

Clinical Transformation Challenges

Clinical transformation can help health care organizations adapt to the dynamic range of forces that drive marketplace change. These forces include Payor pressure, consumerism, and regulation.

The health care industry has a poor track record of using information technology to support business change. For the most part, the industry has failed to get significant value from its technology investments. That's primarily because hospitals and health systems have bought information systems and implemented them without redesigning core business processes. The industry's most successful IT implementations to date have been automation of non-core functions such as financial systems, or departmental applications such as laboratory and pharmacy.

Unlike most other industries, health care providers have only limited experience with automating their core business — taking care of patients. As a result, the health care industry also trails other industries in adopting enabling technologies to support change, such as wireless, handheld, bar coding, and the Internet.

Many industries have so successfully automated their core business functions that we can't conceive how they could function otherwise. Few people would do business today with a bank that doesn't offer Internet banking and ATMs. No insurance company that has not completely automated its premium and claims processes and then tied them to the Internet could possibly compete in today's market. Manufacturing companies find automation indispensable for inventory and process control.

Yet, when it comes to delivering health care, labor-intensive, manual processes are the norm. Physicians order medications by writing on a patient's chart. Nurses dispense medications based on handwritten instructions. Notes jotted on a chart or log verify when the medication is administered. Diagnostic test results

must be read from paper documents the nurses have to carefully put into the proper patient files. It's almost as if the computer revolution of the last 50 years never happened.

Today, the health care industry is making up for lost time. Driven by competitive pressures and the need to improve quality and productivity, health care providers, from independent hospitals to large health care systems, are rethinking their care delivery processes and investing in advanced clinical information systems (CIS) to enable these changes.

There's nowhere else to go. Future quality improvements and cost savings will come from automating core patient care processes. The required changes to people, processes, and technology are what is meant by "clinical transformation."

What Is Clinical Transformation?

Clinical transformation is much more than just acquiring and implementing an advanced CIS. Clinical transformation means optimizing core clinical operations using information technology to drive significant quality and financial improvements.

To realize maximum benefits, health care providers must integrate process improvement, organizational change, and the enabling information technology. When this is accomplished, in addition to improvements in quality and patient outcomes, a financial return on investment can be quite significant — on the order of three or more times the total cost of ownership of the information system over its lifetime.

Paving Cow Paths vs. Rethinking the Cattle Drive

Using technology to automate inefficient manual processes results in ineffective automated processes. This is called "paving the cow path" and has been a critical failure within the health care industry. Other industries have shown that information technology delivers significant quality and financial improvement only when core business functions — not just ancillary back-office functions — are fundamentally redesigned to take full advantage of the benefits technology can provide.

To realize real quality and financial returns from their IT investments, health care providers need to rethink and redesign the processes by which they deliver and manage patient care. Technology alone is not the answer:

- ?? System implementations tend to automate the current environment rather than transform it to a new way of doing business.
- ?? System implementations have a track record of taking too long, with little or no measurable results.
- ?? Physicians do not become active users of systems because they do not perceive a clear and sustained benefit.
- ?? Implementations that fail to fully engage physicians create added strain on already taxed nursing staff.
- ?? Implementations place too much reliance on single vendor solutions, closing out options for increased functionality.
- ?? System implementations will increase the cost structure through depreciation, amortization, and maintenance.

Unique Challenges - Unique Business Model

Health care organizations today face daunting challenges:

- ?? Shortage of clinical personnel, such as nurses.
- ?? Higher expectations of patients

- ?? Patient involvement in making care decisions.
- ?? Capacity issues.
- ?? Reducing medication errors.
- ?? Concern about quality and outcomes.
- ?? Financial pressures.
- ?? Gaining support of the physicians.

Solving these challenges means redesigning the patient care process and automating many business and clinical functions. Doing so will be expensive, but it is the cost of staying competitive in a business environment where there is constant pressure to provide better care with fewer resources at less cost. The health care industry operates on a business model found in no other enterprise.

