A BRIEF GUIDE OF HEALTH ECONOMICS

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Abstract

Initially, health economics was conceived as the articulation of the social and health sciences, specifically economy and public health; in a restricted perspective, health economics has been defined as the study of the methods used in the organization and payment of health services. Later, health economics was defined as the study of the optimal use of resources for illness care and health promotion, as well as the evaluation of the organizational efficiency of health services, this definition was formulated more than half a century ago (in ’50s decade), only a decade after the creation of the World Health Organization [1]. In current age, all health areas are interested in the investment optimization and outcomes about prevention and illness care.

Nevertheless, at present some health professionals persist in myths and skepticism about the application of economic analysis to health issues for different reasons, for example, thinking that protection and care of life are not susceptible to economic analysis or that the economy is only interested in profit, prices or cost reduction. Other consider that the economy applied to health problems leads to the implementation
of the cheapest technologies and not the most useful for patients, or that economic analysis turns health to a commodity and argues that health economics only refers to the use of money from the health sector [2].

In order to decrease and avoid such myths and skeptical posture, this essay presents some definitions and principles of the economy; the origin, definition and objectives of health economics, and the types of economic studies available in this field.

**Keywords:** definition, principles, application, evaluation instruments.

**Definition and principles of the economy**

According to different dictionaries, the economy studies the use of scarce resources, the creation of wealth and the production, distribution, commercialization and consumption of goods and services, for satisfying the needs of a society. Also refers to the effective and reasonable administration of money and other assets of a person, company or society [3,4].

Other authors define economics as the administration of scarcity, insofar as resources are finite and the needs are infinite. The economy provides tools for resolving the disjunctives (or multiple alternatives of use) that people face when using their resources, so it is a discipline based on rational choice for achieving efficiency or maximizing the benefits in the use of the available resources [2]. It also refers to the study of how the societies use scarce resources for producing valuable commodities and distribute them among different individuals. In general, is the study of the way in which society manages its resources [5].

Some principles that guide this discipline included that, the individuals face disjunctives or dilemmas because exist multiples alternatives for using their resources; the cost of a thing is what is given up for getting it; rational people think in marginal terms (utility for each new unit
acquired of a good or service); individuals respond to incentives; trade can improve welfare; markets usually constitute a good mechanism to organize economic activity, the State can intervene to improve market outcomes; and finally, the standard of living of a country depends of their capacity to produce goods and services [5].

**Origin of the health economics**

The need for developing the health economics was based on two central facts; the first one was related with the scientific and technological advances that have generated therapeutic options, mainly pharmacological, for a great number of diseases. This fact has been increasing the capacity of intervention of many health professionals, it has altered the organization and delivery of health services, and it has been increasing the costs of care. The second fact is due to the increase in life expectancy in many places, especially in low- and middle-income countries, where there is no equilibrium between population size and the available resources [1].

The scientific and technological development of the health sector and the increase in life expectancy showed that advances in medical care and public health are efficient to reduce morbidity and mortality rates with simple, faster and low cost action. At the same time involves challenges, for that health outcomes are not been overshadowing by other problems such as low food availability, the risk of increasing poverty, and other issues of the economy [1].

In addition, the health sector is not similar to other market structures, because the pursuit of monetary benefit is not the central topic; hospital care in many places is public or sponsored by non-profit institutions; the price is not a good mechanism to explain the demand and supply of health services. Beside the tariffs are established arbitrarily, it is not easy to delimit individual
or collective benefit in many health actions. In health, the “goods” are not homogeneous because they vary by level of knowledge, capacities and needs of patients, physicians, specialist and other, which hinders the allocation of prices. Finally, the disease illness affects the patient, his family, his company and society in general. All these facts show the relevance of an area of study called health economics [1].

**Definition and objectives of health economics**

Health economics is a field of research whose object is are health issues and the method of study are economic techniques. The object of study includes the factors that determine the prices of health services; the processes of production, use and coordination of health services, appropriate place and proportions, professional codes of performance, planning and budget [1].

