

Health systems goals and indicators: how they influence policy

Lecture 3

Forthcoming seminars

- The seminar topic for 8 and 9 October is as follows:
- **Choice of variables to describe health systems**
- Describe the health system of your country. You should refer to WHO and World Bank databases, especially <http://www.who.int/countries/en/>. Students will be asked to explain their choice of variables and to include in their presentation a report on a recent newspaper article dealing with health system reform in their country.
- The seminar topic for 15 and 16 October is as shown in the lecture notes:
- **Policy implications of WHO 2000 report variables**
- Health system performance assessment requires choice of functions and objectives. Four functions were laid down in the World Health Report 2000. What are their policy implications? 300 words for class discussion.
- Resource: you should read Chapter 2 of the WHO's 2000 report and the Almeida paper which you will find [HERE](#). A pdf of the Nolte and McKee reference (see essential reading for lecture 3) can be found [HERE](#).

Topics

In the last lecture we discussed the concept of universality and its place in the study of health systems. However, health systems can be conceived and described in a variety of ways. The WHO and OECD are associated with specific approaches. In this lecture we will consider how conceptions of health systems can influence or reflect policy choices.

- Health system goals
- Range of variables
- Policy implications: health inequality and social class
- Data questions
- International comparisons

Can we talk about 'health system goals'?

There have been several studies of national health strategies in Europe (Figueras, 2005: 143), but none so far as I am aware outside Europe. According to Figueras, while many countries have a written policy document promoting health, most 'express the desirable rather than the actual situation'. 'Most policies are inspirational rather than managerial or technical tools to achieve change, indicated by the relative paucity of quantitative health targets or specification of ways to achieve them.'

The WHO's report 2000 established a set of goals that are widely used in discussions of health system performance.

Descriptions of health systems depend on the purpose for which information is required

Information is required:

- To improve health outcomes by measuring needs
- To help decide what resource inputs are required
- To monitor the provision of services
- To measure the level of health service outputs
- To assess effectiveness, efficiency, quality of care, and equity
- And to assess performance such as the effects on health outcomes. (WHO Task Force, 2005)

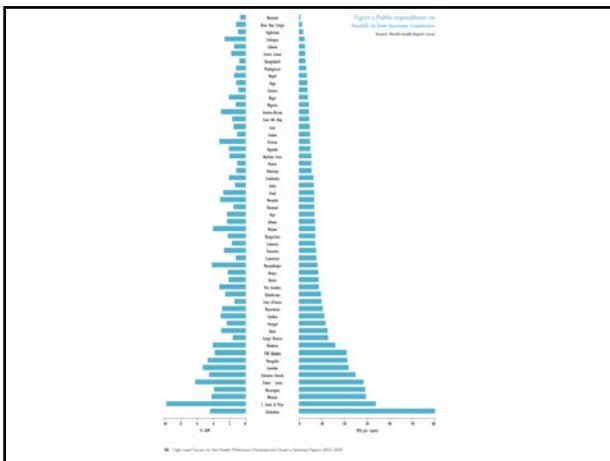
There is a range of descriptive templates:

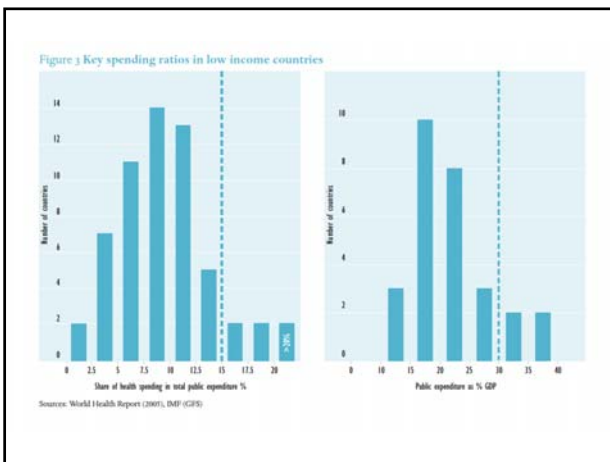
- OECD reports
- EU Observatory (health systems in transition)
- WHO standardised accounts
- International network for Health Policy and Reform

