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Medicine to Big Data

Ten Ways to Avoid Your Lawyer:  
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Readmission Reduction: Working  
With Post Acute Care Providers

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# Executive Insight

Strategies and Solutions for Healthcare Leaders 2012, Vol. 3:10

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# HIT



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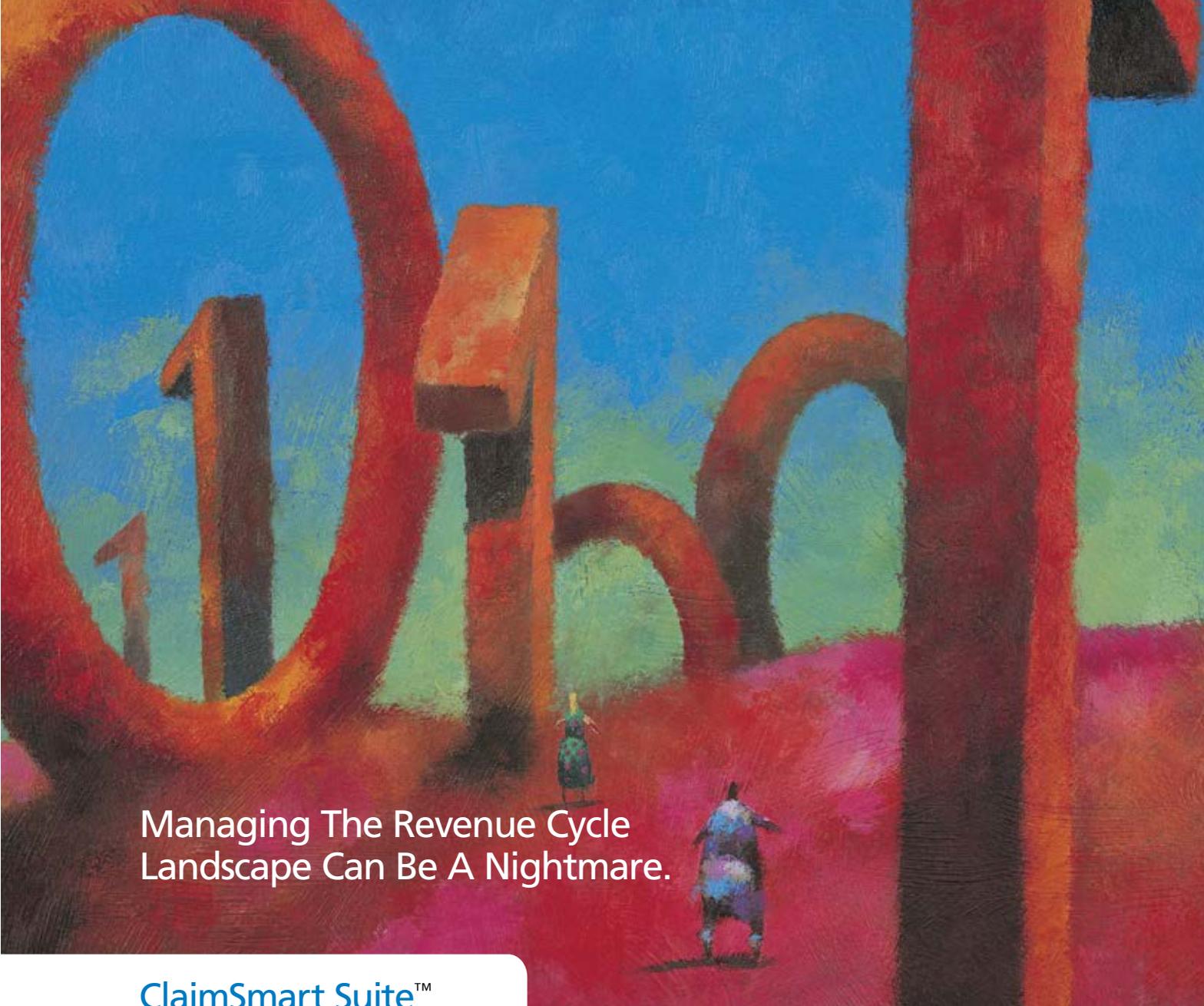
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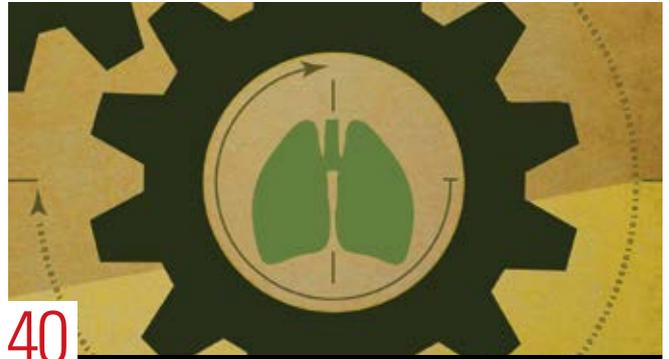
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## GUEST EDITORIAL

By Ken Perez

# The Medicare Debate

**Editor's note:** This is an excerpt from Ken Perez's article, "The Medicare Debate: Speculation by Both Sides," found in its entirety online at [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight). We welcome your comments as the presidential race heats up.

Healthcare has been a major issue in this year's presidential campaign, with Medicare at the epicenter of the debate. Our society's sound-bite orientation and the contentious tenor of the political dialog have resulted in oversimplification of the issues and obfuscation of the real facts. It's been "a campaign full of Mediscare." Both the Obama and Romney campaigns have sought to win the hearts and minds of voters by charging that the other campaign wants to slash Medicare. As a result of the campaign rhetoric and the media's generally superficial analysis, one has to wonder whether Medicare is a cloud that we don't know at all.

### POLITICAL RHETORIC

\$716 billion. That was the one figure mentioned six times by Governor Mitt Romney and one time by President Barack Obama during the first presidential debate, on Oct. 3, 2012. President Obama actually was the first to bring it up, stating, "Seven hundred and sixteen billion dollars we were able to save from the Medicare program by no longer overpaying insurance companies, by making sure we weren't overpaying providers."

But does Medicare overpay providers? Medicare reimburses physicians on average only 80% of their treatment costs. Even before passage of the Affordable Care Act (ACA), average hospital margins on Medicare were estimated at -5% in 2009 and were projected to reach -7% in 2011. According to the American Hospital Association (AHA), 61% of hospitals lose money

on Medicare. And all these estimates are prior to the implementation of the majority of the ACA's increasingly challenging reimbursement reductions.

Rather than looking at the \$716 billion as savings, Governor Romney described it as a cut to the Medicare program, stating, "But on Medicare, for current retirees he's cutting \$716 billion from the program. Now, he says by not overpaying hospitals and providers, actually just going to them and saying we're going to reduce the rates you get paid across the board, everybody's going to get a lower rate. That's not just going after places where there's abuse, that's saying we're cutting the rates. Some 15% of hospitals and nursing homes say they won't take anymore Medicare patients under that scenario."

### THE DEVIL'S IN THE DETAILS

So one person's savings is another person's cut. To find out which interpretation of the \$716 billion is more accurate, one should go to the original source, the Congressional Budget Office (CBO) and Joint Committee on Taxation's 22-page report of July 24, 2012 to Speaker of the House John Boehner. The report was an analysis of the direct spending and revenue effects

of H.R. 6079, the Repeal of Obamacare Act. 



**Ken Perez** is director of healthcare policy and senior vice president, MedeAnalytics, Inc.

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# DIRECTIONS IN GROUP PRACTICE MANAGEMENT

By Russ Nassof, JD

## A Culture of Safety

Unsafe injection practice and the misuse of single-dose/single-use medication are all too often linked to safety gaps.

**N**ow, more than ever before, regulatory as well as financial considerations are propelling the increased merger of a diverse group of healthcare providers, which often are not only different in the type/level of services provided, but also in their culture, approach to problem solving and patient/healthcare worker safety practices.

While CEOs, CFOs, attorneys, chief medical officers, chief quality officers and administrators are generally well versed in examining financial and general corporate balance sheets, issues surrounding institutional differences in patient and worker safety practices — particularly in the newly vertically integrated organizations — are usually not even on the radar screen.

### HAI's

Practices and risks associated with healthcare-associated infections (HAIs) and patient/healthcare worker safety cannot be overlooked in the rush to consolidate, unify, upgrade and rebrand. The failure of the integrated delivery network and/or accountable care organization (ACO) to incorporate a culture of safety that is uniformly implemented and complied with throughout all levels of a healthcare organization can result in liability, litigation, monetary penalties, increased worker's compensation costs, infection transmission to patients and staff, damage to reputation and destruction of morale.

Nowhere are these issues more pronounced than in healthcare organization compliance, particularly at the sub-acute care level, with the OSHA Bloodborne Pathogen (BBP) Standard and the Federal Needlestick Safety and Prevention Act.

### SINGLE-DOSE MEDICATION

An examination of infection outbreaks over

**Regulatory as well as financial considerations are propelling the increased merger of a diverse group of healthcare providers.**

the last decade clearly delineates a continuing disparity of care between acute and outpatient settings predicated upon a breakdown of basic infection procedures involving, among other issues, reuse of syringes and misuse of single-dose/single-use medication. Both the Centers for Disease Control and Prevention (CDC) as well as Centers for Medicare & Medicaid Services (CMS) have recently updated their positions to say that use of single-dose vials for multiple patients is directly associated with infection transmission. CMS will cite healthcare facilities for violations except when medications are repackaged following United States Pharmacopeia 797 standards.

Unfortunately, this position restatement by CMS and the CDC was precipitated in response to providers and suppliers concerned with patient access to many medications in short supply and the pressure to reuse single-dose vials (SDVs). This is despite the fact that over the last 10 years, more than 130,000 patients have been the unfortunate recipients of notifications that they had been potentially exposed to bloodborne pathogens as a result of unsafe injection practices primarily at outpatient facilities.

Equally as concerning is that upon examination of the OSHA BBP Standard violations, physician offices and other sub-acute care facilities top →

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Russ Nassof, JD, is executive vice president, RiskNomics LLC in Scottsdale, AZ.

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## DIRECTIONS

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Once flaws have been identified, safer products and/or practices must be implemented uniformly across all segments of the ACO.

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the list of violators, yet these are exactly the same groups that are now the most common participants in the development of the ACOs.

### RISK MANAGEMENT

It is incumbent upon all healthcare organizations — but particularly the newly integrated ACOs — to develop a risk management strategy focusing on the identification of product and/or practice flaws that create the disparities contributing to the lack of standardization throughout an organization. Unsafe injection practice and the misuse of single-dose/single-use medication are all too often linked to safety gaps. Once flaws have been identified, safer products and/or practices must be implemented uniformly across all segments of the ACO and embedded into the healthcare culture to ensure sustainability. In addition, there must be ongoing innovation and review to reduce risk and provide higher quality patient care. This is already required under the OSHA BBP Standard for safe injection practices.

### LEGAL DEFENSIBILITY

In developing any healthcare risk management strategy, components of the program must be in alignment with applicable regulatory guidelines and best evidence-based practice to create legal defensibility. Legal defensibility is also enhanced through the reduction of variation across the continuum of care, which is important not only for products and practice but also standardization of documentation.

Uniformity of quality of care (product, practice, and documentation) is critical because any and every component in an integrated healthcare organization has now become a potential conduit of liability exposure for a large organization with often very deep pockets. As a result, damages for safety gaps at even the smallest outpatient facility, which is a member of an integrated network, can be catastrophic for an entire organization.

### FUTURE

There is general consensus that healthcare mergers and acquisitions will continue to go forward at a rapid pace for the foreseeable future due to a variety of economic and policy considerations. While there are clearly benefits to integration, challenges are emerging from differences in the culture of safety that may be present in the multiple layers of care being provided under a single umbrella.

Identification of gaps in the quality of care along with the uniform implementation of standardized products and practices will help ensure that the transition to accountable care is successful. EI

By Esther B. Neuwirth, PhD,  
Ryan Darke, MHA & Janet Sohal, RN, MSN

## Video Ethnography Influences Quality Improvements

It yields a patient-centered perspective that can inform and motivate quality improvements for both patients and caregivers.

