

## Chapter 7.13

# The Effects of Confidentiality on Nursing Self-Efficacy with Information Systems

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### ABSTRACT

The objective of this study is to gain an understanding of nurses' perceptions of the confidentiality of computerized charts and determine if these perceptions influence nursing self-efficacy. A questionnaire was mailed to 600 hospital nursing staff just prior to the implementation of an integrated clinical and administrative hospital-wide information system. One hundred and thirty-nine questionnaires were returned for a response rate of 23%. The measurements consisted of perceived confidentiality, self-efficacy, self-reported technology use, self-assessed computer expertise, and attitude. We found that nurses recognize confidential information and that nurses do not

think that computerized records are more or less confidential than paper records. Perceived confidentiality and self-efficacy are related. Because nurses that have lower self-efficacy also think that the data found in a computer is less confidential and that there is less of a need for confidentiality for computerized data, hospitals should take steps to improve self-efficacy by enhancing confidentiality training.

### INTRODUCTION

Hospitals face countless constraints to fully implement information technology for nurses (Chang, Lutes, Braswell, & Nielson, 2006). The

successful implementation of clinical and administrative information systems requires that attention be directed to both managerial and organizational issues (Dixon, 1999). These issues normally include, but are not limited to, the four components of a comprehensive technology assessment: safety, effectiveness, social impact, and cost/benefits (Happ, 1991; Pillar, Jacox, & Redman, 1990). This research focuses on the perceived confidentiality of the data, a safety factor, and the self-efficacy or confidence in their own use of technology of the nurses' that interact with the information system.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 directed the secretary of the U.S. Department of Health and Human Services (HHS) to begin the process of establishing standards for health information, securing that information, and protecting the privacy of the individuals to whom that information refers (NCVHS, 2000.) Confidentiality of patient data, required by law, must be guaranteed. At the same time, this data must be easily available to the nurses and clinicians that are providing care (Priest, 1989). Neither manually produced paper records nor medical records stored within a computerized administrative and clinical system are totally secure from loss or unauthorized use, but problems of confidentiality can be anticipated and minimized if properly managed (Priest, 1989). This is emphasized in the summarized recommendations from the 2001 AMIA Spring Congress, where Yasnoff, Overhage, Humphreys, and LaVenture (2001, p. 535) write, "all stakeholders need to be engaged in coordinated activities related to public health information architectures, standards, confidentiality, best practices and research: and that informatics training is needed throughout the public health workforce."

Self-efficacy is a user's confidence that he or she has the ability to use an information system. Self-efficacy has been shown to have a strong influence on an individual's adoption of an information system. In this research, self-efficacy

is used to assist in identifying the user's understanding of the privacy of confidential data and how it may affect the installation of a clinical information system.

Research is needed to determine the impact of administrative and clinical information systems on quality of care, the nurses' perceptions of the confidentiality of data and the affects of confidentiality on self-efficacy. The purpose of this study is to:

1. Develop and empirically test measures for perceptions of confidentiality.
2. Determine if the nurse's perceptions of computerized charts' confidentiality and paper charts' confidentiality differ.
3. Determine if nurses perceive that computerized charts and paper charts need the same level of confidentiality.
4. Establish that perceptions of confidentiality influence nurse's self-efficacy.

Demonstrating these relationships will help us understand if the implementation of HIPAA regulations is likely to influence nurse's acceptance of clinical information systems.

## **BACKGROUND**

### **Self-Efficacy**

Self-efficacy was introduced to the information systems (IS) literature by Compeau and Higgins (1991) based upon Social Cognitive Theory (Bandura, 1982). Social Cognitive Theory suggests that there are two types of forces that guide behavior: expectations relating to outcomes of the behavior, and beliefs about one's ability to perform that behavior. These beliefs about one's ability are called self-efficacy (Compeau & Higgins, 1991). Compeau and Higgins recognized that an individual's reactions to an information technology would be affected by that individual's

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