

# The economics of health and health care

## An introduction to health economics

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The financial crisis has left the world economy in dire straits. Governments grow worried as decreasing demand causes cutbacks in production, massive layoffs and ever increasing budget shortages. In this line of events health care is an exception, i.e. in health care it is the ever increasing demand for health services that causes politicians headaches. How to keep health care systems affordable in societies that grow old? What to include in insurance benefit packages? Which health care programmes to implement? What constitutes a fair system of financing health care?

This article is about the discipline in which these questions are studied: Health Economics. Broadly speaking, the latter is a branch of economics concerned with issues related to scarcity in the allocation of health and health care. A general introduction, in what follows a number of issues studied, as well as some of the techniques used by health economists are looked at more closely.

### Distribution of scarce resources

Health care plays an important role in the economies of the Western world. In the member states of the Organization for Economic Cooperation and Development (OECD) health care accounts, on average, for approximately 9% of the Gross Domest-

tic Product (GDP), e.g. a good € 50 billion a year in The Netherlands. The USA, spending 15% of GDP on health care is the strongest outlier. Because resources are scarce, how to spend this money wisely is an ever returning question. Indeed, Hunter (1997) hits the nail on its head when he writes: *the demand,*

*if not need for health care seems likely to forever outstrip supply. Continuous advances in medicine have heightened popular expectations of health and of what health care services can do to alleviate suffering. In short, health care services, and those who provide them, are victims of their own success.*



USA



302 841 000  
inhabitants



\$ 44 070  
income per year



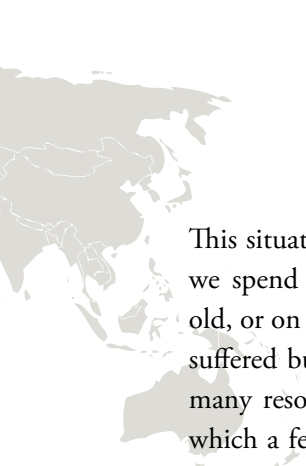
♂ 75yrs ♀ 80yrs  
life expectancy



15.3%  
of GDP for health



24  
doctors/10 000 people



This situation calls for hard choices. Should we spend on a pacemaker for the 85 year old, or on treatment for the 16 year old who suffered burning wounds? Should we direct many resources to treat a rare disease from which a few benefit much, or is it better to implement policies which benefit many, although just a little? What is fair? Although everyone has a right to health care, regarding the first question most people agree that it is justified to spend more on an injured child than on an old person who has had 85 healthy life years. However, what if this 85 year old is your grandma who, before her heart attack, was perfectly healthy and enjoying life? In reality, what may seem logical at a macro level can have grim consequences at the micro level.

## Can we express the value of life in monetary terms?

In trying to shed some light on these, often ethical, issues health economists have developed several tools.

An important analysis carried out in the field of Health Economics is the so called Health Technology Assessment (HTA). A HTA typically focuses on the economic evaluation of a health care programme. In comparing the latter's costs with the outcomes, information is generated in which choices about implementing a health procedure, service or pro-

gramme can be grounded.

For many, viewing health care as any other commodity is still a bridge too far. How can you value and make choices about people's health based upon simple economic principles? Isn't it unethical to try to express the value of life in monetary terms?

Although understandable at first, the scarcity of resources in health care prompts us to look at this issue from a somewhat different perspective. The question we have to ask ourselves is not what the costs of a certain procedure are. Rather, we have to decide if a health procedure, service or programme is worth doing compared with other things we could do with the same resources. Economists talk about *opportunity costs*, i.e. spending on X takes away the *opportunity* to spend on Y.

Three types of HTA studies can help us in making these decisions. In increasing level of complexity these are *Cost Effectiveness Analysis* (CEA), *Cost Utility Analysis* (CUA) and *Cost-Benefit Analysis* (CBA). They differ mostly in how the consequences of the health care programmes compared are valued. In CEA the cost per effect is calculated, e.g. various cancer screening programmes are compared on the cost per case detected. In CUA, the costs of health care interventions

are set against the utility people derive from these interventions. As such, CUA focuses particular attention on the quality of the health outcome. Finally, the broadest form of analysis, CBA, tries to express all costs and benefits in monetary terms.

