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Luc R. Pelletier,  
Editor in Chief

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Janice K. Ernest, Elizabeth J. Brown, Robert K. Spear, Ralph D. Millsaps, J. Michael Neahring, Daniel Friesner

An improved method for advancing evidence-based medicine in the hospital setting has been initiated at St. Mary's Advanced Care Hospital in Evansville, IN. Because newer therapies often were not part of physicians' original training, physicians were reluctant to use preprinted protocols that reflect established guidelines in disease management. Thus, years can go by before new and effective therapies are implemented in care delivery. The approach taken, termed the virtual protocol, provides the physicians and healthcare team with information about the needs of the patient on a case-by-case basis using effective participation, prompting, and profiling. This article examines congestive heart failure (CHF) and shows how successful implementation of consistent and continual feedback to the physicians and care team can make a marked difference in the quality of care and the health of the patient. Using the virtual protocol, St. Mary's has effectively improved compliance with evidence-based CHF treatment guidelines at a greater than 95% confidence level in three of the four categories.

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# Participation, Prompting, and Profiling— Advancing Evidence-based Medicine in the Hospital Setting

Janice K. Ernest, Elizabeth J. Brown, Robert K. Spear, Ralph D. Millsaps, J. Michael Neahring,  
Daniel Friesner

Physicians have been reluctant to follow protocols because, in many instances, the newer therapies were not part of their original training (Morris, 2002). Therefore, patients do not benefit from the latest, most effective therapies until many years after the original discovery. The average time from discovery to implementation of new and effective medical therapies ranges from 5 to 20 years. "Substantial investments have been made in clinical research and development over the last 30 years, resulting in the medical knowledge base and the availability of many more drugs and devices. Unfortunately, Americans are not reaping the full benefit of these investments. The lag time between the discovery of more efficacious forms of treatment and their incorporation into routine patient care is unnecessarily long, in the range of about 15 to 20 years. Even then, adherence of clinical practice to the evidence is highly uneven" (Balas & Boren, 2000, p. 65).

Numerous standardized protocols have been developed and proven for both medical and surgical treatment, and in spite of this effort and knowledge, marked variability in physician practice patterns remains, as seen in the attendant costs and morbidity associated with outmoded treatments, ineffective treatments, or prolonged hospital stays (Weiss & Wagner, 2000). Evidence-based medicine is "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett et al., 1996, p. 71).

In the treatment of one disease process, congestive heart failure (CHF), the evidence clearly supports the efficacy of angiotensin-converting enzyme inhibitors (ACEIs). A study from Stanford University Medical Center indicates that physicians continue to underprescribe ACEIs; they were used in only 39% of heart-failure patients in 2002 (Stafford & Radley, 2003). In addition, clinical evidence of established guidelines in the care of CHF is identified and measured through

**Abstract:** An improved method for advancing evidence-based medicine in the hospital setting has been initiated at St. Mary's Advanced Care Hospital in Evansville, IN. Because newer therapies often were not part of physicians' original training, physicians were reluctant to use preprinted protocols that reflect established guidelines in disease management. Thus, years can go by before new and effective therapies are implemented in care delivery. The approach taken, termed the virtual protocol, provides the physicians and healthcare team with information about the needs of the patient on a case-by-case basis using effective participation, prompting, and profiling. This article examines congestive heart failure (CHF) and how successful implementation of consistent and continual feedback to the physicians and care team can make a marked difference in the quality of care and the health of the patient. Using the virtual protocol, St. Mary's has effectively improved compliance with evidence-based CHF treatment guidelines at a greater than 95% confidence level in three of the four categories.

the quality performance of expert, regulatory, and accrediting committees and agencies (Hunt, Baker, Chin, et al., 2001; Ranjan, Tarigopula, Srivastava, et al., 2003; Venner & Seelbinder, 1996). The most recent data released from the Joint Commission on Accreditation of Healthcare Organizations (Joint Commission) shows compliance with established guidelines as lagging (JCAHO, 2005).

To address underutilization of proven CHF treatment at St. Mary's, it was decided to avoid the use of a standardized printed protocol. A performance improvement model that heavily involves collaboration between nurses and physicians was utilized. CHF clinicians have been developed within the nursing staff. These nurses have been provided with extensive training on the recognition and treatment of CHF. These same nurses are then involved in the daily care of CHF patients and the daily interaction with the treating physicians. Using the virtual protocol, St. Mary's has effectively

## Key Words

profiling  
prompting  
protocols  
quality of care

improved compliance with evidence-based CHF treatment guidelines at a greater than 95% confidence level in three of the four categories.