Health economics also deals with the study of the effects of health services on the size and efficiency of the workforce (population), seeking a better understanding of the relationship between standard of living, production and physical and mental well-being. That is, the relationship between health and gross national product, population growth, economic development and labor productivity [1].

At this point, it is worth mentioning that health can be seen from a microeconomic perspective in which health is analyzed as an economic sector with particularities in the type of goods and services that are produced and consumed. It can also be analyzed from a macroeconomic perspective, in which the health can be assumed as an additional component of the social development, perspective called endogeneity relation. Others authors have wrote about the macroeconomic perspective from another point of view called Simultaneity, in which
health and social development are fed-backed or reinforced; because the bad health slows the progress or investments in health generate greater social development, while the increase of development makes possible investments in health. From a macroeconomic point of view, there are Nobel Prize such as Amartya Sen who argues that health is a constituent part of development, or Angus Deaton who recognizes that precarious health is an important source of deprivation of liberty and, therefore, an obstacle to human development [6,7].

The goal of health economics is efficiency, which requires to know the effort that has been required for producing health, the cost associated, the measurement of monetary benefits, the evaluation of the effects or outcomes for reducing morbidity and mortality, and to increase the human capital and social progress [8].

In summary, health economics is a branch with a particular conceptual development, as well as with its own methodologies and analytical techniques. The health economics has specific objectives such as to identify the determinants of health; to analyze the economic value of the health in each society; to study the demand for medical care and the provision of services; to development policy instruments; to analyze the market equilibrium; to plan, to regulate and to monitor health actions; to evaluate the health system and doing microeconomic evaluation of health technologies [8-10].

**Economic evaluation instruments**

Because the macroeconomic theme has been largely developed by Nobel Prizes in economics, this last part of the essay exposes some microeconomic aspects, particularly the types of evaluations of technologies in health. Health technology assessment have been
developed in response to the need of doing an efficient manage of resource constraints, budget
deficits, and the high cost to society of health services [8].

The objective of the economic evaluation in health is to study the distribution of scarce
resources available to obtain the maximum possible yield, to analyze different alternatives of
health intervention, to establish the costs and benefits of each one; and to have an objective
criteria for achieving equity [8,10].

The economic analysis in the health sector incorporates the concepts of efficiency and
effectiveness in the management of resources, for which it is necessary to evaluate the results
obtained from different interventions on morbidity, mortality, disability, quality of life. This
demonstrates the need of relating economic, social, clinical and epidemiological theories in the
study of the mechanisms and factors that determine the production, distribution, consumption
and financing of health services. Drummond classified economic evaluation studies as shown
in the table 1.

<table>
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<th>Compare ≥2 alternatives or actions in health</th>
<th>Examines costs and results (outcome in health)</th>
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a Epidemiological study  b Partial economic study
Source: compilation by the autor based on Drummond classification [11].
The full economic evaluations are [10,11]:

- Cost minimization analysis: It is used when there is no difference between the effects of the alternatives compared. In this case, the least expensive option is selected.

- Cost-effectiveness analysis: It compares the effects of different therapeutic options in clinical units such as the years of life gained, hospital admissions avoided, number of cases prevented, lives saved and complications avoided. The results can be presented as the average value of the ratio of costs to effectiveness, or as an increase of this ratio (incremental cost-effectiveness).

- Cost-utility studies: Value the life gained not only in terms of quantity (years of life), but also of quality. The units obtained are quality-adjusted life years (QALY) and the results are presented in the same way as in the cost-effectiveness analysis.

- Cost-benefit studies: Both costs and effects are measured in monetary units.

Conclusion

Money is not the central topic of health economics, the axis in a macroeconomic perspective would be the social development and in the microeconomic perspective would be the optimal allocation and the efficient (rational) use of the resources destined for the care of diseases and the promotion of health. Health economics is indispensable for health management in all countries.

References