectiveness and accompanied by rigorous performance assessment.

The sections above have summarized the main evidence on the three sides of the conceptual triangle of health systems, health and wealth and the central goal of societal well-being. They focused on the contribution of health to economic growth and well-being and the impact of health systems on health and economic activity, but also addressed the dynamic relationships between wealth and health and the size and shape of the health system. In addition, they highlighted the importance of performance measurement in making the case for investment and in ensuring better performance and value for money.

The policy summary itself and the key messages at the beginning of this document summarize the evidence, which the main volume explores in more detail (19). This final, concluding section seeks to provide some reflections on what the results of this study mean for policy-makers and the case for investment in health systems, by addressing a series of policy-relevant questions, on the following items:

- “appropriate” level of funding and sustainability
- contribution of health to society
- hows and whys of investing in health systems, and
- hows and whys of improving performance.

### What is the appropriate level of funding? What about financial sustainability?

The debate on health systems investment is rooted in concerns that health system costs are rising inexorably and will imperil financial sustainability. There is however, no clear consensus on either its meaning or its policy implications. Broadly speaking, financial sustainability touches on:

- the ability to generate sufficient resources to allow for continued health care provision in the face of increasing costs;
- balancing expenditure and revenues (fiscal sustainability);
- whether the share of resources a society commits to health is (felt to be) “appropriate” and “affordable”;
- whether health expenditure threatens a country’s macroeconomic competitiveness in an increasingly globalized economy.

These areas of concern are all valid but they are all underpinned by a set of unspoken assumptions. Policy-makers ought perhaps to question these before tackling the complex issue of how much their society should be spending on health systems.

First, there is no objective formula to determine the “appropriate” or “affordable” share of societal resources that can and should be invested in health and which will not undermine macroeconomic competitiveness. The most common way of expressing how much should be invested in health is as a percentage of GDP. Comparative figures and European averages are often used as a reference for policy-makers. Cross-country comparisons, however, cannot determine what is right but rather simply what is commonplace. Moreover, share of GDP is a relative measure against an economic level and cannot define the optimum level of spending either in macroeconomic terms or in terms of societal priorities. Arguably, therefore, under certain economic circumstances it may be more appropriate to focus on economic growth than on the share of resources to be devoted to health. Cost-effective investment in health, which will ensure a healthy and therefore competitive labour force, then becomes part of a strategy to build up the economy and not become a drain on it.

Second, the debate is often framed as one on fiscal context or what is “possible”, when in fact what is regarded as appropriate or sustainable is largely determined by governments and their political priorities. In most European countries, most health funding comes from public or statutory sources. Governments have a high degree of control over the share of total public spending or government fiscal capacity that is allocated to the health sector. There is significant scope for governments to exercise choice, as evinced by the fact that the actual share varies widely between European Region Member States (from 3% to 20%). Fiscal limits do matter, of course, but the level of health expenditure governments can “sustain” is negotiable and not purely a feature of the wider economic and fiscal context.<sup>21</sup>

This in turn gives rise to a discussion of how far government decisions on the priority given to health reflect societal views and the population's willingness to pay for health systems. In some societies, there seems to be a separation between political decisions and the views and expectations of societies. As European societies have become richer, citizens' expectations have increased. Arguably, they are now willing to increase financial statutory contributions (taxes or social insurance premiums) for health services, provided there is specific earmarking of funds. The evidence, however, is still controversial and there are contradictions, specifically around the extent to which individuals are prepared to pay for solidarity for some social groups (see below).

Third, it has been argued that there is a trade-off between financial sustainability and solidarity. Some commentators argue that societies can no longer "afford" universal coverage or a generous package of health benefits. They posit the end of the welfare state, suggesting that a move towards increased privatization of funding and a shift from statutory contributions to out-of-pocket payment or voluntary private health insurance is inevitable.

This position rests on a false dichotomy between solidarity and sustainability and a misrepresentation of the impact of privatization on sustainability. The trade-off between solidarity and sustainability is determined by the willingness of societies to pay for solidarity, and societies can choose to pay. If societies choose to privatize funding, the evidence shows that financial protection and equity will be compromised, resulting in some populations being impoverished and/or inequalities in access and utilization of services. Given that the whole notion of finite limits on "possible" expenditure has been called into question (see above), the extent of coverage through statutory funding will depend on how far citizens value equity and solidarity itself. Certainly, the privatization of funding, in so far as it relies on an increase in private insurance, will not necessarily contain expenditure or confer sustainability. Privatization of funding does in the first instance seem to ease pressure on the public purse and on taxation, but many countries include voluntary insurance (for complementary or supplementary benefits and co-payments) in employment packages. This means employers incur additional expenses that push up their production costs and reduce competitiveness. Moreover, employment-linked health benefits and ties to particular insurance providers reduce mobility because of risk-related premiums and exclusions for pre-existing conditions, and negatively affect the economy.

Fourth, and finally, European Region Member States have put in place cost containment strategies to achieve financial sustainability. There is a common perception in

policy-making that containing cost equates to increasing efficiency. In many instances, however, this is not the case. In practice, arbitrary budget cuts can contain costs "successfully" without having any bearing on cost-effectiveness and without reference to health needs or equity implications. By the same token, efficiency increases do not necessarily prevent cost increases, for instance where new technologies are genuinely cost-effective but also expand the range of conditions that can be treated, so increasing overall costs (Section 3).

Thus, while balancing income and expenditure is indeed a fiscal obligation, it does not ultimately determine what is financially sustainable. Policy-makers can cut costs but they can also choose to increase funding to balance the books. The key considerations must be to address the health systems central objectives of health, equity, fairness of financing, and responsiveness, as well as to ensure efficient use of resources. This involves both technical efficiency that is either minimizing costs or maximizing outcomes to secure "value for money" and allocative efficiency, which distributes resources between interventions in ways that maximize health gain or overall health levels. Containing costs should therefore be seen simply as part of a broader strategy which succeeds only if it improves performance, or at the very least maintains it.

These four strands of argument suggest that while financial sustainability is convincing from a fiscal perspective it cannot be given primacy over other social priorities, nor indeed determine the "right" amount of health spending. Policy-makers need on one hand to engage in an open public debate to agree the value of health and equity and to ascertain to what extent their own society is willing to pay for both of these through statutory contributions. On the other hand, they need to maximize performance and ensure the most efficient use of existing resources, as the only appropriate approach to containing costs.

### **What does health contribute to wealth and societal well-being?**

The amount that societies will pay for health, equity, fairness of financing and other health system goals depends not on an objective calculation but, to a significant extent, on willingness to pay. Policy-makers need then to understand how much their society values health over other objectives in their particular social context and what it contributes to the economy and to societal well-being.

First and foremost, most societies and most individuals consider health to be of value, in and of itself. They also rate highly an equitable distribution of health. WHO European Region Member States have explicitly stated that health is a fundamental human right and have

committed themselves to health protection, equity and solidarity at national level and as regards Europe-wide policy initiatives.

Second, Europe's policy-makers recognize that health and health equity are a major component of societal welfare; a way of increasing social cohesion; and a mark of social advance. The EU Lisbon Strategy, for example, employs Healthy Life Years as indicators of progress towards its aims of increasing economic competitiveness and social cohesion.