**A**s we strive to make healthcare safer, more effective and more affordable, how can we make sure to keep patients and family caregivers at the heart of our efforts? Becoming truly patient-centered requires those of us who work in healthcare to move beyond our professional perspectives. By genuinely learning from the experiences of patients and families, we can create meaningful improvements.<sup>1</sup>

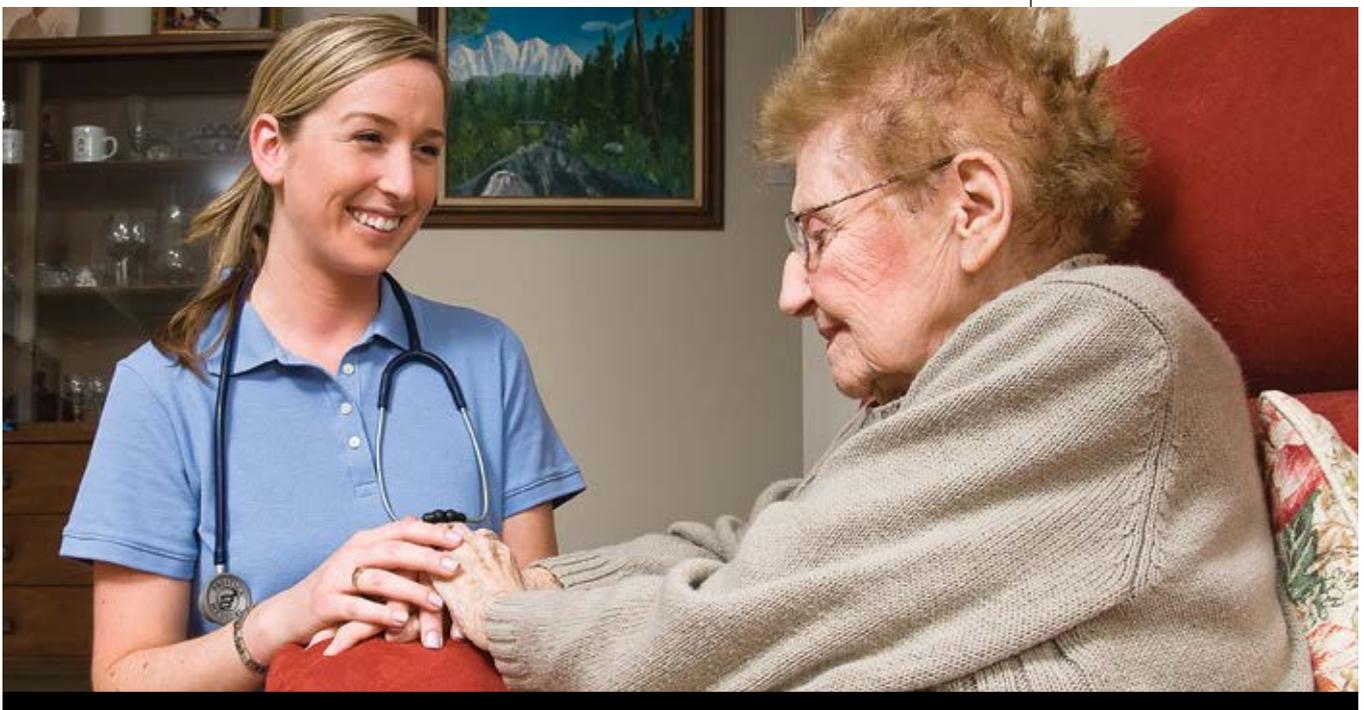
We can learn from patients and family members by inviting them to participate in focus

groups and advisory councils and providing opportunities for administrators and clinical staff to hear their stories. These are helpful strategies, but separating quality improvement from the process of receiving care introduces the possibility that patients and families share what they think we want to know and omit needs they believe we cannot meet. Shadowing patients and families as they receive care teaches us more about their experiences, but how do we effectively convey this knowledge to our col- ➔

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JEFFREY LEESER

**Video ethnography for quality improvement differs from marketing or training videos. No script, staged environment or predetermined message about improvement opportunities exists.**

leagues and co-workers?<sup>2</sup>

Keeping quality improvement connected to the experiences of patients and family members is a challenge that escalates exponentially in a healthcare delivery system with 172,000 employees, 16,000 physicians, and 9 million members in nine states. At Kaiser Permanente, we adapted a technique called video ethnography to help us keep patients and family members at the heart of quality improvement.

In brief, we interview and observe them before or after they receive care, using consumer-grade video equipment to record their perspectives and experiences, and analyze the information to identify themes and improvement opportunities. We embed video ethnography into quality improvement initiatives that span settings and clinical areas.

### **QUALITY IMPROVEMENT DATA IN REAL TIME**

By obtaining consent from patients and families to observe them as they receive care and interview them in their homes, in the clinic or at the hospital bedside, we can begin to see and experience care through their eyes. Capturing interviews and observations on video generates quality improvement data in real time.

Our goal is to improve care by identifying unmet patient needs, system gaps and other opportunities. Small teams of clinical and administrative personnel, trained internally in the technique, embed video ethnography within a rapid-cycle quality improvement framework. They capture data from interviews and observations on video and rapidly analyze it in a collaborative process. A final 5-8 minute video summarizes key findings, incorporating the faces and voices of patients and family members. Sharing final videos throughout the organization informs and motivates quality improvement decisions and activities.

Video ethnography for quality improvement differs from marketing or training videos. No script, staged environment or predetermined message about improvement opportunities exists. In real-life settings, teams spend time with patients, seeing healthcare “through their eyes” as fully as possible. Messages in the final video are selected after the team understands the perspectives and typical experiences of patients and family members.

We use video ethnography throughout the

quality improvement process to identify care gaps, unmet patient and caregiver needs, and effective practices. It also communicates insights to organizational leaders and identifies improvement opportunities.

Building collective will for improvement activities is a strength of this approach. The voices of real patients in videos complement other data sources to engender change in ways that quantitative data alone cannot. In our experience, when clinicians, staff and operational and clinical leaders view videos together, a strong shared vision for quality improvement results.

Video ethnography can be implemented by individuals with diverse backgrounds across a variety of settings. After appropriate training, quality improvement advisors, improvement teams, nurses, physicians, and other health care providers can successfully use it.

“We use all the traditional tools to drive for results on Kaiser Permanente’s quality performance, including metrics, targets, and clear accountabilities,” said Alide Chase, senior vice president, Kaiser Permanente. “But to get us to the next level we need to bring in the voices of our members as additional leverage. Video ethnography has proven to be a great tool for that. Our members’ voices supply motivation and help build will for continuously driving our performance higher.”

### **VIDEO ETHNOGRAPHY IN USE**

In clinical areas with established quality improvement priorities, video ethnography can dive deeper into patient and family experiences, identifying gaps, rough spots and/or unmet needs. Following up on previous work improving patient flow, the performance improvement directors at two Kaiser Permanente Northern California medical centers — Roseville and Sacramento — sought to understand more fully the experiences of patients and family members receiving surgical services and ascertain their wants and needs. They spent 3 days interviewing and observing surgical pre-op and post-op services and environments.

Some of their findings were expected, and the video ethnography reinforced the value of integrating the patient and family’s voice in creating the will for change: family waiting rooms were cramped and uncomfortable, and family members and friends received limited information in the form of status reports on patients. They →



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**Its power arises when it is used as part of an integrated approach to quality improvement, rather than as an isolated technique or strategy; video ethnography brings the voices and faces of patients and family members to other forms of data.**

wanted to be with their loved ones for as long as possible before surgery and as quickly as possible afterward.

Video ethnography also yields new and often surprising insights. Some patients and family members did not understand the rationale for arriving 2 hours before ambulatory surgery; unaware of needed pre-operative procedures, they viewed early arrival as inefficient. Family members wanted to know about the patient's progress through the surgical process and to see with their own eyes that their loved one was being well cared for.

Despite a private consultation room in each waiting area, surgical staff typically spoke with family members in the main area. Other individuals in the waiting room were uncomfortable and tried not to overhear what was being said.

The team created a short video, and shared it with surgical oversight teams, regional leadership and staff from national offices. Multiple patient- and family-centered care initiatives resulted, including allowing family to be present when surgical staff would have otherwise been less willing, developing separate areas where family could stay with a loved one waiting to go in for surgery, and enhancing status updates for family members.

### LIMITATIONS

Due to the practical imperatives of day-to-day healthcare operations, sample sizes are small; a good sampling plan is essential to obtaining meaningful findings. Teams must have a clear idea of what they want to learn about how patients and family members experience healthcare. Analysis of the findings is affected by the filters and priorities of the members of the team.

For these reasons, we couple video ethnography with other sources of quality data, such as the literature, surveys, performance metrics, workflow mapping, and other site-specific assessments. Its power arises when it is used as part of an integrated approach to quality improvement, rather than as an isolated technique or strategy; video ethnography brings the voices and faces of patients and family members to other forms of data.

Video ethnography relies on recording personal experiences of patients and family members in the context of their daily lives. Procedures and practices must be in place to assure appropriate consent and to safeguard protected health information.

Video ethnography team members must set aside their own perspectives to listen deeply and watch closely as they interview and observe patients and family members. This isn't always an easy transition for clinical and administrative staff, particularly when patients or caregivers describe problematic situations. The urge to solve a problem immediately or see issues as isolated instances can sometimes interfere with learning how it relates to the experiences of others, indicating a system-level issue.

### QUALITY IMPROVEMENTS

Video ethnography is an engaging and compelling method for rapidly developing a rich understanding of how patients and family members experience health care. It yields a patient-centered perspective that can inform and motivate quality improvements that are meaningful to patients and caregivers. Video ethnography can be used across settings and implemented by individuals with diverse professional backgrounds. 

### Resources

Neuwirth, E., Bellows, J., Jackson, A., Price, P. "How Kaiser Permanente Uses Video Ethnography Of Patients For Quality Improvement, Such As In Shaping Better Care Transitions," Health Affairs, June 2012.

Video ethnography tool kit: <http://kpcmi.org/cmi-news/tool-kits/>

Video about video ethnography: <http://kpcmi.org/cmi-news/tool-kits/>

### Acknowledgements

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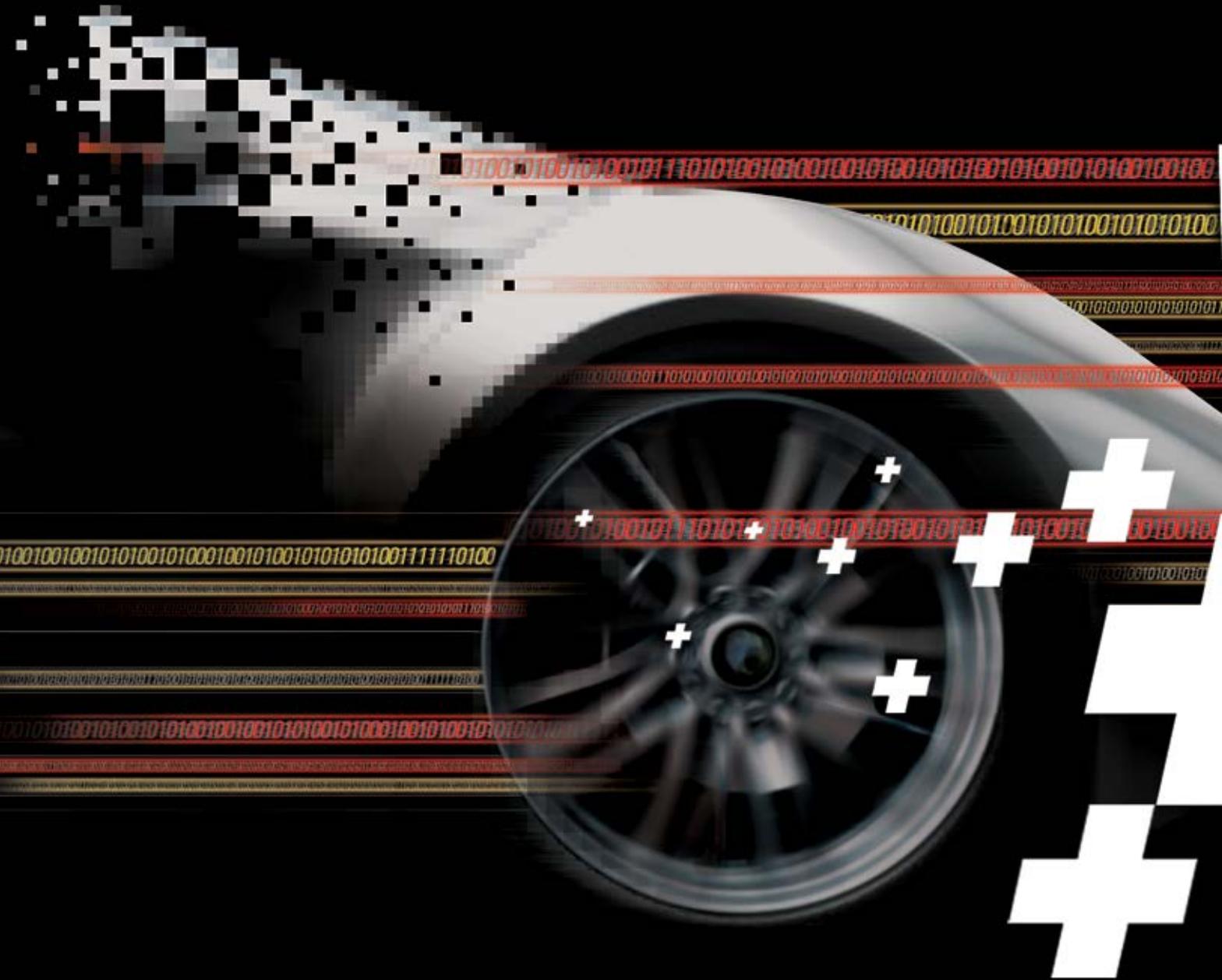
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# WHAT'S DRIVING

