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# Applying time-driven activity-based costing to chronic diseases

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**ABSTRACT:** (L'APPLICAZIONE DEL TIME-DRIVEN ACTIVITY-BASED COSTING A PATOLOGIE CRONICHE). In a time of unprecedented increasing pressures on cost control and budget constraints for healthcare organizations, the literature is devoting particular attention to innovation in costing techniques, in line with the New Public Management principles promoting the use of advanced performance measurement and accounting systems to drive a more efficient, effective, and accountable public sector. More specifically, researchers have discussed the feasibility and advantages of activity-based costing (ABC) and – more recently – time-driven ABC (TD-ABC) in providing more accurate and managerially relevant cost information, yet technical drawbacks and clinicians' resistance toward management accounting innovations may make the actual implementation of these new costing techniques rather challenging. In addition, extant research has mainly focused on the application of such costing tools to single departmental units, procedures, or services as well as on acute conditions treated in hospital settings. In contrast, empirical studies applying TD-ABC to the overall treatment of patients affected by chronic diseases in primary care settings are absent. This gap is particularly problematic given that the ever-growing prevalence and incidence of chronic diseases worldwide represents, indeed, one of the major causes of today's cost crisis in the healthcare sector. Starting from these premises, this paper discusses the peculiarities and challenges of costing chronic patients treated in primary care settings according to a process-oriented approach. This is accomplished by developing a novel approach for applying the TD-ABC methodology to the full cycle of care of type 2 diabetic patients treated in a multi-professional primary care center of an Italian LHM. The results demonstrate the feasibility of the developed costing approach as well as its various advantages over more traditional costing systems. Several practical implications for both healthcare organizations and policy-makers are discussed.

**KEYWORDS:** Time-driven activity-based costing, New Public Management, Chronic diseases

## 1. Introduction

Increasing healthcare expenditure is a continuing matter of concern in many countries, due to rising costs of medical innovations, the aging of the world population, and the prevalence of chronic conditions <sup>②</sup> (GARCÍA-GONI ET AL. 2012). These trends, coupled with the economic and financial crisis of past years, have led to unprecedented increasing pressure on cost control and budget constraints for healthcare organizations (CAMPANALE ET AL. 2014; KAPLAN AND PORTER 2011).

In such a context, and consistent with the New Public Management (from now on, NPM) tenet that the introduction of 'private sector' management techniques within the public sector may increase its efficiency, effectiveness, and accountability (HOOD 1995), the literature has discussed the need for healthcare organizations to improve the measurement of their financial results and resource utilization by adopting advanced performance measurement tools (BRIGNALL AND MODELL 2000; CASATI AND VICHI 2002; NUTI ET AL. 2013;

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<sup>②</sup> For instance, it has been estimated that before 2030 chronic diseases will account for 70% of the global disease burden and will be responsible for 80% of deaths across the world (GARCÍA-GONI ET AL. 2012).