

Ambulatory Care Compact to Organize Risk and Decisionmaking

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Organization:	Massachusetts General Hospital
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Target Population: Adults

Summary: Primary care in our current health system is fragmented, inefficient, and frequently unsafe. Efforts to improve quality of care, focusing on a relatively narrow set of quality measures, and increasing emphasis on care guidelines have transformed the practice of medicine in ways that are both good and bad for patients and clinicians. Standardized care algorithms attempt to promote uniform compliance with evidence-based care, but are underutilized. This may be due to their inability to accommodate individual patient and clinician preferences and values. With greater access to health information via the Internet and other media, patients are increasingly involved in the medical decisionmaking process. At the same time, advances in health information technology (IT) have ushered in electronic health records (EHRs), increasing capacity to identify and track patient populations within a health system. These advances will facilitate the design of new models of primary care delivery that employ system-level health IT tools to promote patient and clinician partnerships.

This project's objectives are to design, develop, implement, and evaluate a comprehensive, practical, and innovative model of care delivery to support the process of shared decisionmaking. The system, titled Ambulatory Care Compact to Organize Risk and Decisionmaking (ACCORD), will allow patients to collaborate with clinicians to establish, monitor, and track shared clinical care plans. ACCORD will interface with the Massachusetts General Primary Care Practice-Based Research Network's preexisting, internally developed Computer Stored Ambulatory Record EHR system.

The project team is developing ACCORD to help providers and patients manage followup activities determined at primary care visits. The team selected the following domains to maintain through ACCORD: preventive health screenings, abnormal findings followup, and medication monitoring. ACCORD will enable patient-specific care plan development to reduce miscommunication between providers and patients by presenting care plans as explicit "compacts" or agreements between provider and patient, and by providing explanatory information about the risks of not adhering to the plans. The project team is working to ensure that patients and providers are comfortable proposing the care plans in this manner.

The project activities are organized into three steps. Step one is to design, build, and test the system to develop a usable method of compact authoring and tracking. Step two will test the tool to determine if providers and patients are comfortable creating explicit agreements and if the tool is effective in this capacity. Step three is to conduct one or more randomized controlled trials (RCTs) in a primary care practice, and an institution-wide cohort in another primary care practice to examine system adoption

and process measures. The RCTs will examine differences in outcomes, such as preventive screening test completion, chronic disease management, patient engagement, patient knowledge, patient-provider communication, patient and clinician satisfaction, and various system-utilization metrics.

Specific Aims:

- Design a model for patient-centered primary care that facilitates patient-clinician partnerships that results in documented followup care plans that can be tracked reliably to reduce the risk of care plans being lost to followup in busy primary care networks. **(Achieved)**
- Develop a health IT architecture and software (i.e., ACCORD) to support the developed patient-centered care-delivery model. **(Ongoing)**
- Implement and evaluate ACCORD in an RCT within the Massachusetts General Primary Care Practice-Based Research Network. **(Upcoming)**

2010 Activities: Dr. Chueh and his team completed design and implementation of the ACCORD scheduling, event detection, and notification engines. Early physician feedback emphasized that ACCORD needed to integrate smoothly with clinician workflow or else it would not be used by clinicians. Integration tasks underway during this timeframe included: 1) generating clinical documentation with a coded problem and problem-linked comment for the structured problem list and 2) integrating ACCORD event notification with the clinician view of the patient schedule. The team completed the addition of associations between “observations” abstractly represented in the ACCORD templates and the actual encoded information available from data services at the institution.

The grant team began design of the randomized controlled trial. Revisions will take into account recruitment delays and the new scenario for initiating ACCORD from patient lists in Oncall Answers result sets, the local EHR. The current study design for the controlled trial focuses on three ACCORDs expected to be appropriate for a relatively high-frequency of the study population. The population eligible within the study timeframe will be identified by query, and targeted for additional enrollment support, in both control and intervention groups. Intervention group providers will be trained to use ACCORD in both the episodic, one problem at a time scenarios initially conceived, and the more recently recognized cohort-based scenario in which providers propose the same range of ACCORD options to a whole list of patients matching specific indications.

Grantee’s Most Recent Self-Reported Quarterly Status (as of December 2010): Project progress is on track in some respects. The project experienced significant delays early in the calendar year because of the delayed release of the iHealthspace patient portal to the practice where the ACCORD control trial was to be implemented. A viable plan is in place for addressing delays. Project spending is roughly on target.

Preliminary Impact and Findings: ACCORD templates provide a structured representation of the plans of care to be jointly considered by the physician and patient seeking to form an ACCORD. This structured representation includes a schedule of expected actions that could be used as the basis for automated notifications when deviations from agreed upon plans of care are detected. As the project progressed, it became clear that templates need to perform four additional functions. First, they need to be locally configured to link to the relevant, locally available knowledge resources. Second, while ACCORD templates are defined in terms of an abstracted notion of “observations”, there still needs to be a local configuration that associates observations with specific data services and the appropriate parameters (usually codes) for those data services. Third, templates need to support local configuration

of information to guide linkage with clinical documentation to the appropriate sections of the locally available EHR. Fourth, each ACCORD template needs to be annotated with indications to support keyword searches for templates that will use the same terms used in clinical queries that find appropriate patient candidates.

Linkage of clinical documentation generated by ACCORD into the local EHR has shown to be more complicated than was anticipated. The ability to generate an independent “ACCORD note” to insert into the store of visit notes represents just the minimum requirement. To support the care process, the ACCORD documentation should be able to drive updates to the problem list, and place text where the plan of care for the problem usually goes. The issue regarding the project local EHR, Oncall, will be solved by enabling the clinician to specify the problem to which the ACCORD should be linked. To support faster physician choice, templates need to be linked to a list of the most likely possible problems, and a “preferred” problem. From this general list, combined with the patient-specific problem list, an ordered list of default selections emerges from which the clinician may choose one. During the last quarter in 2010, the team completed annotation of the templates in the library with lists of possible problems.

Annotating the templates with problems provided new insight into different types of ACCORDs. Some ACCORDs are easier to connect to a well-defined set of problems than others. What makes problem-linking more or less difficult is the specificity of the ACCORD template and where the ACCORD lies on the diagnostic path.

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: Implementation and Use