# IT

By Steve Huffman

No good article on “value” can start without a proper definition. From a healthcare CIO standpoint, value is something that changes on a dime, can be in complete conflict with its multiple stakeholders and can be used as a club to redefine priorities. One customer may define value as the ubiquitous sharing of electronic information, while another regulatory body puts such shackles around the data that value is almost out of reach. One customer wants a dizzying complexity of data to be entered, while physicians want a flawless “less than three clicks” process that reads their minds and completes their documentation.

The truth is, value, as users perceive it, lasts only until the next problem that IT can tackle is found. No mat- ➔

*Proper use and leveraging of data can create a value proposition for your health system that can redefine practice patterns, clinician workflow, patient outcomes and revenue growth.*

When a clinician reminisces on the days when they could round and document in half the time it takes today, I remind him that the amount of information going into the chart would take twice the time in “those days” if we stayed on paper.

ter the challenge to be overcome, the solution to achieve that value must seem to be easy to accomplish from the end-user standpoint. IT value can be as elusive as black magic.

### BACK OFFICE VALUE

The consolidation of hospitals and physician practices into health systems has created a dizzying complexity. Not only are IT departments working on creating efficiencies, dialing in meaningful use, and preparing for ICD-10, but we are also wading through integration challenges. Efficiency has become the expectation from IT in healthcare. With every Six Sigma or Lean project comes a vast array of changes in electronic systems. Today’s healthcare worker is dependent on IT for their daily workflow. IT can destroy—or create—value in workflow efficiency for back office staff and clinicians.

The value that IT can bring in the back office during this interesting time of healthcare reform is matched by its complexity. Trying to integrate payroll systems, time and attendance, billing systems, patient index’s and the like are only accomplished by talented IT teams that understand the data flow and system integration work. Having an enterprise system and playbook to quickly integrate an outside physician into an already humming practice management and electronic health record system can create massive value for the system and physician. Creating a solid inpatient electronic health record and data integration practice can reap enormous value with integrating with another hospital or multi-specialty clinic.

From a regulatory standpoint, ICD-10 will redefine the linkage of back office systems and clinical processes. Through the use of computer assisted coding systems and intelligent documentation systems, hospitals and medical centers are hoping that IT can maintain the value of the documentation and coding process currently in place. When ICD-10 coding practices require significantly more electronic documentation to produce the appropriate specificity to uphold the code, the IT systems and process will be blamed as the culprit of slowing things down, not the regulatory change to ICD-10. IT must bring a level of value that has not been matched previously by implementing software that will accept ICD-10 codes, as well as re-

designing processes that cross back office and clinical systems. While IT should not be leading the ICD-10 charge, it must help to launch value in the immense shift.

### CLINICAL VALUE

With the back office value being challenging for IT, the clinical value of IT has reached a fever pitch as well. The push of Meaningful Use stages 1 and 2 is leading hospitals to implement a wide array of clinical solutions that will forever change how nurses and physicians work and interact. Many of us have implemented and achieved stage 1 and tackled the challenges of housewide CPOE; we have seen both the positive and negative implications of those implementations and worked through them to derive as much value as possible through the challenges. This has led many of our users to the hurdle of “usability” and its impact on IT value.

Regulatory pressure and measurement to achieve the highest quality has led our clinicians to electronically document an intense amount of data into the patient’s chart. When a clinician reminisces on the days when they could round and document in half the time it takes today, I remind him that the amount of information going into the chart would take twice the time in “those days” if we stayed on paper. The more we make the information electronic, the more information we want electronic. The value proposition of IT is to create a process that is efficient and as easy to get the right information in the right place for the clinicians. We are all struggling with this, including the vendors. In the next 24 months, IT value, as defined by clinicians, will be based on our ability to make systems more “useable.”

Now that we are getting all of this information into the system, we also have users who are clamoring to get access to it and improve patient outcomes. Value to the patient and health system in good quality outcomes can be aided by IT when we can intelligently leverage the data we are collecting and produce recommendations to clinicians during the care cycle instead of many days after the patient had care in our facilities. Instead of calling it “big data” or “data warehousing,” we should term it “leveraging our data as an asset.” If it were up to me, data would be listed on the balance sheet as the largest asset

While value for IT is a moving target—sometimes moving weekly—it can be achieved.

a health system owns (which is why I'm not a CFO). The proper use and leveraging of that asset can create a value proposition for your health system that can redefine practice patterns, clinician workflow, patient outcomes and revenue growth.

#### PATIENT VALUE

Pushing this data to the patient also has the potential to improve the value of the healthcare by IT. Today we expect the patient to understand the language of healthcare, send them explanations of benefits that are ridiculously confusing and expect them to remember all of the instructions that we give them. We try our best to navigate them through that complexity, but IT is starting to make inroads at bridging that knowledge and understanding gap. While I may not agree with all of the requirements of the consumer push in

Meaningful Use, I do agree that leveraging technology to increase the value of information to the patient is critical. Providing access to their health record in human readable and understandable form is a game changer. Consumers are starting to see that patient-facing IT is valuable, and will be more valuable in the future.

While value for IT is a moving target—sometimes moving weekly—it can be achieved. Even though one stakeholder's value is another stakeholder's problem, IT value is not impossibly allusive. It is not one thing, one system or one implementation; rather, IT value is a confluence of systems and processes delivered by a team of talented individuals that can make it look easy. 

**Steve Huffman** is chief information officer, Beacon Health System, a new formed multi-hospital system in South Bend, IN.

## CEO PERSPECTIVE

# IT to Drive Change

HIT will directly impact organizational performance and customer loyalty in the years to come. By Ronald A. Paulus, MD

**T**hink back a decade: It's 2002. The euro was just established as a currency, the first iPhone won't debut for another five years and less than 20% of U.S. physicians and hospitals have any form of electronic health record ("EHR").<sup>1</sup> Fast forward to 2012. Now 90% of the world's population is covered by commercial wireless, 5 billion cell phone users span the globe and U.S. hospitals' EHR use is up 50%.<sup>2</sup>

Healthcare is changing rapidly, likewise health information technology (HIT). Continued HIT innovation and adoption will transform care delivery and ultimately health. For health systems, HIT will directly impact organizational performance and customer loyalty. Key impact areas include performance measurement and improvement enabled by new data and analytics, and new patient engagement models.



**Ronald A. Paulus** is president and CEO, Mission Health, Asheville, NC.

**More sophisticated predictive analytics will adjust for patient-specific risks and preferences, allowing for dramatic improvements in care customization.**

#### MEASURING PERFORMANCE

You "can only manage what you measure" is an old adage.<sup>3</sup> Fortunately, our performance measurement capability has increased dramatically with adoption of EHRs and associated technologies. We now know precisely when clinicians follow best practices (e.g., use of beta-blockers in 

## CEO PERSPECTIVE



**TABLE 1 - PERFORMANCE IMPROVEMENT ARCHITECTURE<sup>5</sup>**

### Step 1: Document

#### Document the current state using local data.

- Define current practice and variation level and measure gap between current and desired state.
- Confirm all needed data are available for review; close any data gaps.
- Minimum documentation: flow, treatment intensity, supply chain, accountable clinicians, safety.

### Step 2: Simulate

#### Confirm hypothesis via electronic review and simulate results.

- Establish what benefits the minimal, maximum and expected change would yield.
- Translate those benefits into clinical, financial and satisfaction metrics and targets.
- Compare different avenues for change to allow for rank-ordering of the most likely approach to yield the largest return.

### Step 3: Iterate

#### Try the test on a small scale, but with a strategy for rapid escalation.

- Carry out the test, documenting both expected and unexpected observations relative to the simulation.
- Compare performance to previously established metrics in near real time; confirm or deny ROI.
- Iterate for success or shut down and move on if results are below expectations.

### Step 4: Accelerate

#### Leverage reusable parts from past initiatives and build future infrastructure.

- Always use prior components and off-the-shelf content whenever available.
- Resist the temptation for “one-off” solutions that are inherently unscalable.
- Ensure that solutions implemented for a given initiative are incorporated into the overall transformation architecture for future use and scalability.

myocardial infarction), and we can revisit any “opt out” decisions to modify our processes, education efforts or the guidelines themselves. Also, new electronic tracking tools can measure how long a patient waits between events.

For a patient presenting to the ER, we can track arrival time to triage encounter, patient admit decision, bed arrival and delivery of admission orders. Identification and analysis of this information create tremendous opportunities for quality, satisfaction and efficiency improvements.

### DATA TO DRIVE PERFORMANCE

Recently, Jason Burke (SAS Institute Inc.'s Center for Health Analytics & Insights) highlighted ways that analytic technologies will transform our understanding of disease and care delivery.<sup>4</sup> First is segmentation of populations and diseases using new data elements like genetic traits, personal risk factors and patient-determined engagement models rather than traditional measures like age, gender, and geography. Second, access to ubiquitous clinical data will enable redefined medical indicators and outcomes, including previously unknown or underutilized measures, based upon their relative predictive value. More sophisticated predictive analytics will adjust for patient-specific risks and preferences, allowing for dramatic improvements in

# INTERFACE LIFECYCLE MANAGEMENT TO DRIVE CHANGE

Hospitals that are successfully implementing interface lifecycle management are cutting project timelines and cost overruns.

care customization.

As data improves, so will our approach to performance improvement (PI). Historically, multidisciplinary PI teams have analyzed data, redesigned workflows and tested new care delivery approaches, but those efforts have been slow and prone to recidivism. EHR data revolutionizes this paradigm by incorporating test results, vital signs, flow information and physicians' intent (e.g., reason codes for medication orders). In such settings, PI practitioners leverage data for pre-intervention hypothesis testing and business case development and for post-intervention, real-time comparisons. Critically, the EHR enables "hard-wired change" to physician and caregiver workflows. A revamped PI architecture is depicted in Table 1.

## CARE MODELS THAT ENGAGE PATIENTS

Activating patients in their own self-care remains an untapped opportunity. Nationally, many are working to shift physician and hospital-centric care models to more patient-centered (and patient-responsible) approaches. One example is in western North Carolina, where Mission Health's primary care medical director and colleagues developed a new outpatient practice that incorporates many design features of the patient-centered medical home model,<sup>6</sup> while operating with extremely low overhead (<35% of a standard practice) to serve rural and challenged communities.

A secure, web-based, EHR-connected portal supports this model. Patients register and self-schedule appointments, send messages and prescription refill requests to clinicians, view health-related blogs and pay bills. They prepare by identifying specific visit goals, and at least once per year, complete a comprehensive health risk and values tool. Onsite visit check-in occurs using an electronic kiosk, and a single, cross-trained medical assistant performs all necessary clerical and clinical duties that patients haven't completed themselves. Representative patient feedback is summarized in Table 2.