**Background of the Healthcare System**

St. Mary’s Advanced Care Hospital has a long history of well over 100 years of providing care that encompasses two nonprofit acute-care hospitals as well as for-profit entities that include joint ventures, long-term care, home healthcare, dialysis, ambulatory care, and rehabilitation services. The study was conducted among patients from St. Mary’s Medical Center, a community-based Level II trauma center and minor teaching hospital with 502 beds. The market region is 350,000 lives with 0% growth and an aging population. It is one of two health systems in the market, offering a full continuum of care and regional programs in cardiovascular services, women’s and children’s services, oncology, orthopedics, and behavioral medicine in a manner that reflects its commitment to healing body, mind, and spirit.

**Method**

St. Mary’s voluntarily reports to the National Voluntary Hospital Reporting Initiative. This initiative of the Centers for Medicare and

Medicaid Services (CMS) requires hospitals to report five measures for acute myocardial infarction (AMI), two measures for heart failure (HF), and three measures for pneumonia. Because of St. Mary’s accreditation by the Joint Commission, we provide additional outcomes data on the three disease processes. Our focus on patient outcomes for CHF uses all four measures (see **Table 1**) required through CMS and the Joint Commission (JCAHO, 2005). St. Mary’s utilizes a model that seeks to capitalize on a more comprehensive approach to achieving evidence-based medicine practice with the CHF patient focusing on participation, prompting, and profiling (see **Table 2**).

**Participation**

*Participation* is achieved by identifying physician and nurse champions who can carry the message to the clinical practice setting by providing input regarding project direction and by measuring progress on agreed-upon goals. These practices focus on the role of clinical opinion leaders as a quality improvement method (Borbas et al., 2000). The nurse champions, called clinical experts, include staff from multiple areas who deliver care to CHF patients across the continuum of care. These nurses are from cardiac

**Table 1. Joint Commission Congestive Heart Failure Core Measures (JCAHO, 2005)**

Set Measure ID #	Measure (Short Name)	Description
Heart failure (HF)-1	Discharge instructions	HF patients discharged home with written instructions or educational material given to patient or caregiver at discharge or during the hospital stay addressing all of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.
HF-2	Left ventricular function (LVF) assessment	HF patients with documentation in the hospital record that LVF was assessed before arrival or during hospitalization or is planned after discharge.
HF-3	Angiotensin-converting enzyme inhibitor (ACEI) for left ventricular systolic dysfunction (LVSD)	HF patients with LVSD and without ACEI contraindications who are prescribed an ACEI at hospital discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of LVF consistent with moderate or severe systolic dysfunction.
HF-4	Adult smoking cessation advice or counseling	HF patients with a history of smoking cigarettes, who are given smoking cessation advice or counseling during hospital stay. For purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital admission.

**Table 2.** Elements of the Virtual Protocol

Participation	<ul style="list-style-type: none"> <li>• Physician champions—physicians give project guidance, make committee presentations, and initiate peer-to-peer communication.</li> <li>• Nurse champions (clinical experts)—RNs across the continuum provide suggestions on change strategy, report to peers at staff meetings, and serve as front-line advocates and resources for daily care.</li> </ul>
Prompting	<ul style="list-style-type: none"> <li>• Patients with congestive heart failure are identified.</li> <li>• Prompts are placed on chart for physicians that identify both the deficiency and possible solutions or responses to correct the deficiency.</li> <li>• Patient education resource sheets are given to nurses.</li> </ul>
Profiling	<ul style="list-style-type: none"> <li>• Focus is on outcomes—CareScience reports are generated for each attending physician.</li> <li>• Focus is on process—quarterly reports are generated for each core measure indicator by physician, by specialty, and for all combined.</li> <li>• Emphasis is on timely and specific action—individual letters are sent to physician or nurse when indicator is not met.</li> <li>• Data are disseminated—in addition to mailings to individual staff members, presentations of data occur at section meetings, Performance Improvement Council meetings, and staff meetings.</li> </ul>

telemetry, step-down, intensive care, and medical units as well as cardiac rehabilitation, home healthcare, clinical research, and case management. The physician champions participate in the nurses' training.

Input regarding project direction is garnered from the clinical experts and physicians who generate ideas for improved implementation of established guidelines. Current experience and level of performance provide the platform that positively affects patient care.

Measuring progress toward agreed-upon goals is very important in identifying success. St. Mary's utilizes the ADHERE database and the 3M Health Data Quality Management System to capture the method of treatment used for CHF patients. Case managers document progress, and report writers are used to provide information to the caregivers in close to real time.

