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How to combine lean and safety management in health care processes: A case from Spain

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ABSTRACT

Resource reduction and need to assure high quality levels in healthcare have induced hospitals to develop projects that report multiple performances. In order to pursue patient safety and efficiency improvements simultaneously, "lean & safety" projects (L&S projects) could be implemented, combining Health Lean Management (HLM) and Clinical Risk Management (CRM). This research aims to understand how L&S projects can be implemented. The analyzed case is an exemplary one, as it has been triggered by who is in charge of patient safety and required firstly to reduce incidents and secondly to obtain efficiency improvements. Using an interview protocol grasped from literature, data have been collected conducting semi-structured interviews, analyzing relevant archival documentation and executing observations on the field. A new framework of analysis has been created answering the research purpose.

This research represents one of the first studies that investigate characteristics of an HLM project adopted to solve CRM issues. The results suggest HLM and CRM should be considered in a new synergic methodology. First indications about how developing it are provided boosting future research.

The outcomes of this research is valuable for hospital units and health organizations that need to achieve efficiency enhancement, improving patient safety at the same time. For managing clinical processes properly, hospital managers could consider the results of this research to solve their CRM problems. The emerged evidences contribute to the development of guidelines for the implementation of "L&S" projects, pursuing multiple objectives and contributing to the growth of more safe and sustainable health care systems.

1. Introduction

Healthcare systems have to afford multiple challenges especially during a crisis period where many governments have to spending review in order to comply with international agreements. Particularly for healthcare systems that are guaranteed and funded by public institutions, efficiency should be increased cutting wastes and costs. On the other hand, accreditation standards require high performance in terms of safety improvements. In a context where resources are scant and customers and ethical principles ask for high quality, new managerial solutions should be developed, in order to abandon the trade-off approach among diverging performance objectives and to take advantage of the benefits of different methodologies.

An increasing interest has been devoting to Health Lean Management (HLM) in academic and managerial literature. It has been cogitated as a managerial approach that could contribute to efficiency improvements, identifying and eliminating any wastes, attributing more value to the patient and reducing costs. Few researches have analyzed the impact of this methodology on quality improvements; in particular, until now the possibility to combine Health Lean Management and Clinical Risk Management (CRM) has received scarce attention.

Through the analysis of a single case study that is peculiar for its synergic approach adopted, this research aims to grasp guidelines and key lessons from the implementation of a successful project that has led to efficiency and patient safety improvements. In the project, elements of CRM and HLM are adopted together, contributing to the development of an original process management methodology. Considering not only the hardware but also the software components of the projects, the organizational and contextual aspects will be highlighted. After presenting the national and regional context of the hospital in which the project has been developed, in the third section the emerging managerial approaches adopted in healthcare will be described (Section 2). After defining the research objectives and justifying the followed

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research methodology (Section 4), the results of the case analysis will be reported (Section 5). Discussion of results and lessons learned will be presented in the sixth section, and finally the conclusion will be drawn (Section 7).

2. The national and regional context

The Spanish National Healthcare System (NHS) is based on the article 43 of the Spanish Constitution that recognizes the citizens' rights and the universality of the system, which must be guaranteed through territorial division of powers and equitable distribution of health care resources, as well as equal access to health care. In 1986, the application of these principles started with the General Health Care Act, through which the healthcare system was conceived as decentralized, universal and tax-based financed (Segura, 1999; Reverte-Cejudo and Sánchez-Bayle, 1999). The insurance-oriented model of Bismack was substituted with the model of Beveridge financed by taxes, even if the system today includes also out of pocket payments that mean co-payment by citizens and private insurance in addition to public coverage (Veneziano and Specchia, 2010; García-Armesto et al., 2010; Rajmil et al., 2000). The contemporaneous decentralization process finished in 2002 attributing high responsibility and autonomy to the 17 Autonomous Communities, whose cohesion, strengthened also by Cohesion and Quality Law in 2003, is assured by the Interterritorial Council of the NHS (CISNS), composed by regional ministers and the national minister (García-Armesto et al., 2010; Duran et al., 2006; Lopez-Casasnovas et al., 2005). The central government is responsible for several strategic areas (García-Armesto et al., 2010). Each autonomous community can define a different organization for its territory that can be distinguished into Health Areas and Basic Health Zones; the latter ones are the smallest unit of organizational healthcare (García-Armesto et al., 2010; Borkan et al., 2010). While regional health legislation, health insurance, health services planning, management and provision fall within the competence of Autonomous Communities, the local authorities are responsible for sanitation, collaboration in health services provision and public health and community services (García-Armesto et al., 2010). In health areas, primary and specialized care are provided with few management differences among the Autonomous Communities.

