

# Chapter 51

## Why and How Did Health Economics Appear? Who Were the Main Authors? What is the Role of ITCs in its Development?

**Ana Pinto Borges**

*Universidade do Porto, & NIDISAG, Portugal*

**Erika Laranjeira**

*Universidade do Porto, Portugal*

### ABSTRACT

*Over the past sixty years, developed countries have registered high growth of total expenditure on health, which has attracted the attention of health economists, organizations, and policymakers alike. At the same time, the authors observe the increasingly important role of the Information and Communication Technologies (ICTs), not only in improving diagnosis and treatment and the quality of information, but also in the growth of these expenditures. According to this scenario, the authors focus on the development of Health Economics as an autonomous branch within Economics, highlighting not only its origin and the leading authors that began to write about it, but also the impact and the role of the development of ICTs on Health Economics and healthcare.*

### INTRODUCTION

The end of the World War II was the milestone of period of incredible economic growth due to a boom in technological advance and changes in all sectors of the economy. The healthcare system was not immune to such changes and that influence was so deep that it could not be neglected.

Developed countries thus witnessed not only advances in medical knowledge<sup>1</sup>, but also the introduction of Information and Communication Technologies (ICTs) in the health sector and numerous changes in management dogmas and political beliefs. Such changes were reflected in their national accounts<sup>2</sup> which attracted the attention of several institutions and personalities

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(Mushkin, Lees, Arrow, among several others), with the aim of understanding and giving answers to control such phenomena, thus opening the way for the emergence of health economics as an autonomous branch within the field of economics.

In this chapter, we focus on the development of Health Economics, as a social science, highlighting not only its origin and the leading authors that began to write about it and what they defended, but also the role of the development of ICTs for health economics and healthcare. In this sense, it also should be noted that, in the last decades, there has been an exponential increase in the introduction and use of health technologies, as well as the emergence of several drugs, supplementary means of diagnostic and surgical equipment, among others.

This wave of innovation in the health sector allowed different actors such as governments, healthcare providers, and patients to benefit from health services with a higher quality and from all health benefits that naturally arise with these innovations. Despite all the advantages associated with the introduction and use of these innovations, the use of ICTs in health sector still remains limited in several health areas due to the existence of some barriers, inherent to the sector.

The chapter is organized as follows. Section 1 documents the origin of health economics and the difference between health economics and healthcare economics. In section 2, we explore the development of ICTs and its role in the health economics sector and, finally, the limited use of ICTs. The final section offers concluding remarks.

## **1. THE ORIGIN OF HEALTH ECONOMICS AND THE LEADING AUTHORS**

Issues related with the quality, effectiveness and efficiency of the health sector and, especially, with the level of costs have been frequent themes in the political agendas of different countries. The growing trend verified in health expenditure

attracted the attention of different personalities in the area, with the aim of understanding the underlying causes of this apparent out-of-control spiraling growth (Mehrotra *et al.*, 2003) and also to give some answers to control such phenomenon.

This phenomenon also began to attract the attention of some organizations (such as the Institute of Economic Affairs<sup>3</sup> in London and the Ford Foundation<sup>4</sup>), as well as the concern of policymakers. Their special concerns were not over the fact that the costs were high but mainly because the steady upward spiral did not seem to have an end in sight.

Essentially, the growth in health spending in most of industrialized countries<sup>5</sup>, not only in terms of consumption of national resources but also in global terms, i.e. in terms of public spending and its inherent market frictions began after the World War II. Some works done in the area (Cutler 1995, Okunade and Murthy 2002, Matteo 2005, among others) attribute large part of the growth observed in health spending to the advances in medical knowledge (new medical procedures and drugs), to the introduction of new and sophisticated technology (the initial expense and installations costs for the new equipment is often high), and to the changes occurred in management dogmas and political beliefs.

According to forecast studies developed by Cutler (1995) and Newhouse (1992), the emergence of new medical technologies and services and their adoption were the principle responsible of such growth, contributing roughly by half of the increase verified in healthcare expenditures in the past decades<sup>6</sup>.

It was in this social, political and economic context that, in England, on the 5<sup>th</sup> of July 1948, – the National Health Service (NHS)<sup>7</sup> – a program for health – was created, which was so important that other countries followed its main ideas. Its original principle was: universal coverage and equitable access according to need.

However, the availability of more drugs, such as antibiotics (developed by Fleming 1928, Florey and Chain 1939), better anaesthetics, the use of

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