



HOSPITAL NEWSPAPER

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Consultants Corner

By Rick Smith and Scott Hodson

The Best Prescription for Medical Errors

First of a 3-part series

Everyone acquainted with the subject knows that preventable medical errors are a major problem in health care, perhaps even the eighth leading cause of death in the United States. The ongoing challenge is how to respond to them.

Most experts agree that Clinical Information Systems (CIS) represent a core solution, providing a technological compass for guiding best-practices medical care and preventing both diagnostic and treatment errors.

But, in our opinion, CIS alone are not a sufficient solution. We believe hospitals today require a comprehensive, integrated organizational system, which we call a Transformation Model. Furthermore, we believe that reducing medical errors is important but not sufficient. There are other issues equally critical to the successful operation of a quality medical institution that require attention, including: eliminating waste, eliminating unnecessary variance in care delivery and eliminating delays. The Transformation Model employed by Cerner Corp., which I developed while leading Cerner Consulting, addresses all of these issues simultaneously and, if properly implemented, will dramatically improve the quality of health care delivered by our nation's hospitals.

Let's Play Ball

To envision how our model works, picture a baseball diamond. Around this diamond are five key "players," all of which are necessary for a high-performance operation.

On the pitcher's mound is the Clinical Information System itself. In the position of home plate, you'll find Workflow Optimization. On first base is Knowledge; playing second base is Technology; and on third base is Culture.

Recognizing the strengths and talents of the individual "players" – and the need for their finely synchronized coordination – are as essential to the functioning of a best-practices medical facility as they are to the success of a world class baseball team.

A Description of our Five Core "Players" follows:

- **The Clinical Information System:** CIS is the heart and soul of the operation, providing the means by which all information is captured, stored and exchanged among health care professionals. This includes, for example, the key medical record facts that can help prevent drug interaction errors, prevent physicians from ordering the wrong dosage, or prevent nurses from administering the wrong medication. There are many systems on the market today, but none of them, in isolation, will resolve the problems in question.

- **Workflow Optimization:** Workflow applies to all of the activity that takes place in and around the medical process—from drug administration to surgical planning to outcomes measurement, etc. While the CIS radically changes the way all tasks are executed, workflow optimization assures elimination of waste and delays.

- **Knowledge:** The knowledge that is embedded in the CIS empowers "evidence-based" medicine or best practices based upon hundreds of thousands of patient experiences. A physician can pinpoint situations that match the profile of the patient in question and determine the best treatment that will achieve the best possible outcome. Such a system augments our current standard – "memory-based" medicine – which relies on the recall potential of the human brain to assemble the often puzzle-like pieces of medical histories, symptoms and treatment paradigms to arrive at the precise course of action. Caregivers have immediate access to the best and most accurate treatment options, and patients not only receive expert care, they are also spared unnecessary expense.

- **Technology:** An automated CIS is of little help unless it's easy for physicians to access. It must be simple to operate and portable, so it can be used in the hospital or office, at home or on the road. New handheld devices and smart electronics and their underlying networks make information available in a convenient and timely fashion.

- **Culture:** The fifth and arguably most important player is culture. The ultimate success of CIS relies on how well it is integrated into the culture of the organization and made a living, breathing part of everyday life. To do this correctly requires creating an environment that emphasizes reducing medical errors and eliminating waste as mission critical. Also core to adopting these systems is recognizing that like all new technologies they will require a period of adjustment and



Rick Smith

Rick Smith and Scott Hudson are principals of The ImPart Group, a strategic health care consultancy focused on achieving growth, profitability and quality improvement for health care organizations, from concept through implementation. Rick Smith was formerly executive vice president of the Cerner Corporation's 2,000-person consulting division, Cerner Consulting.

adaptation on the part of the users. Incorporating a clinical information system into a hospital setting promises to be similar in impact to the introduction of ATMs to banks more than 20 years ago. ATMs took upwards of ten years to be accepted, and even still today one can hear rumblings of dismay over their existence. Clinical information systems won't be embraced overnight. But here's one piece of important advice to help your organization accelerate its adoption: be mindful of helping physicians – your number one constituent – recognize the value they will derive from the system. Speak in terms they prize most: time saved, improved patient success and satisfaction rates, reduced insurance costs, and enhanced income.

Few organizations have achieved any level of success with CIS, even though the fundamental systems have been around for many years. This is a testament to the difficult challenge their successful integration represents. The good news is the Transformation Model does work and there are professionals with a track record to help your organization effect a smooth and successful adoption.

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Make Culture Your Ally in CIS Implementations

10 Keys to Avoiding Your Worst Nightmare!

2nd of a 3-part series

An organization's culture can make or break any Clinical Information System (CIS) implementation. Ask Joy Keeler, chief architect of Nicholas E. Davies Award-winning CIS initiative for University of Illinois Medical Center.

"We knew from the beginning one of our greatest challenges was overcoming a prevalent attitude of doubt within the organization as we moved to a paperless clinical information system. Once we showed quick wins and provided proof that we could make things better, we built a following among all the stakeholders at UIMC.

