



# Tablet in the Consultation Room and Physician Satisfaction

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## ABSTRACT

The purpose of the study is to investigate patient-physician interactions during a clinical encounter to ascertain the impact of tablet computing on physician satisfaction during a clinical encounter. This study was conducted at a primary care clinic, and the physicians who participated could use a tablet during their clinical encounters. The authors compared satisfaction between physicians who used the tablet during a clinical encounter and those who did not using data from 122 clinical encounters involving 82 patients. The results indicate that physicians who used the tablet during clinical encounters are more satisfied than those who did not. Additionally, there was a meaning difference in satisfaction between physicians who used the tablet to educate patients and share information than those who did not. HITs have potential benefits, but they also come with risks. To effectively manage the risks and benefits of HITs, healthcare providers should be deliberate and strategic in the implementation of HITs.

## KEYWORDS

Clinical Encounter, EHR, Health Information Technologies, Medical Consultation, Physician Satisfaction, Primary Care, Tablet

## INTRODUCTION

Primary healthcare is a critical component of any healthcare system because of the fundamental role of preventive care in healthcare services. Advances in computing technologies and government regulations, such as Health Insurance Portability and Accountability Act (HIPPA) and General Data Protection Regulation (GDPR), are making it necessary for health management organizations (HMOs) to integrate health information technologies (HITs) into primary healthcare. In addition to these motivations, the strive for efficiency and competitive advantage is driving many HMOs and primary healthcare providers to integrate HITs in the provision of healthcare services (Karahanna et al., 2019; Hamel et al., 2014). As these HITs become popular in primary healthcare, it is important to evaluate these technologies to understand how they impact health care outcomes.

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Primary healthcare is community-based non-emergency health service provided by physicians, such as internists, pediatricians, and geriatricians. Primary healthcare services may be followed by referral to specialist care which may determine long-term treatment options for patients. Physician-patient interactions are critical to the delivery of primary healthcare and HITs are frequently used during clinical encounters to facilitate these interactions (Collier, 2017; Coopmans and Biddle 2008; Patel et al., 2012; Shaarani et al., 2017). There are several types of HITs, many of which rely on a variety of devices and software packages. Studies on how these HITs impact patient care can inform policy makers, researchers, HMOs, and primary healthcare providers on how to create value from using HITs. This study examines the impact of tablet computing on physician satisfaction during clinical encounters in a primary healthcare setting. Specifically, it explores the impact of real-time use of tablet computing on physician satisfaction in a clinical encounter and compares satisfaction between physician who used tablet applications to educate patients and share information and those who did not.

The drive towards a patient-centered healthcare has increasingly underscored patient satisfaction as a critical measure of physician-patient interaction in a clinical encounter (Reychav, et al., 2016; Antoun et al., 2019; Rozenblum et al., 2013). However, the outcomes of patient-physician interaction in a clinical encounter also depend on the attitudes and perception of physicians. Physicians' attitudes, perceptions, and empathy influence patient satisfaction (Eide et al., 2003). Consequently, exploring physician satisfaction in a clinical encounter can provide insights into how to achieve positive outcomes from physician-patient interaction. Physician dissatisfaction with HITs can undermine the outcome of physician-patient interaction in primary health services.

Considering the importance of primary healthcare and popularity of HITs in clinical encounters, it is important to evaluate how these HITs influence the provision of healthcare. Yet, few studies have examined the impact of tablet computing during a clinical encounter in a primary healthcare setting. It is the goal of this study to supplement the prior research on HITs by addressing two research questions. First, does the integration of real-time tablet computing influence physician satisfaction? Second, does the use of specific tablet applications influences physician satisfaction? Answers to these questions complements the prior literature on HITs, shed more light on patient-physician interactions during clinical encounters, and inform healthcare institutions on how to manage HIT implementations to create value.

## **BACKGROUND**

### **Mobile Technology in Clinical Encounters**

Compliance and potential benefits of HITs are driving many healthcare providers to integrate computing technologies into medical consultations and primary healthcare. Clinical encounters between physicians and patients are fundamental to primary care. Thus, physician-patient clinical encounters are essential to primary healthcare services and yet these encounters are fraught with challenges, and sometimes the outcomes are unpleasant for either physicians or patients.

During clinical encounters, doctors solicit information from the patient and may reference medical information to diagnose and recommend treatment options. Primary care physicians engage patients with diverse conditions, including preventive, chronic, and acute conditions. The diversity of care provided by primary care physicians require tremendous amount of information to be effective. Physicians make several diagnostic decisions depending on the nature of the clinical encounter. To facilitate these clinical encounters, many physicians rely on some form of HITs.

HIT has the capacity to influence many aspects of healthcare delivery. HIT can improve quality of care by lowering mortality rates, reducing medical errors, and improving patient satisfaction (Karahanna et al., 2019). Mobile and tablet technologies are becoming popular in healthcare because these technologies are more adaptable and malleable to primary healthcare settings than rolling

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