

Performance Strategies



Improve Performance through Process and Culture Change

Vol. 3, Issue 2, 2009

NCH Optimizes Clinical Care with Standardization



*By Dale Beatty, RN, MS
Vice President for Patient Services and Chief Nursing Officer
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Understanding How You Work

In 2007, [Northwest Community Healthcare](#) (NCH) launched an ambitious initiative to roll out IT solutions for clinical documentation, surgical documentation and utilization, and medication administration. We were embarking on what would be a major redesign of our clinical processes, which we believed would reap great benefits in terms of patient safety and organizational efficiency.

This project was truly a monumental task that went far beyond simply installing software. It demanded a deep understanding of our own current processes and practices so they could be articulated in a single clinical documentation and order system.

We were hampered by a lack of experience in designing a standards system that would fit NCH's needs and processes. To ensure success and meet our own ambitious timeframe for deployment, we decided to seek outside expertise to guide us in a series of rapid design sessions that studied and re-engineered our clinical workflow. Had we done this alone, I'm confident we would not have achieved the same fast implementation and ROI.

Designing A Standard

With a design structure in place that drew on the expertise of physicians, nurses and caregivers from throughout the organization, we were able to build a customized clinical documentation system that supported clinical practice rather than simply driving it. Our goal was to ensure that the deployment was not simply an IT initiative, but a clinical initiative that was supported by IT. In essence it became a strategic partnership between clinical and IT that provided the vital balance of skills, knowledge and expertise.

Through these sessions, we standardized our processes and practices. There are often variations in how care is rendered within organizations, and these differences can increase costs and reduce quality of care — particularly when there is a lack of evidence to support specific clinical practices.

Under the guidance of McKesson's [clinical consulting](#) team, we focused on these variations and arrived at standards that served the needs of the NCH community. Thanks to the involvement of our clinical personnel in the design sessions, we reaped the added advantage of a strong adoption of the clinical documentation and orders system.

The fruit of all this work was realized in an easy go-live of the IT solutions and a system that has produced significant improvements for our staff. For example, the project completed four weeks early:

- Eliminated 63% of nursing documentation processing steps
- Eliminated 87% of paper-based process steps
- Reduced process flows from 12 to 3

OR Expansion Drives Improvement

The lessons learned in the clinical documentation system rollout served NCH well when it came to the next step in our technological revolution — surgical documentation and resource utilization.

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NCH Optimizes Clinical Care with Standardization (Cont.)

The OR was expanding from 20 to 24 surgical suites, but that rapid growth was proving costly as efficiency began to decline. Our goal focused on optimizing operational flow within the surgical services area by improving room utilization and decreasing room turnover time.

Once again we brought together stakeholders from each discipline for rapid design sessions. That process saved valuable time and enabled us to successfully integrate surgical flow with documentation, while developing process standards that improved efficiency and quality of care for patients.

The end result: \$1.2 million in savings. These savings included eliminating open OR time, reduced printing costs, and efficiencies gained from moving to online documentation.

Redesigning Safety at the Bedside

Our next step brought medication administration and documentation together at the bedside. Once again we examined current processes and developed improvements through a partnership between consulting, clinical and IT. By the time we deployed bar-code scanning of medications, we had also redesigned the medication process to increase efficiency in the care delivery process. Process steps were reduced by 37%, while manual charting fell by 52%.

Planning for Success

Through this process, we at NCH have learned that it is vital to:

- Leverage all your resources for their expertise in IT and your clinical services.
- Utilize strategic partnerships such as consulting services.
- Design a system that supports your clinical practice.

Implementing technology can be a complicated and demanding experience, but, as we discovered, it is also a unique opportunity to fundamentally redesign and improve the delivery of healthcare. That's good for everybody.

Dale E. Beatty is the Vice President, Patient Services and Chief Nursing Officer for Northwest Community Healthcare (NCH), a 511 bed acute-care hospital in Arlington Heights, Ill. NCH is an ANCC Nursing Magnet hospital as well as one of Fortune's Top 100 Best Places to Work for 2005, 2006 and 2009. Mr. Beatty is responsible for leadership of patient services and key corporate initiatives and has been instrumental in the development of effective work teams to produce organizational outcomes.

