

# Operating Room Management Accounting and Cost Calculation Model for Operating Rooms

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## INTRODUCTION

Healthcare organizations are actually facing a paradoxical situation where resources are decreasing just as costs and demand for services are increasing (Callahan, 1999).

The economic and financial crisis has also had an important impact on the healthcare sector. Available resources have decreased, while at the same time costs as well as demand for healthcare services are on the rise (Mladovsky et al., 2012; Oduncu, 2012).

In view of this, health managers are under pressure to create and implement increasingly efficient Information Technology (IT) operating tools able to guarantee the sustainability of the healthcare sector, with a specific emphasis on efficiency (McKee et al., 2012). This means to create management accounting tools to monitor and therefore improve activities' efficiency. In doing so, physician behavior often is of impediment to the development or expansion of information systems. In part, their resistance is typically due to their decision-making processes that do not include efficiency considerations. As a result, clinicians may

perceive the introduction of economic measurement tools as distant from their values and perhaps even as a direct attack to their professional norms (Young, 1985).

Hospitals are essential components in providing overall healthcare. Hospitals consume, on average, between 50% (in Western Europe) and 70% (former Soviet Union) of the overall country's healthcare budget '(...) makes them the obvious targets for governments trying to cap public expenditure or to slow the rate of growth' (McKee & Healy, 2002). Operating rooms (ORs) are critical hospital units both in terms of patient safety and in terms of expenditure. In fact, understanding OR procedures in a hospital provides important information about how a consistent portion of health care resources are used (Elixhauser & Andrews, 2010).

The aim of this article is to showcase how the implementation of management accounting tools can be fostered through IT tools already in use for other "patient-centered" purposes. The e-HCM (e-Healthcare Cost Management) consists of a cost per procedure calculation model that gets information about resources used from an IT tool already in use for risk management in an operating room (OR). Direct costs of all

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surgical procedures of the OR can be calculated as a result of this cost accounting model through a seven step implementation process. The cost accounting model can be easily applied to other medical treatments and examinations as well as by other hospitals that make use of tracking system for risk management inside OR.

## BACKGROUND

A decrease in the availability of resources in the health-care sector can be attributed primarily to negative effects of the economic and financial crisis (De Belvis et al., 2012). There has also been an increase in demand for healthcare services due to demographic ageing and a rise in public expectations (demand side changes) (McKee et al., 2012; Rachel et al., 2009; Young, 2008).

But how *can we foster efficiency if we don't know the processes that absorb resources in detail?* How can we aspire to this widely spread management formula: 'if you can measure it, you can understand it. If you can understand it, you can control it, you can improve it' (Harrington, 1987).

Hospital managers are faced with the challenge of providing adequate healthcare services with limited resources through striving for improvements in quality. Coalescing negative impacts on the availability of healthcare resources are heightened by a widespread ignorance of management accounting matters. But little knowledge about costs is a strong source of cost augmentation (Young, 2013).

Healthcare costs are already poorly understood because there is a widely spread 'myth' that many healthcare costs are too complex to be measured accurately. This belief coupled with a general unwillingness to take the time to break down the costs of every patient's treatment is detrimental since there is clear evidence that "[p]oor costing systems have disastrous consequences" (Kaplan & Porter, 2011)

Within the development process of a cost accounting system in healthcare organizations, Finkler et al. (2007) annotate that the following questions should be taken into consideration: 'What information is needed? (for special reports, for regular reports) [Establish goals]; When is information needed? [Plan the cost accounting system]; How much detail is needed? How should information be presented? [Select a proper design of

the cost accounting system]; Have all managers been surveyed for input?' [Select significant interested subjects].

Clinicians typically focus on operational decisions on the day of surgery (*short term*), such as moving cases from one OR to another, assigning and relieving staff, prioritizing urgent cases, and scheduling new ones. By contrast, upper management typically focuses on strategic decision-making (*long term*), such as whether to open a new cancer centre or to align the hospital with the regional healthcare system. This multiple perspectives of time (Pollitt, 2008) needs also to be addressed, else any tentative of introduction of informative systems could fail.

## MAIN FOCUS OF THE ARTICLE

Designing and developing an e-Health Cost Management (e-HCM) model above data management systems for the operating room to analyze the whole patient surgical process and identify the areas where improvements in terms of quality and of cost-effectiveness can be made. Particularly in healthcare organizations, where cost accounting is not always in use and professionals lack awareness and training, the implementation approach is crucial. Professionals of the healthcare sector are particularly resistant to change also because of the fact that they are not always aimed to reach goals and share values of their organization's senior management (Padovani et al., 2013).

The introduction of innovation is a challenge in almost all organizations, but is particularly complicated in organizations where the change effort must overcome the resistance of professionals. Professionals often have deeply entrenched values that are not necessarily consistent with - and often are in direct opposition - to the goals of the organization's senior management team. In fact, this dilemma is particularly prevailing in healthcare sector organizations, where there is a considerable body of evidence to suggest that physicians have an agenda that is often in total contrast to that of non-clinical managers (Young & Saltman, 1985; Young, 2008).

The development of tools to increase efficiency and improve performance measurement as well as accountability for results is on the agenda of many public sector

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