Building an Implementation Toolset for E-Prescribing

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Summary: This project developed and tested complimentary e-prescribing toolsets that act as how-to guides for implementing e-prescribing across various ambulatory care settings and pharmacies. The toolsets were authored as a collaborative effort among researchers from the RAND Corporation; Point of Care Partners, LLC; the University of California, Los Angeles; the University of Medicine & Dentistry of New Jersey; and Manatt Health Solutions. The toolsets—one for health care providers and another for pharmacies—provide guidance on the complete life cycle of activities expected to contribute to successful implementation.

Several successful e-prescribing initiatives were analyzed to assess key practices or features such as governance agreements, organizational characteristics, individual attitudes and motivations, prescription-related work processes, specific e-prescribing technologies and standards used, distinctive implementation practices, and estimated costs (versus savings), for each participating organization. Toolset contents were also drawn from observations in diverse practices that use e-prescribing, expert opinions from the project's advisory committee, and existing tools.

Pilot testing of the toolsets was done among prescribers and pharmacies that were in the process of e-prescribing adoption. Field researchers visited each practice before and after the e-prescribing draft toolsets were piloted to conduct semi-structured interviews and observations of work processes. The toolsets were evaluated on usability and usefulness in helping a broad range of practices to implement e-prescribing.

The findings from the analysis provide guidance and customizable aids to help organizations follow the practices or develop characteristics that contribute to successful implementation. The guidance included goal-setting, timelines, workflow patterns and feasible work process transitions, and direction on other key organizational factors that support adoption of innovations such as leadership, organizational culture, employee involvement, training, and performance evaluation and incentives. Draft versions of the toolsets will be available for extended pilot testing to the Office of the National Coordinator for Health Information Technology-funded Regional Extension Centers through the Health Information Technology Resource Center's Communities of Practice.

Project Objectives:

- Catalogue publicly-announced, ongoing e-prescribing initiatives. **(Achieved)**
- Assess contributors to successful implementation of e-prescribing initiatives. **(Achieved)**
- Create two draft e-prescribing implementation toolsets. **(Achieved)**
- Evaluate the draft toolset's usability and usefulness in helping provider organizations implement e-prescribing. **(Achieved)**
- Create a final e-prescribing implementation toolset based on findings from the pilot evaluation. **(Achieved)**

2011 Activities: Project activity focused on completing the pilot testing of the toolsets and conducting post-pilot visits to each participating practice. The project team interviewed practice staff and observed workflow processes to inform the evaluation of the toolsets' usability and usefulness in helping practices implement e-prescribing. The findings were then analyzed and summarized in a final report. Two e-prescribing implementation toolsets were developed; one aimed at health care provider organizations, the other at independent pharmacies. The project was completed in September 2011.

Impact and Findings: Among the physician offices that participated in pilot testing, those that had recently adopted e-prescribing achieved a level of success that they considered acceptable, at least at 1-month after implementation. However, in general, the use of the toolsets was considerably less extensive than anticipated. One reason for this was the difficulty of identifying practices at an appropriately early stage of planning for e-prescribing but with sufficient commitment to move forward to warrant enrollment in the site-visit protocol. In the end, the practices that could commit to moving forward had typically already selected a particular e-prescribing product and in many cases had already adopted an implementation plan, either from their vendor or their support organization. Therefore, these practices did not feel they needed the implementation-related content in the toolset.

The project team's strategy of facilitating toolset use via personnel from outside support organizations did not appear to increase use of the toolset. One potential reason may be that frequency of visits from the support personnel and their power to affect change in the practice were probably too limited to have a substantial impact. Scheduling time with physicians participating in the study was a contributing challenge. Many sites cited the daunting volume of information in each toolset and the challenge of locating resources of interest within the toolset as obstacles to toolset use. Since the toolset specifically recommends work process redesign, future revisions of the toolset should provide more explicit guidance on this topic. The toolset now indicates that pharmacies should address the issue of tailoring implementation resources and training with their vendor early in the implementation process.

The adoption and uptake of e-prescribing will likely remain a substantial challenge in coming years. The findings from this research suggest that an effective approach to assisting with this challenge may require a larger up-front investment of time and intensity of training. This applies both to the activities of support staff in training and working with members of practices, and to the activities of trainers themselves in learning to use the toolsets.

Target Population: General

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve the quality and safety of medication management via the integration and utilization of medication management systems and technologies.

Business Goal: Implementation and Use
