

## CONTENTS

4. **By the Numbers Part III: Communicating with Leadership About Data-Driven Decisions**  
Discusses the value of data-driven decisions and how to get the message across to leadership, and gives an example of measurements that work.
6. **Missouri Baptist Medical Center Takes the High-Reliability Road to Reduce Mortality Rates**  
Discusses the steps Missouri Baptist Medical Center took to reduce mortality rates and improve patient safety.
8. **Joint Commission Focus: Performance Measurement—Wandering in the Land of Oz**  
Discusses the state of performance measurement today.
9. **Case Study: Using Data to Reduce Urinary Tract Infections**  
Offers a look at how one organization uncovered a pattern of infection and how it implemented measures to prevent future infections.

## A National Performance Measurement Data Strategy: Navigating the Crossroads

“Knowing the score” has become increasingly important in health care as providers focus on improving quality in response to pressure from consumers and advocacy groups. However, measuring what is working and what is not can be challenging.

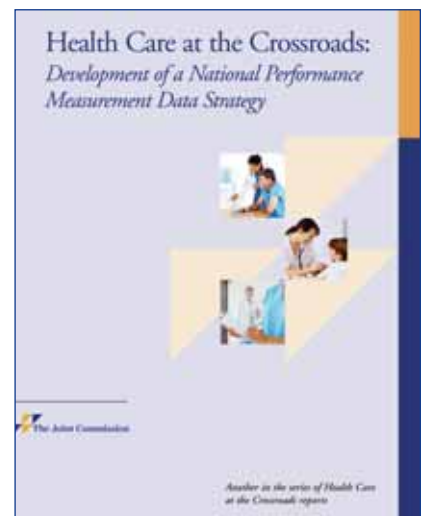
With an understanding of health care provider performance, individual practitioners can identify areas for quality improvement, accrediting and regulatory agencies can evaluate performance, and purchasers and consumers can make informed health care decisions. All in all, the timely availability of credible, accurate, and useful health care performance information has positive outcomes for everyone involved.

To help health care organizations better understand performance measurement, The Joint Commission is calling for a national strategy for the collection, aggregation, sharing, and reporting of performance measurement data across organizations.

This national performance measurement data strategy is spelled out in the recently released white paper titled *Health Care at the Crossroads: Development of a National Performance Measurement Data Strategy*, which was developed by the Joint Commission's expert roundtable, a group comprised of more than 30 leading authorities representing a variety of health care perspectives. Such a strategy ultimately could lead to better use of systems resources and mitigate the confusion that may result from contradictory assessments of performance.

“The time has come to harness the many performance measurement efforts by creating a data infrastructure so information can be shared and translated into powerful tools for decision making and improvement,” says Mark R. Chassin, M.D., M.P.P., M.P.H., president of The Joint Commission. “Although there are significant challenges, the work of the roundtable clearly shows that this is a matter of will. We must invest the necessary resources and engage in a collaborative effort to provide credible, accurate, and useful health care performance information.”

*(Continued on page 2)*



**Senior Editor:** Audrie Brett  
**Senior Project Manager:** Cheryl Firestone  
**Manager, Publications:** Paul Reis  
**Executive Director, Publications:** Catherine Chopp Hinckley  
**Vice President, Learning:** Charles Macfarlane, F.A.C.H.E.  
**Contributing Writers:** Ruth Carol, John McCormick, Andrea Sattinger, Karen Steib, Kathy Vega  
**Joint Commission Reviewer:** Ann Watt, M.B.A., R.H.I.A.  
**Customer Service:** 800/746-6578  
**Visit us on the Web:** <http://www.jcrinc.com>

#### Editorial Policy

Reference to a name, organization, product, or service in *The Joint Commission Benchmark*® should not be construed as an endorsement by The Joint Commission, nor is failure to include a name, organization, product, or service to be construed as disapproval.

#### Subscription Information

*The Joint Commission Benchmark*® (ISSN 1523-8806) is published bimonthly by Joint Commission Resources, One Renaissance Boulevard, Oakbrook Terrace, IL 60181. Send address corrections to *The Joint Commission Benchmark*, Superior Fulfillment, 131 West First Street, Duluth, MN 55802-2065. Annual subscription rates for 2008: United States: \$180 for both print and online, \$149 for online only; Mexico/Canada: \$220 for print and online, \$149 for online only; all other countries: \$234 for print and online, \$149 for online only. **Online site license**—Contact Superior Fulfillment, 800/746-6578 for pricing. Back issues are \$25 each (postage paid). Direct all other inquiries to Superior Fulfillment, 800/746-6578.

© 2008 by The Joint Commission. Joint Commission Resources, Inc. (JCR), a not-for-profit affiliate of The Joint Commission, has been designated by The Joint Commission to publish publications and multimedia products. JCR reproduces and distributes the materials under license from The Joint Commission.

*The mission of The Joint Commission is to continuously improve the safety and quality of care provided to the public through the provision of health care accreditation and related services that support performance improvement in health care organizations. No part of this publication may be reproduced or transmitted in any form or by any means without written permission.*

#### Editorial Advisory Board:

Arnold M. Epstein, M.D., M.A., Harvard University School of Public Health

Linda S. Hanold, M.H.S.A., The Joint Commission

Ellen T. Kurtzman, R.N., M.P.H., The George Washington University

Jerod M. Loeb, Ph.D., The Joint Commission

David B. Nash, M.D., M.B.A., Thomas Jefferson University

Sheila H. Roman, M.D., M.P.H., Centers for Medicare & Medicaid Services

Sharon L. Sprenger, R.H.I.A., C.P.H.Q., M.P.A., The Joint Commission

Douglas L. Wood, M.D., F.A.C.P., F.A.C.C., Mayo Clinic

## A National Performance Measurement Data Strategy: Navigating the Crossroads

*Continued from page 1*

The white paper provides an analysis of the current state of performance measurement in health care, while also providing a blueprint that could guide health care organizations toward more effective use of performance measurement data.

### The Need for Improvement

Quality improvement—and, thus, performance measurement—has become a hot-button issue in today's health care environment. Health care quality, and specifically the high incidence of medical errors, has been thrust into the spotlight since the Institute of Medicine published its landmark report *To Err Is Human* in 1999—and then followed up with *Crossing the Quality Chasm* in 2001. Both of these reports call attention to the need for quality improvement among the nation's health care providers. The latter report, however, also contends that reliance on performance data by providers of health care services—as well as patients—is an important way to improve quality and safety, while driving market share to high-performing providers.