The key decision-makers who drive consumption of resources — physicians — are typically not employees of the hospital. They can't be forced to use a system in which they see no value. Any CIS that is designed for use by physicians must balance what is required of physicians with the perceived benefits they get out of it. If physicians are expected to learn to use computers just to submit orders electronically, this may represent an undesirable burden, unless, by doing so, they can also improve their workflow.

Such improvements could include having instant access to patient records in the hospital, office or even at home, in addition to results of diagnostic tests; radiology and pathology reports; vital signs; current orders; and reference information. If the question, "What's in it for me?" can be answered with capabilities that physicians will value, and then they are more likely to adopt a CIS that can provide those capabilities.

Critical Success Factors

There are a number critical factors related to successful CIS implementation and transformation initiatives.

First, it is critical to set clear and realistic expectations for the outcomes that will result from implementing an advanced CIS. What improvements in quality should be expected? What will be the financial improvement? What other operational improvements can be realized? What adoption rates are expected from physicians? Defining and establishing these expectations, and having everyone understand them and buy into them, is a key success factor.

It is also important to understand that implementing an advanced CIS and transforming care processes is an operational initiative, not an IT initiative. The initiative should have appropriate executive sponsorship from the operational side of the organization. These operational executives must take ownership of the implementation and related transformation and must be held accountable for its success. The CIO and the IS department have vital supporting roles in clinical transformation, and the initiative must be actively supported by the physicians, nurses, clinicians, and other operational personnel who will use it.

If an advanced CIS is to meet the goals of the organization and its clinicians, they must participate actively in its design and implementation. Those who will use the system must be involved from the beginning in decisions about how it will work and how it will be used. Willing physicians must be designated "medical champions" so that the "What's in it for me?" benefits of the system will assure its adoption by the medical staff.

A facilitator or liaison person knowledgeable in both information technology and medical issues should collaborate between the physicians and the IT staff. This person, called the "chief medical informatics officer" in some organizations, will keep the physicians engaged in the implementation process and prepare them to take ownership when the system is in use.

Implementation of an advanced CIS and transformation of core clinical processes is a large, complex initiative requiring dedicated resources with the right mix of clinical, operational, and technical expertise. In addition, a strong project manager with clinical systems implementation experience needs to be identified and dedicated to the initiative.

A well-defined implementation plan and the ability to monitor and track results against the plan is key. The expected outcomes, financial performance, patient safety, reduction of medication errors, and so on, must be carefully and realistically defined up front, then tracked and evaluated all along the way. Incentives should be aligned based on a successful implementation and achievement of predefined outcomes.

This may include a bonus program for key stakeholders, including vendors and third-party consultants. Health care providers should execute contracts with vendors that hold them accountable for meeting timelines and expected outcomes. This is a new kind of business arrangement that asks vendors to risk part of their payments to performance-based measures versus predefined milestones.

Why it Will Work This Time

In the past, information systems imposed a structure on any automated process. Tasks had to be logically structured so that the computer could perform them efficiently. Some processes didn't fit the machines' constraints, and so were either impossible or awkward to automate. Users had to learn to think about their actions in terms of discrete, repeatable steps. Many professionals — and physicians top this list — don't function effectively that way.

Thinking like a computer is no longer necessary. Software and hardware vendors have developed advanced clinical information systems that are sufficiently powerful, reliable, and flexible to adapt to the work processes of physicians and other health care professionals. Workflow tools, rules-based systems, virtually unlimited information storage, and Internet connectivity are among the technologies that make clinical transformation possible.

Medical institutions have already used information technology to automate financial and administrative functions. Driven by cost-conscious medical plans and quality-conscious consumers, health care providers are under constant pressure for better outcomes and safer care at competitive cost. The easy fixes have been made. Technology represents the last frontier.

Today's new generation of information technology can enable a revolution in delivery of patient care. Capitalizing on this opportunity will require the collaboration of operational executives, IT staff, physicians, nurses, other clinicians — every person engaged in delivering or supporting the delivery of patient care.

Today's IT investment will be made more wisely than in the past. It will be based on clearer expectations, automation of core business processes, and the realization that technology must be integrated with process and organizational changes to deliver maximum value. The investment will be made to provide health care professionals with the necessary tools to deliver better patient care. Competitively.