### Prompting

A second element of the virtual protocol is *prompting*. Prompting alerts clinicians to evidence-based practices that apply to CHF patients. In a study conducted by the School of Medicine at the University of Missouri-Columbia, improvements in the care of patients were attributed to prompting physicians (Balas et al., 2000). The effect of computerized prompting was described in a study from Vanderbilt Medical Center, where three types of prompts were trialed for 3 months followed by a 3-month period without prompts. This study reported that the content of the

prompt did matter and that if the prompts were removed, practice trended back to "pre-prompt" levels (Conner et al., 2000).

St. Mary's case managers and clinical experts prompt the physician using the current coding clinics as well as best-practice American College of Cardiology and American Heart Association models as guidelines (Hunt et al., 2001). The prompt identifies the aspect of care that is not currently found in the medical record and lists possible corrective actions. The physician or another member of the care team reviews the prompt and determines whether action is appropriate for the care of the patient.

In addition, after the patient education needs are identified, the most appropriate educational tools for the patient based on his or her learning style and current knowledge base are determined. Prompting identifies the specific patient needs and guidelines for documenting the education provided by healthcare professionals.

### Profiling

The program of performance *profiling* consists of several levels of detail focused on outcome quality measures or the end result of the care that is provided (Emmons & Wozniak, 1994; Donabedian, 1980; Green & Wintfield, 1993; Kassirer, 1994; Kim, Kristopaitis, Stone, et al., 1999).

St. Mary's uses risk-adjusted probability software for patient outcomes. CareScience, a Quovadx, Inc. product, includes a population of over 20 million patients. A unique

template has been developed by St. Mary's to provide quarterly profiles to each attending and procedure-based physician (see **Figure 1**). The profile shows diagnosis-related groups, volumes, morbidities, mortalities, additional acute-coded diagnoses, lengths of stay, and charges for the patients treated by the physician compared with those for physicians in the same specialty.

A more process-focused profile provides clinicians with data about the specific evidence-based care that is provided. These profiles include all physician data, data by specialty type, and data for individual physicians for patients with a principal diagnosis of CHF. Each of the Joint Commission core measures is profiled in this manner. An individual physician receives his or her report from CareScience,

**Figure 1. Inpatient Family Practice Profiles by Attending Physician (July 2003–June 2004)**

Physician Name: DEMO, DOCTOR (09042838)  
Specialty: Family Practice

**Patient Outcomes by Physician**

Total Cases	Average Age	Outcomes	Raw	Risk Adjusted	Deviation	Significance
122	38.1	Mortality	0.8 %	1.7 %	-0.9 %	Not Sig
		Morbidity	10.7 %	8.2 %	2.6 %	75% Sig
		* Additional Acute Coded Dx	40.9 %	35.2 %	5.6 %	90% Sig
		GM LOS	3.0	3.3	-0.3	90% Sig
		AM LOS	4.0			
		GM Charges	\$4,666	\$6,258	(\$1,592)	90% Sig
		Average Charges	\$8,595			
		Total Charges	\$1,048,618			

  

Payor Mix	Physician %	Discharge Disposition	Physician %
BC/BS	7.4%	Against Medical Advice	0.0%
Champus/FEHP/Other Fed. Gov't	0.0%	Another Type of Institution (Includes Psych and Rehab)	0.8%
Commercial	24.6%	Expired	0.8%
HMO	0.0%	Home/Home Health	5.7%
Medicaid	33.6%	Home/Self Care	90.2%
Medicare	34.4%	Intermediate Care Facility	0.0%
Workers Comp.	0.0%	Short-term General Hospital	0.0%
		Skilled Nursing Unit	1.6%
		Unknown/Other	0.8%
<b>% Total</b>	<b>100.0%</b>	<b>% Total</b>	<b>100.0%</b>

**Patient Outcomes by Section/Specialty**

Total Cases	Average Age	Outcomes	Raw	Risk Adjusted	Deviation	Significance
2,225	45.9	Mortality	2.6 %	2.3 %	0.2 %	Not Sig
		Morbidity	9.2 %	8.6 %	0.6 %	75% Sig
		* Additional Acute Coded Dx	35.0 %	35.5 %	-0.5 %	Not Sig
		GM LOS	3.0	3.3	-0.3	90% Sig
		AM LOS	4.0			
		GM Charges	\$4,717	\$6,756	(\$2,038)	90% Sig
		Average Charges	\$7,557			
		Total Charges	\$16,814,327			

  