Both the above points should be powerful arguments for investment in health systems. They are, however, hampered by the fact that the value of health itself is not normally expressed in monetary terms. Social development is often too narrowly equated with economic (GDP) growth. The utilitarian contribution of health to the economy is of real importance but the value of "being healthy" should not be overlooked. The focus on GDP also fails to differentiate between economic activities that add to welfare or well-being from those which diminish it, for example through negative health impacts. Researchers have therefore developed tools that translate the contribution of health and equity to societal well-being into economic terms. "Full income" measures, for instance, show that changes in life expectancy in some parts of the European Region could achieve a notional GDP increase of 20–30% or a corresponding decrease if life expectancy were to worsen. Another approach calculates the statistical value of life years lost due to health inequalities in the EU25 as equating to 10% of their collective GDP. These exercises allow decision-makers to express the cost of ill health and to illustrate the significance of its contribution to economic and social development relative to other sectors. They also flag up the magnitude of health's value within and to societies.

Third, "health's more utilitarian contribution to the economy", which was touched on above, is a real and significant argument for health system investment. Evidence shows that health affects wealth through its contribution to human capital, improving labour supply and productivity and supporting economic growth, as well as through its impact on health care expenditure. While the extent of these impacts vary with context and particularly factors such as the state of the economy or labour market and welfare arrangements, they seem to be significant in most societies. In some parts of eastern Europe small mortality improvements would result in significant GDP growth of 20–40% in the next 25 years, while in some countries mortality crises among young men will have catastrophic impacts on growth unless they are addressed.

Levels of wealth are also affected by the indirect impact of health on health care expenditure. There have been fears that better health and more specifically increased longevity will inevitably increase overall health spending.

There are indeed significant implications for social care and long-term care but in most countries these fall outside the health system. The evidence on health system costs suggests that longer, healthier life expectancy will not automatically create impossible challenges. It seems that there are expenditure savings as a result of lower health service use; that healthier ageing can compress morbidity; and that the "costs of dying" at an older age are reduced. Better health status might then reduce overall health spending. Research on equity also shows that there are potential savings through investment. Addressing health inequalities to reduce mortality and morbidity could save approximately 20% of total spending and similar amounts of expenditure on social benefits. There are, however, other cost pressures, particularly from new technologies and rising expectations. Any savings from healthier ageing are unlikely to offset all of these but they will help to diminish the rate of increase in health expenditure.

Clearly, this area is extremely complex in methodological terms and the valuations generated are highly simplified. Nonetheless, they illustrate the magnitude of the part health plays in European societies. Better health levels and greater equality can and do produce economic benefits and could help to reduce future health care costs. The benefits are not captured adequately by conventional economic measures but Europe's people and societies ascribe real and very significant monetary value to good health. Health makes an enormous contribution to societal well-being and, by the same token, the benefits that can be derived from investing in health systems are also enormous.

### **On what bases should societies invest in health systems?**

Given the value people attach to health and the contribution it makes to societal well-being and national economies, there is a powerful case for investing in it. Health policy-makers must, however, go further to demonstrate that health systems merit investment because they actually improve health and improve it cost-effectively.

Section 6 of this document marshals the evidence to demonstrate that health systems do impact on health and indeed make a significant difference. It outlines the nature of Europe's health problems, the burden of disease and risk factors and their economic consequences. It then explores in detail the way health services and broader public health initiatives, including health promotion, prevention and cross-sectoral work all affect health and health outcomes. The following subsections reflect on what this evidence means for the allocation of resources both to the health system and within it (to its different elements).

#### *Health systems – boundaries and investment*

Health systems were defined at the start of this

document as including three elements:

- the delivery of (personal and population-based) health services;
- activities to enable the delivery of health services; and
- stewardship activities aimed at influencing the health impact of interventions in other sectors that might improve health.

Investment needs to cover all these elements, which means investing not only in curative and preventive health services but also in the determinants of health that are controlled by other sectors. Indeed, much of the budget that shapes determinants will be held by policy actors beyond the health system. Health ministries therefore need to acknowledge the impact and importance of other sectors and to work in close partnership with them. The ministries' role is to advocate for investment in health services and beyond; to monitor and assess the health impact of interventions led by other sectors; and to be accountable for health outcomes, even where they do not have direct control over resources.

### *Balancing health system investment*

There are different ways of reviewing the health system and its constituent parts. However, it is clear that if societies are to invest in health systems they must be looking for an appropriate balance between health services and work with other sectors, with the balance reflecting the national context.

There are difficulties in attributing population health gain to health service interventions. Despite these, the evidence is fairly consistent in showing that around half of the life expectancy increases of recent decades can be attributed to improved health care. This is further underlined by the reductions in "mortality amenable to health care" in many countries of the region. This creates a strong argument for investment in health services, which is reinforced by the fact that "amenable" mortality still accounts – on average – for a quarter of all mortality, albeit with considerable differences between countries. This highlights the scope for further improvement in health services and the role investment could play in achieving mortality reductions with all the associated economic benefits.

There are also major methodological complexities in evaluating public health interventions and in assessing whether population health services are more cost-effective than individual health services. However, there is now considerable evidence that public health interventions, whether they sit within the health sector or work across boundaries, compare very favorably with clinical or curative services in terms of effectiveness and cost-effectiveness. There is also evidence that investment in public health action is most successful

when a comprehensive approach is taken, combining "upstream" measures that work at macro level to shape determinants with "downstream" measures that focus more on health promotion for the individual.

Upstream actions are typically beyond the direct control of the health sector and tend to revolve around education measures or fiscal policy, for example redistributive taxation or housing improvements. The role of health system stewards is critical but depends on creating partnerships, providing information on health impacts, advocating positive change and liaising on implementation, rather than delivery. Downstream actions aim primarily to promote health and prevent disease and are more often under direct health system control. They address behavioural and lifestyle factors and so combine measures targeting individuals with broader societal interventions, such as nicotine replacement therapy which supports people giving up smoking through antismoking campaigns. In order to be effective, downstream actions must be aligned with upstream actions, so – using the example of smoking once again – bans on smoking in public places and changes in taxation or agricultural subsidies will reinforce and support downstream interventions that focus on people's behaviour.

Policy-makers must ultimately decide on how far to invest in health services over public health and how to combine upstream and downstream actions. There is an extensive debate on whether prevention is better than cure, but as the evidence above illustrates, there is no simple, universal answer. The health system is a continuum of activity to prevent illness, promote health, cure people and influence the determinants of health, all linked by public health. To what extent societies invest in prevention and to what extent in cure will depend on the particular health challenges, burden of disease and risk factors; the cost-effectiveness of individual interventions; health system capacity; and the socioeconomic, political and cultural context, not least the value attached to different health states. The fact that there is no single formula to guide decisions makes the role of health system stewards all the more important. They must marshal and present the information needed in order to best combine activities to fit the specific national setting.

