

Editors' note

IOS Press is publisher of Information Services and Use (ISU) along with the book series, Studies in Health Technology and Informatics (SHTI). Currently in preparation for publication in 2017 is the volume, Health Literacy: New Directions in Research, Theory, and Practice, co-edited by Robert A. Logan and Elliot R. Siegel.

Many authors and readers of *ISU* are interested in exploiting new developments in mobile information technology and social media applications. These technologies often promise timely, authoritative, and personally relatable health information to enhance an individual's as well as a population's health literacy. The technologies also attempt to reduce health disparities among underserved populations who sometimes have better access to newer information technologies, such as smart phones and tablets, compared to more traditional sources and channels of health information. Easier accessibility to health care delivery systems additionally is enhanced by the same technologies that can overcome distance from a patient and/or reduce user costs, which addresses two sources of health outcomes disparities.

Health science librarians, information scientists, and technologists often possess only a limited awareness of potentially relevant scholarly theory underlying health literacy, health disparities, and health communication. As a result, some health informatics interventions omit relevant conceptual frameworks and miss what otherwise might be achievable. *Information Services and Use, Volume 37, Number 1, 2017* published the first of two papers from the book we deem in-scope for *ISU* readers. **Robert Logan** authored the paper that explains and partially integrates the conceptual frameworks within health disparities and health literacy research. It contributes to more awareness and appreciation for theory generally, and encourages more hypothesis testing and robust study design by eHealth proponents and practitioners.

Wanda Whitney, Alla Keselman and Betsy Humphreys focused on the unique role of libraries and librarians to promote patient education, general literacy, and information literacy efforts. Indeed, during the past two decades librarians have made remarkable contributions to health information outreach programs in diverse communities that serve vulnerable populations and address health disparities. The paper outlines several librarians' outreach efforts with cutting edge technologies; overcoming challenges to meet both patients' information needs in clinical settings and patrons' health information needs in the context of disaster preparedness.

In this Special Issue of *ISU* we selected nine additional papers from the forthcoming health literacy book noted in the first paragraph. Although written in the context of examining health literacy research, theory and practice, the selected articles illuminate our knowledge and understanding of the uses of emerging information technologies, innovative services, and measurement tools that are applicable to other domains of interest to *ISU* readers.

Alex Krist, Sebastian Tong, Rebecca Aycock, and Daniel Longo address the benefits of engaging patients in their healthcare decision making, clinical care, and self-management. This paper provides a useful context for developers and evaluators of health information technology resources to understand their placement in clinicians' workflow, and their role in patient's own health information seeking behaviors. The paper explains how the traditional means to receive information from a trusted physician

is augmented by the availability of increasingly powerful Internet search engines, mobile devices, wearables, and the hyperconnectivity of personal health information.

The importance of health literacy in the design and use of mobile health information technology (mHealth) applications is underscored by **Gary Kreps**. While the past two decades has seen mHealth evolve to become a major health communication channel for delivering health care, promoting health, and tracking health behaviors, serious communication challenges remain to design and utilize mHealth applications that meet the health literacy levels of diverse audiences.

This theme is reinforced by **Diane Levin-Zamir, Angela Yee Man Leung, Sarity Dodson, and Gillian Rowlands** who, in their health literacy paper written from an international and cultural perspective, underscore the innovative opportunities for system designers to adapt online health information resources for multi-cultural, language, and diverse societal groups.

However, in her paper **Linda Neuhauser** identifies a serious weakness in expert-designed health communication systems and interventions that are mis-aligned with the abilities, preferences and life situations of specific audiences. Neuhauser advances the use of participatory design theory and methods drawn from social sciences and design sciences, where users participate *intensively* in design decision-making and testing scenarios.

But what of the outcomes? **Michelle Roberts, Lizz Callahan, and Catina O'Leary** discuss their organization's efforts to harness social media websites and online tools to improve health literacy. They use metrics based on what they hope to get (sharing, click-throughs, sign-ups, office visits, etc.) as well as the health care objectives and outcomes they seek to advance. They argue that measurement of success should be more than broad ratings of media use.

Tam Nguyen, Michael Paasche-Orlow, and Lauren McCormack review the state of the science of health literacy measurement. Nguyen, Paasche-Orlow and McCormack seek to help readers identify factors that contribute to stronger measures, provide tools to help select and use appropriate measures, and advance a rational strategy for improved health literacy measurement. These lessons are applicable to other domains of interest for *ISU* readers. A Health Literacy Tool Shed is referenced; and is organized by mode of administration, including computer-based, face-to-face, mail survey, paper-and-pencil, and phone-based. The Health Literacy Tool Shed (which the three authors helped develop) provides the intrinsic strengths and limitations of health literacy measures that also are related to and dependent on study design.

Bradford Hesse, Alexandra Greenberg, Emily Peterson, and Wen-Ying Sylvia Chou introduce us to the annual Health Information National Trends Survey (HINTS) as a way for researchers and planners to understand how the public is interacting with a rapidly changing health information environment. *ISU* readers unfamiliar with this resource will appreciate its value for health consumer engagement and health communication research.

Sometimes the research community itself can be an unintended source of knowledge. **Sabrina Kurtz-Rossi, R.V. Rikard, and Julia McKinney** report on an inductive qualitative analysis of email messages posted to an electronic health literacy discussion list that evolved into a setting and corpus for research. As an unconventional measurement tool, such analyses may reveal new topics and challenges before they appear at conferences or in professional papers.

Lastly, the paper by **Sandra Smith and Lauren Carroll** reports on studies to evaluate interventions that promote maternal health literacy. It finds a place in this special issue because of its inclusion of excellent depictions of data visualizations rendering large and complex data sets more comprehensible, and amenable to identify and understand potential interactions. Data analytics and visualization are be-

coming essential tools for data scientists and other users of 'big data' whose research will be increasingly featured in the pages of *ISU*.

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