Payor Mix	Physician %	Discharge Disposition	Physician %
BC/BS	6.8%	Against Medical Advice	0.1%
Champus/FEHP/Other Fed. Gov't	0.8%	Another Type of Institution (Includes Psych and Rehab)	4.4%
Commercial	33.0%	Expired	2.6%
HMO	0.6%	Home/Home Health	3.7%
Medicaid	20.7%	Home/Self Care	81.4%
Medicare	38.0%	Intermediate Care Facility	0.2%
Workers Comp.	0.1%	Short-term General Hospital	0.2%
		Skilled Nursing Unit	7.1%
		Unknown/Other	0.2%
<b>% Total</b>	<b>100.0%</b>	<b>% Total</b>	<b>100.0%</b>

**NOTE:**  
Deviation is the difference between the Raw and the predicted (Risk-Adjusted) performance.  
**\*ADDITIONAL ACUTE CODED DIAGNOSES DEVIATION:**  
Negative deviation values indicate a lack of necessary coding to reflect the severity of illness of your patient population.

**Table 3.** Assessment for Left Ventricular Function (LVF) in Heart Failure Patients\*

	No. of Patients	Rate of LVF Assessment (%)
Baseline	332	81.3
Second quarter 2003	126	83.3
Third quarter 2003	118	87.3
Fourth quarter 2003	120	85.8
First quarter 2004	160	90.6
Second quarter 2004	131	92.3
Third quarter 2004	111	94.6

\*Assessment is recorded for patients whose medical records document that LVF was assessed before arrival or during hospitalization or was planned after discharge.

as well as documentation of ventricular function, use of ACEIs in patients with left ventricular systolic dysfunction, and smoking cessation advice. The physician is compared with those in his or her specialty group and with all physicians caring for HF patients. A cover sheet explaining the indicator definitions is included, and data are provided in a graphic format showing both number and percentage of compliance for each of the HF core measures (see **Table 3**).

Distribution through a quarterly mailing and presentations of the data occur at routine monthly meetings. Physician champions talk directly with medical staff about the numbers, emphasizing the involvement needed to improve the outcomes of care for the patient.

As the physicians are profiled, questions arise about data accuracy. Ensuring data validity and credibility is vital to the success of a profiling strategy. We adopted a level of detail that identifies specific cases for each physician who did not meet the indicators. This proactive approach makes the feedback even more timely and specific. Nonpunitive and informational letters are mailed from the chief medical officer to physicians when the chart audit demonstrates lack of documentation to support compliance. The letter indicates the individual patient, discharge date, indicators not in compliance, and possible corrective actions. This letter is generated at the time of the chart audit, so that by the time the quarterly profiles are distributed, the physician already knows if any of his or her cases did not meet audit criteria.

Similar performance profiling is completed for the nursing units. Letters are generated for cases that are not in compliance with any of the

six required elements for discharge instructions. These letters are sent from the department manager. Aggregate data by month by unit and for all units combined are distributed at the regular clinical experts' meetings. In this way, progress can be seen over time for each particular nursing unit and for units in comparison to their peers. Professionals have responded well to this detailed feedback. Areas in need of improvement are clear, the feedback is timely, and progress is easily seen. The clinical experts display the performance profiles on bulletin boards in their departments. The cardiac unit placed the CHF bulletin board in a public corridor where patients and families may read information on progress. The manager and clinical experts share unit-specific data at the departmental staff meetings for that area.

The core-measure definitions were put in place during the ORYX initiative (the Joint Commission's performance measurement system), but some changes in the definitions occurred in the 3 years before the time of the study baseline. Therefore, accurate trend lines of performance before initiating the virtual protocol for CHF patients are not available. In the year since the project began, each of the four Joint Commission core-measure data indicators demonstrated improvement over the baseline and over the Joint Commission benchmark, with significant difference at greater than 95% confidence on three of the four indicators (see **Table 4**).

We believe that the core-measure ratings will continue to improve as refinements to the virtual protocol model are made and as the data are more widely reported throughout the organization. This model for change is also producing positive results in the areas of

**Table 4.** Results of Congestive Heart Failure Virtual Protocol

Established Guidelines	Joint Commission Benchmark Rate (%)	Baseline Measurement (Oct.–Dec. 2002)		Improvement Measurement (July–Sept. 2004)		Results of Chi-square Test for Improved Measures			
		Sample Size	Rate (%)	Sample Size	Rate (%)	Measured Against Joint Commission Benchmark		Measured Against Baseline	
						Significant Difference	<i>p</i>	Significant Difference	<i>p</i>
Patient education	46.7	55/243	23	80/83	96.4	>95%	0.0000	>99%	0.00000
Left ventricular function (ejection fraction)	85.5	262/322	81.3	105/111	94.6	>90%	0.0656	>99%	0.00033
Use of angiotensin-converting enzyme inhibitors	76.3	102/131	77.9	41/47	87.2	>95%	0.022	90%	0.1230
Smoking cessation advice or counseling	62.4	15/37	40.5	23/24	95.8	>95%	0.0002	>99%	0.00000
Average length of stay (days)—based on diagnosis-related group 127	5.3	322	5.3	113	4.6	*		*	

\*These data are not proportional.

disease management for stroke and acute coronary syndrome.