A further challenge revolves around providing definitive evidence on which interventions represent the "best buy" for a health system. This is particularly the case because evidence on the cost-effectiveness of any given intervention or set of interventions will reflect the particularities of the setting in which the evidence was gathered. The health needs assessment, the scale of resources available and the cost of inputs, not to mention the values placed on outcomes, will all affect cost-effectiveness, making it hard to transfer or translate evidence from one country to another. However, there is a growing body of international work,

including the WHO-sponsored CHOICE initiative that provides evidence that can be adapted to different regional and socioeconomic contexts and indeed to different national settings. There is also an increasing weight of evidence regarding the cost-effectiveness of intervening on a series of core issues such as tobacco, alcohol, obesity, mental health or traffic accidents. This makes it clear that there is real scope for improving population health and that there are cost-effective interventions that warrant increased policy action on these priorities, across most of Europe.

It is easy to charge policy-makers with responsibility for allocating limited resources as effectively as possible so as to maximize health gain, but less easy for them to deliver. The evidence on cost-effectiveness is much improved but still cannot provide simple answers or be applied uncritically in decision-making. Nonetheless, ministries of health must persevere in this area, not only because they need to provide value for money, but also because doing so helps to strengthen the case for additional resources.

This section has focused on the health system goal of improving levels of health. There are also important goals concerning the distribution of health and the fairness of financing, as well as meeting citizens expectations. These are not only integral to health systems but also contribute to health, wealth and societal well-being.

### **Promoting equity**

Health equity is a core health system goal. It is a value in its own right and is highly valued in many European societies. Furthermore, health inequities have a negative impact on national economies, health care expenditure and well-being. Policy-makers therefore ought to consider the potential impact of the health system in reducing inequalities in health and in shaping investment policy. That said, their role and accountability are complicated by the fact that most health inequalities are determined by socioeconomic factors with roots outside the health sector.

Interventions to address health inequalities tend to be grouped into three categories: those that focus on the health system functions of finance and service delivery to tackle barriers to access; downstream policies directed at health behaviours and lifestyle; and upstream strategies aimed at narrowing inequalities in income and wealth. Evidence shows that the health system has a key role in all three areas. Within health services there is ample evidence that reforms such as those that make primary care more effective or that disassociate the ability to pay from utilization have lowered access barriers to services and been successful in reducing inequalities (see also discussion of the fairness of finance goal, below). The tailoring of health services to be “pro-poor” makes a difference. The health system can also take on the leadership of more comprehensive pro-poor

interventions through downstream policies. Addressing how the poor perceive health promotion messages, use screening services or access support with behaviour change can all reduce health inequalities. Similarly, the health system has a stewardship role in more upstream strategies. Decision-makers need to highlight the adverse consequences of inequalities and advocate for changes in other sectors to address them, for example encouraging regulatory strategies or subsidies that target lower socioeconomic groups.

It is worth emphasizing the role of *fairness of finance*, touched on above, since it is a goal of health systems and central to improving equity. Fairness of finance, which is addressed by the health financing function, promotes a more equitable distribution of the burden of financing (equity of financing) according to ability to pay. In addition, it ensures people will not become impoverished as a result of having to pay for health care (financial protection), by promoting universal protection against financial risk. Financial protection feeds directly into the wider conception of health systems as tied to wealth, and is perhaps the most direct link between health systems and the anti-poverty agenda.

### **Responding to citizens**

Finally, responsiveness is a health system goal in its own right and something that adds to societal well-being. Policy-makers allocating resources need to consider strategies that will enhance the way health systems respond to citizens' expectations, just as they must be mindful of equity considerations. There are strategies which make few calls on resources, for example adapting staff training and education to improve communication or dignity and confidentiality, which do not require significant additional investment but have a return in terms of patient satisfaction. However, many other attempts to be responsive have more challenging implications. Increased choice, for example, although it directly increases responsiveness, can undermine other objectives or force trade-offs between goals. This is because users may value access to technologies or amenities which do not actually enhance health or which are not cost-effective and because policies which allow for choice advantage the articulate and so have equity implications. Policy-makers will then have to manage trade-offs between responsiveness, efficiency and equity.

The evidence on responsiveness does not, unfortunately, offer easy answers. In large part this is because measuring the phenomenon is very complex. Culture, class, gender and age all colour expectations of health systems and indeed the whole notion of satisfaction. International league tables and benchmarks of responsiveness measures are not consistent with each other or directly comparable. It is therefore difficult for policy-makers to draw firm conclusions about responsiveness or the relative value of strategies to

promote it. Nonetheless, the evidence that expectations have been rising and that they add to pressures on expenditure is compelling. Policy-makers therefore need to develop the stewardship function in order to assess the validity of responsiveness measures, to facilitate a transparent debate and to ensure that choices are as informed and as appropriate in terms of context as possible.

### ***The economic basis for investing in health systems***

This document has demonstrated the absolute and economic value of health and that health systems improve health and societal well-being. These conclusions argue that investment is needed across all health system dimensions, with a balance that fits the national context. On this basis alone health systems investment can be justified. However, health systems have an additional and direct impact on national economies; they are a major economic sector and a significant source of employment in their own right. It has been argued, often by the pharmaceutical and technology industries, that investment in health systems should be encouraged (for which read less regulated) on the strength of this economic contribution and as a motor for growth.

The evidence reviewed for this study shows that the size of the health sector and its commercial impact are not sufficient grounds for investment simply as a strategy to promote economic growth. Health systems can be a tool for regional regeneration or a precursor for inward investment, but the extent to which health systems investment is justified in economic terms depends, as in any other sector, on levels of economic productivity and the opportunity costs involved. Of the many justifications for investment in health rather than in other sectors, the direct impact of health systems on economic growth is not the most compelling. Nonetheless, policy-makers have sufficient evidence on its value to the economy, to wealth and well-being to insist that it is a significant and prominent part of government spending plans.

### **Investing for performance improvement**

While the case for investing in health systems is supported by substantial evidence, there is still a need to show that new investment will actually improve health, or rather the amount and distribution of the health, equity and responsiveness that the health system creates, and that it can deliver value for money. Policy-makers need to show that they can utilize new resources to achieve more and that they have the tools to ensure value for money. Performance measurement is vital, both to improving performance and to being seen to be cost-effective. Section 7 looks in detail at the range of reforms that have been or are being implemented across Europe to improve performance and at the performance tools that assess how far health systems are achieving

reform objectives. The following subsection briefly reviews how that evidence supports policy-makers.

### ***Looking for best-performing reform strategies***

The case for health systems investment depends on being able to show that more resources will make a difference. Policy-makers therefore need to constantly search for reform strategies and innovations to improve performance. However, there are no absolute best reform strategies. Reforms are highly context dependent and must reflect national circumstances, the organizational structures and environment in place, the resources and capacity available, and the culture, values and expectations of patients, citizens and health sector staff.

