

HEALTH ECONOMICS

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Health economics is a logical and explicit framework to aid health care workers, decision-makers, governments, or society at large, to make choices on how best to use resources.

Health economics in its widest sense deals with several different broad areas of resource allocation.

1. The public private debate on the best way to finance health care systems, for example, through international comparative studies of expenditure on health care.
2. The study of supply of and demand for health care, for example, through the study of health care markets and barriers to access to health care of ways of influencing the demand for and use of health care services by acting on price or by creating incentives for doctors to enhance, for example, vaccine coverage.
3. Valuing health and assessing the relationship between health and its social and economic determinants, for instance by analysis the relationship between health status and income.
4. The discipline is used as an aid to management of health services, for example, by needs assessment-through the use of either the classic epidemiological/descriptive approach, such as the relative weighting to society of different diseases, or through the use of the technique of marginal analysis.
5. Microeconomic evaluation, which is concerned with comparing the resource implications of alternative ways of delivering health care, for example, an assessment of the efficiency of new health technologies such as magnetic resonance imaging (MRI) scans.

The importance of economic evaluation

Health care workers in general and doctors in particular take part with increasing frequency in the process of economic evaluation for several reasons.

Resources dedicated to health care (as those dedicated to other sectors) have increased but still limited and under increasing pressure. In poor countries the limitation is absolute, as health care uses resources which are then no longer available for nutrition and shelter. Richer countries have more resources, but also have an increasingly higher offer of new technologies - all of which cannot be acquired simultaneously. It is often a population's view that nearly all health care needs must be satisfied, no matter what the cost are. This view is often reinforced by the popular press.

Health care workers find themselves with increasing frequency asking which technology should be given priority and which should not, and to what point the need for health care should be met.

All such decisions have to be made in the light of the accountability demanded by both the public and funders of health care systems, regardless of whether they are public or private.

In this panorama there are good reasons for health care workers to get involved in carrying out economic evaluations.

1. All health care systems are run by professionals who cannot be excluded from evaluation of any aspect of process and outcome within these systems.
2. Economic evaluation is a type of assessment which is heavily dependent on the estimates of the effectiveness of the various health care interventions. The involvement of health care workers should ensure that all dimensions of evaluation are taken into account in a multidimensional approach which includes equity and humanity as well as effectiveness and economic efficiency. This function is especially important when a health care worker, usually a GP, is called to be the patient's "agent" in an uncertain and complicated health "market". As GP's experience and training allows him or her to advise the patient, so an equivalent basic understanding of economic principles will allow better judgement of both services on offer and allocation of the GP's own resources.

3. Workers in many health care systems are called to hold managerial functions of ever-increasing complexity which require a basic understanding of the principles underlying economic evaluation.

Those working in public health will find the population-based approach of the economic discipline similar to that of public health, and many of the logical steps are shared between the two disciplines. For instance, every public health physician knows that providing each and every patient with the best possible treatment (regardless of expense) may not be in their community's interest.

There are obstacles, however, to the involvement of health care workers with economics. One common misconception is that health economics is about cost - and especially about cutting costs. Professor Alan Maynard remarked in 1988 that the "pursuit of efficient practice is not merely about reducing costs. If it were, the most efficient procedure would be to do nothing, as that pushes cost to zero." Another perceived obstacle is the possible clash between economic and medical logic and ethos.

The expansion and evolution of health economics

An early recorded rudimentary economic valuation of life and limb dates back to the end of the seventeenth century, when Sir William Petty estimated the value of a human life to be between £ 60 and £ 90. In Victorian times the writings of pioneers of the sanitary movement, such as William Farr (1807-1883), developed the theme of the relationship between economic growth and workers' health. Farr developed an early version of the human capital approach to valuation of productivity losses by calculating a person's monetary value as the current value of the person's projected future earnings minus maintenance. This value he used to calculate the rough benefits of health care during the course of epidemics, thereby applying such values to the advocacy of specific policies.

However, during the latter half of the last century and the first half of this century, economists gave scant attention to the issue of the use of health care resources, and modern health economics began its relatively young life in the 1950s and 1960s. In the 1950s famous American economists, such as Kenneth Arrow and Milton Friedman, started analysing the application of classic economic theory to health care and, in particular, to two possible uses: as an aid to decisions on how to allocate resources and as a vehicle for social reform.

A decade later, the gathering pace of technological development, an ageing population, and other pressures on resources forced the question: "how should we allocate our scarce resources?" to be asked with increasing frequency. The American school of early pioneers such as Klarman, Fein and Rice began publishing descriptive studies called "*cost-of-illness*" studies dedicated to calculating the burden to society of particular problems (for example, road traffic accidents, mental illness, infectious diseases).

In the 1970s economists began trying to adapt evaluative techniques of classic economics such as *cost-benefit analysis* (CBA) to health care and to incorporate the descriptive element of cost-of-illness methodology into the analytical framework of CBA. This decade saw further development of such techniques with the introduction of *cost-effectiveness analysis* (CEA).

The creation in the late 1970s of a single measure of outcome combining quantity and quality of life which reflects people's preferences for health status (the quality-adjusted-life-year or QALY - pronounced "qualy") led to the birth of cost-utility analysis (CUA), a sibling of CEA.

The themes for the 1990s appear to be further development of CUA design, with different types of utilities being devised, generically known as health-related-quality-of-life measurement (HRQOL), the relationship between efficiency and effectiveness of interventions, especially of new pharmaceutical products, the methods of research for measurement and description of costs and the ethics of execution and publishing evaluations.