The Spanish NHS has been studied by different authors and someone (e.g. De Magistris and Bobbio, 2004; Lopez-Casasnovas et al., 2005; Rico and Costa-Font, 2005) has emphasized the diversity among regions especially for the seven Autonomous Communities that have acquired independency before the others. In particular, Catalonia, being the first Autonomous region, has developed gradually a peculiar Catalan health care system (Departament de Salut, 2014) with a direct management of the public structures by the Catalan Institute of Healthcare and service coverage assigned to other public or private suppliers through an accreditation mechanism (De Magistris and Bobbio, 2004; Rajmil et al., 2000).

Lopez-Casasnovas et al. (2005) underline that this decentralized system has not generated inequalities; rather, it has increased quality improvements at least for what concerns patient satisfaction. Borkan et al. (2010) report that in 2007 the NHS developed a Quality Plan: considering inputs from local authorities, twelve strategies were developed and executed at the national, regional, and local levels to reach quality and efficiency improvements and to reduce unnecessary costs and patient waiting times.

According to Veneziano and Specchia (2010), the Spanish NHS stands out for its efficiency and the peculiarity of its primary care organization. Based on the last OECD data (OECD, 2013), Spain performs well: in particular, the life expectation is among the highest in Europe and the hospital beds and the mortality rate are the lowest ones. Considering the waiting times calculated by OECD (2013), Spain reports lower values than the OECD average for almost the indicators.

Despite the good indicator for public debt in 2010, Spain presented poor performance for employment and economic growth and public deficit (Catan, 2008; García-Armesto et al., 2010; Gené-Badia et al., 2012). The latter problems have been faced decreasing the social spending (García-Armesto et al., 2010), criticized by Genè-Badia et al. (2012). Those authors signal a reduction in surgical and clinical activities and in major investments, an increase of delay in payments to providers and salary reductions, which were still the lowest in Europe (OECD, 2013). This occurs together with a pressure to provide high-quality universal care in a context of population growth and even more aging people besides the global financial crisis (Martin-Moreno et al., 2009; Carrasco-Garrido et al., 2009).

Genè-Badia et al. (2012) are concerned about the risk of increase people on waiting lists, bad conditions for chronic patients and low health status for population. Borkan et al. (2010) state that the agenda of Ministry officials encompasses the promotion of optimal levels of quality, equity, and innovation, improvement of human resources management and financial sustainability of the system. Multiple performances could be achieved by hospitals only adopting different managerial approaches, overcoming the trade-off theory developed by Skinners (1985), Hayes and Wheelwright (1984).

3. Emerging managerial approaches in healthcare

According to Department of Health (1998, p. 6), clinical governance is "the process by which each part of the National Healthcare System quality assures its clinical decisions". A system of continuous improvement into the operation of the whole system has to be introduced (Department of Health, 1998). In fact, through clinical governance, "organizations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish" (Scally and Donaldson, 1998, p. 62). Clinical governance is based on integration of different approaches that requires attention to infrastructure, coherence, poor performance, culture, risk avoidance and quality methods. This means a cohesive programme of actions where all the staff are involved and managerial commitment, leadership and creativity are required (Scally and Donaldson, 1998).

For some authors, clinical governance is an organizational innovation that needs a cultural change, which is not easily achievable (Walshe, 2000; Smith, 2001). Reale (2007) identifies the tools and practices for implementing clinical governance (Table 1) that could contribute to the development of an environment more conducive to patient safety.

3.1. Clinical risk management

Clinical Risk Management (CRM) is inserted among the tools and practices adopted for clinical governance. It can be defined as a managerial approach to improve the quality in healthcare placing special emphasis on the identification of circumstances that put patient at risk of harm and acting to prevent or control those risks. The aim is to both improve quality of care, in particular patient safety, and reduce the costs of such risk (Walshe and Dineen, 1998). CRM can be defined also as the system of guidelines, protocols, steps, organizational and clinical procedures adopted by a hospital to reduce the probability that events and actions, which might potentially produce negative or unexpected effects on