There is a growing body of comparative evidence on different reform models and while there are issues of transferability, it does offer important pointers as to the range of strategies that work for each health system function. In service delivery, for example, coordination across the continuum of care has been shown to ensure that prevention and care are delivered in the most cost-effective setting and to promote access for the less advantaged. This will be increasingly relevant as the share of health services used by the chronically ill increases. Similarly, in terms of resource generation, the evidence on HTA makes clear that the approach is effective in reducing iatrogenic or inefficacious interventions and in improving value for money. Interestingly, both these examples illustrate how, in addition to the short term cost benefits, judicious investments in key areas may ameliorate the longer term cost pressures of ageing and new technologies. Financing reform strategies to improve pooling of resources and to ensure better cross-subsidization have been fundamental in improving financial protection and increasing fairness of financing. Finally, there are good examples of strengthened stewardship successfully enhancing health service functioning and work across sectors to influence the determinants of health.

Policy-makers can draw on the evidence, even though they cannot simply pick “best” reforms off the shelf and apply them without reference to the relevant national context. They need to constantly adapt and update reforms, innovating as circumstances change so that they deliver the potential of health systems and sustain the case for health system investment.

### ***Assessing performance and ensuring performance measures have an impact***

If health policy-makers are to ensure that health systems do what is expected of them and if they are to continue to secure resources in the face of competing demands, they must:

- assess performance, including tracking how resources are used; and

- embed performance assessment in health system governance, so that measurement and analysis lead to ongoing improvements.

This means setting up transparent performance measurement at all levels of the health system, with close correspondence between the objectives of an intervention and the outcomes tracked; appropriate indicators of progress and impact; and measures that capture elements of performance amenable to management action. Health system stewards will then be able to be properly accountable for optimal performance, to address problems and make the best possible case for further health systems investment.

The tasks for performance measurement are clear, but there is less clarity about how to manage the complex methodological issues of validity and reliability in practice. Nonetheless, this is an area of constant progress. There is recognition that performance measures need to be aligned with and embedded in governance systems and that this means linking them to regulatory tools, financing mechanisms and incentives as a whole. Governments need to build on this understanding and to ensure that well-designed, well-integrated performance assessment systems are in place and are given a fundamental role in steering health systems and investing

## 9. References

1. European Health Forum Gastein. *Economic and social dimensions of health*. Congress report of the 6th European Health Forum Gastein. Bad Gastein, 1–4 October 2003.
2. European Commission. *White Paper: Together for health: A strategic approach for the EU 2008–2013*. COM(2007)630 final. Brussels, European Commission, 23 October 2007 ([http://ec.europa.eu/health/ph\\_overview/Documents/strategy\\_wp\\_en.pdf](http://ec.europa.eu/health/ph_overview/Documents/strategy_wp_en.pdf), accessed May 2008).
3. Council of Europe. *Terms of reference of the European Health Committee (CDSF)*. (Appendix 9 (Item 6.2b), Fact Sheet) Strasbourg, Council of Europe, 2007 (<https://wcd.coe.int/ViewDoc.jsp?id=1119365&BackColorIntranet=DBDFC2&BackColorIntranet=FDC864&BackColorLogged=FDC864>, accessed May 2008).
4. The Commission on Macroeconomics and Health (CMH) [web site]. Geneva, World Health Organization, 2008 ([www.who.int/macrohealth/en/](http://www.who.int/macrohealth/en/), accessed April 2008).
5. Suhrcke M et al. *The contribution of health to the economy in the European Union*. Brussels, European Commission, 2005.
6. Suhrcke M, Rocco L, McKee M (eds). *Health: a vital investment for economic development in eastern Europe and central Asia*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2007.
7. Suhrcke M et al. (eds.) *Economic consequences of noncommunicable diseases and injuries in the Russian Federation*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2007.
8. WHO Regional Office for Europe. The Health for All policy framework for the WHO European Region: 2005 update. *European Health for All Series*, No. 7. Denmark, WHO Regional Office for Europe, 2005.
9. Council of the European Union. *Council conclusions on common values and principles in European Union health systems* (2006/C 146/01). Brussels, Council of the European Union, 2006.
10. Council of Europe. *European Social Charter (revised)*. CETS No. 163, Art. 11. Strasbourg, Council of Europe, 1996.
11. Council of the European Union. *The Lisbon European Council – An agenda for economic and social renewal for Europe. Contribution of the European Commission to the Special European Council in Lisbon, 23–24 March*. Brussels, 28 February 2000.
12. Wanless D. *Securing our future health: Taking a long-term view*. Final report. London, HM Treasury, April 2002.
13. Wanless D. *Securing good health for the whole population*. Final report. London, HM Treasury, February 2004.
14. Fries JF. Ageing, natural death, and the compression of morbidity. *New England Journal of Medicine*, 1980, 303:130–135.
15. Fries JF. Measuring and monitoring success in compressing morbidity. *Annals of Internal Medicine*, 2003, 139:455–459.
16. Commission on Social Determinants of Health (CSDH) [web site]. Geneva, World Health Organization ([http://www.who.int/social\\_determinants/en/](http://www.who.int/social_determinants/en/), accessed May 2008).
17. Stahl T et al. (eds). *Health in all policies. Prospects and potentials*. Helsinki, Ministry of Social Affairs and Health, under the auspices of the European Observatory on Health Systems and Policies, 2006.
18. Health Ministerial Delegation of EU Member States. *Declaration on “Health in all Policies”*. Rome, EU Ministerial Conference “Health in all Policies: achievements and challenges”, 18 December 2007.
19. Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
20. World Health Organization. *The World Health Report 2000. Health systems: Improving performance*. Geneva: World Health Organization, 2000.
21. Duran A et al. Understanding health systems: scope, functions and objectives. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
22. Figueras J et al. Health systems, health and wealth: an introduction. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.