**Conclusion**

Creating awareness and establishing the need for change is crucial to the success of any change process. Protocols and pathways that were once heralded as critical elements in disease management have not been successfully implemented and consistently monitored. Instead, monitoring use of the protocols often became an end unto itself, and performance improvement teams were left wondering whether patient care was actually improving. St. Mary’s virtual protocol methodology focuses on creating the ideal care path based on key elements of evidence-based practice for CHF patients and a multidimensional plan to implement that care. The three key elements of including those directly involved in the

direct care of patients (participation), concurrently monitoring caregiver practice and communicating identified gaps (prompting), and providing meaningful measures of the effect of change strategies at a detailed level (profiling) have been successfully implemented to demonstrate an evidence-based model for treating and continuously improving the care of CHF patients.

**References**

Balas, E. A., & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. *Yearbook of Medical Informatics* (pp. 65–70). New York: Schattauer.

Balas, E. A., Weingarten, S., Gar, C. T., Blumenthal, D., Boren, S. A., & Brown, G. D. (2000). Improving preventive care by prompting physicians. *Archives of Internal Medicine*, 160(3), 301–308.

Borbas, C., Morris, N., McLaughlin, B., Asinger, R., & Gobel, F. (2000). The role of clinical opinion leaders in guideline implementation and quality improvement. *Chest*, 118, 24S–32S.

- Conner, B. D., Wheeler, A. P., Kaiser, A. B., & Geissbuhler, A. (2000). The effects of computerized prompts on the rate of DVT prophylaxis. *Chest*, 118(4), 122S.
- Donabedian, A. (1980). Basic approaches to assessment: Structure, process, and outcome. *The Definition of Quality and Approaches to Its Assessment: Explorations in Quality Assessment and Monitoring* (Vol. 1, 77-128). Ann Arbor, MI: Health Administration Press.
- Emmons, D. W., & Wozniak, G. D. (1994). Profiles and feedback: Who measures physician performance? In M. L. Gonzalez (Ed.), *Socioeconomic characteristics of medical practice* (pp. 11-16). Chicago: American Medical Association.
- Green, J. & Wintfield, N. (1993). How accurate are hospital discharge data for evaluation of effectiveness of care? *Medical Care*, 31, 719-731.
- Hunt, S. A., Baker, D. W., Chin, M. H., & Cinquegrani, M. P. (2001). Guidelines for the evaluation and management of chronic heart failure in the adult: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *American Heart Association and the American College of Cardiology Circulation*, 104, 2996-3007.
- Joint Commission on Accreditation of Healthcare Organizations. (2005). *Core measures*. Retrieved January 7, 2005, from <http://www.jcaho.org/core+measures/information+on+final+specifications.htm>
- Kassirer, J. P. (1994). The use and abuse of practice profiles. *New England Journal of Medicine*, 330, 634-636.
- Kim, C. S., Kristopaitis, R. J., Stone, E., Pelter, M., Sandhu, M., & Weingarten, S. R. (1999). Physician education and report cards: Do they make the grade? Results from a randomized controlled trial. *American Journal of Medicine*, 107, 556-560.
- Morris, D. (2002). Decision support and safety of clinical environments. *Quality and Safety in Health Care*, 11, 69-75.
- Ranjan, A., Tarigopula, L., Srivastava, R. K., Obasanjoo, O. O., & Obah, E. (2003). Effectiveness of the clinical pathway in the management of congestive heart failure. *Southern Medical Journal*, 96(7), 661-663.
- Sackett, D., Rosenberg, W. M. C., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence-based medicine: What it is and what is isn't. *British Medical Journal*, 312(13), 71-72.
- Stafford, R. S., & Radley, D. C. (2003). The underutilization of cardiac medication of proven benefit, 1990 to 2002. *Journal of the American College of Cardiology*, 41, 56-61.
- Venner, G. H., & Seelbinder, J. S. (1996). Team management of congestive heart failure across the continuum. *Journal of Cardiovascular Nursing*, 10, 71-84.
- Weiss, K. B., & Wagner, R. (2000). Performance measurement through audit, feedback, and profiling as tools for improving clinical care. *Chest*, 118 (20), 53S-58S.

