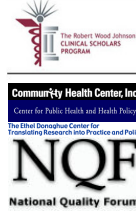




Centers Speak Up: The Clinical Context for Health Information Technology in the Ambulatory Care Setting

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Abstract

Clinicians in ambulatory care settings are increasingly being called upon to use health information technology (health IT) to improve practice efficiency and to improve performance. Successful adoption of health IT requires an understanding of clinical tasks and workflows, and how they will be affected.

We sought to describe the clinical context for health IT, and how health IT functions within this context, through a qualitative study, using in-depth, audio-recorded interviews focused on health IT use in the ambulatory care setting.

Systematic characterization of clinical context identified multiple primary clinical domains. These included interclinic coordination, intraclinic communication, medication management, patient education and outreach, provider education and feedback, and results management. Participants suggested that a strong prerequisite for successful deployment of health IT is that underlying workflows must work well, independently of the health IT solution. Clinical process diagrams were generated to characterize these primary domains.

Understanding the clinical context is a necessary precursor to successful deployment of health IT. The diagrams presented may be used as the basis of use cases for EHR certification, to identify grand challenges to be solved, or as the basis for a curriculum about the role of health IT in clinical practice.

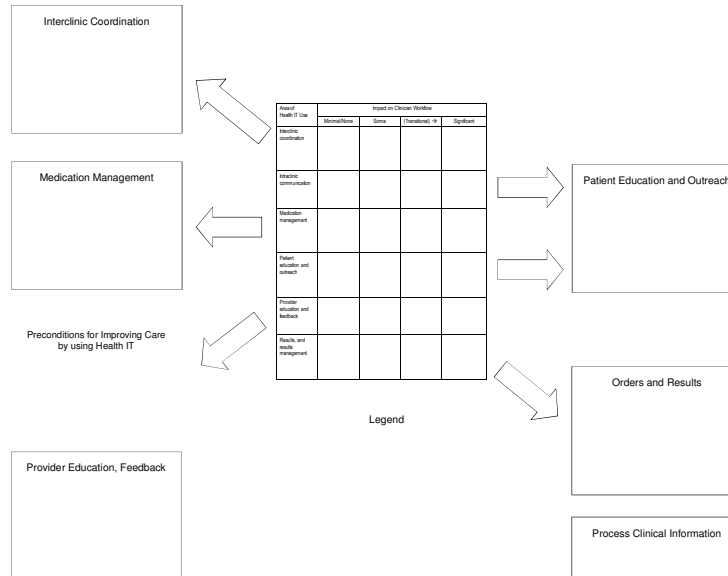
Methods

Organization	Location	Site	Interview

We purposefully sampled community health centers and organizations providing them with IT expertise. From August, 2006 through March, 2007, we conducted audio-recorded interviews, transcribed by an independent professional transcription service. We made site visits until theoretical saturation was reached. Coding and analysis was performed by a multidisciplinary team. Data were synthesized to create a framework reflecting clinical context for health IT solutions. These findings were verified with selected participants, experts, and other health center executives.

Results

We completed 20 on-site, in-person interviews with 1 CEO, 1 COO, 4 CIO's, 4 Medical Directors, and 8 Directors or staff responsible for systems implementation. Participants expressed that health IT systems facilitate and support existing clinical processes within practices, and stated that a precondition for successful deployment of health IT is an underlying set of workable clinical processes. One Medical Director observed, "If you can't get a system to work on paper, making it electronic won't make it any better." We present our findings as clinical process diagrams, displayed below.



Discussion

We created clinical process diagrams describing the clinical context in which health IT systems are placed, based on the experiences of a diverse set of community health centers.

These diagrams can serve as a framework for evaluation. They may be used as the basis for comparison charts to help providers examine the advantages, disadvantages, and error-susceptible processes of different health IT solutions. They can also be used as the basis for use cases for EHR certification, to identify grand challenges (e.g., for documenting the visit, to create a system where information can be entered quickly, but which simultaneously stores relevant data in a structured form for future analysis). The diagrams provide a first step towards creating a curriculum about the role of health IT in clinical practice.

From a policy perspective, clinics would benefit from national quality guideline recommendations, which all clinics could then adopt consistently. Data specifications and analysis standards for these guidelines should be defined so that performance data can be reported uniformly, so it can be compared across practices.

There are important limitations to our study. The selected sites might not fully represent the existing spectrum of clinical uses of health IT in health centers, or participants may have misrepresented their health IT capabilities. We also do not discuss the key issues of organizational readiness, change management, training, non-clinical uses, development and maintenance of IT infrastructure (off-site backups, downtime and disaster recovery strategies), HIPAA, privacy, security, or authentication. Despite these limitations, these clinical process diagrams illustrate the basic issues that practices should consider when planning for new health IT systems.

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