23. Council of Europe. *Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine*. CETS No. 164, Art. 3. Strasbourg, Council of Europe, 1997.
24. Busse R, van Ginneken E, Normand C. Re-examining the cost pressures. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
25. Organisation for Economic Co-operation and Development (OECD). *Projecting OECD health and long-term care expenditures: what are the main drivers?* Economics Department Working Papers No. 477. Paris, OECD, 2006.
26. Economic Policy Committee and European Commission. *The 2005 EPC projections of age-related expenditure: agreed underlying assumptions and projection methodologies*. European Economy Occasional Papers, No. 19, 2005 ([http://ec.europa.eu/economy\\_finance/epc/documents/2005/ageing2005en.pdf](http://ec.europa.eu/economy_finance/epc/documents/2005/ageing2005en.pdf), accessed April 2008).
27. Chawla M, Betcherman G, Banerji A. *From red to gray: the third transition of aging populations in eastern Europe and the former Soviet Union*. Washington, DC, World Bank, 2007.
28. Fuchs VR. Though much is taken: reflections on ageing, health, and medical care. *Milbank Memorial Fund Quarterly*, 1984, 62:143–166.
29. Burniaux JM, Duval R, Jaumotte F. *Coping with ageing: a dynamic approach to quantify the impact of alternative policy options on future labour supply in OECD countries*. Working Papers No 371. Paris, OECD Economics Department, 2003.
30. Oliveira Martins J et al. *The impact of ageing on demand, factor markets and growth*. Economics Working Paper No 420. Paris, OECD, 2005.
31. Chernew ME et al. Managed care, medical technology, and health care cost growth: A review of the evidence. *Medical Care Research and Review*, 1998, 55:259–288 (and 289-297).
32. Goetghebeur MM, Forrest S, Hay JW. Understanding the underlying drivers of inpatient cost growth: a literature review. *The American Journal of Managed Care*, 2003, 9:3–12, Special Issue 1.
33. Docteur E, Oxley H. *Health care systems – lessons from the reform experience*. OECD Health Working Papers, No. 9, Paris, OECD, 2003.
34. Pammolli F et al. *Medical devices, competitiveness and impact on public health expenditure*. Study prepared for the Directorate General Enterprise of the European Commission. Florence, University of Florence, 2005 ([http://www.cermlab.it/\\_documents/MD\\_Report.pdf](http://www.cermlab.it/_documents/MD_Report.pdf), accessed April 2008).
35. Dormont H, Grignon M, Huber H. *Health expenditures and the demographic rhetoric: reassessing the threat of ageing*. Working Paper No. 05-01. Lausanne, IEMS, Université de Lausanne, 2005.
36. Sorenson C et al. *How can the impact of HTA be enhanced? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
37. Baumol WJ. Macroeconomics of unbalanced growth: the anatomy of urban crisis. *American Economic Review*, 1967, 57:415–426.
38. Hartwig J. What drives health care expenditure? Baumol's model of "unbalanced growth" revisited. *Journal of Health Economics*, in press.
39. Suhrcke M et al. *The economic costs of ill health in the European Region*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies (Background document), in press.
40. Usher D. An imputation to the measure of economic growth for changes in life expectancy. In: Moss M (ed). *The measurement of economic and social performance*. New York, Columbia University Press for National Bureau of Economic Research, 1973: 193–226.
41. Nordhaus WD. The health of nations: The contribution of improved health to living standards. In: Murphy KM, Topel H (eds.). *Measuring the gains from medical research: An economic approach*. Chicago, University of Chicago Press, 2003: 9–40.
42. Mackenbach JP, Meerding WJ, Kunst AE. *Economic implications of socioeconomic inequalities in health in the European Union*. Luxembourg, European Commission, 2007.
43. Auld MC. Smoking, drinking and income. *Journal of Human Resources*, 2005, 40(2):505–518.
44. Lye JN, Hirschberg J. Alcohol consumption, smoking and wages. *Applied Economics*, 2004, 36:1807–1817.
45. Cawley J. The impact of obesity on wages. *Journal of Human Resources*, 2004, 39(2):451–474.
46. García Gómez P. *Institutions, health shocks and labour outcomes across Europe*. Madrid, Fundación de Estudios de Economía Aplicada, 2008 (FEDEA Working Paper No. 2008-01) (<http://www.fedea.es/pub/Papers/2008/dt2008-01.pdf>, accessed May 2008).

47. Lechner M, Vazquez-Alvarez R. *The effect of disability on labour market outcomes in Germany: Evidence from matching*. Discussion Paper No 4223. Centre for Economic Policy Research, 2004.
48. Hagan R, Jones AM, Rice N. *Health and Retirement in Europe*. HEDG Working Paper 06/10. York, University of York, 2006.
49. Kalwij A, Vermeulen F. *Labour force participation of the elderly in Europe: The importance of being healthy*. Discussion Paper No 1887. Bonn, Institute for the Study of Labour, 2005.
50. Suhrcke M et al. *Chronic disease: An economic perspective*. London, Oxford Health Alliance, 2006.
51. Fogel RW. Economic growth, population theory and physiology: the bearing of long-term process on the making of economic policy. *The American Economic Review*, 1994, 84(3):369–395.
52. Suhrcke M et al. Economic costs of ill health. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
53. Suhrcke M, Urban D. *Are cardiovascular diseases bad for economic growth?* Munich, Center for Economic Studies and the Ifo Institute for Economic Research (CESifo) Working paper No. 1845, 2006.
54. Zweifel P, Steinmann L, Eugster P. The Sisyphus syndrome in health revisited, *International Journal of Health Care Finance and Economics*, 2005, 5:127–145.
55. Manton KG. Changing concepts of morbidity and mortality in the elderly population. *Milbank Memorial Fund Quarterly*, 1982, 60:183–244.
56. Manton KG, Stallard E, Corder L. Changes in morbidity and chronic disability in the US elderly population: Evidence from the 1982, 1984 and 1989 National Long-Term Care Surveys. *Journal of Gerontology: Social Sciences*, 1995, 50:194–204.
57. Seshamani M, Gray AM. Ageing and health care expenditure: the red herring argument revisited. *Health Economics*, 2004, 13:303–314.
58. Seshamani M, Gray AM. A longitudinal study of the effects of age and time to death on hospital costs. *Journal of Health Economics*, 2004, 23(2):217–235.
59. Raitano M. *The impact of death-related costs on health care expenditure: A survey*. European Network of Economic Policy Research Institutes (ENEPRI) <http://www.enepri.org/files/Publications/RR17.pdf>, accessed May 2008). Research Report No. 17, February 2006.
60. Gandjour A, Lauterbach KW. Does prevention save costs? Considering deferral of the expensive last year of life. *Journal of Health Economics*, 2005, 24:715–724.
61. Daviglus ML et al. Cardiovascular risk profile earlier in life and Medicare costs in the last year of life. *Archives of Internal Medicine*, 2005, 165:1028–1034.
62. Mackenbach JP, Kunst AE. Evidence for strategies to reduce socioeconomic inequalities in health in Europe. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
63. McDaid D, Drummond M, Suhrcke M. *How can European health systems support investment in and implementation of population health strategies? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
64. WHO Regional Office for Europe. European Health for All database (HFA-DB) [online database]. Copenhagen, WHO Regional Office for Europe, 2007 (<http://www.euro.who.int/hfadb>, accessed May 2008).
65. WHO. *Global burden of disease estimates*. Geneva, World Health Organization, 2004.
66. McDaid D, Suhrcke M, Shiell A. Is prevention better than cure? The contribution of public health and health promoting interventions. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
67. WHO. *World health report 2002. Reducing risks, promoting healthy life*. Geneva, World Health Organization, 2002.
68. Leal J et al. Economic burden of cardiovascular diseases in the enlarged European Union. *European Heart Journal*, 2006, 27:1610–1619.
69. Emery C et al. Cost of obesity in France. *La Presse Medicale*, 2007, 36:832–840.
70. Odegaard K et al. The Swedish cost burden of overweight and obesity – evaluated with the PAR approach and a statistical modelling approach. *International Journal of Pediatric Obesity*, 2008, 3(1):51–57.
71. Allender S, Rayner M. The burden of overweight and obesity-related ill health in the UK. *Obesity Reviews*, 2007, 8:467–473.
72. Sobocki P et al. Cost of depression in Europe. *Journal of Mental Health Policy and Economics*, 2006, 9:87–98.