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# Incident Investigation and Root Cause Analysis—A Workshop for Healthcare Professionals

Sandra E. Ward

If you were looking for an interactive training program that utilizes a variety of tools for an investigation, this was the workshop to attend. Sponsored by HealthInsight, a Medicare Quality Improvement Organization for Nevada and Utah, the workshop took place January 31—February 1, 2005, at the Palms Casino Resort in Las Vegas. Since 1997, HealthInsight has developed educational and training programs for quality, safety, administrative, and direct-care professionals to improve the reliability of healthcare systems. The participants' objectives were

- to understand and identify environmental and organizational factors, as well as human error and design principles, that contribute to incident causation
- to use root cause analysis (RCA) as a tool for organizational learning and injury reduction
- to apply risk-analysis techniques for prioritizing events for an investigation
- to gain experience with investigation and interview techniques
- to reconstruct events and evidence visually to improve group dynamics
- to apply human factors principles while developing improvement strategies.

The HealthInsight faculty—Kim A. Bateman, MD, Medical Director; Michael P. Silver, MPH, Director of Patient Safety and Scientific Affairs; and Stormy Sweitzer, MPH, Project Manager—provided a dynamic exchange of ideas.

## Presentation Highlights

### *Learning from Unexpected Events*

One incident that most people can recall is the space shuttle *Columbia* disaster in 2003. What occurred can be compared to the process and system failures within the healthcare environment. The investigation revealed that the foam insulation often fell off the external fuel tank, even though everyone knew that this was not supposed to happen. An existing condition led to a disastrous event. Similar experiences in

healthcare have resulted in a media outcry for change. With patient safety now in the forefront, the focus is placed on performance improvement to correct process failures and inadequate systems. According to Michael Silver, the key is not to wait for a disaster but to redesign the process and system. The goal is to learn from experience and incorporate patient safety measures in order to prevent future failures. All events provide a learning opportunity, even those that do not produce a negative outcome. The integration of these concepts will ensure an effective incident investigation and RCA.

During this session, participants had the opportunity to discuss near misses or event failures at their institutions. Further discussion pertained to accidents and patient harm due to the elements of design within healthcare and the sources of design failures in complex systems.

### Root Cause Analysis: An Overview

RCA has been utilized by other industries and has become part of a risk-management tool in several formats. Stormy Sweitzer sees RCA as a way of looking at unexpected events and outcomes in order to determine all of the underlying causes of the events and recommend changes that are likely to improve the outcomes. Not all events require RCA; its applicability depends on the severity and outcome of the event, as well as organizational policy. However, if the healthcare quality professional determines that one is needed, chartering the RCA team would be an initial step. According to Sweitzer, the team would define the scope of the investigation, identify the team members, establish the expectations and responsibilities of the team, determine the timeline for completion, and identify needed resources such as medical records, reports, or a literature review. After a team has been established, the RCA process can begin.

- **Investigate events**—Define the problem, collect pertinent evidence, conduct

interviews, review event environment, determine contributing factors, and establish a chain of events.

- **Reconstruct events**—Define events preceding the adverse event or near miss, determine actions and conditions leading up to these events by developing a causal tree, and continue until you have identified underlying systems causes or until it is unreasonable to go any further.
- **Analyze causes**—Identify root causes within your causal tree and develop root-cause statements.
- **Develop action plans**—Identify strategies that are appropriate to the causes identified and acceptable to the organization and to those who will be involved in the changes; develop a plan for addressing each root cause and for measuring the effectiveness of your intervention, and gain agreement from organizational leadership regarding actions to be taken.
- **Report RCA processes and findings**—Record the process and tools used, the cost of the process, a summary of the events, the investigation and analysis process, and findings.

It should be noted that not only are the findings useful for reporting to the organizational leadership; regulatory and accrediting agencies will also want to know about the process and plans for improvement.

### Selecting Events for Investigation: Risk Assessment and Event Prioritization

A scale for rating the severity of events aids in the selection of events for investigation. Catastrophic events like an unexpected death, permanent damage, or loss of function have a higher severity rating than a patient's receiving a wrong treatment and recovering without harm. During this session, participants had the opportunity to explore the various tools to determine the severity of an event. For example, the Veterans Administration system uses a severity assessment code (SAC). An RCA is performed for any event with an SAC of 3 or above. Another scoring tool mentioned by Kim Bateman was the Medical Event Reporting System Risk Assessment Index. With this tool, severity ranges from a high of 0.99 to a low of 0.10. Likewise, the probability of recurrence ranges from a high of 0.99 to a low of 0.10. In addition, you have to factor into the score

whether the event caused patient harm, called a recovery. If a score is  $>0.5$ , an RCA is performed.