Collectively, these measurement, analysis and care model changes are exciting and energizing. At Mission Health, our aim is to get each patient to the desired outcome, without harm, without waste and with an exceptional experience. There is no doubt that HIT will help us achieve that aim. How will it help you? E1

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"I'm data-rich but information-poor."

That's an all-too-common refrain in healthcare these days, especially in hospitals. Information is the lifeblood of a hospital organization, but the data isn't flowing. It's pooling in silos, and the reason most often cited is that integration and interoperability are expensive and complex.

Why is interoperability complex? Because healthcare information systems, from EMRs to lab systems, are designed for capturing discrete data and individual transactions. They weren't designed for connecting the data collected in multiple transactions. The result is that patient data resides in dozens of systems — sometimes hundreds. Today, there is no clear path to channel those flows of data in order to provide insights that would lead to improved outcomes and lower costs.

At first glance, it would make sense that the move to integrated clinical systems from vendors such as Epic would overcome these barriers. But these systems can only go so far. For true interoperability and the ability to gain insight from data, the core systems need to be able to exchange data with medical devices, peripheral systems and ambulatory EMRs, as well as financial and operational systems.

The biggest bottleneck in integration today is interfacing — the connections between systems. Even with modern integration technologies, healthcare organizations still face weeks and months of manual work in delivering interfacing projects. That is because an interfacing project consists of many unknown unknowns. And far too many organizations rely on trial and error and drawn-out iterative processes to get projects completed.

There is a new approach emerging, called interface lifecycle management, that can reduce interface deployment time by 50%. Interface lifecycle management means that the development, delivery and maintenance of an interface are treated as a series of repeatable phases and activities, with a view to managing costs and resources.

How is this helpful? First, interface lifecycle management acknowledges that the true costs of interfacing and integration are not in the coding, which a modern interface engine will handle well. By going beyond the coding and the engine, interface lifecycle management addresses deeper business needs around controlling the effort and risks associated with integration and interoperability. Hospitals that are successfully implementing interface lifecycle management are cutting project timelines and cost overruns. With the right processes and software in place, hospitals are able to reduce interfacing testing time by 75% and reduce time on troubleshooting tasks by up to 90%.

For hospital leadership, especially CIOs, interface lifecycle management can have an immediate impact on both cost control and analyst resource shortages. Choosing the right technologies and processes enables leadership to do more with fewer internal resources, stabilizing headcount even during major hospital information system migrations and cutting consulting bills.

Over the longer term, interface lifecycle management can lay the foundations for breaking down silos and bringing together data to create rich, usable information. The right approach can enable systems to communicate, enabling the integrated analytics that can increase margins and drive down costs. Ultimately, by enabling integration and interoperability, interface lifecycle management can help fulfill the true promise of IT in healthcare. E1

— **Sovita Chander** is co-founder at Caristix, a healthcare interfacing company, where she works on product management and marketing strategy.

## CEO PERSPECTIVE

**TABLE 2 - PERFORMANCE IMPROVEMENT ARCHITECTURE<sup>5</sup>**

TOPIC	FEEDBACK
<b>Access</b>	"I really like that I can go online the night before, or on the weekend, and get an appointment the next day." "I was very surprised the doctor gave me his cell phone number on the first visit. I can't imagine I will use it very often, but it is very comforting to know I can get a hold of him directly if I need him, instead of having to fight an automated telephone system."
<b>Use of the care portal</b>	"It was a little confusing at first, but once I got familiar with it, I love it. I can't believe it took so long to introduce this into medical practice. It's so much better."
<b>Self-directed care</b>	"Usually, I forget all the things I want to talk to the doctor about. Writing things down online is nice because I make sure I've listed everything I'd like to discuss. I like that the doctor knows what I need before he comes into the room and can prepare, too."
<b>Setting a health goal</b>	"I've never had a doctor ask me to do that before. It really got me thinking about what I really DO want for my health goal."

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## COO PERSPECTIVE

# Revving Up IT for Improved Healthcare Delivery

Interactive patient care system boosts quality scores by supporting point-of care problem solving, communication and education.

By Barbara Hertzler



**Barbara Hertzler** is executive vice president and COO, St. Joseph Mercy Oakland.

In an effort to both improve patient satisfaction and engagement and support other core hospital objectives such as financial targets, point-of care problem-solving, communication and education, we began to evaluate an important technology: interactive patient care systems. Interactive patient care (IPC) systems have since become a top priority at our organization and

have proved to be an imperative clinical improvement tool.

A 443-bed teaching hospital based in Pontiac, MI, St. Joseph Mercy Oakland (SJMO) implemented an interactive patient care (IPC) system from GetWellNetwork. At the onset, the goal behind the implementation was to achieve improvements in 2010-2012 Press-Ganey →



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**On the heels of lackluster results from a variety of external quality consultants, the SJMO operations team saw IPC as a fresh approach that would address existing quality and safety objectives, better align care professionals with quality improvement initiatives, improve clinical, operational and financial performance, support problem-solving at the point of care and bolster patient and family engagement.**

scores, including hospital staff responsiveness, patient education, patient engagement and pain management and control. The improvements noted in those key areas were above and beyond what was originally anticipated.

#### **IPC LAUNCH**

Since launching IPC almost 5 years ago at the bedsides of some 400 patients, SJMO has seen improvement in several metrics. Hospital staff responsiveness has improved by 11%, call button response time improved by 18% and overall pain management improved by 10%. Meanwhile, the number of patients who report well controlled

pain has increased 4.6%, while patients stating that staff did everything possible to manage their pain has jumped 15.3%.

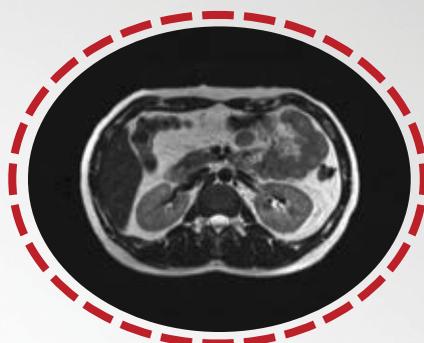
Patients utilizing IPC technology are better able to meet their individual care needs, while caregivers can easily access tools to communicate, problem-solve and facilitate education in areas such as medication and pain management. IPC can be integrated within the electronic medical record (EMR) or offered as a patient-centric application designed to improve quality, safety, efficiency and satisfaction.

The goals we set for IPC outcomes were ambitious. On the heels of lackluster results from a variety of external quality consultants, the SJMO operations team saw IPC as a fresh approach that would address existing quality and safety objectives, better align care professionals with quality improvement initiatives, improve clinical, operational and financial performance, support problem-solving at the point of care and bolster patient and family engagement. Operations leaders also had their sights set on boosting the all-important HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) scores, essential in driving patient and family loyalty and securing maximum reimbursement from payers.





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## COO PERSPECTIVE

Six years ago, hospital professionals at SJMO sought CEO support to move forward with IPC. They also requested support and decision-making from an 18-person multidisciplinary selection and design team that would ultimately generate organization-wide impact and involve departments ranging from lab and pharmacy to nursing and radiology.

Over a 6-month period, the multidisciplinary team re-engineered workflows and integrated IPC with existing technologies. The result was an interactive problem-solving, education and communication system powerful enough to enhance SJMO's clinical, financial and operational performance.

### GOALS MET

The IPC system delivered on its promises. Since its launch, our IPC has improved quality and safety by helping SJMO meet its quality indicators and provide a safe healing environment for patients, family members and staff. Original goals of SJMO, operational efficiency and performance management scores are on the upswing because more than 1,000 staff members — primarily nurses — now rely on IPC as a critical component of their routine clinical workflow. And while patient satisfaction and engagement levels have improved, employees have also experienced IPC's transformative power — especially the system's expanded opportunities for professional development, engagement and close involvement

with communication, education and daily problem resolution.

IPC has also delivered a solid foundation for emerging care and payment models. IPC healthcare professionals are more inclined to want to work as members of a team, gaining experience in the team-based care that is essential in Stage 3 meaningful use, medical home certification and value-based purchasing and accountable care development. Physicians affiliated with SJMO feel more engaged and integrated with the organization as patients and families share their positive experiences with IPC-related communication, education and problem-solving.

We will work toward fuller and deeper integration of IPC into clinical, operational and financial workflows. Such integration and involvement will be likely to occur through the design of enhanced mechanisms for patient, family and staff feedback, as well as customization of tools and resources to more closely meet the communication, education and problem-solving needs and preferences of users. EI

### ON THE WEB

To learn how the Children's Hospital at Montefiore is using HIT to engage young patients, visit [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and search **Engaging Pediatric Patients Through Technology**.

## CFO PERSPECTIVE

# Steering to Enhanced Accountability Through Cost Savings

Every healthcare organization must implement ACO-type processes, accept risk and take on accountability for delivering patient care at a fixed price. *By Shane Pilcher, FHIMSS*



**Shane Pilcher** is vice president at Stoltenberg Consulting, a healthcare information technology consulting firm.

**H**ealth information technology (HIT) is neither a mantra, a panacea nor a way of life. Instead, HIT is a significant enabler of short- and long-term healthcare transformation and change. The current healthcare environ-

ment has already shifted toward meaningful use, value-based accountable care, bundled payment, patient engagement and population health management. However, no healthcare organization (HCO) can take advantage of these trends and



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## CFO PERSPECTIVE

However, every HCO — from the smallest community hospital to the largest multi-hospital system — must implement ACO-type processes, accept risk and take on accountability for delivering patient care at a fixed price.

opportunities without mobilizing the right HIT solutions and leveraging the proper guidance and strategies.

### ACCEPTING RISK, ENHANCING CARE

Whether or not phrases like “accountable care” and “bundled payment” appear in the strategic plans of HCOs is irrelevant. Equally irrelevant is whether or not HCOs participate in government-sponsored ACO projects. However, every HCO — from the smallest community hospital to the largest multi-hospital system — must implement ACO-type processes, accept risk and take on accountability for delivering patient care at a fixed price. That in turn, will require more vigorous HIT-driven processes to enhance care quality, safety and efficiency, improve outcomes and prevent costly complications and readmissions.

How will HCOs achieve these goals? It won’t happen without HIT solutions that integrate patient health and business information across applications so providers can view the same information and “see” each patient the same way across encounters. HCOs must also track and report on quality measures, generating the kind of intelligence that identifies trends across departments or centers. Doing so will help HCOs identify cost centers capable of doing “more with less,” or where minor process changes can lead to significant cost savings, along with the details for their exceptional performance.

When a multihospital system in the eastern U.S. started to analyze costs and trends at the level of the patient encounter, it noted significant cost and quality disparities between hospital dialysis centers. Ultimately, the system discovered that one center achieved superior outcomes at a reduced cost because it ordered a less expensive but equally effective drug. The system responded by researching whether or not the lower-priced drug could generate the same positive patient outcomes across dialysis centers. The example is typical of how HIT works to integrate patient information and business data across departments, pinpoint trends and reveal actions to cut costs and improve outcomes.

### TRACKING PERFORMANCE ON A BUDGET

Unfortunately, more than a few HCOs have been stymied in their efforts to track performance, outcomes and costs. Forced to do more with less at a time of severe budget constraints and dwindle →

**HIT departments make an impact when they shadow department staff, dissect department workflow, and, if necessary, re-engineer business and clinical processes. Warning: Avoid the temptation of wrapping the latest technology around an ineffective process.**

dling reimbursement, some HIT departments are facing challenges in their everyday functions. As they struggle to implement Stage 1 and 2 Meaningful Use and await Stage 3 requirements, they lack the staff and funding to take on functions like data analytics, business intelligence and strategic planning that directly impacts patient outcomes and costs. While purchasing applications may help these departments, they still need a properly equipped staff to identify information locations, pinpoint trends and offer guidance on the use of that information.

