Chapter 6.6
An e-Healthcare Mobile Application:
A Stakeholders' Analysis Experience of Reading

Niki Panteli
University of Bath, UK

Barbara Pitsillides
Nicosia, Cyprus

Andreas Pitsillides
University of Cyprus, Cyprus

George Samaras
University of Cyprus, Cyprus

ABSTRACT

This chapter presents a longitudinal study on the implementation of an e-health mobile application, DITIS, which supports network collaboration for home healthcare. By adopting the stakeholders' analysis, the study explores the various groups that have directly or indirectly supported the system during its implementation. The system was originally developed with a view to address the difficulties of communication and continuity of care between the members of a home healthcare multidisciplinary team and between the team and oncologists often hundreds of kilometers away. DITIS evolved to be much more than that and even though it was introduced 5 years ago, it is considered a novel application. Despite this, its implementation has been slow, and several challenges, including the system's sustainability, have to be faced. This chapter aims to understand these challenges and the results of the study point to a diversity of interests and different degrees of support.

INTRODUCTION

Healthcare is an environment that has been experiencing dramatic progress in computing technology in order to process and distribute all relevant patient information electronically and overall to improve the quality of care. In particular, mobile e-health involves a spectrum of information and telecommunication technologies to provide healthcare services to patients who are at some distance from the provider and also to provide supporting tools for the mobile healthcare professional. The benefits of such mobile applications are numerous, with the main one being improvements in access to medical resources and care.

Recently, the healthcare and related sectors have been found to embrace mobile technology in e-healthcare applications. Though there have also been cases of mobile workstations being implemented at small medical units to facilitate easier access to specialist medical advice (e.g., Salmon, Brint, Marshall, & Bradley, 2000), most of the applications have been introduced to support patients at home. These could either be patient centered where patients and/or caretakers are given direct access to a mobile phone for communicating with the provider (e.g., nurse, doctor, counselor, etc.), or nurse centered where nurses who visit and care for patients at home have direct access to mobile applications for communicating with other medical staff.

It follows that the practice of e-health projects is often a collaborative activity requiring extensive and interactive communication within and between members of specialized occupational groups to coordinate patient care services. This becomes necessary when dealing with patients requiring a multidisciplinary team approach to their care, and who are treated outside the hospital environment. In such a case, the team is mostly geographically dispersed and rarely sees the patient together. This requires the creation of virtual multidisciplinary teams of care whose management and coordination can be supported by technology. In the study, we aim to explore the role of diverse stakeholders in an e-health application involving virtual multidisciplinary teams of care. Diverse stakeholders get involved at different stages of the project implementation and may experience different degrees of knowledge about the system itself, its significance, and its novelty. These along with their different backgrounds, interests, and expectations may contribute to different meanings and understanding about the system, its role, and its significance, which will ultimately affect system implementation.

BACKGROUND

Stakeholders' Analysis

The role of stakeholders in IS implementation has long been recognized in the literature, though it has only been during the last few years that the identification of different stakeholders as well as the roles and interrelationships between them was found to be important for uncovering some of the complexity in system implementation (Pouloudi & Whitley, 1997).

Despite this, researchers have given different definitions to stakeholders. Sauer (1993), for example, makes reference to stakeholders as supporters, those who provide funding, information, and influence, whilst Beynon-Davies (1999) argues that there is a need to broaden this definition. As he puts it, "…not all groups with an interest in the development of an information system necessarily support that development. Some stakeholder groups may have a definite negative interest in the success of a given project" (p. 710). Following from these, in this chapter, in an attempt to keep a broad definition, stakeholders are defined as those with a direct or an indirect interest in a project.

According to Mitchell, Agle, and Wood (1997), stakeholders can be distinguished in terms of three relationship attributes: power, legitimacy, and