73. Kessler RC, Frank RG. The impact of psychiatric disorders on work loss days. *Psychological Medicine*, 1997, 27:861–873.
74. Stewart WF et al. Cost of lost productive work time among US workers with depression. *Journal of the American Medical Association*, 2003, 289:3135–3144.
75. Jarl J et al. The societal cost of alcohol consumption: an estimation of the economic and human cost including health effects in Sweden, 2002. *European Journal of Health Economics*, 2007 [e-pub ahead of print].
76. Anderson P, Baumberg B. *Alcohol in Europe. A public health perspective*. London, Institute of Alcohol Studies, 2006.
77. McDaid D, Kennelly B. The case for suicide prevention: an economic perspective. In: *The Oxford Textbook of Suicidology – The Five Continents Perspective*. Oxford, Oxford University Press, in press.
78. McKeown T. *The role of medicine: dream, mirage or nemesis?* Oxford, Blackwell, 1979.
79. Illich I. *Limits to medicine*. London, Marion Boyars, 1976.
80. Colgrove J. The McKeown thesis: a historical controversy and its enduring influence. *American Journal of Public Health*, 2002, 92:725–729.
81. Nolte E, McKee M. *Does healthcare save lives? Avoidable mortality revisited*. London, The Nuffield Trust, 2004.
82. Nolte E, McKee M. Measuring the health of nations: Updating an earlier analysis. *Health Affairs*, January/February 2008, 27:58–71.
83. Rutstein DD et al. Measuring the quality of medical care. *New England Journal of Medicine*, 1976, 294:582–588.
84. Holland WW (ed). The “avoidable” death guide to Europe. *Health Policy*, 1986, 6:115–117.
85. Kunst AE, Looman CWN, Mackenbach JP. Medical care and regional mortality differences within the countries of the European Community. *European Journal of Population*, 1988, 4:223–245.
86. Kessner DM, Kalk CE, Singer J. Assessing health quality – the case of tracers. *New England Journal of Medicine*, 1973, 288:189–194.
87. Bunker JP, Frazier HS, Mosteller F. Improving health: measuring effects of medical care. *Millbank Memorial Fund Quarterly*, 1994, 72:225–258.
88. Beaglehole R. Medical management and the decline in mortality from coronary heart disease. *British Medical Journal*, 1986; 292:33.
89. Bots ML, Grobee, DE. Decline of coronary heart disease mortality in the Netherlands from 1978 to 1985: contribution of medical care and changes over time in presence of major cardiovascular risk factors. *Journal of Cardiovascular Risk*, 1996, 3:271–276.
90. Newey C et al. *Avoidable mortality in the enlarged European Union*. Paris, Institut des Sciences de la Santé, 2004.
91. Hutubessy RC et al. Generalized cost–effectiveness analysis: an aid to decision-making in health. *Applied Health Economics and Health Policy*, 2002, 1(2):39–46.
92. Hoffmann C, Graf von der Schulenburg JM. The influence of economic evaluation studies on decision-making. A European survey. (The EUROMET group.) *Health Policy*, 2000, 52:179–192.
93. OECD & WHO. *Switzerland (OECD Reviews of Health Systems)*. Paris, Organisation for Economic Co-operation and Development, 2006.
94. Appleby J, Devlin N, Parkin D. NICE’s cost–effectiveness threshold. *British Medical Journal*, 2007;335:358–359.
95. Murray CJL et al. Effectiveness and costs of interventions to reduce systolic blood pressure and cholesterol: a global and regional analysis of reduction of cardiovascular disease risk. *Lancet*, 2003, 361:717–725.
96. Murray CJL et al. Development of WHO guidelines on generalized cost–effectiveness analysis. *Health Economics*, 2000, 9(3):235–251.
97. Edejer T et al. (eds.). *Making choices in health: WHO guide to cost–effectiveness analysis*. Geneva, WHO, 2003.
98. Evans, DB et al. Achieving the Millennium Development Goals for health: Methods to assess the costs and health effects of interventions for improving health in developing countries. *British Medical Journal*, 2005, 331:1137–1140.
99. Chisholm D, Evans DB. Economic evaluation in health: saving money or improving care? *Journal of Medical Economics*, 2007, 10:325–327.
100. WHO [web site]. CHOICE, CHOosing Interventions that are Cost-Effective. Geneva, World Health Organization ([www.who.int/choice](http://www.who.int/choice), accessed April 2008), 2008.
101. WHO. *National Health Accounts (NHA)*. Geneva, World Health Organization ([www.who.int/nha](http://www.who.int/nha), accessed April 2008).
102. World Bank [web site]. Data and statistics. Washington, DC, World Bank (<http://go.worldbank.org/SDHOTB92H0>, accessed April 2008).
103. McDaid D, Needle J. *Economic evaluation and public health: mapping the literature*. Cardiff, Welsh Assembly Government, 2006.

104. Schwappach DL, Boularte TA, Suhrcke, M. The economics of primary prevention of cardiovascular disease – a systematic review of economic evaluations. *Cost Effectiveness and Resource Allocation*, 2007, 5:5.
105. Rush B, Shiell A, Hawe P. A census of economic evaluations in health promotion. *Health Education Research*, 2004, 19:707–719.
106. European Commission. *Work Programme of the Community Action Programme on Health Promotion, Information, Education and Training*. GEST 9V/F/3. Luxembourg, European Commission DG V, 1998.
107. Chaloupka F, Warner W. The economics of smoking. In: Cuyler A, Newhouse J (eds.). *Handbook of Health Economics*, Amsterdam: Elsevier Science, 2000, Vol. 1B:1539–1627, 2000.
108. Leon DA et al. Hazardous alcohol drinking and premature mortality in Russia (the Izhevsk Family Study): a population based case-control study. *Lancet*, 2007, 369: 2001–2009.
109. McKee M et al. The composition of surrogate alcohols consumed in Russia. *Alcoholism: Clinical and Experimental Research*, 2005, 29:1884–1888.
110. Pärna K et al. A rapid situation assessment of the market for surrogate and illegal alcohols in Tallinn, Estonia. *International Journal of Public Health*, 2007, 52: 402–410.
111. Swinburn B, Egger G, Raza F. Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Preventive Medicine*, 1999, 29(6):563–570.
112. Winterthurer Institut für Gesundheitsökonomie. *Ökonomische Beurteilung von Gesundheitsförderung und Prävention*. Winterthur, Wintherthurer Institut, 2004.
113. National Health and Medical Research Council (NHMRC). *Promoting the health of Australians: case studies of achievements in improving the health of the population*. Canberra, Australian Government Publishing Service, 1997.
114. Pelletier KR. A review and analysis of the clinical and cost-effectiveness studies of comprehensive health promotion and disease management programmes at the worksite: update VI 2000–2004. *Journal of Occupational and Environmental Medicine*, 2005, 47(10):1051–1058.
115. Mills PR et al. Impact of a health promotion programme on employee health risks and work productivity. *American Journal of Health Promotion*, 2007, 22(1):45–53.
116. Zechmeisterl, Kilian R, McDaid D. Is it worth investing in mental health promotion and prevention of mental illness? A systematic review of the evidence from economic evaluations. *BioMed Central Public Health*, 2008, 8:20.
117. Laxminarayan R., Chow J, Shahid-Salles AA. Intervention cost-effectiveness: Overview of main messages. In: Jamison DT et al. (eds.). *Disease control priorities in developing countries*. New York, Oxford University Press, 2006.
118. Chisholm D et al. Reducing the global burden of hazardous alcohol use: a comparative cost-effectiveness analysis. *Journal of Studies on Alcohol*, 2004, 65(6):782–793.
119. WHO [web site]. Cost-effectiveness results: Tobacco use. Geneva, World Health Organization, 2007 (<http://www.who.int/choice/interventions/en/>, accessed May 2008).
120. International Society for Equity in Health [web site]. Guatemala, International Society for Equity in Health (<http://www.iseqh.org>, accessed March 2008).
121. Mackenbach JP. *Health inequalities: Europe in profile*. London, UK Presidency of the EU, 2006.
122. Eikemo T et al. Health inequalities according to educational level in different welfare regimes: A comparison of 23 European countries. *Sociology of Health & Illness*, in press.
123. Eikemo T et al. Class-related health inequalities are not larger in the East: A comparison of 4 European regions using the new socioeconomic classification. *Social Science and Medicine*, in press.
124. MacIntyre S et al. Using evidence to inform health policy: Case study. *British Medical Journal*, 2001, 322:222–225.
125. Mackenbach JP, Bakker MJ, European Network on Interventions and Policies to Reduce Inequalities in Health. Tackling socioeconomic inequalities in health: an analysis of recent European experiences. *Lancet*, 2003, 362:1409–1414.
126. Stirbu I et al. Educational inequalities in avoidable mortality in Europe. In: Kunst et al (eds). *Tackling health inequalities in Europe: an integrated approach (Eurothine)*. Rotterdam, Erasmus MC, 2007:139–158.
127. Stirbu I et al. Educational inequalities in utilization of preventive services among elderly in Europe. In: Kunst et al (eds). *Tackling health inequalities in Europe: an integrated approach (Eurothine)*. Rotterdam, Erasmus MC, 2007: 483–499.
128. Mielck A et al. Association between foregone care and household income among the elderly in 10 western European countries. In: Kunst et al (eds). *Tackling health inequalities in Europe: an integrated approach (Eurothine)*. Rotterdam, Erasmus MC, 2007: 471–482.
129. Starfield B, Birn AE. Income redistribution is not enough: income inequality, social welfare programmes, and achieving equity in health. *Journal of Epidemiology and Community Health*, 2007, 61:1038–1041.

