The Merging of HIT

By Barry P. Chaiken, MD, MPH

As the frenzy associated with electronic medical record (EMR) implementation winds down, many industry experts wonder what new initiative sits on the horizon. While most organizations face a daunting task of redesigning clinical workflows and facilitating change management to achieve the targeted clinical and financial outcomes from their EMR purchase, they must also continue to invest in their healthcare information technology (HIT) infrastructure.

The straightforward yet difficult work of clinical workflow redesign requires identification of best practices as well as determining how to embed those practices in a natural workflow. Clinical and administrative staff must determine how to effectively leverage EMR functionality to consistently and optimally deliver the chosen best practice.

A 2013 *PSQH* article, "The Health Supply Chain," linked the quality of direct patient care with both the clinical and nonclinical processes deployed in a clinical setting: "The Health Supply Chain model provides a broad, all-encompassing view of care delivery that links both administrative and clinical processes and workflows in the 'manufacture' of patient care." The article added, "Although administrative staff historically has focused on processes that impact their functional silo, they now must understand how their policies, processes, and workflows impact clinical care delivery" (Chaiken, 2013).

Although most attention to HIT focuses on the use of the EMR, other recent HIT tools successfully merge clinical and administrative activities that previously stood independent of each other. These new tools represent the larger overlap of care delivery activities by combining clinical bedside care with the broad range of services that support it. This blurring of lines bodes well for HIT's ability to impact the quality and cost of patient care.

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The challenge of mergers

For organizations expanding their reach through mergers and acquisitions that create an even larger integrated delivery network (IDN), managing patients throughout the network becomes increasingly critical and greatly impacts profitability. Boosting patient volume solely by expanding geographically does not guarantee recruitment of profitable patient populations. And though detailed patient group stratification might appear to be intelligent financial risk management at first, it often breaks down once the realities of the actual merger and covered patient mix take hold.

Large IDNs depend upon a network of feeder hospitals that migrate patients from community hospitals to tertiary treatment centers. This approach allows patients requiring routine care to receive it at the most appropriate and least expensive point of service—the community hospital—while sicker, more complex patients are transferred to the tertiary care center that is better equipped to manage them. Treating less sick patients at a tertiary hospital is usually not cost-effective compared to a community hospital setting, and treatment of complex cases at the community hospital often produces less favorable outcomes that are not in the best interests of the patient. As an example, uncomplicated gallbladder surgery might best be performed at a community hospital where the procedure is done routinely, while kidney transplant may best be undertaken at a tertiary care center with an embedded, well-trained transplant team.

Transfer HIT provides expanded data set

Previously, IDNs used paper records or spreadsheets in their transfer centers to manage patients as they moved from one hospital setting to another. The lack of EMRs and other HIT tools limited the available information on each patient,

allowing these mostly manual processes to adequately manage patient transfers.

With the advent of EMRs and other clinical and administrative HIT systems, each transferred patient potentially arrives with an exponentially larger set of medical data. This data, when provided to hospital staff, allows the clinical team to more efficiently manage the limited resources available to treat these complex patients.

Returning to our example of a kidney transplant patient being transferred to a tertiary care center, the clinical staff obtains great value from the clinical and administrative patient information that is provided as part of the transfer process. Armed with this information, specialized services can properly assign beds, transplant teams, and various ancillary services before the patient arrives on the ward.

Specialty services monitor the patient throughout the transfer process, allowing the treatment center to plan and allocate resources proactively rather than reactively. In addition, EMRs ingest much of the transfer center's generated data, allowing for better documentation of the patient's condition and for the data to be easily used by subsequent clinicians.

Interoperability challenges often prevent the seamless transfer of information among clinical and financial systems. The building of high-quality, robust interfaces helps alleviate many obstacles to sharing data, but such efforts unfortunately drain resources from other worthwhile projects.

In addition, EMRs' ability to ingest data varies; some may only accept static data elements from a PDF, rather than discrete variables that become the active part of a medical record. However, the industry and government pressure to improve interoperability provides optimism that EMR data capture will improve over time.

While transfer center activities are associated with the details of managing patient administrative information, the combination of this administrative data with clinical data—facilitated by new, robust, and focused HIT systems—enhances the ability of clinical and nonclinical staff to efficiently manage a transfer while assisting the clinical teams newly assigned to a patient. Targeted HIT thus allows systems that were previously paper-based and inefficient to morph into a properly focused best practice for patient transfer. Standardization, coupled with digital tools, allows for the collection of data to assist in generation of both clinical and administrative quality metrics.

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Transfer management demonstrates the evolution of HIT and portends the eventual merging of clinical and administrative systems. It also illustrates how these systems naturally interlock in providing patient care.

This next phase of HIT utilization surely includes clinical workflow designs that synergize clinical and administrative systems in managing care delivery. Could this be the inflection point where HIT systems finally deliver on the hype of the past decade? Perhaps, but there is much to do to improve the development and interoperability of these systems. Nevertheless, every small step forward matters.

Barry Chaiken *is the president of DocsNetwork Ltd. and has more than 25 years of experience in medical research, epidemiology, clinical information technology, and patient safety. He is board-certified in general preventive medicine and public health and is a fellow, and former board member and chair of HIMSS. At DocsNetwork, Chaiken worked on quality improvement studies, health IT clinical transformation projects, and clinical investigations for the National Institutes of Health, UK National Health Service, and Boston University Medical School. He is currently an adjunct professor of informatics at Boston University's School of Management. Chaiken may be contacted at bchaiken@docsnetwork.com.*

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