Tapping the Unmet Potential of Health Information Technology

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Health information technology (HIT) holds promise for facilitating vast improvements in care and, ultimately, in the health of Americans, but achieving that potential remains a daunting task. A recent article in the Los Angeles Times described the new phenomenon of hiring computer-savvy undergraduate “scribes” to take notes for physicians during patient encounters and enter the information into electronic health records (EHRs) — a practice that suggests how far we must go to develop EHRs that clinicians will embrace. Of course, the most highly trained professional in the room need not be the one to enter data into the computer, especially during an emergency, but the perceived need for scribes and providers’ experiences using EHRs raise important questions about both the efficiency of care processes and the usability of current EHRs.

Although EHRs laudably provide immediate access to patient data and electronic messaging functions, clinicians have been frustrated by the difficulty of using them to support care delivery and coordination. Transforming EHRs into effective clinical tools rather than a means of capturing information primarily for documentation and billing purposes will require progress on multiple fronts.

Clinical processes must evolve so as to improve care and be more responsive to patients’ needs, and HIT’s capabilities must evolve along with them. HIT has particular potential in such areas as coordination of care, workflow efficiency and use of teams, clinical decision support, and population health management — all areas offering glimpses of both the potential and the challenges associated with improved HIT use.

Few providers today, for example, can truly coordinate care — integrating care, in consultation with patients and their relatives and caregivers, across all of a patient’s conditions, needs, clinicians, and health care settings. Outpatient practices and inpatient facilities lack well-developed processes for exchanging information, both within their own walls and during care transitions. Poor care coordination negatively affects patients — particularly those with multiple chronic conditions who account for an overwhelming proportion of U.S. health care expenditures.

HIT, especially if widely implemented, can facilitate coordination by making information electronically available at the point of care. As clinical care processes become more effective and efficient, they can inform new HIT capabilities that will better support coordination. For example, providers need to develop consistent notification processes to ensure timely communication about care transitions. Medical and nursing professional societies could work with HIT vendors to develop standardized notification procedures, which could be implemented through refined criteria for the “meaningful use” of HIT. HIT can also better support care coordination through the development of referral-tracking systems, improved approaches to reconciling patients’ medications, and expansion of “problem list” capabilities — to avoid cluttering of lists with redundant information, for example, and permit sorting and searching of lists and linking of listed problems to relevant portions of progress notes, assessments, and treatment plans.

In addition, improving care coordination and health outcomes requires teamwork. Taking into account each team member’s training, skill set, and expertise when delegating tasks and defining roles is critical to improving efficiency, for both primary care teams within a practice and inter-specialty teams sharing patients’ care. HIT can support team-based care with tools enabling team members to identify patient care goals and document and monitor progress using a shared care plan. In outpatient practices, providers report that electronic messaging and notification of staff about patient care tasks facilitate communication about delegation and task completion. Electronic messaging can also enable real-time communication with specialists — if they’re on the same system — to determine whether a consultation is necessary.

Coordinating care for patients with complex health conditions who see multiple physicians can also be supported by better HIT interoperability. The primary care team may be in the best position to coordinate a patient’s care, but it will often need information from other providers. Most current EHRs don’t adequately support data exchange across providers and settings, so practices communicate with outsiders primarily on paper. To support information exchange, EHRs must present data in standard ways, and separate organizations providing services for the same patient need to share information securely.
The Health Information Technology for Economic and Clinical Health (HITECH) Act envisions the secure exchange of data across providers and settings occurring through the Nationwide Health Information Network, which will provide a common platform and protocols. Some states and communities are developing regional health information exchanges, but most are still in their infancy. It is hoped that these local and national efforts might eventually be linked. Some have raised concerns, however, about the sustainability of these exchanges absent a stronger business case to support them.

Clearly, HIT alone cannot transform our health care system: financial incentives must be re-aligned to reward patient-centered care. Current fee-for-service reimbursement encourages EHR use for documentation of billable events rather than for tasks important to the quality of care, such as coordination. Payment innovations such as bundled payments and accountable care organizations aim to encourage providers to share accountability for outcomes. Such payment reform would offer clinicians incentives to demand HIT capabilities that better support the clinical tasks required to improve patients’ health and would make these activities important to the success of health care organizations.

Fee-for-service reimbursement also makes it difficult for clinicians to take the time to listen to patients’ concerns. Unfortunately, adding an EHR to the clinical encounter can further distract clinicians from patients (which is one of the reasons that some emergency departments use scribes). To counter this tendency, payment reform could be accompanied by training for clinicians, residents, and medical students in effective communication with patients in the presence of an EHR.

HIT can also provide tools to help inform decision making with regard to diagnosis (with clinical prediction rules), prevention (reminders), disease management (registries), and treatment (electronic prescribing tools). The use of computerized medication orders, generated with the help of decision-support tools, is associated with reductions in adverse drug events. But most current commercial EHRs don’t provide or link to decision-support systems, particularly for managing chronic care or selecting preference-sensitive treatments. To permit the development of adequate decision-support tools, the evidence base must be expanded and actively maintained.

Finally, primary care practices increasingly must focus not just on individual patients but on whole populations, as they strive to function as medical homes. A new orientation and effective methods for shifting practices from reactive and acute-symptom care to approaches including proactive, planned care for both healthy and chronically ill populations will be needed. Without HIT, it’s difficult to provide effective population-based care and report quality metrics, but most commercial EHRs currently cannot help identify which patients in a population may need particular services. Registries are another critical tool for population health management and an area where HIT applications could be better developed and integrated with EHRs.

Regardless of HIT’s potential advantages, clinicians in the country’s many small primary care practices can be overwhelmed by it and will need to be convinced that EHRs are affordable, enhance efficiency, and improve care. Then, they will need extensive, ongoing support. Under HIT, HIT Regional Extension Centers will provide technical assistance, guidance, and information on EHR adoption and meaningful use, particularly to such practices. These centers could also compile clinicians’ feedback for policy-makers and vendors, providing an infrastructure for shared learning. Unfortunately, the United States currently lacks an adequately trained workforce to support practices in these areas.

Continued research on clinical care processes, the design and use of HIT, and payment reform, as well as ongoing support for clinicians, will be key to the effective and meaningful use of HIT. Today’s EHRs do not sufficiently support aspects of care delivery that are vital to improving care and controlling costs.

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