130. Busse R, Valentine N, van Ginneken E. Being responsive to citizens' expectations? Health services and responsiveness. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
131. Valentine NB et al. Health system responsiveness: concepts, domains and operationalization. In: Murray CJL, Evans DB (eds). *Health systems performance assessment: debates, methods and empiricism*. Geneva: World Health Organization, 2003: 573–596.
132. Üstün TB et al. *WHO multi-country survey study on health and responsiveness 2000–2001*. Geneva, World Health Organization (GPE Discussion Paper 37), 2001.
133. European Commission [web site]. Eurobarometer surveys. Brussels, European Commission ([http://ec.europa.eu/public\\_opinion/index\\_en.htm](http://ec.europa.eu/public_opinion/index_en.htm), accessed April 2008).
134. Blendon RG et al. Common concerns amid diverse systems: Health care experiences in five countries. The experiences and views of sicker patients are bellwethers for how well health care systems are working. *Health Affairs*, 2003, 22(3):106–121.
135. The Picker Institute [web site]. *Through the patient's eyes*. Camden, ME, The Picker Institute (<http://www.pickerinstitute.org/>, accessed April 2008).
136. Health Consumer Powerhouse. *Euro Health Consumer Index 2007. EHCI 2007 report*. Health Consumer Powerhouse AB, 2007.
137. Valentine NB et al. Responsiveness. In: Smith PC et al. (eds.). *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
138. Valentine NB et al. Patient experiences with health services: population surveys from 16 OECD countries. In: Murray CJL, Evans DB (eds). *Health systems performance assessment: debates, methods and empiricism*. Geneva, World Health Organization, 2003
139. European Commission. *Eurobarometer surveys. Eurobarometer 2002*. Brussels, European Communities, 2002.
140. Figueras J, Lessof S, Srivastava D. Managing paradox. In: Marinker M (ed.). *Constructive conversations about health policy and values*. Oxford, Radcliffe Publishing, 2006.
141. Thomson S, Dixon A. Choices in health care: the European experience. *Euro Observer*, 2004, 6(4):1–4.
142. Coulter A, Jenkinson C. European patients' views on the responsiveness of health systems and health care providers. *European Journal of Public Health*, 2005, 15(4):355–360.
143. Strandberg-Larsen M et al. Denmark: Health system review. *Health Systems in Transition*, 2007; 9(6):1–164.
144. Institute for Public Policy Research (IPPR). *Patient choice should reduce health inequalities*. Press release [online]. London, Institute for Public Policy Research, 16 November 2005 (<http://www.ippr.org/pressreleases/?id=1790>, accessed May 2008).
145. Klein R. The politics of participation. In: Maxwell R, Weaver N (eds.). *Public participation in health*. London, King Edward's Hospital Fund: 17–32.
146. O'Mahony M, Van Ark B. *EU productivity and competitiveness: an industry perspective. Can Europe resume the catching-up process?* European Commission, 2003.
147. European Commission [online database]. EUROSTAT. Brussels, 2008 (<http://europa.ec/eurostat/>, accessed February 2008).
148. European Commission. *Creating an innovative Europe: Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit*. Luxembourg, Office of the European Communities, 2006.
149. Griliches Z. The search for R&D spillovers. *Scandinavian Journal of Economics*, 1992, 94:29–47.
150. Eurostat. *Statistical books. Science, technology and innovation in Europe*. Luxembourg, Eurostat Statistical Office of the European Communities, 2008.
151. European Commission. *Funding health in your region*. (Factsheet) Brussels, Office of the European Communities, 2007 ([http://ec.europa.eu/health/ph\\_overview/Documents/structural\\_funds\\_en.pdf](http://ec.europa.eu/health/ph_overview/Documents/structural_funds_en.pdf), accessed May 2008).
152. Saltman RB et al. Health system reform strategies. In: Figueras J, McKee M, Menabde N (eds.). *Health systems, health and wealth: Assessing the case for investing in health systems*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Open University Press, in press.
153. European Observatory on Health Systems and Policies [web site]. Brussels, European Observatory on Health Systems and Policies, 2008 (<http://www.euro.who.int/observatory>, accessed May 2008).
154. Nolte E, McKee M (eds.). *Caring for people with chronic conditions. A health system perspective*. Maidenhead, Open University Press, in press.