Certainly, these reports have spurred action in the health care arena. In an attempt to better understand performance improvement, for example, many industry groups have developed performance measurement initiatives and databases. These initiatives include those of the American Medical Association–convened Physician's Consortium for Performance Improvement, AQA (formerly the Ambulatory Quality Alliance), the Centers for Medicare & Medicaid Services, the Agency for Healthcare Research and Quality, the Hospital Quality Alliance, The Joint Commission, and the National Committee for Quality Assurance. In addition, a plethora of health plans, payers,

and professional disciplines also maintain performance measurement databases.

The explosion of performance measurement efforts has increased system costs and the burden associated with data collection and reporting. With so many efforts running simultaneously, some organizations are overwhelmed with numerous reporting and analysis chores.

### The Right Plan

A national performance measurement data strategy could help health care organizations achieve efficiencies in the measurement process and, thereby, permit more effective use of performance data. In addition, with such a strategy in place, data could be more readily used to support health care decision making, which is becoming increasingly important because patients are demanding more control over how their health care dollars are spent.

The question is: What would such a national performance data strategy look like?

The roundtable created 22 principles for the development of a national performance measurement data strategy (*see* "Principles for the Development of a National Performance Measurement Data Strategy" on page 3) and identified the following three strategies to guide national performance measurement efforts:

1. Create the framework for a national performance measurement system that meets the needs of all of the various users of, and stakeholders in, performance data by standardizing measure definitions and data collection processes to produce comparable information. A national system for performance measurement data should be assured through sustainable funding from private and public-sector sources.

2. Build a data highway to support the exchange of health information whose interoperability permits data

## Principles for the Development of a National Performance Measurement Data Strategy

A national performance measurement data system should do the following:

### A. Have the following qualities and characteristics:

- Be a credible source of high-quality, actionable, timely data.
- Embrace transparency and engender trust.
- Include a strategy for raising consumer awareness of the availability of publicly reported performance data and their benefits.
- Assure that the data and information provided are comprehensible to consumers at all literacy levels.
- Serve as a useful source for improving the quality and safety of care.
- Encourage the rapid adoption of information technology across all health care settings.
- Foster accountabilities among practitioners, provider organizations, payers, purchasers, patients, and communities for continuous improvement in performance.
- Be assured of sustainable funding from public and private-sector sources.

### B. Accommodate the following needs:

- Provide for performance measurement and data gathering at the patient, practitioner, provider organization, and population levels.
- Minimize the data collection burden at all levels of the system.
- Permit comparative data portrayals that are useful in supporting clinical decision making, performance improvement, incentive payment programs, and consumer decision making.
- Foster the use of performance measures—and particularly outcomes measures that are linked to evidence-based process measures—that address national quality goals and high-impact, high-cost clinical conditions, including chronic diseases.
- Effectively protect patient privacy while also assuring broad access to meaningful and relevant performance data as a public good.
- Address information needs across the continuum of care so as to provide a longitudinal view of the quality and safety of patient care.
- Permit overviews of performance at the national level, as well as at regional and local levels.

### C. Include the following design characteristics:

- Have an infrastructure that is based on common, interoperable information technology architecture.
- Use standardized, quality-controlled methods for gathering, validating, and aggregating performance data.
- Have as its locus an existing or new entity that provides effective stewardship for the system and whose oversight actively involves public and private sector leaders.
- Permit the transmission of data from, and across, multiple databases.
- Provide for the establishment of consensus “rules of the road” respecting transparency and data access.
- Use an effective system for linking and matching patient records that protects patient privacy while also permitting expanded portrayals of practitioner and provider performance.
- Be in conformance with and support the data standards being developed through the National Health Information Network that will eventually permit the collection of performance measurement data.

exchange and aggregation when warranted. Information technology systems, such as electronic medical records, must be designed to support performance measurement activities and relieve registered nurses and other clinicians from the burden of manually paging through patient records to obtain needed data.

3. Engage stakeholders and engender trust by addressing concern over the privacy of personal health information. Rules and principles must effectively focus on data use, integrity, and reporting. Significant attention also must be paid to educating patients on the options and risks inherent in data sharing, and the value of performance measurement.

### The Right Data

In addition to these broad strategies, the white paper emphasizes the importance of using standardized performance measures. Standardization of measure definitions and data collection processes is essential to the ability to produce comparable information, as well as to engender trust in the resultant information. In addition, standardized performance measures and data collection processes can also serve to reduce the burgeoning “performance measurement burden” that exists today as a consequence of the accelerating demands for data by a variety of interested parties.

Standardization should specifically address the data elements that are collected for each measure and the methodology for measure calculation. If this does not occur, rates for measures that are similar but not identical cannot be compared and will continue to compromise performance measurement efforts and waste resources. For the same reason, best practices for data aggregation must be identified and applied consistently. **B**

---

*Source:* Information in this article was adapted from the Joint Commission white paper *Health Care at the Crossroads: Development of a National Performance Measurement Data Strategy*. The paper is available at <http://www.jointcommission.org>.

# By the Numbers Part III: Communicating with Leadership About Data-Driven Decisions

Whether data are being prepared for a nursing leader or a CEO, providing timely and accurate information better prepares staff for regulatory surveys and strengthens the connection between standards and clinical practice.

“The whole system has to define measures in the same way, with a common goal and an aligned approach,” says Melissa A. Fitzpatrick, R.N., M.S.N., F.A.A.N., vice president and chief clinical officer at Hill-Rom, Batesville, Indiana. “When it comes to reaching your goals, you can’t just shoot from the hip or say ‘We’ll know when we get there.’ It always comes back to the data.”<sup>1</sup>

Beginning in October 2008, the Centers for Medicare & Medicaid Services will no longer reimburse health care systems for preventable adverse events, including patient falls. “When I have asked providers how they are doing with patient falls, they often say, ‘We’re doing great,’” says Fitzpatrick. “But if you delve further, you find inefficient or inconsistently applied falls prevention processes and a less-than-rigorous data-collection and results-reporting process.

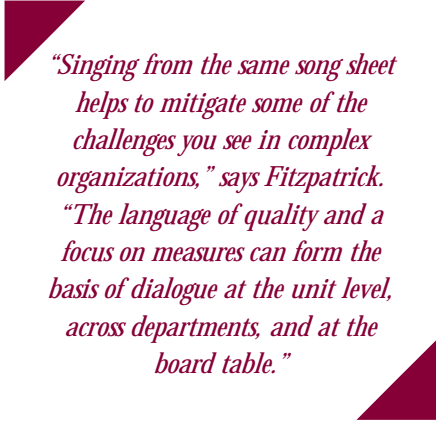
“A data-driven approach is the only way to take out process variation and to get everyone from the bedside to the boardroom aligned around the measures that matter and that really drive performance and quality,” says Fitzpatrick.

## The Same Song Sheet

“There are any number of quality frameworks or criteria from which to choose, but whichever one is selected, it must be used consistently to interpret the overarching quality strategy and to apply it throughout the organization,” says Fitzpatrick.