Results of Charting and OR Process Redesigns

Patient Care Assessment

- ▶ Eliminated 63% of charting steps for patient care assessment and 87% of paper-based charting steps.
- ▶ Reduced current state process flows from 12 to 3 for future state process.

Medication Administration

- ▶ Eliminated 37% of medication administration charting process steps and 52% of paper-based charting steps.

Operating Room

- ▶ Saved \$1.2 million in the OR by reducing open OR time and printing costs, and efficiencies gained from moving to online documentation.

By redesigning processes when moving to electronic documentation systems for patient care assessment, medication administration and OR charting, NCH was able to decrease the number of process steps and streamline the charting process. Decreasing paper-based process steps improves efficiency and decreases the opportunity for errors. In addition to charting improvements in the OR, the redesign helped NCH reduce open OR time and reduce printing costs.

Learn More

[JAMIA: Workarounds to Barcode Systems and Threats to Patient Safety](#)

[UHN Provides Patients a Window on Care](#)

[Improving Physician Adoption](#)

[Health Management Technology: The Two-Way Solution](#)

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OhioHealth Finds Path to Clinical Transformation



*By Suzanne DeWoody, MS, RN, NE, BC
Vice President, Systems Integration
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Process Leads Technology

At [OhioHealth](#), we've always placed a high value on improving patient safety, so it came as no surprise when our governing board decided to prioritize the deployment of bar-code medication administration ahead of other projects and applications at three hospitals in the Columbus area.

Early on we realized that simply installing software and handing scanners to nurses was not going to create a safer environment in the three hospitals selected for implementation. We had to examine all the processes involved in medication administration, understand how each hospital was currently handling this process, and identify what had to change in order to ensure the process supported a single electronic health record.

The deployment was complicated by the reality that each of our three hospitals handled medication administration a little differently. For example, there was no common standard for handling missed medications if patients were out of their rooms. As we reviewed the entire process at all three of our hospitals, we soon found that policy and process changes were required that had nothing to do with implementing a technology solution.

Rallying the Troops

As the need to create a set of standard practices became clear, we quickly realized that changes in the way people work can't be imposed from above. The changes had to address the day-to-day patient interaction, and the only people who can provide that knowledge are those who provide direct patient care.

We took a comprehensive approach to our project, engaging McKesson's [clinical consulting services](#) to help us tie the people, process and technology together. We brought together a team of clinician representatives from each hospital and discipline involved in the reengineering process, including staff from nursing, pharmacy and respiratory therapy. We wanted everyone who touched the medication process to have a say in the development of these new rules.

Not only did this process provide us with a wealth of knowledge, but it also ensured a much higher level of buy-in and support.

Leadership Drives Compliance

We also knew that the level of compliance needed to make this system effective could only be achieved if it was clear that our leadership — board and administration — was committed to the success of this project. That's why early on we were adamant that willful failure to use these tools would be grounds for dismissal. That sent a strong message.

Not only did we say everyone had to use the system, but we measured it as well. Regular reports demonstrated who was complying, and that pushed better performance — either from competitive spirit or simple embarrassment.

Training Everyone

If we expected everyone to use the system effectively, we knew that training was required.

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OhioHealth Finds Path to Clinical Transformation (Cont.)

In most deployments of this kind, a few users receive direct training from experts, and then they are expected to pass along what they've learned to everyone else. We decided that a "train the trainer" solution wasn't enough. Every user had to be brought up to a specific standard of competency as quickly as possible.

Measuring Success

In the end, we came up with two metrics of success:

- Scan at least 95% of all medications prior to administration.
- Reduce medication errors by 92% on units through process redesign and use of McKesson's [point-of-care medication administration application](#).

We quickly met each of these goals. We achieved 97% compliance in scanning medications, and almost 100% reduction in medication errors for four of the five rights (patient, medication, dose and route — we did not track against time).