In sum, HTA-studies help us ensure that those health programmes which resort the most effect, utility, or benefits are implemented.

### Social security

Besides looking at which programmes provide the best value for money, health economists also study the system of health financing as a whole. In the OECD health care is mainly paid for through various systems and levels of national health insurance. However, as people themselves do not feel the cost of health care (their insurer pays), insurance changes people's behaviour, i.e. people are inclined to use more health care services than strictly necessary. This phenomenon, known as moral hazard, is partly responsible for the ever increasing demand for health services. Other causes are populations growing old and the development of new techniques and medicines. Health economists try to devise ways in which these undesirable consequences can be mitigated. The newly introduced health insurance scheme in The Netherlands is a good example. In an effort to curb increasing health



care costs, the new system provides financial incentives for health care providers and users alike to act in a more cost-conscious manner. Although the final verdict on this insurance scheme is not out yet, all stakeholders agree ever increasing health care costs, in the long run, are unaffordable. Moreover, in light

of scarce resources, optimal use of these resources needs to be ensured and (regulated) competition can help to do so. Again the concept of opportunity costs is important, i.e. money spent on health care cannot be spent on education, infrastructure and social welfare programmes. In fact,

compared with health care services the latter are stronger determinants of levels of population health. When health issues do occur, a health care system acts as a final safety net. As Hunter (1997) states: *The best estimates are that health services affect about 10% of the usual indices for measuring health: infant*

## Without insurance, the impact of disease on family income often is catastrophic

*mortality, absences through sickness and adult mortality. The remaining 90% are determined by factors over which doctors have little or no control: individual lifestyle, social conditions and the physical environment.*

Health economists also study those factors over which doctors have no control, e.g. the private and social causes of health-affecting behaviour such as smoking. Furthermore, the actual use of health care and its distribution are subject to study. It is well known people less well off suffer more health problems than people higher on the social ladder. Consequently, the first group uses more health services. However, when we standardize health care use on the basis of *need*, in about half of the OECD countries less well off people still see too little specialists. In other words, in these countries, when corrected for the need of specialist services, the chances that better off people see a specialist are higher than those at the bottom of the social ladder. This *inequity* in the use of health care services is studied by health economists as well.

### Combating poverty

So far the focus has been on the developed world. However, much of these issues are apparent in developing countries as well.

Health economists more and more are involved in calculating the effects of implementing various health care schemes in developing countries. Often governments, with a certain amount of money, want to know which programme buys them the most health. Health economists can calculate how to best distribute resources to reach this end, by assembling regional databases on the costs of various health interventions, their impact on population health and their cost-effectiveness.

In the developing world, the majority of the population does not have health insurance; implying health care is paid for out-of-pocket at the time of illness. Without insurance, the impact of disease on family income often is catastrophic, i.e. people need to spend a large portion of family income on health care. Often, families are being pushed into poverty solely because of health care costs. In studying the effects of out-of-pocket payments for health care in eleven Asian countries, Van Doorslaer et al. (2006) calculated that an additional 2.7% of the population under study (78 million people) was left with less than \$1 a day because of these costs.

Besides quantifying the economic consequences of disease in developing countries, health economists try to contribute to pos-

sible solutions as well. Setting up schemes that provide the poor with financial protection against health care costs is an example. Indeed, the success of so called Community Based Health Insurance (CBHI) is drawing interest from various governments. How to set up CBHI, which covers basic health care services for relatively small groups of (often illiterate) people, is also studied by health economists. As health and development are closely linked, health economists have an important role to play in fostering development as well.

### Conclusion

In both the developed and developing world many challenges in the economics of health and health care remain. Challenges in which, Health Economics will continue to be an ever more important branch of study.

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### About the author

Laurens Niëns finished master programmes in Public Administration and Health Economics, Policy and Law. He now works as a researcher for the Institute of Medical Technology Assessment (iMTA) at the Erasmus University Medical Centre in Rotterdam.

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### Further reading

The WHO has a programme on Health and development. See: <http://www.who.int/hdp/en/>