“Singing from the same song sheet helps to mitigate some of the challenges

you see in complex organizations,” says Fitzpatrick. “The language of quality and a focus on measures can form the basis of dialogue at the unit level, across departments, and at the board table.”



*“Singing from the same song sheet helps to mitigate some of the challenges you see in complex organizations,” says Fitzpatrick. “The language of quality and a focus on measures can form the basis of dialogue at the unit level, across departments, and at the board table.”*

## Measurements that Work

The Seton Family of Hospitals in Austin, Texas, is an example of achieving positive outcomes from data-driven decisions.

Seton has 23 clinical locations, including 9 hospitals, and is part of Ascension Health. Five years ago, the clinical excellence team at Ascension decided to focus on one overarching goal: to reduce the number of preventable deaths and injuries to zero by July 2008.

To reach the goal, the team knew it would have to find a way to create transformational change, not just incremental change. The team asked some Ascension locations to serve as alpha sites to lead the transformation in six or seven of their highest-volume, highest-risk areas, aiming to approach, if not achieve, a rate of zero adverse events.

The executive leadership of Ascension challenged Seton and another location, St. Mary’s Health System, Evansville, Indiana, to be alpha sites in taking on the high-risk area of birth trauma.

“We initially felt a bit anxious about the work ahead because we couldn’t see any other systems concentrating on perinatal safety,” says Frank Mazza, M.D., vice president of Medical Affairs for Seton. “We could not find any evidence that any organization, including the Institute for Healthcare Improvement, the National Quality Forum, or any others, had looked systematically at developing a change package of best practices in the perinatal area.” To establish a framework, Seton decided to create an interdisciplinary team, invite senior leadership to the table to empower the team, commit to applying best practices from the literature, and refashion their labor and delivery units as much as possible according to the principles of the high-reliability organization.<sup>2,3</sup>

## Show Me the Data

Once those cornerstones were in place, the team identified the five highest-risk areas in obstetrics and systematically focused on each one. One risk area identified was the use of vacuum and forceps for delivery. The team collected data on how often they were used and then looked at episodes of birth trauma related to the use of those assistive devices.

The team then presented physician-specific objective data, which showed skeptical physicians the problematic issues with regard to use of the vacuum and forceps. After creating best practices around the use of these devices, they saw an immediate reduction in their use and a subsequent reduction in birth trauma associated with their use.

“They were able to see that the use of these devices was problematic in aggregate, and they were more willing to make the change in their practice once they saw the data,” says Mazza. “Once we were able to show that good things were happening, that is, that birth

trauma rates were dropping, we reached a tipping point with our physicians around the practice of operative delivery. That emboldened the team to look to promote other transformational practices.”

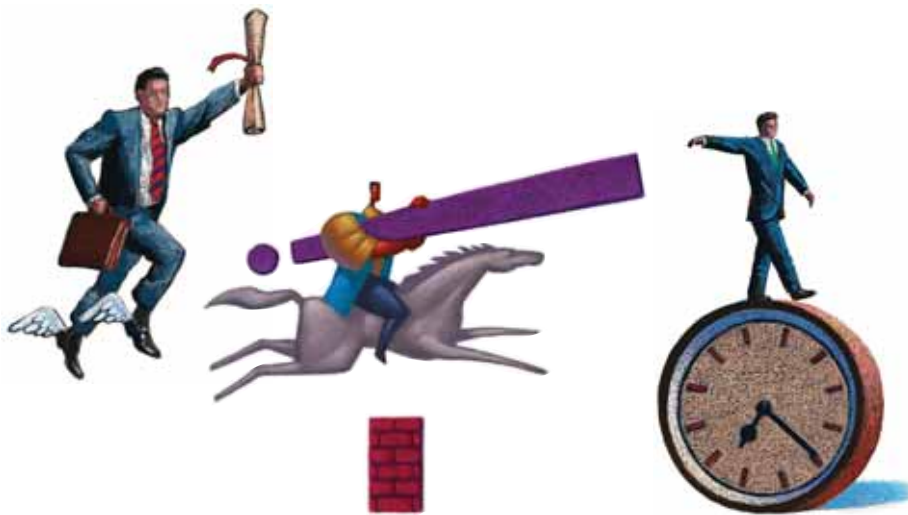
Next, the team decided to tackle the issue of elective induction. Guidelines from The American College of Obstetrics and Gynecology (ACOG) advise that births not be electively induced before 39 weeks. Data collected from Seton validated ACOG’s position by showing that babies induced before 39 weeks had higher rates of admission to the neonatal intensive care unit for complications related to iatrogenic prematurity. Within nine months of implementing a new practice that empowered front-line staff to refuse to schedule pre-39 week elective inductions, premature births per quarter decreased from an average of 57–59 to zero. The incidence of iatrogenic prematurity subsequently plummeted. This, and subsequent successes related to the reliable adoption of evidence-based practices, further empowered the team and their efforts.

“You don’t need to be a content expert in the area of investigation to lead a team like this,” says Mazza. “You just have to be a reliable facilitator and have some process expertise.”

### Getting the Message Across

Talking to leadership about data-driven decisions and conveying data are not always easy. Irene Fraser, Ph.D., director, Center for Care Delivery, Organization and Markets at the Agency for Healthcare Research and Quality, Rockville, Maryland, has some advice for those analysts who will engage in these conversations. “Start with the most important information first and work backward,” she says. “Most researchers work in the reverse from how journalists are taught to write; researchers tend to save their goodies for the end.”

Try to conduct practice-based research involving multiple sites in the



*When communicating information to leaders, consider the style, content, and timing of your communication.*

data collection itself. And, as much as possible, use illustrations, including anecdotal and graphic examples, to bring home your point.

### Conveying Information

To present data to busy leaders, consider the style, content, and timing of your communication.

### Communication Style

“Leadership is bombarded with all sorts of formal style information,” says Jeffery A. Alexander, the Richard C. Jelinek professor of Health Management and Policy, University of Michigan School of Public Health, Ann Arbor. “Because leaders usually don’t have the time or inclination to pore over what may be reams of data, format and synthesize data consistent with the work style of these busy people.”

### Communication Content

If data aren’t related to decisions that leaders make, they probably won’t pay attention to the information.

“You can have the most elaborate data systems in the world,” says Alexander, “but unless the information they produce is relevant to the leader, it won’t have much value.” Involving leaders in creating those data systems is one possible solution.

Unfortunately, many leaders see data

collection and analysis as a technical function that is outside their realm. Therefore, they delegate all responsibilities having to do with data decisions and don’t receive the information they really need.