Medications are now captured and charted electronically at the bedside. Records are legible, timed and immediately accessible to caregivers. This means the attending physician can access medication data through McKesson's [physician portal](#), whether at the hospital, the office, or even at home.

While some errors can't be eliminated solely by technology — such as removing an IV drip bag, for example — it's clear that OhioHealth patients are safer than ever before.

Suzanne DeWoody, MS, RN, NE, BC, is Vice President, Systems Integration, at OhioHealth. Based in Columbus, Ohio, OhioHealth is a family of 17 hospitals, 30 health and surgery centers, home-health providers, medical equipment and health service suppliers throughout a 46-county area.

Results of Medication Safety Process Improvements

- ▶ Achieved average of 97% bar-coding compliance.
- ▶ Achieved almost 100% reduction in medication errors attributed to patient, medication, dose, route (4 of the 5 rights — time was not measured).

Within 60 days of implementing the bar-code medication administration system, OhioHealth was able to reduce all of the following to almost 0 (zero) errors for medication administration: wrong patient, wrong medication, wrong dose and wrong route of administration.

Learn More

[Standardization to Drive Performance](#)

[Baptist Health Systems Improves Medication Safety](#)

[Healthcare Informatics: More than IT at Mercy Health Partners](#)

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Eisenhower Empowers Staff to Change Clinical Processes



*By Louise White, RN
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EISENHOWER MEDICAL CENTER

Re-engineering Paper-Based Care

Implementing healthcare IT isn't just installing new software; it's also redesigning process and changing culture. That fact was clear to us when [Eisenhower Medical Center](#) implemented McKesson's nursing clinical documentation and medication administration solutions. We changed not just the way we did things, but how we thought and the way we viewed our jobs. For clinical documentation, we were going from a paper-based system to an electronic documentation system, which forced us to re-engineer the way we provided care.

The project had two distinct phases — process and technology. We knew that the easiest part would be the technical deployment of the solutions, for example bar-code scanners and computer terminals. One of the challenges for us lay in redesigning our medication administration workflow so that it integrated with our new clinical documentation system.

To change processes, you first need to understand how you really do things. After that, you enable staff to take the lead in redesigning their own workflow and processes. In order to ensure the best use of time and resources, we used McKesson's [clinical consulting services](#) to design a framework for change and then help manage the redesign process for us.

Bridging the Gaps

The first step was having the consulting services team conduct an assessment of current processes for clinical documentation and the medication use continuum. We wanted to know what we were really doing versus what we thought we were doing.

We assembled teams with multidisciplinary representation from all areas of the hospital. Nurses mapped out actual workflows on the clinical units, which provided insight into processes — both good and bad. With the help of the services team, we diagrammed these findings to give clarity to the data we gathered. We prioritized our weaknesses, which enabled us to focus on the biggest obstacles to ensuring efficient clinical documentation and creating a safe and effective system of medication administration.

The staff members crafting these redesigns continued to work at least half-time at the bedside. Being drawn away into a team often has the effect of promoting acceptance of processes that are less than ideal in real-life care situations. Continuing to work at the bedside was an active reminder that they were re-engineering processes they were going to practice on the floor themselves.

Understanding our workflow enabled us to retrain staff in the new patient care model and processes before they were faced with the day-to-day demands of patient care using the new clinical documentation and medication administration systems.

Keys to Empowerment

In order to achieve success, an organization must engage and empower their staff while providing the resources they need. If any of these factors is lacking, the implementation of change is likely to face rough sledding.

Eisenhower's leadership set the goals that we had to achieve, but then managers stepped back to enable staff to reach the best conclusion with gentle guidance. We also gave staff the time and resources needed to effectively evaluate and change practices.

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Eisenhower Empowers Staff to Change Clinical Processes (Cont.)

Changing Minds, Changing Culture

Direct participation in designing their own workflow made it easier for the staff to accept change and understand the challenges we faced in re-engineering processes. In our planning sessions, we communicated that this deployment was not going to be easy, but that it would make our patients safer and enable clinicians to provide better, more satisfying care.