### Understanding the Causes of Events

This session provided an in-depth review of the causal factors in RCA. An effective investigation can be achieved when barriers to understanding what causes an event (such as reacting to failure with a judgmental attitude, stopping too soon in the investigation, or believing that there is only one root cause) are eliminated. Attention must also be given to the human factors and human errors involved in the development of an event. Presenters made it clear that "human beings contribute to the breakdown of our systems—or rather, create holes in our defenses—in two ways." One way, an *active failure*, is an intentional violation committed by an individual. The other, a *latent condition*, is a breakdown in processes or systems such as a lack of education, the failure to follow a procedure, an equipment defect, or a poor design. The philosophical viewpoints on human errors that one should keep in mind during an investigation are the following:

- Human error is not the *cause* of events; it is a symptom of deeper troubles in the system.
- Human error is not the *conclusion* of an investigation; it is the beginning.
- Events are the result of multiple causes.

By understanding that active failures and latent conditions are components of root causes, corrective action with system redesign can be implemented as a means of reducing risk. The audience participated in small-group simulated exercises related to the development of human errors in our information processing and response time, attention span, memory, and cognitive performance levels.

### Event Investigation: Concepts and Strategies

One of the basic goals of an investigation is to understand why people make certain decisions that cause an event; in other words, to get inside the "tunnel" of an investigation. According to Bateman, in order to achieve this goal, all investigations must be performed methodically within the RCA process:

- Define the problem. What happened, when did the event occur, where did it

occur, and what was the significance of the event in regard to patient harm or organizational liability?

- Collect pertinent data related to the event.
- Reduce any barriers that may hinder the investigation.
- Consider who should be interviewed, and prepare for interviews as soon as possible.
- Develop questions to ask without putting pressure on the interviewee and without blame or reprisal.
- Review the involved individual's environment and the task that he or she was performing prior to the event.
- Evaluate the organizational norms affecting the individual's behavior.
- Review the organizational policies and procedures.

The audience then participated in an RCA simulation activity regarding a clinical situation in a small acute-care facility. Each team reviewed the event, the investigation, and the action plan. Members of each team played various roles as the interviewer or the individual directly involved in the event. Each team developed questions that would be asked and determined evidence needed for the investigation. After the group activity, participants discussed their impressions related to the interviews, questions regarding corrective action, and issues related to the clinical case presentation.

### **Event Reconstruction, Causal Analysis, Improvement Strategies, and Action Plan**

Many of the tools and concepts explored the first day were incorporated on the second day to further enhance the participants' overview of RCA. Because causal analysis is pertinent to the investigation, time was spent reconstructing the event utilizing the causal tree analysis and rules of causation. According to Silver, a causal tree looks like a fishbone diagram, but it is more effective for determining root causes. The purpose of a causal tree is to help the team determine not only what happened but why the incident occurred, to provide a visual picture for the sequence of events, and to explore all the pertinent causes of an event. Prior to the development of a causal tree, the rules of causation must be understood because they are the foundation of this process:

- The causal tree should clearly show the cause-and-effect relationship.
- Negative descriptions should not be used. Avoid words like *poorly* or *careless*.
- Each human error must have a preceding cause.
- Violations of procedure are not final causes; they must have a preceding cause.
- Failure to act is causal only when the duty to act is pre-existent.
- Causes that are really not-yet-implemented solutions should not be included in the tree.

One method for developing a causal tree is to determine the actions and conditions leading up to the event. An *action* is a momentary cause that brings conditions together to produce the effect, and a *condition* is a cause that exists over a period of time prior to the action. For example, an action would be a patient receiving the wrong medication, thus producing an adverse outcome. The conditions contributing to this event may include the nurse's lack of knowledge regarding the medication, fatigue by the staff member working overtime, or illegible documentation of the physician's orders. During this session, groups of participants used the prior clinical case study to develop a causal tree. This was no easy task because one had to determine the actions and conditions that preceded the event as a means of developing solutions and improvement strategies.

