

Creating a Foundation for the Design of Culturally-Informed Health Information Technology

Principal Investigator:	Valdez, Rupa Sheth, Ph.D.
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Summary: The aim of this AHRQ Health Services Research Dissertation-funded project was to create a foundation for a design strategy that leads to culturally-informed consumer health information technology (IT). The long-term objective of Dr. Valdez’s work is to reduce racial and ethnic health care disparities by designing culturally-responsive approaches to the design of health IT that patients and members of their social network (e.g., family members, friends, neighbors) can easily use.

This dissertation took a mixed-methods approach grounded in cultural anthropological and systems engineering principles to assess patients’ daily routines of health information communication. Eighteen patients who self-identified their racial, ethnic, and national culture participated in the main study. These participants were asked about their cultural identities and if and how these identities affect their health information communication practices. During two rounds of interviews, patients created a visual depiction of their social network and were asked if, why, and how they would communicate the following four types of health information with each member of their social network: 1) daily observations of health status; 2) test results from clinical visits; 3) information on diabetes self-care and self-management; and 4) time and place of doctor appointments. In addition, a subset of study patients used journals to keep track of their communication with members of their social network over 5 days: 2 days before a clinical appointment, the day of the appointment, and 2 days after.

Specific Aims:

- Determine the daily routines of health information communication exhibited by patients holding diverse cultural identities. **(Achieved)**
- Determine what design considerations for consumer health IT result from knowledge of these daily routines. **(Achieved)**

2012 Activities: Dr. Valdez completed the qualitative data analysis for the project, which ended in July 2012. In December 2012, she received a Ph.D. in Industrial and Systems Engineering from the University of Wisconsin-Madison.

Impact and Findings: The types of people, information, modes, and rationales illustrated the complexity and diversity of participants’ daily routines of health information communication. The study also highlighted the challenges of traditional targeted approaches to incorporating cultural considerations in design processes and provided support for a tailored approach. This work informed the creation of three conceptual frameworks related to the design of culturally informed consumer health IT. The first

conceptualizes the tensions between using engineering and cultural anthropological approaches; the second conceptualizes how cultural factors may be integrated; and the third illustrates how cultural factors are part of a larger cohort of factors—such as functional, technical, and affective factors.

Target Population: General

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Knowledge Creation