For example, involving our staff fostered an understanding of the patient safety benefits that electronic documentation offered all clinicians. It also helped us to change the cultural mindset that nurses must “take care of the patient first, chart later.” There was a genuine shift in our culture that now saw charting at the bedside as an integral part of serving the best interests of the patient.

Accountability Ensures Compliance

As the project unfolded, staff members at all levels were held accountable for their roles in effecting change. Attendance at training sessions for 800 employees was scheduled and monitored. Directors were charged with ensuring those under their supervision attended the training sessions.

The success of our clinical technology deployment can be attributed to many factors, but the most important is that we provided leadership support and invested the time and resources to review and optimize our processes upfront.

Louise White, RN, is Vice President for Patient Care Services and Chief Nursing Officer at Eisenhower Medical Center in Rancho Mirage, Calif. For the past two years, the hospital has earned the Distinguished Hospital Award for Clinical Excellence™ from HealthGrades based on its clinical quality performance.

Design Session Recommendations

Design Session	Process Recommendations	Implementation Recommendations
Surgical Services (OR and PACU)	36	11
Emergency Department	39	8
Clinical Nursing Services	84	45
Medication Safety	82	26
Education and Quality Improvement	63	9
TOTAL	304	99

After an analysis of its existing practices, Eisenhower Medical Center redesigned its processes to improve performance and patient safety. Recommendations were made for 304 process changes and 99 prioritized software implementation changes across various areas and functions of the organization.

Learn More

[Fixing the Medication Reconciliation Breakdown](#)

[Effectively Combining People, Processes and Technology](#)

[Patient Safety, Evolving from Compliance to Culture](#)

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What it Takes to Successfully Implement Health IT



*By Jeannell M. Mansur, RPh, PharmD, FASHP
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Driven by regulatory agencies as well as their own desire to make the practice of medicine safer and more effective, hospitals are investing considerable resources in technology that automates processes and eliminates paper. Increasingly, we're seeing a convergence of technologies — a physician writes an order, an infusion pump delivers the drug to a patient, and the information that is captured is stored in an electronic health record.

The deployment of this technology at different points in the medication process is growing rapidly, and many organizations have achieved outstanding results that have made medicine safer and more efficient for patients. The fact that use of technology is not even more widespread can be attributed in part to the reality that implementing these systems is complex; demands considerable resources of money, time and talent; and must be constantly updated to be effective.

Ensuring a Successful Deployment

To achieve successful deployments, health organizations must develop a clear understanding of what is required in terms of people, time and resources. As the number of implementations has grown, we are now at a point where we can learn valuable lessons based on experience.

For example, the successful rollout of any medication administration technology, whether Computerized Provider Order Entry (CPOE) or bar-code readers, demands the realization that signing a vendor contract is just one of many steps along the way.

Setting the Stage

A healthcare institution must begin by:

- Carefully evaluating vendors and their products.
- Seeking out advice and lessons learned from other organizations who have implemented this technology.
- Understanding the care setting — inpatient, emergency room, surgical suite or ambulatory.
- Examining current workflow processes and procedures for risks and inefficiencies. Don't automate bad processes.
- Deciding on the best sequencing of technologies — which do you implement first?
- Involving clinicians and staff affected by technology and ensuring they interact with IT staff.
- Assessing supporting procedures, technologies and resources.
- Developing processes to monitor and correct problems during implementation.
- Setting clear responsibilities for staff involved in the implementation.

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What it Takes to Successfully Implement Health IT (Cont.)

Using the Available Expertise — External and Internal

External: When considering different vendors, all groups – clinical, financial and information technology staffs – should be involved in the selection process. Outside evaluations such as [KLAS ratings](#) and the experiences of other healthcare institutions can provide a means of judging specific providers and applications.

Internal: Insiders can help in evaluating the unique needs of the setting that the technology will affect. What works in an inpatient environment may be totally out of place in the emergency department or an ambulatory clinic. The needs and the processes are different, and one product will not fit all departments and settings.