155. Coyte PC, Goodwin N, Laporte A. *How can the settings used to provide care to older people be balanced? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
156. Singh D. *How can chronic disease management programmes operate across care settings and providers? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
157. Nolte E, Knai C, McKee M (eds.). *Managing chronic conditions – experience in eight countries*. Copenhagen, World Health Organization on behalf of the European Observatory on Health Systems and Policies, in press.
158. Castoro C et al. *Day surgery: Making it happen. Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2007.
159. McKee M. *Reducing hospital beds. Health Systems and Policy Analysis: Policy Brief*. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2004.
160. McKee M, Healy J (ed.). *Hospitals in a changing Europe*. Buckingham, Open University Press, 2002.
161. Saltman RB, Rico A, Boerma WGW (eds.). *Primary care in the driver's seat? Organizational reform in European primary care*. Berkshire, Open University Press, 2006.
162. Atun RA. *What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services? Policy brief*. Copenhagen, WHO Regional Office for Europe Health Evidence Network, 2004.
163. Atun RA, Bennett S, Duran A. *When do stand-alone (vertical) programmes have a place in health systems? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
164. Coulter A, Parsons S, Askham J. *Where are the patients in decision-making about their own care? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
165. Saltman RB, Busse R, Mossialos E (eds.). *Regulating entrepreneurial behaviour in European health care systems*. Buckingham, Open University Press, 2002.
166. Legido-Quigley H et al. *Assuring the quality of health care in the European Union*. Berkshire, Open University Press, in press.
167. Rechel B, Dubois C-A, McKee M (eds.). *The health care workforce in Europe. Learning from experience*. Trowbridge, Cromwell Press, 2006.
168. Dubois CA, McKee M, Nolte E (eds.). *Human resources for health in Europe*. Berkshire, Open University Press, 2006.
169. Buchan J. *How can the migration of health service professionals be managed in ways that reduce any negative effects on supply? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
170. Bourgeault IL et al. *How to effectively implement optimal skill mix and why? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
171. Merkur S et al. *Do lifelong learning and revalidation ensure that physicians are fit to practise? Health systems and policy analysis: Policy brief*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
172. Mossialos E, Mrazek M, Walley T (eds.). *Regulating pharmaceuticals in Europe: striving for efficiency, equity and quality*. Berkshire, Open University Press, 2004.
173. Davis C. Understanding the legacy: health financing systems in the USSR and eastern Europe prior to transition. In: Kutzin, J, Cashin C, Busse R (eds.). *Implementing health financing reforms: Lessons for and from countries in transition*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
174. Kutzin J et al. Reforms in the pooling of funds. In: Kutzin J, Cashin C, Busse R (eds.). *Implementing health financing reforms: Lessons for and from countries in transition*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
17. Mossialos E, Thomson S. *Voluntary health insurance in the European Union*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2004.
176. Sheiman I et al. Sources of funds and revenue collection: reforms and challenges. In: Kutzin J, Cashin C, Busse R (eds.). *Implementing health financing reforms: Lessons for and from countries in transition*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.

177. Kutzin J et al. *Health financing policy: a guide for decision-makers*. Copenhagen, WHO Regional Office for Europe Health Systems Financing Programme, in press.
178. Hrobo P, Machacek T, Julinek T. *Healthcare reform for the Czech Republic in the 21st century Europe*. Prague, Health Reform.cz, 2005.
179. Shishkin S, Kacevicius G, Ciocanu M. *Evaluation of Moldova's 2004 health financing reform*. Copenhagen, WHO Regional Office for Europe (Division of Country Health Systems, Health financing policy paper), 2008.
180. Minder A et al. Health care systems in transition: Switzerland. *Health Systems in Transition*, 2000, AMS 5012667 (SWI):1–82.
181. Hofmarcher M M, Rack H-M. Austria: Health system review. *Health Systems in Transition*, 2006, 8(3):1–247. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies.
182. Sauerland D. *Presentation to the 6th European Conference on Health Economics*. Budapest, 6–9 July 2006.
183. Hrobo P. *The Czech health system: its presence and future*. Presentation to Hungarian Parliament Conference on Health Insurance Reform 2007–2009. Budapest, 26 January 2007.
184. Figueras J, Robinson R, Jakubowski E (eds.). *Purchasing to improve health systems performance*. Berkshire, Open University Press, 2005.
185. Saltman RB, Busse R, Figueras J (eds.). *Social health insurance systems in western Europe*. Berkshire, Open University Press, 2004.
186. Smith PC et al. (eds.). *Performance measurement for health system improvement: experiences, challenges and prospects*. Cambridge, Cambridge University Press, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
187. Smith PC et al. *Performance assessment. Background document*. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, in press.
188. Murray CJL, Evans, DB (eds.). *Health systems performance assessment: debates, methods and empiricism*. Geneva, World Health Organization, 2003.
189. Shengelia B et al. Access, utilization, quality and effective coverage: an integrated conceptual framework and measurement strategy. *Social Science and Medicine*, 2005, 61:97–109.
190. Kutzin J. *Overview of health system functions*. Presentation to Flagship Summer School on the Essentials of Health System Reform and Sustainable Financing. Budapest, 28 August–2 September 2005.
191. Dudley RA. Pay-for-performance research: How to learn what clinicians and policy-makers need to know. *Journal of the American Medical Association*, 2005, 294(14):1821–1823.
192. Wismar M et al. *Health targets in Europe: learning from experience*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2008.

World Health Organization  
Regional Office for Europe  
Scherfigsvej 8,  
DK-2100 Copenhagen Ø,  
Denmark  
Tel.: +45 39 17 17 17.  
Fax: +45 39 17 18 18.  
E-mail: [postmaster@euro.who.int](mailto:postmaster@euro.who.int)  
Web site: [www.euro.who.int](http://www.euro.who.int)



WHO European Ministerial  
Conference on Health Systems:  
"HEALTH SYSTEMS.  
HEALTH AND WEALTH"

Tallinn, Estonia, 25–27 June 2008

This report is one of three background documents prepared for the WHO European Ministerial Conference on Health Systems: "Health Systems, Health and Wealth", held on 25–27 June 2008 in Tallinn, Estonia. Together, these reports demonstrate that:

- ill health is a substantial burden economically and in terms of societal well-being;
- well-run health systems can improve health and well-being, and contribute to wealthier societies, and
- strategies are available to improve health systems' performance.

These are the key themes of the Conference. These detailed syntheses highlight important research findings and their implications, and underline the challenges that they pose for policy-makers. They support the Conference position that cost-effective and appropriate spending on health systems is a good investment that can benefit health, wealth and well-being in their widest senses.

These three background documents together provide the theoretical foundations around which the aims, arguments and rationale for the Conference are oriented. Document 1 gives the background evidence on the cost of ill health and is supported by twin volumes on health as a vital investment in eastern and western Europe. Documents 2 and 3 represent concise synopses of the two comprehensive Conference volumes being coordinated by the European Observatory on Health Systems and Policies. These volumes on health systems, health and wealth and performance involve a range of leading experts and will be made available to delegates in draft for comment. They will be revised in light of feedback before publication at the end of 2008.

### **Background document #3** **Health Systems, Health and Wealth: assessing the case for investing in health systems**

This summary provides a conceptual framework that captures the complex relationships between health systems, health and wealth and an analysis of the evidence which demonstrates that investing in health systems can contribute to societal well-being. It shows that health services combined with stewardship of relevant activities in other sectors do not undermine financial sustainability, but rather can drive economic growth. It further shows how careful and appropriate health system investment in personal and population health services, and in health in all policies coupled with performance measurement, can improve health, enhance equity and responsiveness and contribute to economic growth.