### Communication Timing

The basic rule of thumb is: Old data are not useful. “The complaint I often hear,” says Alexander, “is ‘These data are from last quarter. I’m dealing with different issues now’ or ‘The landscape has changed so these data are no longer relevant to my decision making.’” Timeliness of data is crucial.

### Who Is Communicating?

The person who conveys the data will also make a difference in how valuable the leader perceives that information to be. “The skill of conveying information does not necessarily reside in the same person as the skill of collecting the information,” says Fraser. “Presenting complicated ideas simply is a very special skill. You almost have to be bilingual in research and English.”

In addition, an individual may be a good speaker one-on-one, but a poor communicator in a larger group. Therefore, consider sending the most articulate manager or analyst to speak with decision makers.

*(Continued on page 11)*

# Missouri Baptist Medical Center Takes the High-Reliability Road to Reduce Mortality Rates

When Missouri Baptist Medical Center in St. Louis set out to reduce its mortality rate, it took the high-reliability road.

Just as the health care industry has adopted tools such as crew resource management from the aviation field, it is looking to duplicate the concept of high-reliability organizations (HROs), that is, those organizations that achieve consistently high-quality outcomes in an environment fraught with potential opportunities for error.

The qualities that distinguish HROs from other organizations are as follows<sup>1</sup>:

1. Preoccupation with failure
2. Reluctance to accept simplifications
3. Sensitivity to operations
4. Resilience to error
5. Deference to experience

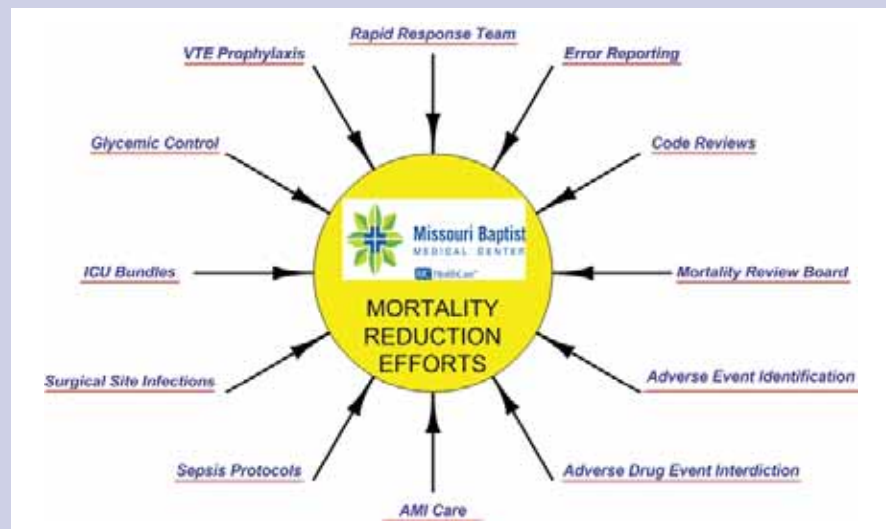
Missouri Baptist leaders learned about high reliability through the hospital's participation in Institute for Healthcare Improvement initiatives, beginning with "Quantum Leaps in Patient Safety."

## A Fair and Just Culture

Before the 489-bed hospital could transform into an HRO, it had to undergo a cultural transformation. Among the changes were establishing a fair and just culture, conducting teamwork training and communication, and implementing tools, such as WalkRounds that promote the alignment of leadership and front-line provider perspectives, all of which are initiatives cited as key to achieving high reliability.<sup>2</sup>

At Missouri Baptist, the culture of safety is instilled in every staff member, according to John Krettek, M.D., Ph.D., vice president of Medical Affairs. Employees are aware that adverse events occur on the front line because all humans make errors. The more intense

**Figure 1. Missouri Baptist Medical Center Mortality Reduction Efforts Chart**



Source: Missouri Baptist Medical Center, St. Louis. Used with permission.

the work area, such as an intensive care unit (ICU), emergency department, or operating room (OR), the higher the risk of such errors. "We need to design systems in those areas to improve processes and mitigate errors before they reach the patient," says Krettek.

Consequently, every employee is educated about the need to report potential sources of error and adverse events (AEs), explains Krettek. Management is responsible for addressing and removing those risks by focusing on the system rather than the individual. If the staff is afraid of a punitive response, however, they won't report anything. "You can't do any of this without having a fair and just culture," says Krettek.

In addition to self-reporting, Missouri Baptist has an electronic error reporting system that collects data about AEs. Then there are the monthly code and mortality reviews. "We review every single code and death in the hospital," says Krettek. Although some occur as a result of the disease process, some are preventable. "But if you don't know

what these rates are, you don't know where to begin fixing these things." (See Figure 1, above.)

## Teamwork Training

Team training and communication go hand in hand with HROs. High-reliability teams require cross training so that all members gain a clear understanding and shared mental model of how to function.<sup>3</sup> Perceptual contrast training improves the members' recognition of contrasting scenarios. Team coordination training builds skills that will enable members to coordinate and communicate as a team. Team self-correction training helps members identify errors and unsafe behaviors before they turn into hazardous situations. Finally, scenario-based training encourages members to practice for complex, potentially harmful events to be better prepared to handle them with adaptability and flexibility. Unlike traditional quality improvement efforts that seek to eliminate variation in care through the use of practice guidelines, for example,

## Eight Steps to Patient Safety and High Reliability

According to the Institute for Healthcare Improvement, eight steps are necessary to achieve patient safety and high reliability in health care organizations. They are as follows:

1. Address strategic priorities, culture, and infrastructure.
2. Engage key stakeholders.
3. Communicate and build awareness.
4. Establish, oversee, and communicate system-level aims.
5. Track/measure performance over time, strengthen analysis.
6. Support staff and patients/families impacted by medical errors.
7. Align systemwide activities and incentives.
8. Redesign systems and improve reliability.

Source: Botwinick L., Bisognano M., Haraden C.: *Leadership Guide to Patient Safety*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement, 2006.

HROs promote a more flexible approach, recognizing the need to adapt to changing scenarios.

Communication is a key issue because health care organizations traditionally have been hierarchical, which can impede the free exchange of information among staff. High-reliability teams use closed-loop communication, which promotes shared situational awareness.<sup>3</sup> The Situation-Background-Assessment-Recommendation (SBAR) technique is an example of a framework that enables team members to provide clear, concise information that works well in HROs.

At Missouri Baptist, employees are trained to understand that they have a responsibility to the patient and to other team members to communicate about potential harm or AEs. Staff received formal team training in the OR and in

labor and delivery. Informal team training was conducted in the ICUs.

In addition, staff is encouraged to use SBAR routinely because it is understood that whenever a location or caregiver is changed, critical information may be lost, says Krettek. "It's a structured way of thinking about a problem, so you're not rambling about everything that is happening." Staff use it during shift changes and patient handoffs, as well as when patients are transported. The technique is also used during team checks in the procedure areas. Nursing staff is encouraged to use SBAR when speaking with a physician who is calling in about a patient.

