

**Before heading full-speed in the direction you think you want to go, be sure you know where you are coming from. Assessing the readiness of your organization to adopt new processes and technologies is a vital first step that prevents unpleasant and costly surprises later on.**

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At the fundamental level, all health care organizations are after the same thing: automating care processes to provide better, safer patient care using fewer resources at less cost. However, choosing the right implementation path will vary widely depending upon your organization's initial state and business environment. For example, a hospital system with large variations in clinical practice, highly skeptical clinicians, isolated information silos, and disparate applications is in a very different starting position from an organization that has disease-specific practice guidelines, change-thirsty clinicians, robust infrastructure, and integrated applications connected to users through a fast, reliable, and ubiquitous network. Health care systems composed of multiple entities face different transformation challenges than independent hospitals. An academic teaching hospital may have very different needs from a community-based delivery network. No matter what type of organization, understanding where you're coming from is the necessary first step toward planning how to get to where you want to be.

## **To Plan Where You're Going, Know Where You Are**

Before beginning to implement an initiative as expensive and far-reaching as a clinical information system (CIS), it is vital to assess the readiness of your organization to make the necessary changes. You need to take a good, hard look at the realities that confront such a transformation. You should be prepared to answer the following questions:

- ?? Are your organization's high-level executives committed to this initiative?
- ?? While capital and operating dollars are under increasing pressure, is your organization prepared to spend what it takes to do it right?

- ?? In the face of clinician shortages, are your physicians and other clinicians willing to devote sufficient time and effort to the transformation effort so that the eventual solution will serve their needs?
- ?? Are your current processes and organizational structures consistent with your enterprise's vision for the future?
- ?? Are your clinicians ready for a collaborative working environment?
- ?? Have you clearly defined the service levels necessary to support the use of clinical systems in patient care environments?

## **The Case for Readiness Assessment**

An ounce of prevention is worth a pound of cure. Failing to ask these questions up front may result in unpleasant surprises later. According to Larry Lotenero, CIO at University of California San Francisco Medical Center, "A readiness assessment is a rigorous look at your organization's ability to take a total transformational approach, not just implement an advanced clinical information system."

Measuring readiness is not an informal or superficial process, but a methodical, deeply probing analysis of your organization's existing organizational, cultural, and technology characteristics. An analysis should examine the attitudes of physicians and other clinicians and potential opportunities for process improvement.

These characteristics are measured against peers to provide objective comparisons between your organization and industry leaders. Most importantly, a readiness assessment lets you know in advance the challenges you will probably face — the gaps that must be remedied — so that dealing with them can be part of your implementation plan.

A detailed readiness assessment should be the mandatory first step for every CIS implementation. Professional change and system integrators, expert in

guiding organizations through transformational initiatives, and with a track record of successful clinical transformation and clinical system implementations, assess readiness at the outset of every clinical transformation program.

## **Been There, Don't Want to Do That**

In the past, information systems were evaluated and implemented by information professionals with little input from clinicians. The implementation was viewed as almost a purely technical initiative. At most, a few physicians and nurses were recruited to look at the vendor dog-and-pony show. Based on criteria developed primarily by the IS department, the organization selected its clinical system. Its implementation became an IS responsibility. The result of such a scenario was often a basic clinical system implemented at great expense, yet incredibly without adequate clinician support and not tied to the goals of the organization.

Ignoring cultural and process changes that must accompany technology improvements invariably results in information systems that deliver few (if any) benefits. Here are some war stories of implementation challenges from organizations that did not understand their lack of readiness for change:

?? One health care organization discovered that it didn't have the right information infrastructure to run the flexible, integrated systems and applications required for automating patient care. The CIO's funding priority had been to develop independent, compartmentalized solutions for radiology, pharmacy, diagnostic laboratory, and other clinical departments. The result was an unplanned expense and delay while a patchwork of proprietary solutions and architectures went through extensive reworking and retooling before an integrated CIS could be implemented.

?? A large community-based delivery system had a misdirected sense of urgency. This impelled the organization to an implementation that didn't meet user needs. "Let's get it online and improve its functionality later," was the approach that resulted in systems (including physician order

entry) that no one wanted to use. Getting back on track meant regrouping and rethinking ways to better engage physicians and other end users in the transformation process.

?? Two similar academics came to realize that they didn't have the right mix of skills in their IS departments to accomplish a clinical transformation. They naively relied almost solely on the software vendor's install team. They didn't adequately recruit physicians and other clinicians to lead and take responsibility for key objectives. They didn't recognize the need to staff up with crossover people who have sufficient understanding of both clinical and IT issues to assure an effective collaboration between these two factions. The results were almost identical: significant delays and no measurable benefits.

Health care organizations that have been disappointed with the results of earlier, less-comprehensive IT projects, or that understand the complexities involved in implementing a CIS, realize that the time and effort put into a readiness assessment is well-spent.

## **The Role of the CIO**

The chief information officer involved in a successful clinical transformation must realize that he is leading an operational initiative, not a technological one.

