

Enhancing Fulfillment Data in Community Practices for Clinical Care and Research

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Summary: In ambulatory care, there are two major forms of prescription data. *Prescribing data* represent what clinicians have prescribed for patients—ideally, the *intended* medication regimen. *Fulfillment data* represent what patients have received from the pharmacy—the *actual* medication regimen. While community practices that use electronic prescribing (ePrescribing) are obtaining new access to fulfillment data, many questions still remain about the actual accessibility, comprehensiveness, and utility of these fulfillment data for clinical care and research. Better informed medication management has the potential to improve the quality, safety, and efficiency of the health care system, particularly when there is bidirectional information that includes both prescribing and fulfillment data. In a fragmented medical system, providing clinicians with fulfillment data has the potential to improve coordination of care by revealing what other clinicians have prescribed for a patient. It may also help clinicians provide better-informed care by revealing whether a patient has been able to adhere to prescribed drug regimens.

This project is using the Distributed Ambulatory Research in Therapeutics Network (DARTNet) to assess and improve the accessibility and utility of fulfillment data in community practices. The focus of this study strives to extend beyond what occurs at the pharmacy level to include additional information on prescriptions submitted by other providers. DARTNet, funded by the Agency for Healthcare Research and Quality, is an electronic practice-based network that is uniquely qualified for this assessment because it includes 32 independent and geographically-dispersed organizations encompassing more than 1,700 clinicians and 4 million patients. For this project, member practices will be surveyed for their use of ePrescribing and the accessibility and utility of fulfillment data in their electronic health records. Fulfillment data will be extracted from five of those practices and assessed for completeness and accuracy. The utility of using prescribing and fulfillment data to identify unintended continuation of medication and duplication of therapy will be explored.

Specific Aims:

- Use surveys and interviews to assess the actual status, organizational plans, and barriers for full ePrescribing, capture of fulfillment data, and clinician use of fulfillment data at all DARTNet organizations. **(Ongoing)**
- Assess the data's comprehensiveness and clinical utility in five DARTNet organizations receiving fulfillment data through the ePrescribing-based process, the consent-based process, or both. **(Ongoing)**
- Develop and pilot test a patient-level report used using clinical, prescribing, and fulfillment data to

improve the management of hypertension during the clinical encounter, with subjective assessments of utility by survey and group interviews of clinicians in one DARTNet organization capturing fulfillment data. **(Upcoming)**

2011 Activities: During the first few months of the project, the focus of activity was on submitting the research application to the Colorado Multiple Institutional Review Board (COMIRB), developing the initial survey among DARTNet organizations, and creating the initial list of proposed data elements for extraction of fulfillment data.

The first submission to COMIRB was made in October 2011, from which minor modifications were requested. The application was re-submitted December 2011 and COMIRB approval was granted on December 21, 2011.

The survey was created using Research Electronic Data Capture (RedCap), a public domain survey tool used in more than 100 institutions. The survey that was developed was based on previous informal email survey questions used in years prior but differs in its ability to include conditional questions using RedCap's logic. Four internal reviewers were used as pilot testers for the survey, resulting in significant modifications during its development, and the addition of conditional logic to improve the flow of questions and topics. More complicated than originally anticipated by the study team, the final version of the survey includes three levels of conditional logic.

In developing the list of proposed data elements, the project team had to consider data availability dependent on the data feeds available at the selected sites. Following a review of the survey data, the team will work with the proposed sites to evaluate data availability for extraction.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are on track, and project budget spending is on target.

Preliminary Impact and Findings: There are no findings to date.

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: Knowledge Creation