### WalkRounds

WalkRounds are designed to increase awareness of patient safety issues by all clinicians, make safety a high priority for senior leadership, educate staff about patient safety concepts such as nonpunitive reporting, and obtain and act upon information from staff about safety problems or issues.<sup>4</sup>

Leaders at Missouri Baptist have been doing weekly WalkRounds since 2004. The patient safety officer, the environment and health safety officer, and various executives from the president to the chief financial officer rotate weekly. Plans are under way to start risk management WalkRounds.

But as Krettek points out, WalkRounds are just one way to get leadership involved in patient safety efforts. The hospital's board of directors routinely reviews the core objectives, one of which is to improve clinical quality and safety. Senior leaders see the monthly reports on core measures, patient satisfaction, and the quality scorecard.

### Multiple Things, Multiple Fronts

As part of the institution's preoccupation with failure, Missouri Baptist adopted the philosophy of "doing multiple things on multiple fronts" to

reduce its mortality rate. It is a philosophy that is gaining momentum in the health care industry.

Hospitals are implementing as many as 15 different patient safety initiatives simultaneously, according to the Agency for Healthcare Research and Quality.<sup>5</sup> These patient safety initiatives include everything from technology- and culture-related projects to microsystem initiatives and system/staffing changes.

The mortality reduction strategies that Missouri Baptist implemented as part of its participation in the 100k Lives Campaign (*see* "100K Lives Campaign Overview" in the online version of this newsletter) included the following:

1. Deploy rapid response teams.
2. Prevent adverse drug events.
3. Deliver reliable evidence-based care for acute myocardial infarction.
4. Prevent surgical site infections.
5. Institute ventilatory-associated pneumonia bundles.
6. Implement central line associated bacteremia bundles.
7. Institute sepsis protocol and bundles.
8. Administer venous thromboembolism prophylaxis.
9. Implement glycemic control protocols.
10. Establish mortality review board.

### References

1. Weike K.E., Sutcliffe K.M.: *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. San Francisco: Jossey-Bass; 2001.
2. Frankel A.S., Leonard M.W., Denham C.R.: Fair and just culture, team behavior, and leadership engagement: The tools to achieve high reliability. *Health Serv Res* 41(suppl. 1):1690-1709, Aug. 2006.
3. Wilson K.A., et al.: Promoting health care safety through training high reliability teams. *Qual Saf Health Care* 14:303-309, 2005.
4. Frankel A., Gandhi T.K., Bates D.W.: Improving patient safety across a large integrated health care system. *Int J Qual Health Care* 2003; 15(suppl. 1):i31-i40, Dec. 2005.
5. Dixon N.M., Shofer M.: Struggling to invest high-reliability organizations in health care settings: Insights from the field. *Health Serv Res* 41(4):1618-1632, Aug. 2006.

## Performance Measurement—Wandering in the Land of Oz



*Jerod M. Loeb, Ph.D., executive vice president,  
Quality Measurement and Research,  
The Joint Commission*

**I**n the 1939 film based on L. Frank Baum's children's novel *The Wonderful Wizard of Oz*, Dorothy journeys down the yellow brick road toward the Emerald City in search of the Wizard of Oz. Sixty-nine years later, while health care providers journey down a road called performance measurement, it is unclear where the road is going, where it may end, or whether there is a pot of gold at the end of the rainbow.

To say that the performance measurement environment is chaotic in 2008 would be an understatement. The users and uses of performance measurement continue to grow. The appetite for measures is large—and growing. Measures are used in programs designed for various purposes, including internal quality improvement, accountability, pay-for-reporting, pay-for-performance, and, most recently, the maintenance of physician certification. While many would argue that the level of evidence sufficient to substantiate the use of individual measures should vary with the

designated use(s), most of the measures used today have been implemented in disparate programs, often with a modicum (or no) supportive evidence linking the use of the measure with its stated purpose. This includes the clinical evidence supporting the use of the measure in relation to processes or outcomes of care and the evidence delineating the reliability and validity of the measure itself.

Until recently, there were relatively few national organizations involved in the development, testing or implementation of performance measures for use in the inpatient hospital setting. Before 2000, the major public and private-sector players included The Joint Commission, the Centers for Medicare & Medicaid Services (CMS), several commercial vendors, and some state hospital associations (for example, Maryland Hospital Association). In addition, a number of private payers began to link performance with payment. However, overall, there was little coalescence around standardized sets of performance measures. By 2008, driven by a variety of factors (including, at the federal level, passage of the Medicare Modernization Act, which was superseded by the Deficit Reduction Act and the Tax Relief and Health Care Act), the myriad of players and performance measurement initiatives has grown dramatically, and the environment has grown proportionately in its complexity. In addition to The Joint Commission and CMS, key entities include the National Quality Forum, Hospital Quality Alliance, the AQA (formerly the Ambulatory Quality Alliance), the Quality Alliance Steering Committee, the Physician's Quality Reporting Initiative, and the American Medical Association–Physician's Consortium for Perfor-

mance Improvement. Many payers have established performance measurement programs, and reporting programs exist in many states. As part of the Medicare Value-Based Purchasing Initiative, the federal government is investing in a series of new programs (Better Quality Information for Medicare Beneficiaries, Chartered Value Exchanges, and Community Leader programs), all designed to create greater transparency using data derived from performance measurement. Yet, there is still little agreement on what should be measured or on how the data should be portrayed and reported. A considerable literature base exists that suggests that, while provider performance is improving in areas where measures are being publicly reported, there is little evidence to suggest that stakeholders are using the data to make more informed health care decisions.

Over the last decade, there has been a considerable hue and cry expressed regarding the importance of harmonization and alignment. However, in reality, little harmonization exists, particularly across disparate settings of care, and it is unlikely that full alignment will ever be achieved across settings of care. Providers are facing “measurement overload” as more and more measures are added to an infrastructure in which data collection is seen as an iterative exercise that has not been formally linked to the delivery of quality health care. The demand for more measurement continues unabated—particularly in the realm of measurement of efficiency, where formal, consensus-based definitions are lacking—and there has been only a modicum of attention paid to turning performance measurement data into sustained performance improvement.

