

Developing a Guide to Identifying and Remediating Unintended Consequences of Implementing Health Information Technology

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Target Population: General

Summary: The use of new health information technology (IT) has been shown to enhance the quality, safety, and effectiveness of medical care. However, there are also unanticipated and undesired effects of health IT implementations, often called unintended consequences, which can be difficult to identify during a technical analysis or pilot test of the new technology. The RAND Corporation, in partnership with Kaiser Permanente of Colorado and the American Health Information Management Association (AHIMA), is developing, conducting user testing, and disseminating an empirically grounded, practical, Web-accessible *Guide to Identifying and Remediating Unintended Consequences of Implementing Health IT*. This guide synthesizes the existing knowledge on types and causes of unintended consequences and strategies to avoid or address them.

The project is a collaboration of six major health care settings and groups representing a geographically diverse group of provider organizations that includes inpatient and outpatient care delivered in academic and community settings. These organizations are either in the process of implementing a variety of health IT components from several vendors or are planning to do so in the near future. Depending on health IT implementation status and preferences, participants serve either as laboratory sites to help develop the Guide or as pilot sites to test the Guide. Since these organizations include large numbers of locations and practices, they represent a wide range of perspectives and will facilitate pre-post comparisons of the Guide's pilot-test assessment.

The Guide will help organization leaders understand sociotechnical sources of unintended consequences and may help them avoid undesirable effects in health IT implementations. This knowledge will allow organizations to develop a process to diagnose and cope with emergent consequences. This process may even help prevent undesirable outcomes and provide opportunities for learning about and improving health care delivery. Examples of the target audience for the Guide include regional extension centers, chief information officers, directors of clinical informatics, practitioners serving as champions of health IT, hospital and clinic administrators, and implementation oversight teams. The front-line health IT users, including physicians and nurses, should also find the Guide useful.

Project Objectives:

- Synthesize the existing knowledge on types and causes of unintended consequences and strategies to avoid or address undesired consequences. **(Achieved)**
- Develop the draft version of the Guide, and instructions for its use. **(Achieved)**

- Pilot test the Guide at three additional sites to assess its usability and usefulness. **(Achieved)**
- Revise the Guide and disseminate final version in a Web-accessible format through several methods. **(Ongoing)**

2010 Activities: The focus of activity was on completing the draft version of the Guide and presenting the draft at several meetings, including: the HMO Research Network Conference in March 2010, the Agency for Healthcare Research and Quality's (AHRQ's) Annual Health IT Grantee and Contractor Meeting in June 2010, the AHIMA Convention and Exhibit in September 2010, the EPIC Systems Users Conference in September 2010, and AHRQ's Annual Conference in September 2010.

The Guide was pilot-tested at three sites to assess its usability and usefulness. Revisions have begun in response to the feedback received in the pilot testing phase.

Preliminary Impact and Findings: The project has no findings to date.

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: Synthesis and Dissemination