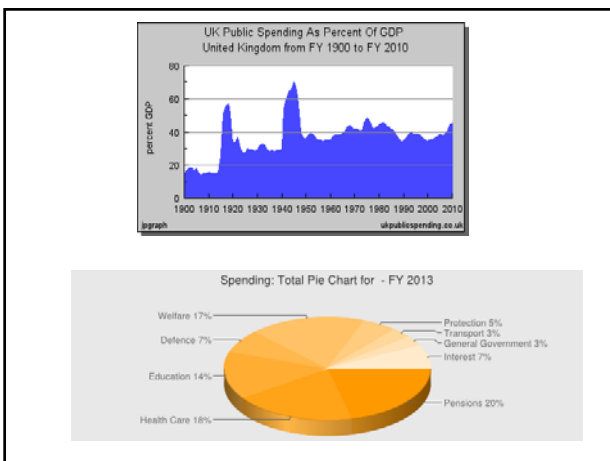
These alternatives are fully described in Nolte and McKee; Gruen and Black.

Comparisons of expenditure on health care as a proportion of gross domestic product

Sometimes used as a spending norm







But does choice of description and performance measurement make a difference?

The case of inequality

The WHO and health 'inequity'

The term 'inequity' as used in WHO documents refers to **differences in health which are not only unnecessary and avoidable but**, in addition, are considered **unfair and unjust**. Judgements on which situations are unfair will vary from place to place and from time to time, but one widely used criterion is the degree of choice involved. **Where people have little or no choice in living and working conditions**, the resulting health differences are more likely to be considered unjust than those resulting from health risks which were chosen voluntarily. The sense of injustice increases for groups where disadvantages cluster together and reinforce each other, making them very vulnerable to ill health. (Whitehead, 1991, emphasis added)

The emphasis is on socially structured inequality among social groups. This is a standard public health approach

The 2000 report focuses on inequalities between individuals

Until 2000, the WHO approach to inequity involved comparing more and less advantaged groups.

The World Health Report 2000 substituted an individual approach: inequities should no longer be 'artificially' grouped into classes or socio-economic groups; instead avoidable health differences should be measured among individuals that were not grouped a priori according to social characteristics. (Braveman, 2006)

This view is associated with health system goals other than equity. For example, Murray (1995) argues that the objective of health systems is "to provide interventions and services that maximize welfare or, in other words, some aggregation of individual utilities." This type of analysis substitutes the economist's conception of 'utility' for equity. This social welfare approach does not emphasise inequalities of access among social groups. ('Welfare' will be dealt with in lecture 4).

Implications of abandoning social inequalities

- it directs health systems policy towards **individual determinants of sickness and disease and away from social determinants**
- it is associated with health system goals other than universality. For example, Murray (1995) argues that the objective of health systems is “to provide interventions and services that maximize welfare or, in other words, some aggregation of individual utilities.” This is a different goal from universal, comprehensive health care (cf essential health care and the DALY)
- approaches that seek to maximise welfare have important consequences for the ways in which problems are defined.

Measuring performance without equity – the DALY

- A Disability Adjusted Life Year (DALY) is the unit used for measuring the Global Burden of Disease (GBD). Diseases were classified into 109 categories based on the International Classification of Diseases (9th revision). Each DALY indicates a loss of a year's healthy life, either from time lived with a disability or from time lost through premature death. The latter is calculated as the difference between the actual age of death and the age to which the person could have expected to live at birth in an advanced industrialized country (82.5 years for women and 80 years for men).
- (http://www.cgh.uottawa.ca/whocc/projects/eo_toolkit/chp1/t_daly_EOT.htm)
- DALYs ARE BAD (Anand), i.e. the fewer the better
- They were developed by the World Bank to determine the “basic health care package”

Ruger (2005) on the World Bank and DALYs

“The bank [...] was criticized for introducing DALYs to global health assessments. It described DALYs in the *World Development Report, 1993* as a way to conceptualize and measure the global disease burden and to associate this burden with health and other social policies. **Critics argue that DALYs lack a sound theoretical framework and are inequitable because they value years saved for the able-bodied more than for the disabled, the middle-aged more than the young or old, and the currently ill more than those who will be ill tomorrow. By introducing DALYs, the bank contends it improved analysis of international health systems. Critics remain concerned with its use in global health, and the debate continues.**”
(Am J Public Health. 2005 January; 95(1): 60–70.)

