

Chapter 5.17

An Exploratory Study of Patient Acceptance of Walk-In Telemedicine Services for Minor Conditions

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ABSTRACT

Though healthcare costs continue to soar, the healthcare industry lags other service industries in applying information technology to improve customer (i.e., patient) service, improve access to healthcare services, and reduce costs. One particular area of concern is overuse and overcrowding of emergency departments for nonurgent care. Telemedicine is one potentially important application of information technology in this realm. The objective of this study is to examine the antecedents of patient acceptance of walk-in telemedicine services for minor ailments. Drawing upon theoretical models in the healthcare and technology acceptance literatures and based on salient beliefs elicited during interviews with 29 potential adopters, the authors develop a concep-

tual model of antecedents of patient acceptance of walk-in telemedicine services for minor conditions. While relative advantage, informational influences, and relationship with one's physician emerged as important predictors of acceptance, media richness and e-consultation diagnosticity emerged as central concerns for potential adopters. They discuss the study's implications for research and practice and offer suggestions for future empirical studies.

INTRODUCTION

In the United States (U.S.), the healthcare industry lags other service industries in applying information technology to business practices. Healthcare spending in the U.S. continues to outpace gross domestic

product (GDP), comprising nearly \$1.9 trillion, or 16 percent, of GDP in 2004 and is projected to rise to 20 percent of GDP by 2015 (Borger et al., 2006). With the healthcare economy rapidly growing but suffering from pervasive organizational inefficiencies, there is vast opportunity for implementing technological innovations to meet the demands of both industry and consumers, reduce overall costs, and provide widespread access to healthcare at affordable rates.

One particular area of concern is patients' increased use of emergency departments for non-urgent conditions. While this trend contributes to the rising costs of healthcare, patients often choose this option because their primary care physician is not readily accessible or because they do not have a usual source of care (Afilalo et al., 2004; Howard et al., 2005). Proposed solutions to this problem include walk-in urgent care clinics and emergency department fast tracks, often staffed by nurse practitioners and physician assistants (Howard et al., 2005). Another potential solution is a walk-in clinic for minor conditions that uses telemedicine (telecommunication systems to facilitate healthcare consultations between individuals remotely) to connect patients to healthcare providers. Advantages of a telemedicine walk-in clinic include fewer required staffing resources compared to a traditional walk-in clinic and the potential to provide patients, particularly those in rural areas, greater access to routine healthcare services.

Thus, the current study investigates this new application of telemedicine¹ that provides healthcare services for minor ailments to walk-in patients via a teleconferencing e-health center. The first facility of this kind in the U.S., the Health e-Station (HES), opened in 2006 in Georgia. Designed primarily to promote patient empowerment and improve access to healthcare during off-hours, HES is open weekdays from 4:00 p.m. to 8:30 a.m. and for 24 hours on weekends—i.e., during times when primary care providers are generally unavailable. Proponents of HES argue that its main

advantages over emergency rooms are its lower cost for services and quicker access to healthcare providers (Health e-Station, 2006).

A typical HES visit involves patient interaction with a trained technician, who connects the patient to an available physician via videoconferencing and operates the instruments to perform the patient examination. The videoconferencing technology transmits images and sounds taken from the patient examination to the physician and permits real-time interaction, via video and audio, between the physician and patient. Moreover, the patient is able to view the transmitted images on a display monitor in the examination room.

Though research on adoption of other telemedicine technologies exists, our understanding of the antecedents leading to patient adoption of telemedicine services that are readily offered to a broad population to diagnose minor conditions is limited. With this type of health services model, the choice to seek health services originates from the patient, as opposed to other types of telemedicine (e.g., telepsychiatry or teledermatology), which typically involve a provider referral to the telemedicine service. Further, it differs from telemedicine use for telemonitoring of chronic conditions since this service is used for diagnosing minor conditions and not for recurrent monitoring of an existing condition. As such, the determinants of patient acceptance of walk-in telemedicine services for minor conditions are likely to differ from other applications of telemedicine and warrant new investigation. Thus, the research question for this study is: *"What are the antecedents of patient adoption of walk-in telemedicine services for minor conditions?"* In this study, patient perspectives concerning walk-in telemedicine services (WITS) for minor conditions are assessed by eliciting potential adopter beliefs concerning use of HES. Using qualitative methods, the study identifies the salient factors that influence patient acceptance, builds a theoretical model, and derives propositions that can be investigated empirically in future studies.

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