*(Continued on page 11)*

# CASE STUDY

## Using Data to Reduce Urinary Tract Infections

Each year, nearly two million hospital patients in the United States develop infections that are not related to the condition for which they were hospitalized.<sup>1</sup> These infections—called health care–associated infections (HAIs)—result in approximately 90,000 deaths annually and add an estimated \$4.5–\$5.7 billion per year to patient care costs.<sup>2</sup>

The urinary tract is the most common site for an HAI, accounting for more than 40% of the total number of HAIs reported by acute care hospitals and affecting an estimated 600,000 patients per year. Between 66% and 86% of urinary tract infections (UTIs) are the result of instrumentation of the urinary tract, mainly urinary catheterization. Although not all catheter-associated urinary tract infections can be prevented, it is believed that a large number could be avoided by the proper management of the indwelling urinary catheter.<sup>3</sup>

Recently, Mission Hospital began an improvement initiative to reduce UTIs within the organization by targeting its organizationwide care and management of indwelling catheters. This case study takes a look at the organization's work.

### Using Data to Identify an Issue

A key element to effective infection control is surveillance. By monitoring the number, types, and characteristics of infections occurring within an organization, a hospital can identify areas for improvement and target improvement initiatives. Mission Hospital, through a Blue Shield of California Foundation grant, uses an Internet-based electronic surveillance system called MedMined™ to monitor all infections throughout the organization. The tool not only gives the number and rate of infections but

### At a Glance

**Name of the organization:** Mission Hospital is a 301-bed Level II trauma center located in Mission Viejo, California.

**Objective of the performance improvement project:** To reduce the number of urinary tract infections (UTI) occurring in the organization by improving the care and management of indwelling catheters.

**Solutions:** The organization created a front-line staff-centered infection prevention team to create guidelines for urinary catheter care and management. The hospital also implemented education initiatives to help reduce infection rates.

**Outcomes:** In 18 months, the organization reduced its UTI rate by 20%.

also information about the estimated cost and length of stay associated with the infections. The tool produces objective data that are reproducible and gives the organization a clear picture of the nature of infections and their associated ramifications.

“When we looked at the infection data from our system, we saw that 50% of our HAIs were related to urine,” says Carol Muench, director of professional education and infection prevention for Mission Hospital. “This is slightly above average, and we felt it was important to reduce the presence of this type of infection within our facility.” As previously mentioned, many UTIs are preventable, and the organization felt that targeted work in this area could improve patient safety and quality of care.

Muench presented the surveillance data to nursing leadership at the hospital's Nursing Operations meeting, in which nursing leaders were selecting performance improvement goals for 2007. Based on the data, leadership selected “reducing UTIs” as a quality measure for the organization. “This endorsement and support by leadership was key to achieving success in our program,” says Muench. “By making the goal of reducing UTIs into a quality

measure for the organization, it got people's attention and moved the idea from an infection control initiative to a housewide goal. It also set expectations for improvement and reinforced the importance of the initiative.”

### Establishing a Team

A critical first step in the organization's UTI prevention initiative was creating a task force, which included a bedside nurse from every unit. The team met once a month to review data and to work collaboratively to reduce UTIs throughout the hospital. “By having front-line staff as the major contributors to the team, we were able to ensure the work would be applicable to and supported by the units,” says Muench.

### Creating Guidelines

A specific focus of the team was to improve the management and care of indwelling urinary catheters within the organization, as they are a primary source of UTIs. To help systemize the management and care of indwelling urinary catheters, the task force created guidelines that address their use. The goals and objectives of the guidelines were as follows:

*(Continued on page 10)*

## Case Study: Using Data to Reduce Urinary Tract Infections

Continued from page 9

- Identify when a patient requires an indwelling urinary catheter.
- Establish criteria for when the indwelling urinary catheter can be discontinued.
- Outline the proper nursing interventions to prevent urinary tract infections related to catheterization.
- Describe alternatives to indwelling urinary catheterization.

To meet these goals and objectives, the guidelines cover the following topics:

- Assessing and reassessing the patient
- Proper catheter insertion techniques
- Ensuring appropriate care of the catheter
- Proper techniques for changing the catheter
- Monitoring patient response
- Criteria for discontinuing catheter use

Nurses reassess patients every shift for the need of an indwelling catheter. If a patient does not meet the criteria for having a catheter, nurses discuss discontinuation with the patient's physician. In addition, nurses assess if the patient's elimination needs can be managed by an alternative method, such as diapers or male condom catheters.

"One of the most important things these guidelines did was establish when a urinary catheter should be removed. If a patient meets certain criteria, the nurse can remove the catheter without a physician's order, thus streamlining the process and improving the likelihood that catheters are removed in a timely manner," says Debbie Mulligan, infection prevention manager for Mission Hospital.

### Creating Education About the Guidelines

To ensure that all nurses understood and followed the guidelines, each unit

developed its own education on the guidelines, including posters and pictures of bacteria. A sticker that helps show how long a catheter has been in place and when to remove it was created by a staff nurse and shared with all units (see Figure 1). Units share education strategies and ideas. "The task force allows for collaborative idea exchange, and thus units could pick and choose what would work for their particular unit dynamics," says Mulligan.

Mission Hospital also created an in-house video and self-learning module that speaks directly to the guidelines and explains why the organization is focusing on reducing UTIs. The module also includes a pen with the slogan "You'rine Control" to help remind staff to follow the guidelines.

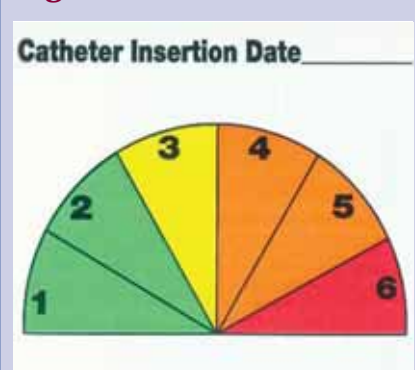
### Rewarding Participation

One of the key elements of success with this program is recognizing those nurses who participated on the improvement team "We wanted to acknowledge each participant's work and encourage further involvement in improvement initiatives," says Mulligan. Recognition was sometimes as simple as giving each task force participant a packet of sweet pea seeds at a meeting and another time being recognized at an award luncheon. Participants were also given time in their schedules to attend the task force meetings.

### Considering the Alternatives

As previously mentioned, one alternative to an indwelling urinary catheter is a diaper. To make sure the hospital was using the best possible diapers, the organization conducted a diaper day, in which 67 nurses tested different types of diapers by pouring glasses of water on them. "Nurses considered absorption, likelihood of leakage, comfort of the elastic, and appropriateness for obese patients. An overwhelming majority of the nurses selected one particular diaper, which was then trialed in the intensive

Figure 1. Catheter Sticker



Source: Mission Hospital, Mission Viejo, CA. Designed by Ildiko Vitez, R.N. Used with permission.

care unit and the progressive care stroke unit," says Mulligan.

### Measuring Success

To monitor the success of its guidelines and staff education, Mission Hospital turned to its electronic surveillance system. Eighteen months after increasing awareness, the system showed that Mission's UTI rate dropped nearly 20%. Mission Hospital continues to share information from the surveillance system on the UTI rate with the UTI prevention team, and members of the team bring the results to their units.