Though the implementation of an advanced CIS may be disguised as a technology project, it is in fact an effort that requires the active participation of clinicians even more so than IS staff.

According to Mark Headland, Vice President and CIO for Children's Hospital of Orange County, "The CIO must lead by being a supportive catalyst for change ... changing not only the organization's information technology, but also the clinical care processes the new applications and systems will support."

Ben Williams, Senior Vice President and CIO for St. Joseph's Health System, added, "The CIO should provide leadership, along with the medical staff and hospital executives, to ensure expectations are realistic. The CIO must collaborate with clinicians to facilitate process redesign into a sustained change model, supported by technology. The process and culture change components should not be underestimated, as they are the most important aspects of the transformation."

Both technical and operational decision-makers must take responsibility for the system to deliver the expected benefits.

### **A Physician's Perspective**

When assessing medical staff readiness in a CIS implementation, misguided assumptions may be made if existing physician leadership alone is assessed. The physician leaders of an organization have risen to that level by inordinate dedication, highly regarded clinical acumen, above-average consensus-building ability, entitlement of seniority, or (usually) a combination of all these attributes. As such, they do not necessarily reflect the average physician's willingness to partner with the larger institution or align with its goals. The readiness of medical staff to accept change might most easily be addressed by their response to three simple questions:

1. What is the difference between data and information, and which is your current system providing you? Blank stares or, "That is too 'techie' of a topic" are poor signs.
2. How do you feel about care guidelines, antibiotic formulary control, and online decision support? If the majority of physicians are resentful of these "intrusions into autonomy," then the prevailing atmosphere of quality improvement and safety has not yet been established, and the value of an advanced CIS will be a hard sell. The battle here is operational/cultural and not technological.

3. Who will be responsible for bringing the new computer system online? If the reply is typically "information services," be wary. Clinicians must identify themselves as the architects of the change with technology in a facilitating role for the project to succeed. The perception that the medical staff is being coerced into participating in an IT project is a clear sign of looming failure.

Physicians, under burden of heavier clinical volumes to compensate for lower per-capita reimbursement, are often overwhelmed by their own regulatory requirements. The external legislative and marketplace pressures for CIS adoption, keenly felt by hospitals and health care organizations, are below the radar of most physicians dealing with other issues. The hospital expecting staff physicians to endure loss of revenue-generating clinical hours in order to participate in CIS implementation is akin to the physician expecting hospital executives to come to his/her office to guide HIPAA compliance.

The "we" in "We need to ..." should be fully examined. Executives, informaticists, and clinicians differ in background, jargon, priorities, and cognitive approach. Failure to recognize this jeopardizes consensus building. Open discussion of motive, needs, and a common language are critical to enjoin the three camps into allies rather than warring factions. The perception that any one group is either above the fray (or in control of it) will throw the proverbial golden apple of discord into the midst.

Physician Champion

## Measuring Readiness

Industry analysts, health care provider reports, and the lessons learned from previous clinical transformation projects all indicate that certain readiness characteristics are associated with successful CIS implementations. These characteristics, when present, increase an organization's ability to achieve its desired goals and avoid the pitfalls common to large-scale transformation efforts.

Absence of any of these key characteristics represents a lack of readiness — challenges or deficiencies that must be addressed by specific strategies as part of the implementation plan (see Figure 1).

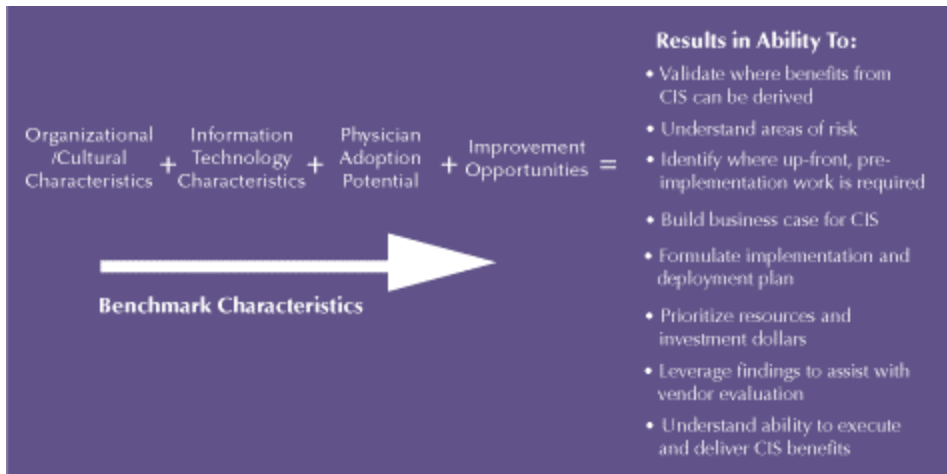


Figure 1: Measuring Organizational Readiness

## Cultural/Organizational Readiness Characteristics

- ?? There is a high level of executive commitment to the initiative from both operational and technical decision-makers.
- ?? These executives understand the financial investment and time commitment that the initiative requires, and are willing to make these investments.
- ?? There is consensus throughout the organization that the CIS is aligned with organizational goals.
- ?? Strategic initiatives with potential to compete with CIS are clearly prioritized.
- ?? The majority of physicians and other clinicians support and perceive value in the CIS initiative.
- ?? Clinicians throughout the organization enjoy a collaborative working environment.