WHO DALY Review questions policy relevance

The development of the DALY represents a considerable technical achievement. [...] There are, however, many technical details that need to be considered further. [...]

In particular, the technique purports to assign a "value" to human life, a value that varies according to age in a complex manner. The use of the technique to calculate the financial implications for society of the incidence of death or disability might be defensible. However, if it is used to express a social concept, other considerations - notably ethical issues - must be taken into account. The Review Group recommended that CIOMS be asked to investigate the ethical aspects.

(For example, is it ethical or realistic to propose that patients should be turned away when they are ill because the appropriate intervention is not on a list of basic health care?)

Suppression of information always accompanies data "pooling". With DALYs, such pooling takes place in two ways: by aggregating healthy life years lost due to mortality with those due to disability; and by aggregating data across regions of a country that may have quite different physical and socioeconomic environments. [...]

The potential distorting effect of the heterogeneity of the population on the DALY in its present form risks leading to poor policy-making or resource allocation. This difficulty might be resolved by the design of multidimensional indicators, providing a basis for more illuminating descriptions of health status.

(For example, the approach fails to distinguish between the needs of rich and poor areas).

Report of DALY Review Group. ACHR33/CRP/95.

Performance measurement

- Quantitative studies of performance outcomes are widely advocated in health economics. For example, the OECD seeks to associate 'number of input and process indicators such as health care expenditure, number of physicians, type of provider payment or access to services with health outcome such as premature mortality and infant mortality' (Nolte, 2005: 24). This type of performance evaluation is closely aligned with policies of cost containment and the search for more cost effective methods of organisation.
- Public health questions can also motivate performance evaluation. For example, systems might be compared in order to discover which ones better serve the health care needs of geographic populations.

An alternative view of outcomes: avoidable mortality

DALYs provide a method of evaluating and measuring outcomes in relation to inputs.

Avoidable or amenable mortality offers an alternative method:

"all those deaths that, given current medical knowledge and technology, could be avoided by the healthcare system through either prevention and/or treatment.

"The most recent empirical literature shows that the notion of avoidable mortality continues to be used to establish the extent to which people are dying from amenable conditions within and/or across countries and over time, and whether socio-economic status and ethnicity are related to mortality from amenable conditions. Most studies use data taken from national death registries, with only two which link the concept of avoidable mortality to routinely collected administrative data of healthcare provision, such as hospitals. A number of criticisms are raised, with probably the most remarkable being the lack of association found between avoidable mortality and healthcare inputs. No study has actually attempted to use the concept of avoidable mortality [...] as a quality indicator of healthcare provision." (CHE Research Paper 63)

Although there is a widely held perception that a connection has been demonstrated.

Nolte and McKee 2011: amenable mortality and access to care

ABSTRACT We examined trends and patterns of amenable mortality—deaths that should not occur in the presence of timely and effective health care—in the United States compared to those in France, Germany, and the United Kingdom between 1999 and 2007. Americans under age sixty-five during this period had elevated rates of amenable mortality compared to their peers in Europe. For Americans over age sixty-five, declines in amenable mortality slowed relative to their peers in Europe. Overall, amenable mortality rates among men from 1999 to 2007 fell by only 18.5 percent in the United States compared to 36.9 percent in the United Kingdom. Among women, the rates fell by 17.5 percent and 31.9 percent, respectively. Although US men and women had the lowest mortality from treatable cancers among the four countries, deaths from circulatory conditions—chiefly cerebrovascular disease and hypertension—were the main reason amenable death rates remained relatively high in the United States. These findings strengthen the case for reforms that will enable all Americans to receive timely and effective health care.

The primary health care model

The primary health care model is not generally associated with performance outcome measures such as DALYs because its proponents recognise that population health outcomes cannot be explained purely in terms of health care services and that the focus should be on access to care.

"Primary health care is an approach to achieve both the MDGs and the wider goal of universal access to health through **acceptable, accessible, appropriate, and affordable health care**. Thus primary health care, if implemented, would advance health equity in all countries rich and poor and, as a result, promote human and national development. Effective primary health care strengthens the integration of community, primary, and district health-care and prevention services. Health depends on more than the health-care sector alone, and primary health care has from the beginning stressed the importance of intersectoral collaboration, social justice with community participation, and empowerment. Finally, **the broad range of preventive and curative services provided within primary health care makes it a particularly cost-effective approach to address the large population health challenges in low-income and middle income countries.**"

Primary health care: making Alma-Ata a reality
John Wallely, Joy E Lawn, Anne Tinker, Andres de Francisco, Mickey Chopra, Igor Rudan, Zulfi qar A Bhutta, Robert E Black, and the Lancet Alma-Ata Working Group. Lancet 2008; 372: 1001–07

How is equity of access measured?