Despite the hype given to big data, the majority of HCOs quickly learn that information itself is far from being “king.” Instead, they discover that analysis turns information into the kind of intelligence that enables business and clinical transformation. How can HCOs turn information into actionable intelligence? Following are key recommendations:

**Evaluate the HCO’s culture, as well as its operational, financial and clinical needs, priorities and goals.** Make sure information and data analysis are customized to the HCO and its most active users and align HIT activities with the business goals of the HCO.

**Seek external guidance.** HIT consulting firms can help HIT departments identify priority sources of information and common areas for improvements, avoiding time-consuming, expensive and random searches of multiple information sources.

**Avoid treatment as an ancillary department.** Ideally, HIT departments should wrap

their initiatives around an HCO’s business and clinical processes and goals. The HCO’s relationship with HIT is often shaped by one of two CIO types: CIO 1.0 who leads the HIT department and manages staff only, or CIO 2.0 who reports to the CEO and influences business goals.

**Partner with departments.** HIT must pose three questions of departments: What do you do? How do you work? What would or could you do with the information you plan to collect? HIT departments make an impact when they shadow department staff, dissect department workflow, and, if necessary, re-engineer business and clinical processes. Warning: Avoid the temptation of wrapping the latest technology around an ineffective process.

**Address staff shortages creatively.** Heavy investment in Meaningful Use as well as isolated geographical locations can affect HCOs’ ability to recruit and retain HIT staff. External consultants can help — not only in assuming staff responsibilities and roles, but also in developing skills among existing staff who can one day assume more expanded roles as business intelligence analysts and strategic thought leaders in their IT department.

**Prepare for an HIT marathon.** Once HCOs receive reimbursement for Stage 1, they must reinvest in Stage 2 and then move on to Stage 3. Unfortunately, ACOs and ICD-10 won’t wait for meaningful use to conclude. An HIT consulting firm can help an HCO push forward on meaningful use, prioritize ACO and ICD-10 initiatives, and maximize use of internal staff while maintaining focus on and achieving HCO goals and objectives.

**Look for flexibility, depth and mindset.** HCOs stand to benefit if they seek external HIT resources that can perform multiple functions, work toward long-term goals and operate with a strategic mindset. Doing so will help HCOs bring resources to specific, time-sensitive goals while maintaining a focus on big-picture issues. Ei

## ON THE WEB

To learn how accountable care organizations can reward healthcare innovators for delivering higher quality care and outcomes, visit [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and search **ACOs: Opportunities for Higher Quality Care & Outcomes**.

# Hitting the Road: One Health System's Meaningful Use Journey

See how Self Regional Healthcare is on the road to meeting Stage 2 Meaningful Use requirements. By Chuck McDevitt, MBA, CPHIMS, CISA



**Chuck McDevitt**, is vice-president and chief information officer, Self Regional Healthcare, Greenwood, SC.

**H**ealthcare systems around the country have been racing over the past 2 years to implement clinical application and technology changes, as required by the American Recovery and Reinvestment Act's Meaningful Use criteria. As a health system, we are rapidly achieving these milestones on the hospital side and with owned and affiliated physician practices in our community.

## STAGE 1

Self Regional Healthcare is a 414-bed tertiary facility in the upstate of South Carolina, serving the seven counties of the Lakelands region with about 250,000 covered lives. Our inpatient sys-

tems are primarily McKesson's suite of products and Allscripts on the physician side.

In early 2012, we successfully attested to Medicaid for Meaningful Use Stage 1 and received the first payment from Medicaid. We are currently in our 90-day data gathering period on the Medicare side, which is worth millions in incentives and penalties. In these days of declining reimbursements, such incentives definitely have the attention of our senior management and board of directors.

## PARTNERSHIP

One way that we're achieving these goals is a partnership with our physicians and clinical →

We were able to successfully implement CPOE across the entire hospital in about 6 weeks with an immediate adoption rate of over 50%.

## CIO PERSPECTIVE

staff in the hospital and our community. We began that partnership by selecting an outstanding chief medical informatics officer in Dr. David Isenhower, an ear, nose and throat surgeon, to lead our efforts. We contracted with Dr. Isenhower to work with us one day a week during the implementation of our computerized provider order entry (CPOE) system that we dubbed “iOrder.”

This is where things really took off for us as a health system. Dr. Isenhower put together a group of about 20 people, including physicians covering all the major specialties, pharmacists, our clinical informatics group and executives, such as myself. The physician order expert team or POET has been meeting every

Wednesday morning at 7 a.m. for over a year. Staff members are paid for their time under contract, breakfast is provided and meetings start/end on time.

### AGENDA

The group worked through clinical order sets, as we moved from paper to electronic formats during the past year, and has tactfully challenged each other’s assumptions particularly around pain medication, anti-coagulation and insulin management.

I’ll never forget one session where the surgeons were presenting one of their order sets that described how much Dilaudid to give to patients, when our palliative care specialist, spoke up and said, “Do you realize how much morphine that is?” He rou-

tinely works with late stage illnesses and is very familiar with pain management.

That’s the way the entire team operates today — by challenging each other not only on clinical issues with order sets but also on process issues across the hospital. This has been essential to implementing every other system that we’ve done — from the emergency department information system to medication reconciliation. The POET team is now routinely referenced as a group of experts by physicians and the Medical Executive Committee, which suggests standing protocols and other decisions be run through POET.

### WINNING FORMULA

Dr. Isenhower recently said about our team

## GEAR UP FOR STAGE 2 SUCCESS AT THE POINT-OF-CARE

By Rob Sobie

**A**fter two years and nearly \$2.5 billion in spending under HITECH, many hospitals have made significant progress in deploying technologies to improve quality of care and caregiver efficiency. With the release of Stage 2 guidelines for Meaningful Use last month, hospital leaders and system providers now have a clearer picture of next steps for achieving the full potential of EMR systems.

Just over the past year we have seen tremendous gains in the deployment of two key patient safety systems – computerized physician order entry (CPOE) and barcode medication administration (BCMA). For the first time, a majority of U.S. hospitals are using these technologies.

Last year CPOE deployment increased to 61 percent, according to a survey in Pharmacy Purchasing & Products. CPOE use is skyrocketing in all sizes of hospitals, but is most common in large (400+ bed) facilities.

Even in small hospitals with 100 beds or less, CPOE use has increased from just 15 percent in 2009 to 55 percent now. That’s impressive – especially when you consider that the survey found that just five years ago the primary ordering methods were courier, pneumatic tube and fax. CPOE use is expected to increase to nearly 90 percent within five years while use of old paper-based ordering systems decline sharply.

According to the same survey, BCMA deployment has increased by 29 percent just last year. Today, almost 60 percent of hospitals are using BCMA to improve patient safety by ensuring correct medications, up from just 21 percent five years ago. The number is even higher among large- and mid-sized facilities though even among small hospitals almost half have deployed the technology.

The dramatic progress on BCMA and CPOE lays the foundation for even greater challenges to meet Stage 2 Meaningful Use requirements, which require much tighter integration between the point of

care, pharmacy, lab and radiology. While smart phones and tablets will assuredly play a role, mobile computing workstations and wall-mounted computers will continue to be the primary technology platform. Mobile workstations can be readily equipped with medication dispensing systems as well as BCMA scanners to support workflows. However, dispensing alone is not enough as workflows must integrate medication storage and delivery as well. There are no one-size-fits-all solutions, so you need a thoughtful partner who can explore the options to help you tailor the right approach that supports caregivers at the patient bedside.

It’s also important to find a partner who can look beyond point-of-care hardware to support the software issues involved with the move to closed-loop medication administration. For instance, ensuring

that workstations can seamlessly integrate with electronic administration records (eMARs) will be critical. E1

**Rob Sobie** is vice president of healthcare marketing at Metro, a world leader in providing technology, storage and transport solutions for healthcare facilities and other industries.



Rob Sobie will provide detailed insights on BCMA in his next post. How is your organization progressing with BCMA and CPOE? What do you see as your biggest challenges for meeting the stage 2 requirements for Meaningful Use?

Continue the conversation at [www.pointofcarecorner.com](http://www.pointofcarecorner.com).



of experts, “POET has proven that paying docs for their work, always asking them to do only important work that interests them, and precisely controlling meeting agendas and time duration, is a winning formula for engaging the medical community. We initially planned to have a small core group that would meet regularly and a larger special team that would be convened when the meeting topic required their input. We quickly discovered that it was impossible to predict which doctor would provide the vital insight that resulted in important clinically relevant improvement to order sets and related processes. So we always meet with all of POET.”

#### ACHIEVEMENTS

After a year of order set building and planning, we were able to successfully implement CPOE across the entire hospital in about 6 weeks with an immediate adoption rate of over 50% (well past the Stage 1 requirements of 30%), and that rate continues to grow.

On the community side, for physician EMR systems, we contracted with many of the same physicians to host their system, including implementation and training. We have handled over 25 implementations across different practices using a small contingency of our own IT staff and partners. This would have been impossible for many of these practices to achieve on their own, and is what Allscripts describes as a community model. We were one of the first groups in the country to adopt this model on behalf of our physicians.

#### STAGE 2

We are now moving forward with connecting these practices with our hospital, each other, ambulatory services, and outside labs and state agencies.

The requirements for Meaningful Use Stage 2 aren't getting any easier but we believe by partnering with our physicians in the hospital and community we're uniquely positioned to not only achieve meaningful use but prepare us for accountable care requirements. E1

#### ON THE WEB

To read more on this topic, go to [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and enter “Meaningful Use” in the keyword box.



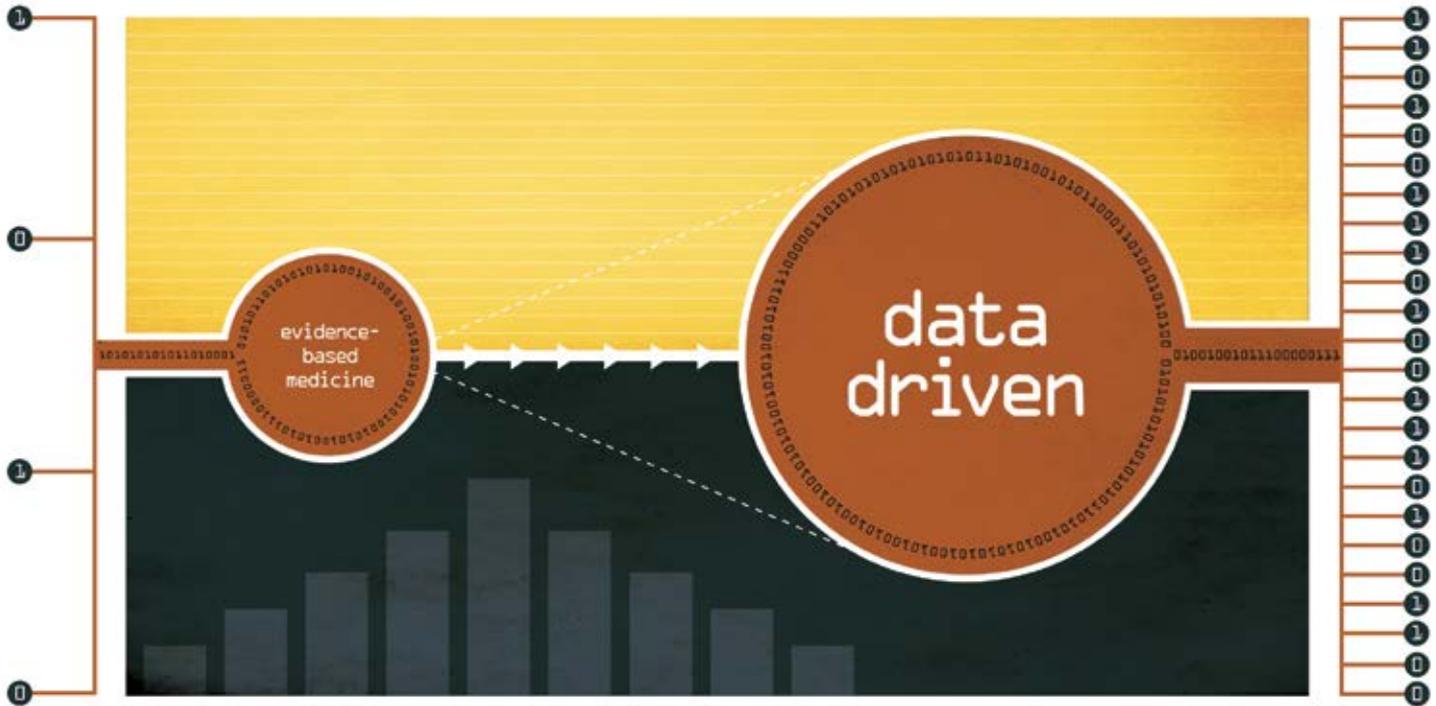
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# Transition to Data-Driven Healthcare

Healthcare will evolve from evidence-based medicine to — you guessed it — big data to identify the best possible treatments. By Dan Riskin, MD

“Big data” is revolutionary — not only impacting healthcare, but also affecting industries ranging from banking and telecommunications, to government agencies and retail. Healthcare has already witnessed big data move out of silos and into enterprise information technology (IT). The healthcare C-suite is now thinking strategically about its potential uses, but making the right decisions requires an understanding of its origins, development and challenges.