"By creating a passion for our mission, we transformed the way we deliver care, improving patient outcomes, reducing waste and variances, even improving our retention rate among physicians and nurses. And while everyone has embraced the new system, the principal beneficiaries are our patients," said UIMC's current associate vice chancellor of Health Affairs.

The case history described by Keeler provides instructive insights into achieving success with CIS and tackling arguably the most challenging barrier of all – organizational culture. Instead of something to be feared, a renewed and revitalized culture can be your most important ally, as Keeler discovered.

Of all the approaches we have practiced and observed over the last 25 years as consultants to the health care industry, we believe the following ten are the most powerful and most likely to lead to making organizational culture your ally vs. your worst nightmare:

1. Create Passion for the Vision, Mission, Values and Strategies

Whatever your organization's reasons for embarking on a CIS initiative, make sure that all key stakeholders know, understand, and embrace the objectives and can articulate "what we are doing and why we are doing it." Success for

this huge undertaking will require a ubiquitous commitment to quality care...and many specific goals such as eliminating medical errors, waste, delays, unnecessary variance as well as improving patient satisfaction and your strategic positioning.

2. Measure Readiness Early ...and Conduct Periodic Check-ups

A formal assessment of your organization's readiness for CIS will help you understand the major barriers you have to overcome. Assessing readiness and undertaking a readiness improvement effort is as vital for this type of initiative as physical training is for a marathon runner. Readiness can be measured in many ways, including: technical readiness, workflow readiness, culture readiness, financial readiness, and project management readiness. We know this is a lot of "readiness," but it's a critical part of successful implementation.

3. Deal with Cultural Challenges Proactively

Two very common cultural challenges (courtesy Dr. Jeffrey Rose, CMO, Cerner Corporation) include infobia, or the fear of appearing incompetent using technology, and archetypal medical tradition, which drives resistance to standards, guidelines, and outside scrutiny. Simply hoping that these challenges will go away by themselves is naive – intervention in the form of education and skill-based training is required, which will only be possible if all key stakeholders are on board.

4. Establish Value as the Foundation for CIS

Our belief is that it is important to quantify and clearly articulate the "financial ROI" and the "strategic ROI" of the initiative. Value-based initiatives are the most successful because there is a clear understanding of all of the costs (financial and otherwise) and all of the benefits of the initiative.

5. Communicate and Train Early and Often

We believe it's important for all stakeholders to understand and articulate what they are doing, why they are doing it, and what the costs and benefits are of the undertaking. We also understand that most stakeholders will require new skills and capabilities to succeed in a new CIS environment, so it's important to provide substantial training so people can learn the new 'mechanics' of CIS. Best results are achieved if the CIS initiative is treated like a major construction program – all the way down to the "Pardon Our Dust" posters that beg patience for current problems while providing hope for a much better future.

6. Identify and Satisfy the Needs of Individual Stakeholders

You must identify the key stakeholder groups and the opinion leaders within each. Once you understand what their major needs are, work with them to ensure that the CIS project can meet those needs as much as possible. It is our experience that adoption happens more quickly and thoroughly if everyone gets as much of what they want as possible.

7. Pick Champions Carefully at All Levels

Every major cause needs a legion of champions. We believe these champions can be identified, encouraged, and given roles that create leverage throughout the organization. You don't need Superman or Superwoman, just opinion leaders who are respected by their peers, have the ability to perform, a positive attitude, thick skins and high endurance – after all, this type of initiative is a marathon, not a sprint!

8. Excitement Overcomes Fear of Change

We have learned many fundamental truths over the years, one of which is: "A clear vision of the destination creates enthusiasm for the journey." It's also very important to

be truthful about how long and arduous the journey will be. Champions will be able to lead the organization through the 'valley of despair' if everyone believes that the end result will be better. We also know that there will be people who try mightily but are unable to complete the journey – carry them, and give them new and more appropriate roles.

9. Use Speed To Your Advantage

As evidenced by the UIMC example above, the faster you get to benefits, the faster the organization will embrace the initiative, and the quicker you can make organizational culture your ally. We encourage using three different and powerful mechanisms: Speed to High Performing Teams, Speed to Implementation, and Speed to Value.

10. Chose the Right Guide

Recognize that the selection and implementation of a CIS is a major undertaking, and most likely the one and only time most people in your organization will experience this in their entire careers. The cost of mistakes is very high and the probability of success is increased substantially with full-time professional program management. There's no reason to undertake this transformation alone, and the right professional guide can make all the difference in the world. Pick a consultant or expert who has a proven track record, understands your unique circumstances, acts like a guide and not a dictator, and will work with your organization.

Most health care executives say that their most vivid nightmare about a CIS implementation is the fear of CIS-rejection by the organization's culture. Newton asserts that a "body at rest will tend to stay at rest, and a body in motion will tend to stay in motion." We assert that if you apply the key points in this article, you will avoid the nightmare, avoid being stuck 'at rest,' and be able to keep your organizational body in motion as you confidently charge ahead along your positive journey of progress.

