Chapter 20
Innovation in Public Health Care Institutions:
The Case of Green Hospitals

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ABSTRACT

The increasing importance of environmental sustainability for all society and for healthcare systems in particular is unquestionable. Thus, in recent years, hospitals and health centres began to arm themselves with techniques and equipment to reduce environmental impact, because it was found that these institutions contributed greatly to environmental deterioration. This chapter seeks to present the creation and implementation of an environmental sustainability programme in a hospital focused on saving energy and water resources, demonstrating that there are economic and competitive opportunities behind the environmental improvements. This would allow the hospital to become more competitive and to become the first green hospital in Portugal. The focus of the chapter is the study of attitudes and behaviours of staff regarding to the environmental sustainability campaign followed by the hospital.

INTRODUCTION

Given the increasing importance that is being given to environmental sustainability in general in an attempt to address climate change, it seems appropriate that this could be extended to include the healthcare system (Morley, 2012). This sector can be of crucial importance in helping societies in the adaptation to the effects of climate change and the risk it brings to human health, as well as to play an essential role in reducing the effects of pollution by taking steps to limit its own environmental footprint (Karliner & Guenther, 2011).

Thus, in recent years, hospitals and health centres began to arm themselves with techniques and equipment to reduce environmental impact, because, meanwhile it was found that these institutions contributed greatly to environmental deterioration. Some experts estimate that hospitals spend up to about 2.5 times more energy than an office building of the same type. Johnson (2010) enforce this idea stating that according to the Environmental Protection Agency (EPA), a healthcare

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organisation is the second most energy-intensive commercial building type, behind the food service industry. This high level of energy use is justifiable, given the level of demands placed on hospitals; thus, hospitals generate a great quantity of solid waste, require a huge quantity of water and have to pump in fresh air and operate continuously. Given the circumstances, the green movement has been pressuring the hospitals, and some of them have moved forward to address green issues. By that, the designated "green hospitals" are gaining importance, presenting innovative and creative projects, combining technology and environmental awareness (Paiva, 2013) proving that the industry of health care can contribute to friendly solutions to environment (Bilec, Geary, Ries, Needy & Cashion, 2010) and demonstrating that there are economic and competitive opportunities behind the environmental improvements.

An efficient management of energy resources makes possible to reduce the related costs, namely the electricity cost, besides helping to protect the environment. A more rational energy consumption is also essential for creating a model of sustainable and socially responsible development (Yale Center for Environmental Law and Policy, 2005). The question of sustainability is seen by Iyer (1999) as being multilateral and is defined as an institutional problem, not only because it clearly recognises the necessity to conceive adequate social mechanisms for regulating energy generation, but also because its implementation is crucial for challenging and changing the prevailing attitudes and values.

It can be said that green hospitals are those that have environmental concerns and respect the environment in several respects. One of these aspects has to do with the type of construction, which should be based on the concepts of Green Building (international standards of Leadership in Energy and Environmental Design - LEED) (Paiva, 2013). However not always is possible to comply with the principles of sustainability in construction, especially when it comes to buildings already constructed, so the hospitals have tried to intervene in other areas where it is easier to implement environmental practices, such as the energy resources saving. This study seeks precisely to illustrate this case, presenting the creation and implementation of an environmental sustainability programme focused on saving energy and water resources. The greater focus will be given to the attitudes and behaviours of staff, regarding to the environmental sustainability campaign followed by a hospital.

BACKGROUND

Innovation in the public sector is essential to improving economic performance, social welfare and environmental sustainability; further it may also allow an increase of organisational efficiency, the provision of services better tailored to citizens, the reduction of transaction costs and the implementation of new operational methods (Commonwealth of Australia, 2009). However, innovation in specific public organisations as the hospitals, is complex to implement. In their study Johnson and Baum (2001) identified two common approaches: (1) to "do a health promotion project", as a limited, slight, activity that comes and goes relatively quickly and has little impact; or (2) to delegate health promotion as the responsibility of a specific section or department, resulting in the failure of health promotion to be integrated into the role of the whole organisation. Thus, the authors consider that instated of these traditional approaches, innovative approaches should be used: (1) to turn the whole hospital into a "health promotion setting" through activities that include patients and their families and all staff; and (2) additionally include the surrounding community.

Innovation in healthcare organisations can be precisely in the greening hospitals. Karliner and Guenther (2011) define a green hospital as the one that promotes public health by making an effort to continuously reducing its environmental impact. Further it is recognised the relation be-