- Equity of access by place or geographic area
- Equity of access by income level ('economic access')
- Cultural equity of access

General criticisms of performance indicators

- Indicators do not identify the source of health improvements within a health system, i.e. they cannot distinguish between good and bad performance
- Indicators do not identify the role of health systems in health improvement - they do not provide any clue about the contribution of health care to health outcomes
- Indicators may require data that is unavailable, e.g. the World Health Report 2000
- Problems of analysis and international comparison (Kaiser Permanente example)

Performance measurement and data problems

The World Health Report 2000 became notorious for interpolating or estimating data where none existed in order that modelling could be undertaken. For the majority of countries and several indicators most of the data was estimated (Almeida et al, 2001). The poverty of data should not be under-estimated and in many respects is the key hurdle for evaluation. In most countries of the world basic information about their populations is simply absent. In Africa, for example, it has been said that most people are born and die without leaving any official trace (Setel et al, 2007). This point applies to vital information, disease surveillance, national accounts (economic information) and global burden of disease data. Data availability is a growing problem with health services privatisation which has led to data becoming commercially confidential and to the abandonment of data series that were formerly collected routinely.

In low resource settings data problems are found with respect to:

- routine activity data
- expenditure data
- burden of disease data
- vital statistics data

DFID report on DALYs concluded:

- allocating resources according to the cost effectiveness of the interventions involves
- identifying the costs of certain key interventions (about which little was, and is, known)
- assessing the likely impact of such interventions (about which even less is known). And
- translating the expected impact into health benefits (with these benefits being measured in terms of DALYs saved).

EACH OF THESE DEFICIENCIES IS CURRENTLY BEING TARGETED IN 'HEALTH SYSTEM STRENGTHENING' INITIATIVES

Case study: problems with international comparison of cost effectiveness

- There are several methodological issues associated with international comparison. Some of these are addressed in the paper by Talbot Smith et al (2004) on Feachem's attempt to compare the cost efficiency of the US and UK systems.
- In January 2002, the *BMJ* published an article that aimed to 'compare the costs and performance of the [National Health Service] NHS with those of an integrated system for financing and delivery of health services (Kaiser Permanente) in California.' The article claimed to show that 'Kaiser achieved better performance at roughly the same cost as the NHS'. Kaiser's members were said to experience 'more comprehensive and convenient primary care services and much more rapid access to specialist services and hospital admissions.' Furthermore, Kaiser's use of acute hospital beds was purported to be considerably lower than that of the NHS.
- The article has become important in United Kingdom (UK) government policy making. The Treasury's review of NHS funding and the white paper for England, *Delivering the NHS plan3* refer favourably to it, and to the Kaiser 'model' of care. Kaiser has also been invited to work with the NHS to help modernise services. In November 2003, the Secretary of State for Health in England, John Reid, addressed the National Association of Primary Care in the UK under the banner 'Learning from Kaiser Permanente: how can the NHS make better use of its resources and improve patient care?' (Talbot-Smith et al, 2004)

Four main areas in which Feachem et al's methodology was flawed

- The populations of patients served by Kaiser Permanente and by the NHS are fundamentally different. Kaiser's patients are mainly employed, significantly younger, and significantly less socially deprived and so are healthier.
- Feachem wrongly inflated NHS costs by omitting substantial user charges payable by Kaiser members for care, excluding the costs of marketing and administration, and deducting the surplus from Kaiser's costs while underestimating the capital charge element of the NHS budget and other costs.
- The authors incorrectly adjusted for currency differences and this substantially reduced Kaiser's reported costs.
- They used non-standardised data and this substantially affected the NHS's reported efficiency
- They misleadingly claimed that Kaiser offered a more 'integrated' system than the NHS. The NHS provides health care to around 60 million people free at the point of delivery, long-term and psychiatric care, and continuing care after 100 days whereas Kaiser provides care to 6 million people, mainly employed and privately insured.