## FROM EBM TO DATA-DRIVEN HEALTHCARE

Roughly every 50 years, healthcare has historically redefined itself through breakthrough technologies. In the 1870s, the germ theory of disease generated rapid expansion of public health programs, while the discovery of penicillin in the 1920s accelerated use of medication-based therapy. In the 1970s, the emergence of randomized

controlled trials (RCT) produced a more scientific approach to healthcare, as well as an ethical approach to research.

But what of the future? As we move farther into of the 21st century, and farther into the newest technological era, it makes sense to ponder healthcare’s next revolution — the next big thing.

Just as previous healthcare revolutions reacted to political, business and cultural trends, so will healthcare’s next revolution. In response to trends like massive processing power, interconnectivity and big data availability, healthcare’s emerging revolution will likely be the transition from evidence-based medicine (EBM) to data-driven (DD) healthcare.

Implemented in the 1970s, EBM leveraged the randomized controlled trial (RCT) and defined medicine as a science, promoting decisions based on evidence, rather than limited past →

.....  
**Dan Riskin** is the CEO of Health Fidelity, a provider of a commercial-grade, cloud-based natural language processing (NLP) service. Dr. Riskin is also a consulting assistant professor of surgery at Stanford University.

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MKT02294 Rev. B 9/12



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Instead of relying on thin and siloed discrete data streams from departments as diverse as pharmacy, lab, imaging and billing, healthcare organizations must demand solutions that facilitate the use of full clinical content.

personal experience, inserting the scientific method into medicine. However, this process assumed that clinicians could apply the experience of tens or hundreds of subjects to millions of patients, and that one patient with hypertension was the same as many other patients, regardless of age, cause, other medical conditions, or other medications taken.

DD healthcare offers a transformative alternative to EBM. Instead of defining a standard of care based on limited numbers of study patients generalized to the many, healthcare will soon be able to identify the best possible treatment for a specific patient based on what has worked for millions. DD healthcare has the power to identify optimal therapy for either the fairly typical 70-year-old man with diabetes and hypertension or the rare 35-year-old woman with lupus and lung cancer. Because the source incorporates millions of cases, clinicians can address issues even if they were never studied in an RCT.

The benefit of DD healthcare applies to improving standard of care and enhancing day-to-day practices. By leveraging all incoming data streams, a healthcare organization (HCO) could run real-time assessments of best practices to identify and improve areas of weakness, leverage areas of strength and make population-based health and real-time care improvement possible.

### BIG DATA IMPERATIVES

While big data offers massive amounts of information, it presents the challenge of how to fully and optimally utilize it. Healthcare needs appropriate technologies to aggregate and make sense of this knowledge and deliver value. That means vendors must work with HCOs to merge information and turn the 80% of unstructured data, which currently goes unused, into usable knowledge. Vendors must also de-identify and aggregate data in an automated fashion.

Until recently, healthcare lacked these technologies. Now, innovative, scalable systems in natural language processing, ontologies, data warehousing, and data mining make big data extraction and use possible.

Healthcare technology has a tough to-do list. It must make information accessible in real-time to the right professionals, protect information from misuse and apply analytic techniques that offer HCOs coded information in multiple formats for powerful local and regional analytics.

### ACTION STEPS

Instead of relying on thin and siloed discrete data streams from departments as diverse as pharmacy, lab, imaging and billing, HCOs must demand solutions that facilitate the use of full clinical content, including unstructured physician notes, which are currently unutilized. Executives and clinicians must also call for solutions that aggregate information in ways that make it available in real-time for clinical, financial and operational decision-making.

HCOs can play a role in encouraging government and private entities to gradually shift focus from electronic medical records implementation to care improvement through data analytics. By leveraging the expertise of the Office of the National Coordinator for Health Information Technology and healthcare associations already focused on usage, this type of initiative would allow the U.S. to take the lead in the data-driven healthcare revolution.

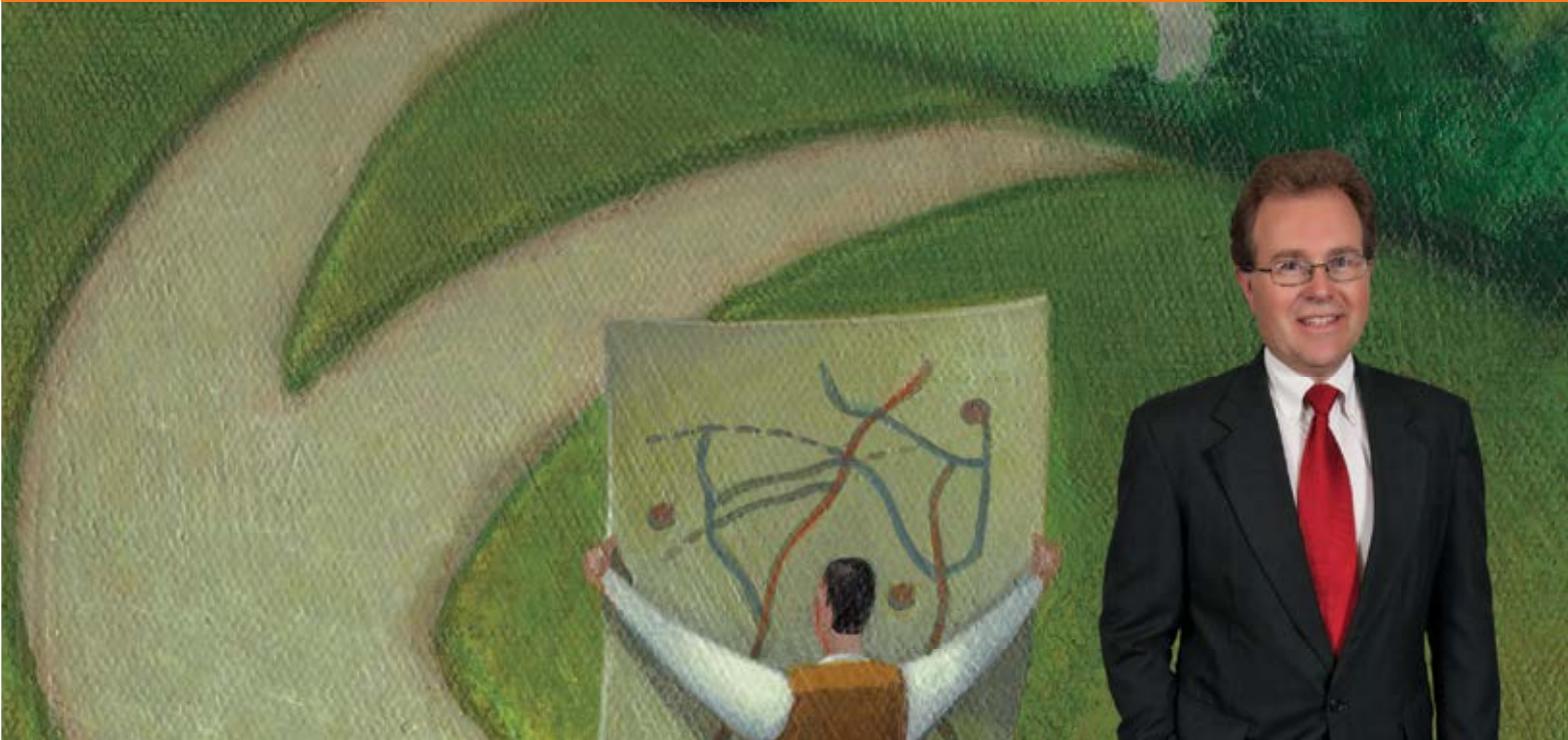
**Healthcare leaders can also take these steps to support the transition to full usage of big data:**

- **Face healthcare's underlying problems. Healthcare now faces multiple challenges, including lackluster cost control, outcome variations, fragmentation, duplication and inefficiency. Leaders should explore how use of big data could solve these problems.**
- **Take advantage of enabling factors. Lessons learned through the massive investment in research and development of consumer information technology make the big data revolution possible. Healthcare must use what has been learned to benefit patients and providers.** E1

### ON THE WEB

To learn about the quest for technological infrastructures that will support advanced clinical intelligence, visit [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and enter **Healthcare's Big Data Conundrum** in the keyword box.

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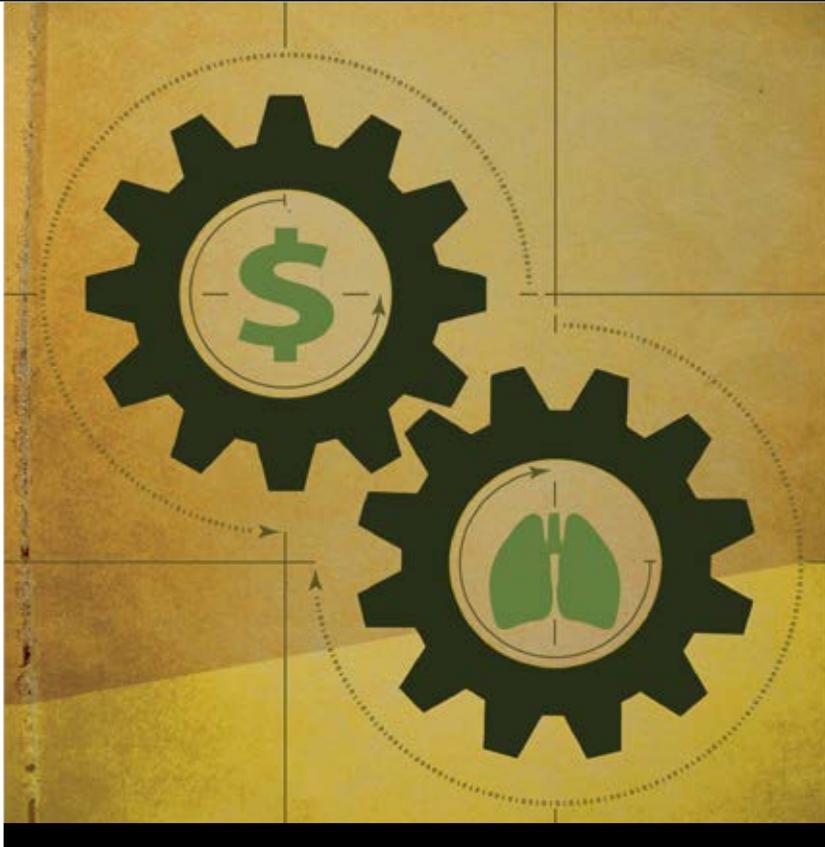
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Jack Roberts, Director of Information Systems  
Twin County Regional Healthcare

<sup>1</sup>Source: 2006-2011 'Top 20 Best in KLAS Awards: Software & Professional Services', www.KLASresearch.com.  
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# Meeting Patient Needs Within Budget

Meet operational, fiscal and patient outcome targets through the use of an RCMIS. By Greg Giefer, RRT



**Greg Giefer** is a respiratory care specialist, Via Christi Hospitals, Wichita, KS.

**M**ost respiratory care department directors would agree that with each passing year, their department's operational and financial targets become increasingly difficult, due to a multitude of factors. Documentation requirements for appropriate reimbursement are constantly monitored by internal and external auditors. Efficiently managing practitioner workflow and productivity is essential, as is accurate charge capture by those practitioners.