Evaluating the Need for Process Change

Another reason to avoid imposing a system on a clinical setting lies in the way technology changes processes. Moving from a paper-based system to an electronic one involves far-reaching changes in work habits and procedures. When a physician uses CPOE to create a medication order for a particular patient, the steps required are going to be very different than using a paper document.

The organization must appreciate and understand how that technology is going to influence the process and workflow of caregivers. For example, medication alerts provide valuable data that can prevent adverse drug incidents. Yet too many warnings that have to be overridden can create “alert fatigue” and ultimately lull clinicians into ignoring real problems.

Keeping Technology Effective

IT administrators need to install software updates to support the continued effectiveness of the technology. For example, required upgrades ensure new drugs and their interactions with other medications are incorporated into the database to prevent medication errors. By staying current with software updates, health systems maintain the benefits of technology.

In the years to come, more organizations will implement technology as they see the benefits that can be reaped. It has become very clear that good technology properly implemented can help prevent medication errors. It is when technology is not implemented with a clear understanding of work process that these systems can introduce their own problems.

Jeannell Mansur is Practice Leader for Medication Safety with [Joint Commission Resources \(JCR\)](#), which provides consulting, education and publication solutions to its worldwide clients. Dr. Mansur provides leadership to clients and JCR on medication system design and enhancement, technology implementation, medication safety design and sustainability within the medication processes. She has published and presented extensively in the areas of medication safety and pharmacy operations improvement. Dr. Mansur has consulted throughout the US and internationally in Asia and the Middle East.

Joint Commission Alert: 13 Actions to Safely Implement HIT and Converging Technologies

A Sentinel Event Alert from the Joint Commission, issued in December 2008, examines actions to help safely implement health IT and converging technologies, such as medical devices. The alert cautions providers of the safety risks and preventable adverse events that could occur from the interaction of humans with the technology or from the design of the system. The alert recommends that technology implementations include clinicians and staff in planning, and take into account the workflow process, adoption and other factors.

[Read the Joint Commission Alert for 13 actions that can help promote patient safety](#) related to the implementation and use of health IT and converging technologies.

Related Solutions

[Recorded Webinars](#)

**Decatur Memorial's Journey
to 100% CPOE Adoption**

**Patient-Centered Healthcare
in an All-Digital Hospital**

**Driving Use of Evidence-Based
Content and Decision Support**

Gaining CPOE Momentum

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To Optimize Results, You Need Synergy between Process and IT



By Sarah Shillington
Vice President, Clinical Consulting Services
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Experience teaches that technology alone will not drive change in the healthcare setting. Rolling out electronic medical records, computerized physician order entry (CPOE), bar-code scanning and other tools can help clinicians and other staff members work more effectively and efficiently. However, technology may not achieve the desired results without the supporting processes, adoption and workflow.

A recent [Sentinel Event Alert](#) issued by the Joint Commission concluded that “users (of technology) must be mindful of the safety risks and preventable adverse events that these implementations can create or perpetuate.” Even with this caution in mind, organizations should not shy away from investing in healthcare IT. The rewards of greater patient safety and better use of resources are far too great to be ignored.

The goal of implementing clinical technology always must be to support safe and effective patient care. A successful outcome requires a strategy that integrates people, process and technology to drive results. To achieve optimum results, healthcare organizations must consider and develop new ways of delivering care that take into account how clinicians actually work and the realities of everyday practice.

Laying the Groundwork for IT Adoption

Rolling out software solutions without laying the proper groundwork for adoption may create compliance issues as staff and clinicians figure out new ways to keep the old manual processes in place.

Reducing medical errors, keeping patients safe and achieving a host of other objectives promised by automation, can only be achieved through a holistic approach to organizational change. Prior to the first technology roll out, several essential elements must be in place:

- Program leadership
- Clinical practice change
- Standardization
- Process re-engineering
- Success measures

Let's look at each of these factors.

Taking the Lead: The implementation of technology often requires culture change as well as an investment of finances and human resources. To effect culture change, leaders need to effectively communicate goals and expectations as well as the importance of change. If those involved don't grasp why changes are taking place, an organization will not achieve the anticipated results. This includes understanding the rewards for success and the penalties for failure and non-compliance.