By using data to identify an infection control issue and taking a leadership-supported, front-line staff-driven approach to addressing the issue, Mission Hospital was able to reduce its UTI rate and improve patient safety and quality of care. **B**

### References

1. Centers for Disease Control and Prevention: *Estimates of Healthcare-Associated Infections*. <http://www.cdc.gov/ncidod/dhqp/hai.html> (accessed Mar. 5, 2008).
2. Stone P.W., Larson E., Kavar L.N.: A systematic audit of economic evidence linking nosocomial infections and infection control interventions: 1990-2000. *Am J Infect Control* 30:145-152, 2002.
3. Centers for Disease Control and Prevention: *An Overview of Catheter-Associated Urinary Tract Infections (UTI)*. [http://www.cdc.gov/ncidod/dhqp/dpac\\_uti.html](http://www.cdc.gov/ncidod/dhqp/dpac_uti.html) (accessed Mar. 1, 2008).

**By the Numbers Part III: Communicating with Leadership About Data-Driven Decisions**

*Continued from page 5*

**Relational Considerations: Living the Mission**

According to Lea Ayers-LaFave, Ph.D., R.N., former associate professor of nursing at Colby-Sawyer College, New London, New Hampshire, it is important to bring clinicians and other direct care providers into the process of data-driven decisions. Ayers-LaFave says that the most important component of conveying data involves the relations between people. Ayers-LaFave just completed her dissertation for her doctoral research at UMass School of Nursing on the subject of nursing practice as knowledge work within a clinical microsystem; that is, what kinds of systems knowledge nurses used in order to function in their jobs. Her research focused on travel nurses, staff nurses, and nursing leadership, and she studied the structural, operational, and relational aspects of decision making.

“Nurses work at the intersection

between the health care system and the patient,” says Ayers-LaFave. Their communications were a vital part of their every day, their minute-by-minute, and their handoffs. “The nurses had a genuine commitment to the institutional mission, and patient-centered and evidence-based care. Data were what integrally linked leadership to the staff who were producing them. And as we develop research tools, nurses are to be valued in that process.”

Ayers-LaFave provides an example of the process at Elliot Hospital, a 296-bed acute care facility in Manchester, New Hampshire. Kathleen Thies, Ph.D., R.N., a senior nurse researcher, worked closely with quality improvement professionals there, cultivating a relationship with leadership and educating them about her role. Thies asked leadership what types of data they needed to make their decisions. For example, by analyzing the hospital’s post-fall database, Thies was able to tell each unit at what time of day which of their patients fall and for what reason. That information helps target interventions more effectively. **B**

**References**

1. Fitzpatrick M.: Using data to drive performance improvement in hospitals: Real improvements in patient care, financial performance and efficiency will stem from the use of evidence-based approaches. *Health Management Technology*, Dec. 2006. [http://archive.healthmgttech.com/archives/1206/1206using\\_data.htm](http://archive.healthmgttech.com/archives/1206/1206using_data.htm) (accessed Mar. 31, 2008).
2. Weinrick R.M., Shin P.W.: *Monitoring the Health Care Safety Net*. U.S. Dept of Health and Human Services, Public Health Service, Agency for Healthcare Research and Quality. AHRQ Pub No 04-0037. 2004 <http://www.ahrq.gov/data/safetynet/weinrickpdf> (accessed Mar. 20, 2008).
3. Fulkerson W. Jr., Hartung D.L.: *Creating a Healthy Hospital: The Demand for Physician Executives*. Cejka Search, Inc. 2008. <http://wwwcejkasearch.com/resources/healthcarelibrary/healthy-hospital.htm> (accessed Mar. 28, 2008).

**Online-Only Content** 

For more on communicating with leadership, see the online version of this newsletter.

Also, see the online version for information on “Clinically Informed Outcomes Management: Ensuring Quality Care Using Patient Input.”

**Joint Commission Focus: Performance Measurement—Wandering in the Land of Oz**

*Continued from page 8*

Improvement resources are often spent making changes to existing processes for which performance levels may have already reached a high plateau and where additional incremental gains are likely to be small.

This raises significant questions about the focus of measurement and the need to reassess the measures that have been in common use over the last several years. The nearly 40-year debate over whether to measure processes of care, outcomes of care, or both continues today, and the jury has not yet returned a final verdict. The seeming apprehen-

sion on the part of providers with the measurement of clinical outcomes has more to do with obstacles associated with the reliability and validity of the measurement approach and the linkage of the derived data to improved processes of care than with whether such measurement is wanted or warranted. Even within the last year, contradictory evidence has been published lending fuel to both sides of the argument. Putative linkages between compliance with evidence-based processes of care leading to salutary impacts on short- and long-term clinical outcomes have been demonstrated in some areas, but not others. One troubling point of agreement that seems to be emerging is that measurement can have untoward effects. In particular, recent data suggest

that “practicing to the measure” rather than practicing good medicine can influence providers to inappropriately treat patients. This trend has been evident with respect to measures addressing antibiotic timing in pneumonia and timing to percutaneous coronary interventions in acute myocardial infarction.

While Dorothy sought to find a heart, brain, and courage for her friends while journeying down the yellow brick road, the challenge in health performance measurement today seems to be in finding the courage to lead, finding the measures derived from the strongest evidence that will result in the greatest impact on patients’ health outcomes, and finding a way to eliminate the chaos. Unfortunately, there does not seem to be a Wizard to solve the problem. **B**

**Volume 10, Issue 4, July/August 2008**

Send address corrections to:

**The Joint Commission Benchmark**

Superior Fulfillment

131 W. First St.

Duluth, MN 55802-2065

800/746-6578

## Hospital Executive Briefings

2009 marks the implementation of changes to standards and scoring as part of The Joint Commission's **Standards Improvement Initiative (SII)**.

*Hospital Executive Briefings* will emphasize key changes for hospital leaders:

- Re-sequencing of standards, elements of performance, and chapters
- New chapters added to the manual
- Changes to scoring categories
- Moving from thresholds to criticality of survey findings
- Applying a new accreditation decision model
- 2009 National Patient Safety Goals with a focus on medication reconciliation

**Come early and attend the three-hour preconference:**

*Going "Green" in Health Care: Saving Hospital Dollars and the Environment*

- Financial and environmental benefits of hospitals becoming efficient with using natural resources
- Best practices about going green will be shared by an active clinician from an area hospital
- The speaker will demonstrate how these changes and improvements can be made
- Attendees will be able to put these techniques into practice upon returning to their organization

**August 28, 2008  
Rosemont, IL**

**September 5, 2008  
New York, NY**

**September 12, 2008  
Dallas, TX**

**September 19, 2008  
Los Angeles, CA**

Make additional plans to attend a special half day preconference the day before! (except New York)

**Missouri Baptist Medical Center Takes the High-Reliability Road to Reduce Mortality Rates**  
*Continued from page 7*

### **100K Lives Campaign Overview**

In 2006 the Institute for Healthcare Improvement (IHI), with the support of The Joint Commission and other agencies, unveiled a national campaign to save 100,000 lives by June 2006.

