

# Chapter 12

## Linking Cost Control to Cost Management in Healthcare Services: An Analysis of Three Case Studies

**Michele Bertoni**  
*University of Trieste, Italy*

**Guido Grisi**  
*University of Trieste, Italy*

**Bruno De Rosa**  
*University of Trieste, Italy*

**Alessio Rebelli**  
*Azienda Ospedaliero-Universitaria “Ospedali  
Riuniti” of Trieste, Italy*

### ABSTRACT

*The issue of healthcare costs has become increasingly problematic over the years. This chapter summarizes the problems faced by hospitals when measuring the costs of healthcare treatments, explaining how an Activity-Based Costing (ABC) framework can be successfully adopted in healthcare settings. After describing the theoretical foundations of cost control and cost management, the chapter continues with the analysis of three real-life applications of ABC in a hospital, drawn from the process analysis and activity-based costing experience developed at the Azienda Ospedaliero-Universitaria “Ospedali Riuniti” (Joint Hospitals) of Trieste, Italy. In particular, the cases are about cost measurement in cardiology, odontostomatology, and radiology, and describe the technical solutions applied for computing the costs of selected therapeutic and diagnostic treatments. A particular emphasis is placed on how these measures have been subsequently used by hospital managers and medical personnel in order to gain insights and to improve the efficiency of the processes developed within the organization.*

### INTRODUCTION

Healthcare has experienced significant changes in competition and regulation over the last decades, with an ever prominent role played by market forces in shaping national policy debates regarding funding and cost containment (Cardinaels & Soderstrom, 2013). Considering that in many countries healthcare

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ranks among the largest economic sectors (Ditzel et al., 2006), it is not surprising that healthcare represents a significant portion of public spending. Moreover, most countries have experienced a rise in the percentage of Gross Domestic Product (GDP) devoted to national health systems over the past few decades (Reinhardt et al., 2004; Perotti, 2006; Pammolli & Salerno, 2006; WHO, 2000, 2010; McKinsey Global Institute, 2008; Armeni & Ferrè, 2013; Scheggi, 2012). In 2011, countries in the Organization of Economic Cooperation and Development (OECD) spent an average of 9.5% of their GDP in healthcare, up from an average total spending of 7.8% in 2000 (OECD Health Statistics, 2013). The reduced growth rates (or, in some cases, even recessions) that several European countries experienced between 2008 and 2013 put a strain on public spending, and forced some governments, where national health services are established, to introduce drastic measures for ensuring financial stability.

The compounded effect of aging populations and increases in health care costs prompted many governments to strive for betterments in the efficiency of the management of their national health services, often by means of tightened budget constraints and widespread cost cutting efforts. The gradual introduction, started in the 1980s, of Diagnosis-Related Groups (DRG) for funding healthcare providers is an example of such efforts. Under this mechanism, the payment to the providers (hospitals and physicians) depends on the nature of the patient's illness, not on the amount of resources used to treat the payment. An increase of resources used to treat the illness, therefore, does not translate in an increase in hospital reimbursement, thus shifting the cost risk from the insurers (private or governmental) to the providers of healthcare (Cardinaels & Soderstrom, 2013). Hospitals have reacted by introducing cost containment measures, including governance models and cost accounting systems designed around corporate examples. However, simply transferring systems and methods from for-profit corporations to providers of healthcare services could lead to erroneous results (Alexander & Weiner, 1998), especially when decisions concerning the appropriateness of different medical treatments are based exclusively on cost information.

In order to understand the root causes of the surge in healthcare expenditures, it is useful to consider that, even if in most countries healthcare is not provided in a competitive market context, there is nonetheless a demand for and supply of healthcare services. Healthcare demand, although peculiarly subjective, is mainly driven by supply. In fact, the availability of specific medical treatments often generates its own demand. In turn, supply is influenced mainly by technology (i.e., the ability to treat). Historically, technology has transformed medicine into a discipline in which professionals deal not only with the symptoms, but also with the causes of the disease (Drouin et al., 2008). New therapies, products, and medical services set expectations to a new level, pulling up demand. Supply is influenced by capacity: since health care is free or heavily subsidized for many patients, the mere presence of healthcare facilities affects the rate of their consumption (Drouin et al., 2008; Ehrbeck et al., 2010). Finally, supply is also affected by incentives offered by providers: funding policies set by healthcare regulators and governments can determine under- or overproduction of specific treatments or services.

Demand, on the other hand, is relatively insensitive to price (being most users fully or partly subsidized), and it is mainly driven by social norms, wealth (the higher a country's GDP, the higher the demand for healthcare services), current and expected health. The influence of said variables on the demand and supply of healthcare tends almost invariably to generate an increase in the availability of healthcare products and services, since the system is apparently unbounded, given the probable evolution of medical technology and healthcare expectations. Although the above factors are indubitably relevant, it is our opinion that one of the drivers which can explain a significant part of the healthcare costs is complexity, and how it is managed. In the last century, the role of medicine and physicians has changed

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