

## Chapter 5.25

# The Impact of Professional Certifications on Healthcare Information Technology Use

**Neset Hikmet**

*University of South Florida, Sarasota-Manatee, USA*

**Anol Bhattacharjee**

*University of South Florida, Tampa, USA*

### **ABSTRACT**

This study examines the effects of professional certifications such as JCAHO on healthcare information technology (HIT) usage in healthcare organizations and user satisfaction with such usage. Using survey data collected from healthcare administrators in a nation-wide sample of 347 hospitals and long-term care facilities, we provide evidence that professional certifications do indeed enhance HIT usage and user satisfaction, at least within specialized user groups such as healthcare administrators. We further demonstrate that this increase in HIT usage due to professional certifications increases with facility size and is more prominent for larger hospitals than for smaller long-term care facilities, though the same cannot be said of user satisfaction. Our study suggests that professional certifications can be used as a

valuable tool for motivating HIT usage, while also drawing attention to an under-examined area of HIT research.

### **INTRODUCTION**

As the cost of healthcare has soared in the United States, rising to \$1.7 trillion or 15.3% of GDP in 2003 (CMS, 2005), the role and use of healthcare information technology (HIT) has come into increased focus. HIT, in this context, refers to a wide range of clinical systems such as electronic medical records (EMR), computerized patient order entry (CPOE), and pharmacy information systems, and administrative systems such as patient billing systems, budgeting systems, and scheduling systems, that are expected to streamline healthcare delivery to patients, improve

healthcare quality, and reduce delivery costs. In the report presented to the U.S. Congress by the Medicare Payment Advisory Commission (MEDPAC, 2004), HIT was identified as having the potential to significantly improve the quality, safety, and efficiency of healthcare. A similar report by the National Health Leadership Council (NBCH, 2005) identified HIT as the critical foundation for promoting health system reform, generating productivity and performance improvement, and producing significant cost reduction in healthcare expenditures.

As healthcare organizations face increasing pressure to invest in HIT, many healthcare managers are struggling to find ways to motivate physicians, nurses, and administrators to use the implemented HIT. Clearly, technology deployment is futile if users do not use the technology, use it inappropriately, or find ways to circumvent its usage. For instance, in 2003 doctors at the prestigious Cedars-Sinai Medical Center at Los Angeles rebelled against their newly installed CPOE system, complaining that the system was too great a distraction from their medical duties, forcing the withdrawal of a system that was already online in two-thirds of the 870-bed hospital (Freudenheim, 2004). The Leapfrog Group (an advisory group associated with the National Academy of Sciences) estimated that, of the nation's 300 non-governmental hospitals (6% of all hospitals in the U.S.) that have implemented comprehensive HIT systems, only 40 of these systems (less than 1%) are routinely used by of doctors for ordering prescriptions and laboratory tests (Freudenheim, 2004).

One technique that is expected to motivate HIT use among hospital administrators is professional certifications (Chow, 2001; Watcher, 2004). Many hospitals nationwide seek certification from the Joint Commission of Accreditation of Healthcare Organizations (JCAHO) to demonstrate their commitment to quality in healthcare delivery through the use of HIT and to meet eligibility requirements for participation in the government's Medicare and

Medicaid programs (Associated Press, 2004). A significant requirement of JCAHO certification is continuous monitoring and tracking of a variety of operational statistics such as design of new services, implementation of safety plans, and infection control, which require the use of HIT. Furthermore, information management, potentially using HIT, is a key concern in the JCAHO certification process, including management of patient-related information, use of comparative information, and the transmission of national hospital quality measure data (JCAHO, n.d.). Hence, it is incumbent upon healthcare administrators to use the available HIT appropriately in order to meet and continue JCAHO certification status for their facility.

In this paper, we examine whether professional certifications such as JCAHO are indeed effective in motivating HIT use among administrators in healthcare settings. Additionally, we are interested in knowing whether JCAHO-induced HIT usage patterns vary across different types of healthcare organizations such as hospitals and long-term care facilities (nursing homes). Given the size and revenue differences between hospitals and long-term care facilities and the consequent availability of slack financial and technological resources to devote to HIT-driven quality initiatives such as JCAHO certifications, one may expect the motivation for JCAHO and HIT usage to be different across these organizations. Furthermore, given the broader scale and scope of hospital operations relative to long-term care facilities, the benefits of JCAHO may be disproportionately larger for the former than the latter.

Examining these issues is important for both practical and research reasons. From a practical standpoint, though JCAHO certification is eagerly sought by healthcare facilities nationwide, there is no evidence yet that such certification indeed yields significant quality and performance gains through the use of HIT. Though professional certification may be one potential tool in a manager's arsenal to motivate organizational HIT use, at

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/impact-professional-certifications-healthcare-information/26326](http://www.igi-global.com/chapter/impact-professional-certifications-healthcare-information/26326)

## Related Content

---

### Classification of Sleep Apnea Types Using Clustering with SVM Classifier

Faiza Charfi and Ali Kraiem (2012). *International Journal of Biomedical and Clinical Engineering* (pp. 39-48). [www.irma-international.org/article/classification-sleep-apnea-types-using/73692](http://www.irma-international.org/article/classification-sleep-apnea-types-using/73692)

### Detection of Rarefaction of Capillaries and Avascular Region in Nailfold Capillary Images

Suma K. V. and Bheemsain Rao (2016). *International Journal of Biomedical and Clinical Engineering* (pp. 73-86). [www.irma-international.org/article/detection-of-rarefaction-of-capillaries-and-avascular-region-in-nailfold-capillary-images/170463](http://www.irma-international.org/article/detection-of-rarefaction-of-capillaries-and-avascular-region-in-nailfold-capillary-images/170463)

### Using Extreme Learning Machines and the Backprojection Algorithm as an Alternative to Reconstruct Electrical Impedance Tomography Images

Juliana Carneiro Gomes, Máira Araújo de Santana, Clarisse Lins de Lima, Ricardo Emmanuel de Souza and Wellington Pinheiro dos Santos (2021). *Biomedical Computing for Breast Cancer Detection and Diagnosis* (pp. 16-27). [www.irma-international.org/chapter/using-extreme-learning-machines-and-the-backprojection-algorithm-as-an-alternative-to-reconstruct-electrical-impedance-tomography-images/259707](http://www.irma-international.org/chapter/using-extreme-learning-machines-and-the-backprojection-algorithm-as-an-alternative-to-reconstruct-electrical-impedance-tomography-images/259707)

### Mental Health Management in New Zealand: The Pathways Model for Client-Based Treatment

G. J. Cooper (2010). *Biomedical Knowledge Management: Infrastructures and Processes for E-Health Systems* (pp. 253-266). [www.irma-international.org/chapter/mental-health-management-new-zealand/42612](http://www.irma-international.org/chapter/mental-health-management-new-zealand/42612)

### Bone Age Assessment

S. Kavya, Pavithra Pugalandi, Rose Martina P. A., N. Sriram, K. S. Babu and Basavaraj Hiremath (2013). *International Journal of Biomedical and Clinical Engineering* (pp. 1-10). [www.irma-international.org/article/bone-age-assessment/101925](http://www.irma-international.org/article/bone-age-assessment/101925)