Using Technology to Reduce a Healthcare Disparity

H

Nilmini Wickramasinghe
Epworth HealthCare, Australia & Deakin University, Australia

INTRODUCTION

Healthcare costs globally continue to rise and the US in particular is struggling to contain healthcare costs (Wickramasinghe et al., 2015, 2012). This has led most OECD countries to focus on healthcare reform coupled with greater investment in IS/IT to facilitate superior healthcare delivery (Wickramasinghe et al., 2015). At the same time, the federal government has affected policy to emphasize meaningful use of such technology in healthcare (Wickramasinghe et al., 2015; "Meaningful Use," 2012). Hence, it is now prudent to develop appropriate technology solutions that not only comply with this requirement but also facilitate superior healthcare delivery to ensue.

An area that can particularly benefit from the application of technology solutions is that of equal experience and trying to provide equality of care and access to all citizens. A key area within healthcare disparities relates to access of language services in healthcare or more specifically supporting limited English proficient patients (LEP patients). In particular, English language proficiency should not impinge on access to- and quality of- service for healthcare. Improving access to language services in healthcare has been an ongoing issue that continues to be at the forefront of various healthcare agendas ((Au et al., 2009; Barrett et al., 2008; Chen et al., 2007).

BACKGROUND

Recent discussions on healthcare disparities (Gibbons, 2011) all note the significant potential benefit technology can make in trying to provide an equal experience to all Americans. Sadly, while there are many good points about the US healthcare system, there also exists a considerable racial and ethnic disparity in the delivery of healthcare across the US (Gibbons, 2011). The underlying root causes for these disparities are all amenable to interventions using IS/IT (information systems/information technology). The thesis of this paper is that technology is well suited to assist is that of limited English proficiency (LEP).

More than 23 million Americans today have limited English proficiency, which in turn has a negative impact on their ability to receive and comprehend appropriate healthcare delivery (Youdelman, 2008; Flores et al., 2008). Integral to the delivery of care is communication between doctor and patient; however, language barriers typically lead to problems such as delay or denial of services, issues with medication management, and underutilization of preventative services (Green et al., 2005; Jacobs et al., 2004; Ghandi et al., 2000; Karliner et al., 2004). The literature suggests that the quality of communication between Although Title VI of the Civil Rights Act 1964 has always required that entities receiving federal funds provide language services to those with LEP, the law has not often been enforced in healthcare settings (Jacobs et al., 2006). However, awareness of the need to provide language services in healthcare has increased in recent years (Gibbons, 2011).

Current Problem

In 2001 The Institute of Medicine has published two key reports "To err is Human" and "Cross-

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ing the Quality Chasm". Taken together these reports highlight that patient safety should be one of the essential components of high quality healthcare and that patients should not be harmed by the care that is intended to help them. These profound statements have had far reaching impacts to policy reform and efforts to address patient safety and quality of care delivered today. The role of language barriers and their impact on adverse events is thus now also receiving heightened attention. Especially given that research is consistently highlighting that adverse events affect LEP patients disproportionately more and result in serious consequences to the patient.

Approximately 57 Million people or more than 20 percent of the US population speak a language other than English and this figure is growing while approximately 8.6 percent of the population is defined as LEP. Thus at least 8.6 percent of the US population is at risk for adverse events because of barriers associated with language issues. This adds further cost pressures to an already strained healthcare system

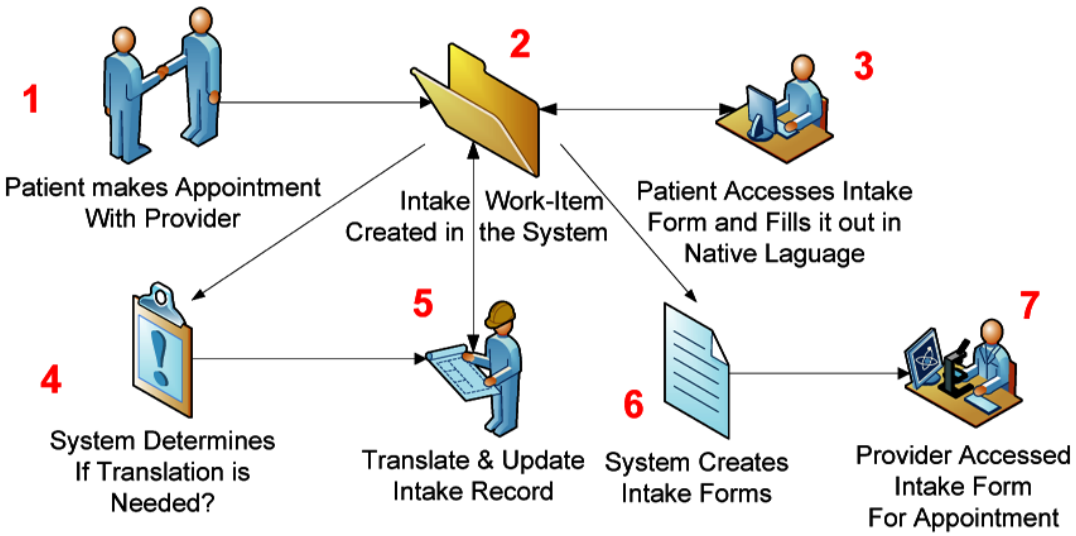
To address this problem a technology mediated solution is proffered to provide multi-lingual support at in-take and registration for LEP patients.

Development of the Conceptual Model

Web 2.0 technology and cloud computing which provides and facilities anytime anywhere access to (Troshani et al., 2011; Svantesson & Clark, 2010; Mell & Grance, 2010; Gilbert, 2010; Amazon, 2011; Armbrust et al., 2010), affords us the possibility to leverage these technology benefits to design and develop an appropriate solution to address the problem – a portal that support multi language real time translation at intake and registration. Figure 1 provides the conceptual model.

From the above conceptual model in Figure 1, it is possible to model the intake process into critical steps. All these 13 steps of care must be addressed in the technology solution and/or suite of solutions if the solution is to provide the necessary assistance for LEP patients. Taken together these steps traverse the healthcare encounter at intake.

Figure 1. Conceptual model



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