ABSTRACT

The Role of ICT inimproving the Quality of Healthcare

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India is the second most populous country in the world and will cross the population of China by 2028[1], but the investment in healthcare technology and infrastuture in India is not growingat the same pace. This can be a threat in managing a number of diseases caused due to the lack of infrastructure. In addition, the evolution of technology in healthcare is sluggish in India as healthcare remains to be a neglected sector.

The Information and Communication Technology (ICT) would help the doctors communicate effectively with the patients during or after the treatment (Carnahan, 2006), automate the manual monitoring of inpatient departments in the hospitals, reduce errors during administration of medication to patients (Chertow et al., 2001), and diagnose the patients accurately and rapidlyas the accessibility to patients' history is simplified (Miller &Sim, 2004).

Electronic Medical Records (EMR) store the patient's medical history in a single file in digital format (Goodman, 2010). The digital records are accessible across the hospitals and among the healthcare providers ubiquitously. Computerized Physician Order Entry (CPOEs) are systems that assist the doctors to order for varioustests and medications for the patient andtrack the status of the tests and the medications (Cunningham et al.,2008). As the the size of hospitals has been reported to have apositive impact on health IT adoption for medication safety applications,we hypothesize that similar trends will follow the adoption of CPOEs in the hospitals.

In the developing countries like India, the access to primary healthcare services remain restrictedto the hospitals during the office hours. The slow adoption of technology in healthcare in India is a major impediment towards accessibility to healthcare services and in the accurate diagnosis of the disease. In view of the current inadequacies in the access and provision of healthcare services, we have studied the feasibility of a system of healthcare that can potentially provide continuous access to healthcare services at all times of need. This system is known as home health provisioning system (HHPS).HHPS helps patients to access healthcare services from their homes. The patients are given the opportunity to receive answers to the follow-up queries through ICT (telephone and/or computer).

The adoption of ICT such as telephone, or the usage of computers can help increase the utilization of healthcare by the patients. The accessibility to doctors during non-office hours could enable patients to get prompt treatment instead of ignoring the initial symptoms that could lead to major illnesses. We hypothesize that the use of ICT to access healthcare services would have a significant impact on the factors necessary for the adoption of HHPS in India.

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[1]http://statisticstimes.com/population/china-vs-india-population.php

The findings of this study adds to the literature on healthcare service delivery systems that are not prevalent in India. The findings of the work have contributed to the estimation of factors necessary for the adoption of CPOE. The research adds to the literature of ICT for the adoption for HHPS, which could improve the efficiency and quality of care for patients.