On-the-fly custom report generation has become crucial to making everyday operational decisions. Nationally recognized benchmarking systems require the ability to collect and analyze

detailed operational statistics. The array of bedside charting devices is ever-changing. Dilemmas like these are universal to respiratory care department directors, and when considered collectively, may seem daunting.

However, healthcare facilities that use a dedicated RCMIS (respiratory care management information system) find that successful operational and fiscal management of their department is easily achievable using the unique functionality and tools found in an RCMIS.

## RCMIS

An RCMIS is a specialized information system tailored to the unique operational characteristics of respiratory care departments, particularly those in hospitals. Several such systems have been available since the 1980s and have enjoyed widespread use.

Mainstream hospital information systems are not optimally configured towards the unique environment or clinical practice of respiratory care. In fact, analyses performed by many hospitals conclude that not using an RCMIS may actually decrease departmental efficiency, productivity, charge accuracy and level of care — all of which lead to increased costs and lower revenue for the respiratory care department and organization. Let's examine the various components of an RCMIS and the distinct advantages it can offer.

**Documentation and Configurability:** The ability to accurately capture patient care documentation is one of the most elementary components of any healthcare information system. Most systems do a fine job in this regard. However, an RCMIS is designed to meet the unique bedside documentation needs of respiratory care practitioners. Frequently changing governmental and payor documentation requirements for respiratory care services demand a system that is highly configurable towards the respiratory care environment. Configuration changes in an RCMIS are typically very simple and can be made without the involvement of the vendor or hospital IT department, making customization possible in hours instead of weeks.

**Workflow & Productivity:** One strength of the RCMIS is its ability to efficiently manage workflow and boost productivity. Not many healthcare information systems are





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### Healthcare facilities that use a dedicated RCMIS find that successful operational and fiscal management of their department is easily achievable using the unique functionality and tools found in an RCMIS.

equipped to competently quantify an ancillary department's "work due" during a shift and then evenly assign those procedures to scheduled staff. But an RCMIS has the ability to associate work units (time) with the scheduled respiratory care procedures for each patient, organization-wide, across multiple campuses, for an entire shift. It can then automatically divide and assign that work evenly, based on the number of scheduled practitioners. For decentralized departments like respiratory care that travel to all hospital units, the workflow engine of an RCMIS is an invaluable asset.

**Charge capture:** Accurate charge capture is crucial to any hospital department, Respiratory Care included. The charge-generation mechanisms employed by health information systems can vary widely. Some rely heavily on manual charge entry. A good RCMIS captures charges based exclusively on patient care documentation. In other words, a therapist's charting actually produces charges, without the need for manual charge entry. The result is extremely accurate billing with a low incidence of error. For hospitals of all sizes, the charge-on-chart billing method employed by a RCMIS can result in substantial revenue increases through a dramatic decrease in billing errors.

#### **Report generation, statistical analysis and benchmarking:**

One of the most powerful features of an RCMIS is its ability to produce custom reports. Almost all generic hospital information systems can produce a multitude of reports, but most are not useful to the respiratory care department. Mechanical ventilation time per patient, therapist productivity, missed therapy, code blue survival rates, procedure statistics, resource utilization and equipment tracking are only a few of the custom reports that can be quickly generated from the RCMIS. These reports can typically be created without involvement from hospital IT staff or the system's vendor, and on-the-fly reporting ability impresses hospital administrators and accreditation surveyors, alike. RCMIS reports also play a crucial role in data collection for entry into the various benchmarking systems used by respiratory care departments across the nation. The information derived from these benchmarking systems are valuable in promoting best practices, providing empirical evidence to support administrative decisions and building sound budgets. The specialized data required by these systems would be difficult to obtain without the use of an RCMIS.

**Technology and bedside documentation devices:** It is widely accepted that bedside documentation through point-of-care systems improves patient care. The RCMIS facilitates this practice by supporting multiple hardware platforms that are commonly used at the bedside, such as a desktop computer, mobile notebook, tablet or hand-held devices.

The features and advantages discussed here are only a sampling of the powerful tools that an RCMIS can bring to the operational and financial management of a respiratory care department. In the current trend of health information system consolidation and paring down of specialized departmental systems, the RCMIS continues to provide strong, justifiable value to the respiratory care department, to the hospital, and most of all, to our patients. EI

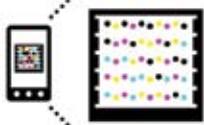
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# Ten Ways to Avoid Your Lawyer: Focus On Employee Safety

By Robin M. Sheridan, Anne M. Ruff & Stephane P. Fabus

**C**urrent data suggests that more workers are injured in healthcare than any other industry. Since the cost of these employee injuries from direct care, insurance costs, productivity losses, absenteeism, etc. is staggering, the last thing any hospital needs is more expense.

Generally, medical and disability income expenses of work-related injuries are covered by Workers' Compensation insurance and employees are not permitted to pursue their employer for additional damages. While this "exclusive remedy doctrine" is recognized in every state, there are exceptions. Most exceptions relate to intentional acts and safety violations. In *Arnazzi v. Quad/Graphics* (West Virginia, 2005), an employee was injured while driving a forklift. The court recognized that the employee was entitled to Workers' Compensation benefits and civ-



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il damages because the employer had failed to provide OSHA-required training.

At least 14 states' Workers' Compensation laws also provide a penalty for violating a safety policy, law or regulation. In Kentucky, for example, the penalty is as much as 30% additional compensation for the claimant. Penalties are generally not covered by Workers' Compensation insurance coverage.

So how can you reduce the risk of an exclusive remedy exception or Workers' Compensation penalty?

## 1 COMPLY WITH OSHA.

Federal and state-specific OSHA standards were established to provide safe and healthy working conditions. Employers who fail to comply are subject to fines and citations and also run the risk of having equipment or facilities closed until the hazardous situation is remedied. In states with exceptions to the exclusive remedy doctrine, failure to comply may provide a basis for civil damages. Workers' Compensation penalties may also attach. →

## LEGAL ISSUES

### 2. COMPLY WITH STATE LAW.

States often have their own laws addressing employee safety, including “Safe Place” legislation requiring employers to provide a safe work environment (Wisconsin, Alabama). Other states enforce safe patient handling laws (Illinois, Minnesota). Failure to comply with these state laws can also result in fines and/or a basis for an exclusive remedy exception.

### 3. MAINTAIN AND ENFORCE YOUR POLICIES.

Communicate safety rules clearly. Require that everyone (vendors and employees — including physicians!) comply. Observe and document compliance and provide refresher training regularly. Test and monitor your supervisors to ensure they understand and enforce the policies. Require and monitor near-miss reporting.

### 4. COMPLY WITH THE JOINT COMMISSION.

The Joint Commission (“TJC”) manual for acute care hospitals has 80 standards addressing hospital safety, applicable to patients, visitors, employees and staff. Failure to comply could result in employee injury as well as a loss of deemed status and site visits from CMS. Because failure to meet a standard of TJC is likely a violation of hospital policy, injuries resulting from violations could also result in workers’ compensation penalties.

### 5. SCREEN EMPLOYEES.

Enforce state-required health screenings for all employees, not just caregivers. In spite of the ADA restrictions on employer conduct with respect to employee medical conditions, post-offer/pre-employment examinations and medical inquiries are lawful. Post-employment physicals are also permissible when job-related and consistent with business necessity or as part of a voluntary employee health program. Work closely with Human Resources to avoid ADA or state disability discrimination law issues. A thorough screening process will reduce the presence of infectious disease in the workplace, hospital-acquired conditions and calls from the patient’s lawyer.

### 6. MINIMIZE RISK THROUGH VENDOR CONTRACTS.

When entering into vendor contracts, ne-



Communicate safety rules clearly. Require that everyone (vendors and employees — including physicians!) comply.

gotiate protections. Include indemnification provisions that make the manufacturer responsible for injuries caused by faulty equipment or worker error. If agencies will be sending locum tenens to your facility, ensure the agreement specifies, and the locum acknowledges, that s/he has to have personal health insurance that covers work-related illnesses and injuries. Require that everyone coming onsite, even vendor workers, meets the mandated employee health requirements to limit the likelihood that their presence in your facility will make patients or employees ill.

### 7. REEXAMINE YOUR CORPORATE BYLAWS.

Determine whether your corporate bylaws provide sufficient indemnification. Many states allow (or require) employees of a corporation to be indemnified for lawsuits related to their employment. If not limited by statute, indemnification can be limited in the bylaws so that you are not responsible for defending intentional or potentially criminal conduct.

### 8. REEXAMINE YOUR INSURANCE PLANS.

To the extent that exclusive remedy exceptions exist in your state, ensure you have applicable CGL and/or D&O coverage.

### 9. WORK CLOSELY WITH YOU WORKERS’ COMPENSATION CARRIER.

Maintain an aggressive return-to-work program to reduce the medical and indemnity costs related to an incident (and retraining or education costs) and to reduce the risk of an ADA failure to accommodate action. Ensure that your carrier subrogates aggressively from responsible third parties.

### 10. REMEMBER: VIOLENCE IS A SAFETY RISK.

OSHA and TJC both maintain standards related to workplace violence. Identify high-risk areas perform references require background checks for all employees and contractors (require the same for vendor workers), consistent with state law and train staff to recognize and respond to threats. Workplace violence not only subjects the employer to the possibility of negligent hiring, negligent supervision, safe workplace violations, etc., but costs dearly in terms of public, and employee trust. EI

# Keys to Effective Lab Equipment Implementation

Select the correct device, and understand and follow the correct processes for installing and training users. By James Liggins

1  
SELECTION OF APPROPRIATE EQUIPMENT

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THE ESSENTIAL ELEMENTS OF AN AGREEMENT

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DIFFERENTIATION BETWEEN THE THREE TYPES OF EQUIPMENT QUALIFICATION

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AN OUTLINE OF THE NEEDS SURROUNDING VALIDATION

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MAINTENANCE AND CALIBRATION

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ORGANIZING EQUIPMENT RECORDS

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KEY PROCESSES FOR LAB INVENTORY MANAGEMENT

You'll face many challenges and decisions when you decide to install and implement new laboratory equipment. For example, there are myriad devices available, many of which have been tailored to meet the needs of varying practice sizes. Selecting the correct device, and understanding and following the correct processes for installing and training users are the keys to effective lab equipment implementation.

Here, we will discuss several of the practices you should consider when purchasing and installing your laboratory equipment.

## SELECTING A VENDOR & EQUIPMENT

When selecting an equipment vendor, be sure the equipment meets standards set by the FDA. You will also need an agreement from your vendor that contains a product description, price payment terms, termination clauses, prior recall notices and guarantees that you will be notified of any future issues that could affect test results.

### Consider the following key elements when adding equipment to your lab:

- test system should provide the proper test panel for your patient population
- laboratory must have sufficient space for the device as outlined by the manufacturer's requirements
- ventilate area properly
- be prepared for waste generation and disposal
- meet temperature and humidity requirements for the test system

Once you have selected a device that meets your needs, have an installation qualification and training assessment performed. The manufacturer typically provides this check, verifying that the equipment is set up and performing to stan-

dards, and that employees have been properly trained in its use. You also will want verification that the device has been calibrated and performs properly through the specified testing range. Be sure to document all validation, training and verification activities.

Once the equipment has been successfully installed, you need to ensure that you have a process in place to assure accurate and reliable results that meet U.S. CLIA (Clinical Laboratory Improvement Amendments) requirements. This can present a challenge if you are adding testing in a new specialty or subspecialty. Both the laboratory and your regulatory agency have specific responsibilities that must be fulfilled when adding tests or test systems that expand the laboratory's menu into a new specialty or subspecialty.

### It is important to recognize these responsibilities and timelines to ensure that:

- the laboratory is competent to provide accurate and reliable results
- appropriate notifications are made to ensure that the laboratory will be eligible for reimbursement
- the laboratory has demonstrated that the new test method performs at an acceptable level when operated by the laboratory staff in their own facility
- the laboratory has developed a training program for employees and ensured initial competency of those authorized to perform testing

## TEST COMPLEXITY & PERSONNEL

Laboratories must first determine the complexity of their new test system and confirm that the corresponding personnel qualifications are met. The manufacturer of your new test system or kit should be able to tell you the complexity of →

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## EQUIPMENT

each test on the new test system. Be sure to check the corresponding personnel requirements, and make certain that each individual operating the test system has the appropriate education and experience.

