

# Reducing Healthcare Disparities with Technology



**Nilmini Wickramasinghe**

*Epworth HealthCare, Australia & RMIT, Australia*

**Ray Arias**

*Arias IS, USA*

**Jeff Wilgus**

*Arias IS, USA*

**Chris Gonzalez**

*Northwestern Memorial Hospital, USA*

## INTRODUCTION

Healthcare costs in the US continue to rise exponentially (Wickramasinghe et al., 2012) and this has led to greater investment in IS/IT to facilitate superior healthcare delivery. At the same time, the federal government has affected policy to emphasise meaningful use of such technology in healthcare ("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.

A key area within healthcare disparities relates to access to 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).

Given the trend of IT incorporation into healthcare coupled with the emphasis on meaningful use of technology, it would appear that a technology solution might be able to provide a suitable answer to the challenges of healthcare disparity due to LEP patients. The following then, discusses how the development of a real time on-line cloud based technology mediated solution to support LEP patients can address key effectiveness

and efficiencies issues and provide superior healthcare and thereby serve to reduce a key healthcare disparity.

## BACKGROUND

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). Such language barriers in healthcare contexts 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). Furthermore, difficulty in communication also limits clinicians' ability to understand patient symptoms and effectively provide treatment (Karliner et al., 2004). The literature suggests that the quality of communication between patients and providers is strongly associated with providers' ability to deliver better and safer care (Ponce et al., 2006) and thus LEP patients are more likely to receive inferior care due to language and communication related problems (ibid). Language services, such as translation and interpretation, can facilitate this communication and thus improve healthcare quality, the patient experience, adherence to recommended care and ultimately health outcomes (Flores, 2005; Jacobs et al., 2006; Karliner et al., 2007).

DOI: 10.4018/978-1-4666-5888-2.ch335

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 (Youdelman & Perkins, 2002).

## Current State

Currently, there are over 60 Million Americans who speak languages other than English and that number is expected to grow exponentially over the next decade (Au et al., 2009; Barrett et al., 2008). Findings from several recent studies conducted and funded by the United States Department Health and Human Services reveal that language barriers are a real source of additional cost to the already over worked American Healthcare System (Institute of Medicine, 2003; National Committee for Quality Assurance, 2008). Estimates rise to \$ 20 Billion per year for this additional cost.

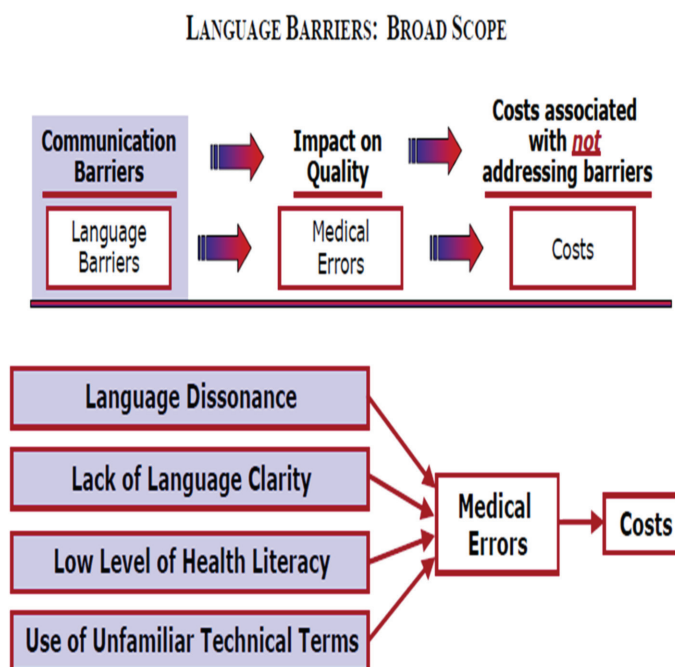
## Development of the Conceptual Model

Succinctly stated then the key issues of this problem are as follows (figure 1):

- High cost and quality impact of language barriers on US healthcare system (medical errors)
- 60 million LEP healthcare interactions each year
- \$100B+ direct and indirect costs/year
- Only 20% of LEP patients received proper healthcare co-ordination
- Federal government is also at significant litigation risk due to non-service to the LEP population.

Reproduced with the permission of Workflow Health LLC

Figure 1. Problem in a nutshell



7 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/reducing-healthcare-disparities-with-technology/112772](http://www.igi-global.com/chapter/reducing-healthcare-disparities-with-technology/112772)

## Related Content

---

### Variance-Based Structural Equation Modeling: Guidelines for Using Partial Least Squares in Information Systems Research

José L. Roldán and Manuel J. Sánchez-Franco (2012). *Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems* (pp. 193-221).

[www.irma-international.org/chapter/variance-based-structural-equation-modeling/63264](http://www.irma-international.org/chapter/variance-based-structural-equation-modeling/63264)

### Modified LexRank for Tweet Summarization

Avinash Samuel and Dilip Kumar Sharma (2016). *International Journal of Rough Sets and Data Analysis* (pp. 79-90).

[www.irma-international.org/article/modified-lexrank-for-tweet-summarization/163105](http://www.irma-international.org/article/modified-lexrank-for-tweet-summarization/163105)

### Revealing Social Structure from Texts: Meta-Matrix Text Analysis as a Novel Method for Network Text Analysis

Jana Diesner and Kathleen M. Carley (2005). *Causal Mapping for Research in Information Technology* (pp. 81-108).

[www.irma-international.org/chapter/revealing-social-structure-texts/6515](http://www.irma-international.org/chapter/revealing-social-structure-texts/6515)

### Evaluative Dimensions of Urban Tourism in Capital Cities by First-Time Visitors

Annamaria Silvana de Rosa, Laura Dryjanska and Elena Bocci (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 4064-4076).

[www.irma-international.org/chapter/evaluative-dimensions-of-urban-tourism-in-capital-cities-by-first-time-visitors/184114](http://www.irma-international.org/chapter/evaluative-dimensions-of-urban-tourism-in-capital-cities-by-first-time-visitors/184114)

### Transmedia and Transliteracy in Nemetical Analysis

Michael Josefowicz, Ray Gallon and Maria Nieves Lorenzo Galés (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 6488-6497).

[www.irma-international.org/chapter/transmedia-and-transliteracy-in-nemetical-analysis/184344](http://www.irma-international.org/chapter/transmedia-and-transliteracy-in-nemetical-analysis/184344)