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To Optimize Results, You Need Synergy between Process and IT (Cont.)

Changing Clinical Practice: New technology always brings about changes in care practice. However, non-compliant users can always devise a workaround that creates duplicate documentation. As a result, the organization fails to realize the efficiencies promised by the technology.

Involving stakeholders in every aspect of the process helps ensure that the end result meets their needs, and therefore is more likely to have their support. When the chief nursing officer and the chief medical officer delegate decision-making authority to representatives of every affected clinical department, they create stakeholders that see the technology as their clinical tool, not just an IT implementation.

Setting Standards: Many organizations view technology as a means to create efficiencies through automation, but it should also support decision-making through effective data mining. Information aggregated from thousands of patient encounters can reveal trends and opportunities for positive change that create safer, more effective healthcare.

For data analytics to work, standardization of how information is gathered and categorized must be built into the system during the implementation phase. A common language creates a common process for gathering and evaluating data on an organization-wide basis.

Engineering New Processes: One of the most difficult areas of any implementation is changing the way clinicians do things. We find over 70% of the opportunities for improvement in IT clinical transformation projects are centered on the work processes. For technology to be effective, the clinical workflow must be safe, efficient and compliant. A careful study of how work gets done can lead to process improvements or changes in the way the IT is implemented.

Measuring Success: It's a truism in business that you can't improve what you can't measure. Healthcare organizations must be able to accurately gauge efficiency, patient safety, and compliance. Out of these measures will come opportunities for improving day-to-day delivery of care in an efficient and safe way that transcends simply creating an automated process.

Successful IT Implementation Results from Planned Process Change

Healthcare technology is a powerful tool for improving the way your healthcare organization delivers care. But like any tool, without preparing for it, mastering its use and implementing it to support your goals, its benefits will never be realized.

Throughout my consulting experience with McKesson, one fact has emerged over and over again. In consulting with more than 50 different healthcare organizations undergoing significant technological change, about two-thirds of improved results stem from carefully planned process change that precedes and accompanies the implementation of IT.

Sarah Shillington has been helping McKesson customers understand and implement technology for more than 15 years. She currently serves as Vice President of Clinical Consulting Services. Prior to this position, she led McKesson's Customer Education Solutions group.

OR Benchmarks Collaborative Provides Data for Actionable Change

In greater numbers, healthcare organizations are leveraging their data for process improvement by benchmarking results against best practices and peer performance. For example, members of the [OR Benchmarks Collaborative](#) (ORBC), a “vendor-neutral” service from OR Manager Inc and McKesson, provide monthly trend data on 12 key performance indicators (KPIs) and many other supporting data points, including:

- Start-time accuracy for the first case of the day and subsequent cases
- Estimated case-duration accuracy
- Prime time utilization and block utilization
- Day of surgery add-on and cancelled cases

Members use a dashboard of the organization’s results against KPIs to analyze bottlenecks and efficiency. The data can be viewed by various factors, such as procedure and surgeon. The organization can also view their results as benchmarked against other member’s results and set achievable performance improvement goals.

[Ross Memorial Hospital](#), a 178-bed community hospital in Ontario, joined ORBC in 2007 and has been able to drill down to specific causes of scheduling bottlenecks. The hospital used the results to create common case durations for the top 10 procedures by surgeon. The common durations enable the hospital to improve the accuracy of booking and improve subsequent case start times. After improving case averages for only two surgeons, it was able to improve booking accuracy by more than 20%.

“Now patients come in at the right time and leave at the right time,” said Pat Ainsworth, OR Coordinator.

Overall, ORBC users have improved their scheduling accuracy by 29% based on data from more than 4 million OR case records from 381 ORBC subscribers. Scheduling accuracy, which translates into predictable start and end times, improves both patient and physician satisfaction with the OR, and is a key contributor to efficiency.

Related Solutions

[Clinical Consulting Services](#)

[Clinical Performance Analytics](#)

[OR Benchmarks Collaborative](#)