The campaign consisted of six quality improvement strategies:

- 1. Deploy rapid response teams** that can be called upon to evaluate, and provide clinical support to a patient at the first sign of decline in clinical status.
- 2. Deliver evidence-based care** for AMI such as early administration of aspirin and beta-blockers that are known to prevent patient deaths from heart attack.
- 3. Prevent adverse drug events** by assuring medication reconciliation at transitions in care and to ensure that the patient continues to receive the correct medications at the correct dosages.
- 4. Prevent central line infections** by consistently carrying out interdependent steps, such as hand washing, barrier precaution, and chlorhexidine prep.
- 5. Prevent surgical site infections** by reliably delivering prophylactic antibiotics.
- 6. Prevent ventilator-associated pneumonia** by implementing interdependent steps, such as elevating the HOB to 30°F (-1°C) using PUD prophylaxis and sedation surfacing.

The campaign aimed to enlist hospitals to commit to implement changes in care that have been proven to prevent avoidable deaths. The campaign continues, with the most recent incarnation being the 5 Million Lives Campaign.

For more information, visit the IHI Web site at  
<http://www.ihl.org/IHI/Programs/Campaign/Campaign.htm>.

AMI, acute myocardial infarction; HOB, head of bed; PUD, peptic ulcer disease

### **Tips for Communicating with Leadership About Data**

1. Choose an approach, framework, strategy, or philosophy from which to work and build care-provider consensus on that. Keep it simple. Make it everybody's job every day.
2. Collect and present data that are physician specific.
3. As much as possible, provide data in a graphic format. Graphs and charts are more powerful than tables.
4. Have evidence to back up all your assertions. Physicians may or may not choose to accept that evidence, but the data should be available.
5. When you present your data to leaders, have at your side an influential member of the medical staff.
6. Start with the most important information and work backward.
7. Condense and synthesize data in a user-friendly fashion. But don't take shortcuts with important information.
8. Ask the leader: What is the decision that you need to make? What are the elements that are part of that decision?
9. Tell leaders whether the data they are reviewing were collected from similar or different types of organizations (for example, integrative versus a network, or urban versus rural).
10. Disabuse leaders of the notion that data collection, analysis, and review are a technical function only. Give them real-world examples of how data could be useful to them in their day-to-day decisions.
11. Communicate, communicate, communicate.

## Clinically Informed Outcomes Management: Ensuring Quality Care Using Patient Input

Clinically Informed Outcomes Management (CIOM)<sup>®</sup>, currently in use by The George Washington University Medical Center, Washington, D.C., examines patient progress concurrent with treatment and provides feedback to the treatment team. This approach identifies a patient's self-reported progress in relation to the care he or she is receiving and compares it to other patients with similar characteristics, in terms of changes that occur and outcomes resulting from care.

CIOM is built on a brief questionnaire completed by consumers once a week, every other week, once a month, and so forth depending on their treatment schedule. The questionnaire asks about perceived improvement in functional status, symptomatology, and risk reduction. Other questions relate to the quality of the therapeutic alliance, treatment expectations, openness to change (stages of change), optimism and hopefulness about the recovery process, and social support. Profiles are then established based on the data collected through the questionnaire.

Using the patient's self-report as the baseline provides the evidence that what the clinician is doing is effective (or in some cases, ineffective), with CIOM providing prompts and alerts to counselors, therapists, and case managers. For example, data showing improvement in status would provide a prompt that the treatment is working and to continue with the program. If the individual's status is stable, counselors and therapists would be advised to monitor progress. Data indicating that the patient's condition is deteriorating or that the patient is likely to leave treat-



*Ann Doucette, Ph.D., senior research scientist, Center for Health Services Research and Policy, The George Washington University Medical Center.*

ment prematurely would trigger prompts to conduct additional diagnostic assessment, modify the treatment plan, consult with the psychiatric and nurse clinician about medication, using motivational strategies to encourage continued treatment, and so forth. The CIOM feedback report includes a graphic summary, recommendations, and reports on specific domains.

CIOM takes its cue from the Institute of Medicine's call in the *Crossing the Quality Chasm* report urging patient-centered care as one of the fundamental changes necessary to improve the American health care system, as well as from calls by the Substance Abuse and Mental Health Services Administration for consumer-driven treatment planning.

"In behavioral health care, [clients] really haven't had a voice," says Ann Doucette, Ph.D., senior research scientist, Center for Health Services Research and Policy, The George Washington University Medical Center. "Behavioral health care has relied heavily on admin-

istrative data, but this gives the consumer an opportunity to voice their perspective."

In addition to giving consumers an opportunity to assess their own therapeutic progress and improvement, CIOM seeks to establish a practice-based evidence approach that identifies effective treatments and interventions. This is a departure from evidence-based models that Doucette says are typically developed for individuals being treated for one condition, such as depression, but do not adequately account for the differences in an individual who may, for example, be treated for depression along with diabetes and substance abuse. "People in the real world don't come as neatly packaged," she explains.

In addition to the use of CIOM in the District of Columbia, a modified version of the approach is now being pilot tested in parts of Los Angeles County as part of the California Mental Health Care Management Program (CalMEND). Several health plans also have expressed interest in using CIOM, which Doucette says has broad applicability for any type of health care organization that is focused on managing a condition. All of the surveys that serve as the foundation for CIOM are publicly available, and the management system offers a flexible methodology that can be adapted to consumer, staff, and agency needs. For example, CalMEND's use of CIOM is focused more on wellness than the District of Columbia model.

"I've purposely kept the instrumentation in the public domain because I really want people to use this approach," says Doucette.

Doucette emphasizes that CIOM is

concerned only with whether treatment and care lead to consumer improvement. The benefit of this approach is that it identifies effective treatment. In other words: What works for whom and under what conditions? This helps target needed resources and training for staff, such as the use of motivational strategies, methods for building a strong therapeutic alliance, or addressing the challenges of co-occurring disorders. Although the data are not relayed in real time, Doucette says treatment teams receive the information in a timely enough fashion that treatment plans can be modified. The treatment team receives training and education to effectively use and respond to the feedback. For consumers, CIOM supports treatment that is responsive to what the consumer is experiencing and gives individuals an active way to identify both improvements and challenges, thus providing a mechanism to be actively involved in treatment planning. **B**