### PROFICIENCY TESTING

Each laboratory performing moderate and high-complexity testing is required to verify the accuracy of their test methods. Participation in proficiency testing (PT), or another scientific means of assessing results, is required to assess quality. For regulated analytes, the laboratory must enroll in PT. For unregulated analytes, the laboratory can either enroll in PT or perform a Split Sample Analysis.

Laboratories are expected to enroll in PT for the first available event following the addition of a new, regulated analyte. PT providers allow laboratories to add or delete analytes during the year, to accommodate changes in test menus. Be aware, however, that a laboratory is not permitted to change PT providers mid-year, although you may enroll with an additional provider, if necessary, to cover a test not offered by your current provider.

### VERIFY PERFORMANCE SPECS

When adding an unmodified, non-waived, FDA-approved test to your menu, CLIA requires you to verify the manufacturer's stated performance specifications (found in the package insert) for that test before you report patient results. This verification process confirms that the test performs as the manufacturer intended, taking into account the particulars of your laboratory environment, your personnel, and your patient population.

### CALIBRATION & QUALITY CONTROL

After verifying the performance specifications for your new method, you must define your laboratory's requirements for calibration and quality control (QC). In the majority of test systems, the manufacturer has defined — based on the performance specifications and the reagent and test system stability — initial requirements for the number and type of samples to be used,

and the frequency of performance.

The laboratory must also determine if the manufacturer's requirements are supported by the results of its own study of performance specifications, and whether the requirements meet the minimum requirements of CLIA or your accrediting agency. Further, the laboratory also must determine if it is subject to more stringent regulatory, manufacturer or specialty-specific requirements, and specify its exact requirements in its written policies and procedures.

### WRITTEN PROCEDURES

The laboratory must also have written procedures that provide step-by-step instructions for staff to perform each task associated with the test(s) being added. The laboratory may use manufacturer's instructions (such as operator's manuals for equipment, and package inserts for kits or reagents) to fulfill some of the requirements for a procedure.

**There are several required components that you need to put in writing yourself, including:**

- calibration and QC procedures, if different than manufacturer's requirements, or if manufacturer's requirements do not specify number, type, and frequency
- instructions for recording control results, evaluating results for acceptability, and instructions regarding whether to report results or retest specimens if controls are out of range
- reportable range and normal values as determined when verifying performance specifications
- defined alert (panic) values
- instructions for how to report results
- instructions for what to do if the test system is down

Compile the manufacturer's instructions with your written procedures and then ask a staff member to use the docu-

ments to perform a test. This allows you to verify that all steps are documented, and to get feedback about anything that might be confusing or unclear. This is a critical part of the process, as the written procedure will be the basis for training employees in how to perform the test.

Once you are satisfied with the written documents, have them approved and dated by your laboratory director and add them to your procedure manual.

### PERSONNEL TRAINING & COMPETENCY

Personnel must be trained to perform the new testing, and must demonstrate competency before testing patient samples that will be reported. If a new instrument is involved, the manufacturer will usually provide instrument training.

**Training for a new test must include:**

- patient preparation (if applicable), and specimen handling and processing
- reagent preparation, handling, and storage
- maintenance, function checks (if applicable), and calibration
- quality control and calibration procedures
- test procedures and result interpretation
- result reporting
- troubleshooting

**Competency can be assessed by:**

- direct observations of test performance
- direct observation of performance of instrument maintenance and function checks
- monitoring the recording and reporting of test results
- reviewing worksheets, quality control records, calibration records, proficiency testing results, and preventive maintenance records
- evaluating results obtained when testing previously analyzed specimens, internal blind testing samples, or previously tested proficiency testing samples
- evaluating problem solving skills EI

### ON THE WEB

For information on leasing lab equipment, visit [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and search **Equipment Leasing**.



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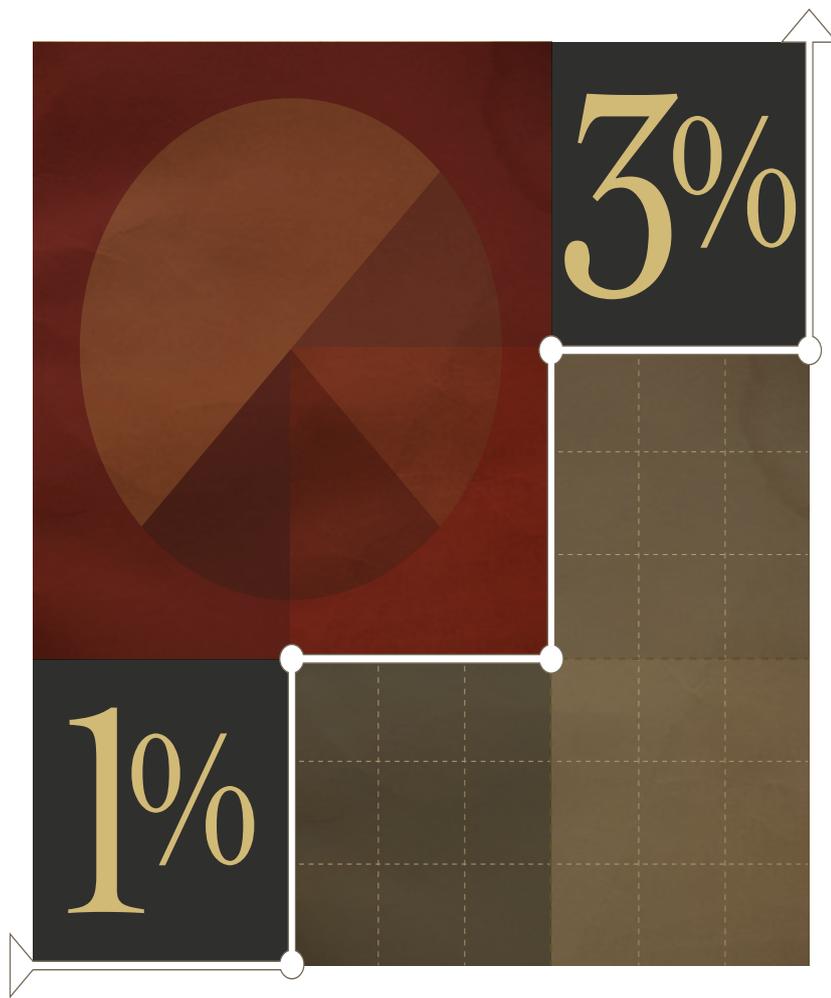
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# Readmission Reduction Strategies

Working with long-term post acute care providers can reduce re-hospitalizations. By Mike Wessinger



jecting that Medicare spending will increase by about 79% between 2010 and 2020, from \$518.5 billion to \$929.1 billion, with an annual average growth rate of 6% on inpatient hospital care, reaching \$234.9 billion in 2019.<sup>2</sup> In comparison, Medicare payments for hospital inpatient care in 2008 totaled \$129.1 billion and represented 29% of total Medicare payments.

In addition, with nearly one-fifth of all Medicare recipients hospitalized in 2004 within 30 days of discharge and almost 90% of these hospitalizations classified as unplanned, the result was a \$17.4 billion cost to the Medicare program. With these trends on an alarming upward climb, there is a tremendous amount of buzz around reducing 30-day hospital readmissions and the growing need to decrease the risk for them.

## PENALTIES

Healthcare reform efforts targeted at reducing hospital readmissions are here to stay with significant penalties for preventable hospital readmissions. Oct. 1, 2012, marked the start of CMS' requirement to reduce payments to acute hospital providers with excess readmissions under the new Hospital Readmissions Reduction Program (HRRP), with one percent of a hospital's entire Medicare billings climbing to three percent by 2014. Unfortunately, recent Medicare data shows that hospitals aren't making much progress in lowering readmission rates, even during this critical time when effective ways to reduce

**Healthcare reform efforts targeted at reducing hospital readmissions are here to stay with significant penalties for preventable hospital readmissions.**

**M**uch of hospital spending pays for a small percentage of high-cost Medicare beneficiaries who use hospital services more than others. These high-cost beneficiaries tend to be older and have chronic conditions, such as diabetes and coronary artery disease.<sup>1</sup> Data shows there is a concerning upward climb in Medicare spending for this group. Specifically, the Congressional Budget Office (CBO) is pro-

these occurrences should be sought.

As acute hospital providers review sources of admissions and readmissions, focus should be placed on reducing or eliminating those that have a significant impact on their readmission rates. Providers should work to establish solid care coordination relationships with local long-term and post acute care (LTPAC) providers that have proven policies, programs and proce-

Mike Wessinger is CEO of PointClickCare.

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Providers should work to establish solid care coordination relationships with local long-term and post acute care (LTPAC) providers that have proven policies, programs and procedures in place to monitor, manage and avoid potential hospitalizations.

dures in place to monitor, manage and avoid potential hospitalizations. These LTPAC providers will play an integral role in helping hospitals meet requirements to reduce readmissions.

### APPROACHES TO PARTNERING

Knowing how to partner with LTPAC providers that are less likely to re-hospitalize patients can be a challenge but achieved through different approaches. The first is by establishing a methodology to measure readmission rates, whether planned or unplanned and related or unrelated to the original reason for admission. The underlying goal is to identify LTPAC facility readmission rates, along with understanding the associated timing and nature of these readmissions. Doing so can provide the opportunity to educate discharge planners that the end goal is no longer about finding an empty bed but rather about placing a resident in a setting providing the quality of care needed to deliver the best possible outcomes for a healthier recovery and reduced possibility of re-hospitalization.

### IMPROVING CARE, REDUCING TRANSFERS

The second approach is to partner with providers that have a nationally accepted program in place to monitor, manage and prevent re-hospitalizations. The one program used by the most successful LTPAC providers is INTERACT™ (Interventions to Reduce Acute Care Transfers). Developed by Florida Atlantic University, INTERACT is a quality improvement program designed to improve the early identification, assessment, documentation and communication about changes in the status of patient's condition while under a LTPAC provider's care. The goal is to improve care and reduce the frequency of potentially avoidable transfers to the acute hospital by preventing conditions from becoming severe enough to require hospitalization through early identification and assessment of changes in a patient's health. It is also designed to manage some conditions in the LTPAC provider's facility without hospital transfer when feasible and safe.

These goals are achieved with clinical tools that improve care coordination through inter-professional and inter-facility communica-

tion, which includes the use of advanced care planning and palliative care plans when appropriate as an alternative to hospitalization. Ultimately, INTERACT prevents unnecessary re-hospitalizations and provides for more rapid identification and transfer of residents who do need hospital care.

As a quality improvement program recommended by industry associations, as well as numerous credentialing bodies, including CMS' Nursing Home Quality Assurance and Performance Improvement (QAPI) program, providers are incorporating INTERACT's clinical tools into their facilities with several goals in mind. The first is to improve resident quality of care and quality of life while reducing their frequency of potentially avoidable transfers to acute hospitals. Studies have shown that the use of INTERACT has resulted in a 17% reduction in hospital admissions among the residents, and even greater in homes that were more engaged in implementing the INTERACT program and tools.

Secondly, by lessening these occurrences, the emotional and physical difficulties residents face with associated transfers and hospital stays is curtailed. It also decreases the impact of complications associated with those stays, as well as the high costs related to transfers and readmissions.

Florida Atlantic University is taking the INTERACT program a step further with a new initiative – eINTERACT™ – that embeds the evidence-based and clinical protocols of the INTERACT program within the electronic workflow framework of an EHR system.

In the end, working with an LTPAC provider that leverages the INTERACT program, particularly through eINTERACT, will ensure that patients receive the quality of care required after discharge, have fewer complications of hospitalization, and contribute to reducing the estimated \$4.34 billion Medicare problem over the next several years. E1

### References

1. CBO, High-Cost Medicare Beneficiaries, May 2005, <http://www.cbo.gov/ftpdocs/63xx/doc6332/05-03-MediS-pending.pdf>.
2. Congressional Budget Office, "CBO's August 2010 Baseline: Medicare."

### ON THE WEB

For tips on developing new strategies for patient care following discharge, visit [www.advanceweb.com/executiveinsight](http://www.advanceweb.com/executiveinsight) and search **Steps to Reducing Revolving Readmissions**.



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