

# Chapter 78

## Enablers for Patients to Adopt Web–Based Personal Health Records (PHR)

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### ABSTRACT

*This study analyzed what are enablers to adopt web-based Personal Health Records (PHR) from patients' perspective while many studies are conducted from providers' perspective. Patients may consider Perceived Value of Information, Perceived Worthwhileness of Searching, Privacy, Information Trust, and Security before adopting web-based PHR. By using HINTS (Health Information National Trends Survey), this study found out that Perceived Value of Information is the most critical enabler for patients to adopt web-based PHR. Privacy, Information Trust, and Security are also enablers to adopt web-based PHR. But, Perceived Worthwhileness of Searching is not statistically significant to explain adoption of web-based PHR. However, Perceived Value of Information is strong antecedent of Perceived Worthwhileness of Searching. Based on this study, patients are more likely to adopt web-based PHR when they realize that web-based PHR provides valuable and reliable information with protecting privacy and security.*

### INTRODUCTION

According to the Institute of Medicine (1991), computerization of the health care industry is necessary to provide high quality of health care in the 21<sup>st</sup> century. “Computerization” includes new IT (Information Technology) adoption. Several studies show new IT adoption in health care industry reduces costs and improves quality (Thompson & Brailer, 2004; Menachemi et al., 2007; Li et al., 2014; Simon et al., 2008; Simon et al., 2007; Menachemi, 2006), efficiency, and safety of health care (Li et al., 2014). In addition, new IT adoption like e-Health care systems is patients' demand for improved access, cost efficiencies, and improved quality (American Telemedicine Association, 2013). In the case of web-based

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Personal Health Records (PHR), it emphasizes empowering patients (Institute of Medicine, 1997) by allowing patients to check and manage personal health information as Goldzweig et al. (2009) stressed patient focused IT application. In a word, new IT system in health care industry brings lots of benefits to providers as well as patients.

However, new IT adoption in health care industry like electronic health care information systems does not seem to have been popular despite lots of benefits (Bhattacharjee & Hikmet, 2007; LaPointe & Rivard, 2005) to providers and patients. Ilie et al. (2009) explained why new IT adoption in health care providers are so slow from provider's perspective, using the case of EMR (Electronic Medical Records) into four reasons; complexity, dual organizational structure, different characteristics of physician and general IS users, and power structure. However, relatively few studies analyzed why patients are hesitating to adopt the web-based PHR systems or what makes patients adopt the system. Therefore, this study focuses on patients' adoption of web-based PHR as one type of information technologies used in health care industry. The purpose of this study is to explain patients' intention to use the web-based PHR for personal health records through analyzing what makes patients be willing to use the web-based PHR. Research question would be "what are important enablers for patients to adopt web-based PHR?"

This study will contribute academic area and practical area. Currently, there are relatively few studies conducted from patients' viewpoint, compared to the studies from providers' viewpoint. This study will fill the gap between studies from providers' side and studies from patients' side by focusing on patients' adoption factors. Practically, the results of this study will provide guidelines for health care providers of how to implement web-based PHR to reduce costs and improve service quality.

The following section reviews existing literature and proposes hypotheses derived from literature reviews to answer the research question. Data analysis section explains the procedures to collect and analyze data. The discussion will be followed after analysis results. This study concludes with some implications and limitations.

## **LITERATURE REVIEW**

Hare, et al. (2013) provide overview of the health care related research. They had classified e-health care research into seven groups; life experience, service design, point of delivery, accessibility, availability, specialist education and training, and consumer typology. Studies for life experience cover life being struggled for individual or family. Service design studies handle patients' feeling of complexity and coordination. Studies regarding point of delivery have staff's attitude and communication as a main topic. The studies for accessibility refer to individuals' decision-making process. The studies for availability show individual's choice of a service provider. The last two categories are about employees in the service provider such as employee education, training, and empowerment. Among them, this study would be in the category of accessibility and point of delivery because the study for patients' adoption of e-health care focuses on how patients make decision to use web-based PHR and how to improve communication for personal health records through the PHR.

The Health Care Information and Management Systems Society (HIMSS) defined an electronic Personal Health Records (ePHR) as "a universally accessible, layperson comprehensible, lifelong tool for managing relevant health information, promoting health maintenance and assisting with chronic disease management via an interactive, common data set of electronic health information and e-health tools" (Liu et al., 2013) The definition implies ePHR is one type of IT used in health care industry. Considering

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