

Chapter 5.20

Using Stakeholder Analysis to Identify Users in Healthcare Information Systems Research: Who is the Real User?

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ABSTRACT

Applying IS research to the healthcare context is an important endeavor. However, IS researchers must be cautious about identifying individual roles, the context of the setting, and postulating generalizability. Much of IS theory is rooted in organizations, their business processes, and stakeholders. It is not a simple matter to generalize healthcare IS research, assuming that it is equivalent to organizational IS research. Hospitals, emergency rooms, and laboratories are different from the “business environment”, and “healthcare users” vary considerably in their roles. Therefore, IS researchers need to understand the healthcare setting before they can appropriately apply IS theory. Obviously, if we are studying the wrong person, or group of people, we cannot expect to get relevant results. In order to alleviate confusion regarding “who is the user?” in healthcare IS research, we provide examples of healthcare sce-

narios, perform simplified stakeholder analysis for each scenario, and identify the stakeholders.

INTRODUCTION

Information systems continue to make inroads into the healthcare industry as more of those in medicine adopt computer technologies (Goldschmidt, 2005; Huston & Huston, 2000; Khoubati, Themistocleous, & Irani, 2006). Innovative technologies support healthcare by maintaining or reducing costs, distributing care to geographically distant patients, and providing consulting specialists where expertise is limited or not available (Field, 1996; LeRouge, Hevner, & Collins, 2007; Login & Areas, 2007). Emphasizing the needs and abilities of those who are using the technology improves the quality of health information systems research.

Crafting Information Systems (IS) research for the healthcare context is an important endeavor. However, IS researchers must be accurate when identifying individual roles (Kling, 2003; Reponen, 1994), the setting context, and postulating generalizability (Avgerou, 2001; DeLone & McLean, 2003; Rawstorne, Jayasuriya, & Caputi, 2000). One of the most important principles for IS researchers is “know your user” (Norman, 2005). This principle should also apply to those performing healthcare information systems research. However, this is often not the case.

Much of IS theory is rooted within the organization, its business processes, and stakeholders (Ginsberg & Venkatraman, 1985; Magni & Pennarola, 2008; Massa & Testa, 2008; Van de Ven, 2005). One well accepted definition of a stakeholder is “Any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984). In order to understand “who really counts”, we need to systematically evaluate stakeholder relationships (Mitchell, Agle, & Wood, 1997). IS stakeholders within a business context generally fall within one of three groups – users, managers, and IS professionals. Although this distinction is fairly clear in healthcare administration (the business side of healthcare), it is not nearly as clear-cut in patient healthcare.

Hospitals, emergency rooms, and laboratories are very different from the normal “business” environment, and healthcare stakeholders vary considerably in the role they play (patient, attending physician, specialist, intern, resident, nurse, clinician, administrator, etc.). Depending upon the situation, any or all of these stakeholders can be users of a healthcare IS system. Therefore, definitions originating from the business environment involving business users and processes may not apply in the healthcare setting. For example, attempting to apply an IS theory such as the Technology Acceptance Model (TAM) to telemedicine requires that the investigator realize the differences in stakeholders. All stakeholders are not

users. A physician who reads a report generated by a clinician that operated some technology is not the “user” of the technology. It would therefore be inappropriate to survey the physician’s user acceptance or usability of the technology. The clinician, not the physician, is the “user”. In addition, a patient who obligingly reports for an examination and passively participates in a tele-video consultation is not a “user”. The technician who operates the equipment is the user, and the technician’s acceptance of the technology is important to IS researchers.

We contend that IS researchers should understand the healthcare setting and the role of its stakeholders before applying IS theory. In addition, networks of patients and practitioners using information technology create very different interrelated user and interorganizational processes. Healthcare processes are considerably different. These processes may involve life and death situations that depend on extremely important and often time sensitive data and information. Most patients facing illness or injury are sick and stressed. Ignoring these contextual differences in favor of generalizability simply dilutes or negates the effects of human computer interactions in the unique healthcare environment.

A recent meta-analysis of patient satisfaction revealed that a) few studies adequately defined terms, b) most studies lack explanation of interaction effects of the physician-patient relationship, and c) in general, studies lack data correctly examining the perceptions of the users (Mair & Whitten, 2000). These studies were performed by medical and/or information systems researchers. The very division of healthcare into medical/clinical and socio/technical entities begs for a duality of understanding when applying theoretical constructs.

Conceptualization of the user is fundamental to healthcare and IS research (Lamb & Kling, 2003). Those researching the “IS user” in healthcare must have insight into the triad of physician, clinician, and patient in order to correctly apply IS theory

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