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Ten tips that just might save your CPOE initiative... and your hide!

Last of a 3-part series

This is the third in our series of articles focused on the role of Clinical Information Systems (CIS) in successfully reducing medical errors. We previously focused on areas such as culture and knowledge and the role they play in successfully integrating new technologies into existing areas of practices. Now we visit the area of workflow and, more specifically, the exceptionally daunting challenge of optimizing integrated workflow – and doing so in a CPOE environment.

So, what is CPOE, anyway? Well, the letters stand for Computerized Physician (or Practitioner) Order Entry, but what is it, really? One definition we read: “CPOE is a clinical software application designed specifically for use by physicians to write patient orders electronically rather than on paper.”

A more enlightened transformational definition according to Dr. Jeffrey Rose, CMO of Cerner, “CPOE is an organizational initiative that integrates elements of clinical information systems, technology, culture, workflow, and knowledge across all stakeholders in the patient care experience to achieve an optimal health outcome.”

Optimizing workflow is tricky enough, but doing so in an integrated environment as called for in the definition above is, in fact, as challenging as it gets. Why? Because CPOE changes everything for everyone! CPOE changes the clinical decision making process, the meds administration process, the documentation process, medical records management, patient flow...everything for everyone!

When we guide our clients through integrated workflow optimization, we utilize a comprehensive structured approach that we believe plays an important role in achieving success. Key components of this approach include the following:

1. View Workflow Comprehensively, Not as an Isolated Series of Worksteps

As indicated above, CPOE changes everything, therefore a comprehensive, holistic view is required. While it might be tempting to focus on workflow optimization only in certain areas (given the immense scope of CPOE), this approach will ultimately lead to an underperforming system.

2. Organize Around Strategic Work Groups

We refer to them as SWiGs. They include stakeholders from all facets of a workflow, including physicians, nurses, allied professionals, and support staff. The amount of work to be accomplished is immense, and using these teams to “divide and conquer” adds significant leverage as well as expertise. Furthermore, these are the ultimate “users” of the system when it is up and running, so they have a deeply vested interest.

3. Identify Major Processes

We believe there is significant value in “thinking horizontally” (i.e. cross functional processes) rather than “vertically” (i.e. departmental silos). Once the major processes are identified (e.g.: medication ordering and administration, patient access, etc.), then work can be prioritized and time-sequenced.

4. Re-learn How to Flow-Chart

Most of us once knew how to do this; it’s time to re-learn. It’s really important to be able to map the existing processes identified above – who does what, when and how. That becomes vitally important when you seek to find ways to automate and/or otherwise redesign work flow.

5. First Priority: What’s Best Clinically

This is easy to forget...unfortunately. Workflow redesign efforts often focus on what’s best from an economic perspective, or a time-saving perspective. While these (and other) views are important, our principal focus is on what’s best clinically. Physician input and a clear understanding of best clinical practices is key here – use this knowledge to establish what we refer to as “standards of care.” This will help defend your work to the inevitable challenges downstream.

6. Release Chokeholds.

Every organization has them...the wait for an OR is extended for the lack of proper turnover procedures or labor...the ER is backed up for lack of patient flow management on the floors and in the ancillary units...the pharmacy cannot deliver meds for the overload of peak time orders. Identify what these chokeholds are, and redesign workflow to release them. “Root Cause Analysis” is a particularly useful tool for this exercise.

7. Empower Technology to Make Real Change.

CPOE technology can do much more than automate workflow, but only if you unleash the power of technology to do so! All too often technology is forced to mimic the “old way” things were done rather than technology driving a change in workflow.

8. Establish Baseline Metrics and Measure Value Created

Whatever you intend to achieve with CPOE (i.e., whatever your value proposition is), make sure you measure the “as is current

state” before you begin to make changes to workflow. This will allow you to test whether or not the “new and improved” approach is, in fact, better. It will also allow you to measure the value created by the optimized workflow, which will be an important part of your reply when asked by your Board of Trustees to justify the massive investment in CPOE.

9. Use Dress Rehearsals

This may sound silly, but, it really works. Before you actually turn on a new workflow, do it in “dress rehearsal” fashion. This will familiarize everyone along the workflow chain as to the new procedures, will educate all involved in the new technology, and will allow you to identify gaps, problems or issues before you go “live.”

10. Leverage Professional Expertise.

It is unlikely that you will go through a CPOE implementation more than once in your career – why risk your career by trying to “get it right” on your first and only attempt?

Better to seek the professional guidance of someone who has “been there, done that” and can bring the benefit of experience to bear in your organization.

Workflow optimization is certainly not the glitziest part of CPOE implementation, but it has the potential to be among the most value-producing. Conversely, if left unattended (or marginally attended), then inefficient and ineffective workflow will likely create a high exposure to risk of overall failure. After all, if CPOE changes everything, then it’s best to get the integrated workflow optimized as well as possible!