

Patient Readiness to Use Internet Health Resources

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Organization:	University of Missouri, Columbia
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Target Population: Adults, Chronic Care*, Diabetes

Summary: As the burden of chronic disease increases in the United States and throughout the world, new approaches are needed to adequately care for people with chronic conditions. The Chronic Care Model suggests processes and systems that can help optimize the care of patients with chronic disease. It emphasizes patient self-activation because activated patients are prepared to take a collaborative, if not central, role in managing their own health. Online health resources could potentially provide a sustainable and patient-centered format for delivering the education, communication, and self-management resources needed to optimize patient activation. However, Web-based resources for chronically ill patients are only valuable if patients have the computer skills and motivation to use them.

This project examines patient readiness, in terms of both aptitude and desire, to use Web-based health resources such as patient education, self-management tools, online prescription refills, requests, medication reconciliation, and secure messaging. The study looks at the relationship between motivation for behavioral change and the use of online health resources and interactive online communication between the patient and the health care team. To help examine the question of patient readiness, the project team is developing a practical measure of the readiness of ambulatory patients with chronic conditions to use Web-based health resources. The first aim of the study is to test the measure's predictive validity against logs of actual use of Web-based health resources by such patients, and directly observe their use of these Web resources. The second aim is to examine how use of an interactive online patient portal is associated with improvements in clinical measures for patients with type 2 diabetes.

This examination of preferences for use of Web-based health resources among ambulatory patients with chronic disease will inform projects, systems, and policies that seek to use the online environment as part of a comprehensive disease management strategy.

Specific Aims:

- To develop a measure of the readiness (aptitude and desire) of patients with chronic conditions attending primary care clinics to use Web-based health resources for health information exchange. This measure will be called the Electronic Health Information Exchange Readiness Scale (E-HIERS). **(Ongoing)**
- To determine how the frequency and type of use of Web-based health resources are associated with improvements in clinical measures for patients with type 2 diabetes. **(Upcoming)**

In addition to the specific research project aims, Dr. Koopman, as part of her Mentored Clinical Scientist Research Career Development Award, has an overarching goal to improve the quality and safety of patient care for those with chronic conditions. This will be attained via the following short-term career goals: 1) to acquire expertise in scale development, such as the E-HIERS Scale; 2) to develop an understanding of the intersection of information and learning in health applications, focusing on both the human and technological dimensions; 3) to gain scientific and career guidance from local collaborators, advisors, and consultants; and 4) to acquire skills in leadership and management from professional development seminars and a longitudinal self-improvement plan developed in collaboration with a mentor.

2010 Activities: Activities primarily included the analysis of the focus group findings, using qualitative software to analyze responses, to inform development of the scale to measure patient readiness to use Internet health resources. The complete scale development, which is scheduled over a period of 2 to 3 years, has also been informed by a comprehensive literature review of validated items from previously published scales, all of which were examined in terms of risk perception, motivation, anxiety, and trust. Quantitative and qualitative evaluations will help to validate the scale. Feasibility testing of the scale began in November 2010, during which the questionnaire was administered in conjunction with a cognitive interview to help determine if any of the questions were confusing or misinterpreted. The questionnaire is divided into various sections related to computer use, familiarity with the Internet, e-mail use, and communication with their health care provider. The questions are grouped thematically but are aligned with themes found in the focus groups. Once feasibility testing is complete, the scale will be revised as necessary and administered to 200 participants.

Grantee's Most Recent Self-Reported Quarterly Status (as of December 2010): The research team made significant progress this year. The recruitment goal of 15 participants in the feasibility testing phase is well within reach. Dr. Koopman reports that all project milestones were met on time and spending is roughly on target.

Preliminary Impact and Findings: Dr. Koopman is developing a manuscript based on the focus group findings, which indicated that promoters of online health resource use included speed, convenience, and the ability to look up information before a visit with a physician. Primary barriers to online health resource use included Internet security and privacy concerns. Some general conclusions drawn from the results are that the use of online information among patients with chronic conditions is an accessory to their relationship with their physician, that patients with less-established relationships may rely on the Internet more heavily, and that patients are using the Internet to enhance care by becoming more informed consumers, confirming the Chronic Care Model. These results were used to inform development of the scale to measure patient readiness to use Internet health resources.

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of health information to improve quality of care.

Business Goal: Knowledge Creation

* *AHRQ Priority Population*