## **IT Readiness Characteristics**

- ?? An IT infrastructure is either in place or under development that will support the processes of the advanced CIS with no or minimal downtime during the transformation.
- ?? The organization has established service levels that must be met by clinical systems used to deliver patient care.
- ?? There is a delivery and support model in place for the new systems and applications that addresses resources, helpdesk operation, issues resolution and escalation policies, project prioritization, project management, and user satisfaction — all at appropriate service levels.
- ?? The organization (specifically the IS department) has a track record of bringing value through IT initiatives.
- ?? The IS staff is involved in clinical quality improvement and other patient care initiatives and is willing to collaborate with clinicians toward shared objectives.

## **Physician Adoption Readiness Characteristics**

- ?? The majority of physicians affiliated with the organization believe that it is relatively easy to care for patients at the facility and that an advanced CIS will improve this experience.
- ?? Most physicians describe their relationship with the organization's administration and other clinicians as open and collaborative.
- ?? Physicians actively participate in initiatives that promote leading clinical practices and improve patient safety through reduction of treatment variations.
- ?? Some physicians are willing to take leadership roles in a CIS implementation by taking responsibility for key objectives, guiding the

implementation team, and helping to promote the system to the physician community.

## **Building a Case for Action**

The next logical step is to assess the opportunities that a successful CIS implementation can deliver. Identifying improvement opportunities helps organizations to understand both qualitative and quantitative benefits that can be achieved with a CIS. This is useful in building a case for action that substantiates the strategic importance of the CIS within the organization.

### **Opportunities for Improvement**

- ?? Improvement in the quality and safety of patient care: Automating clinical processes produces workflow efficiencies for care providers. They are able to better serve the patients, resulting in better patient satisfaction. Rule-based applications, in combination with more collaborative clinician relationships, help to reduce treatment variations and medical errors, increasing patient safety.
- ?? Financial improvements: An advanced CIS can increase operational and workflow efficiencies, reduce a patient's length of stay, and help guide physicians' medication orders to the most cost-effective options, reducing pharmaceutical expenses.
- ?? Improvement in market share: Streamlining the delivery of patient care and reducing clerical tasks improves the performance and job satisfaction of care providers. In a competitive labor market, the organization with the most-favorable work environment will have an advantage in recruiting and retaining the best nurses and the most distinguished physicians. Overall improvements in bed capacity and patient throughput will strengthen the competitive position of the hospital within its community.

# A Blueprint for Success

The readiness assessment helps to identify the risks that must be addressed in the clinical blueprint. Risks in this context are deficiencies discovered by the readiness assessment — areas where the organization is not ready to proceed with the implementation. One product of a comprehensive readiness assessment is a blueprint, which results in the ability to mitigate the risks and deliver the benefits associated with an advanced CIS. In the blueprint, specific tactical plans are developed to remedy each "not ready" situation discovered during the readiness assessment. The implementation and deployment of the CIS can proceed in the right direction, since both the current and future states of the organization's processes and technologies are well understood. These findings are also instrumental in the evaluation and selection of hardware and software vendors (see Figure 2).

## Approach

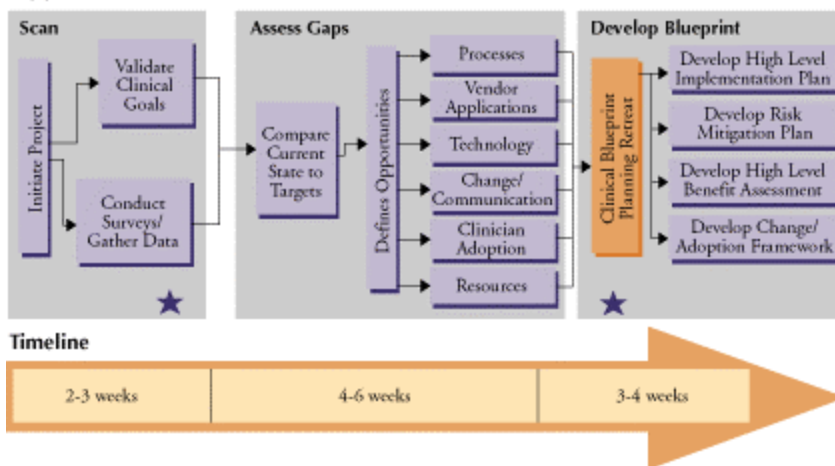


Figure 2: Clinical Readiness /Risk Assessment Approach

Whether the readiness assessment is considered a separate, robust deliverable or simply as due diligence homework that precedes and informs the formulation of a project blueprint, it is an essential first step toward implementation of an advanced clinical information system.