Each participant received a binder on RCA and a CD titled "Root Cause Analysis Just-in-Time Training" (Version 2005). References may be obtained from the author upon request. Those interested in further study should visit the following Web sites:

#### **A Protocol for the Analysis of Clinical Incidents**

<http://www.patientsafety.ucl.ac.uk/CRU-ALARMprotocol.pdf>

#### **JCAHO Sentinel Event Policy and Procedures**

[http://www.JCAHO.org/accredited+organizations/hospitals/sentinel+evemts/se\\_pp.htm](http://www.JCAHO.org/accredited+organizations/hospitals/sentinel+evemts/se_pp.htm)

#### **Veterans Health Administration National Center for Patient Safety**

<http://www.patientsafety.gov>

**Medical Event Reporting System (for transfusion medicine and total healthcare)**

<http://www.mers-tm.net>

**Clinical Risk Unit at University College London**

<http://www.patientsafety.ucl.ac.uk/caseanalysis.htm>

**The Columbia Accident Investigation Board Report**

<http://www.caib.us/news/report/default.html>

**CAIB Report Columbia Accident Investigation Board**

<http://www.nasa.gov/columbia/home/index.html>

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# q&a: Shashi Madhok on Quality Outcomes at Robert Wood Johnson University Hospital

Joann Genovich-Richards

Joann Genovich-Richards, Deborah M. Flores, q&a Editors



**q** What was the role of the RWJ Hamilton quality professionals in preparing for the review processes at the national and state levels—for example, in staff preparation, documentation, and leadership development?

**a** The quality department utilizes a standardized systematic approach of PDCA (Plan, Do, Check, Act) for performance improvement. The quality outcomes department coordinates the organizational performance improvement (OPI) indicators and OPI balance scorecard. These indicators are aligned with the strategic initiatives and support organizational performance. The department directors deploy these strategic initiatives to their departments using the five-pillar communication process—people, service, quality, finance, and growth. The “Hospital Highlights” bulletin is used daily for effective communication of information from the leadership to all employees. The department directors on duty huddle with their staff every day at 9:30 am and 9:30 pm to communicate important information, results, organizational performance, and departmental news.

**q** What were the most challenging aspects of the preparation process?

**a** The preparation process is ongoing. Systematic, standardized, and timely sharing of the same information throughout the organization is a real challenge. The education and communication processes need to meet the needs of the employees—one of our key customer groups. The listening and learning methods were used to improve the effectiveness of the process. The deployment of E3: Engage Every Employee in progressing toward a common goal requires continuous, persistent efforts.

Shashi Madhok joined Robert Wood Johnson (RWJ) University Hospital in Hamilton Township, NJ, in 2001 as an assistant vice president, quality outcomes. She is responsible for leading and managing the performance improvement, medical records, case management, infection control, and quality outcomes departments. In addition, she collaborates with physicians and manages the physician peer review committees. Madhok is a Malcolm Baldrige Examiner and Quality New Jersey State Baldrige Examiner. She serves on the advisory committee of Quality New Jersey and is a member of the National Quality Forum. She served on the committee evaluating nominations for the John M. Eisenberg Patient Safety and Quality Awards.

RWJ Hamilton has been recognized for quality and performance at both the national and state levels. In November 2004 the hospital was awarded the prestigious Malcolm Baldrige National Quality Award. The Baldrige Award is the nation’s highest award for quality and the only award given by the U.S. President. RWJ Hamilton was the only healthcare recipient in 2004. The hospital joins a group of only three other healthcare organizations that have ever received the award. In January 2005, RWJ Hamilton also received the Quality New Jersey Governor’s Award for Performance Excellence—Gold. This award is the state’s highest and most respected designation of quality that an organization can receive; its recipients serve as models of performance, leadership, and service. This award recognizes outstanding organizational practices, using the same criteria that the Baldrige Award uses.

**q** Is there anything you would now do differently in submitting documentation and preparing for the site visits of the examining groups?

**a** RWJ Hamilton has learned from previous feedback and benchmarking experiences that there is always a better way of doing things. Similar questions are asked at the end

## Key Words

error reduction  
error reporting  
patient safety  
quality awards

of every meeting: What have we learned? What can we do better next time? I would advise that people be themselves and just have staff talk about what they do on a daily basis. Another piece of advice: we found that by setting up a “command central” during the site visit, we were able to coordinate requests for additional documents and allow only one person to distribute documents.

**q** What are some of the tactics you are using to sustain a high level of performance?

**a** We are reinforcing the practices that were successful. We continue to improve by using PDCA methodology, listening and learning from our customers, and evaluating our critical success factors, lessons learned from our site visits, and feedback reports from

Baldrige. We continue to benchmark and look for best practices to sustain and improve our performance.

**q** What advice would you give your colleagues who are considering applying for a state or national award?

**a** Performance excellence is a long journey, and it is always difficult to get started. The key is leadership commitment and vision to achieve the goal. Start with the self-assessment, using the state level or Baldrige assessment form; the criteria guide the rest of the process. We started with the state quality program and moved toward Baldrige through the continuous improvement process.

*Joann Genovick-Richards, PhD MBA MSN RN, is the president of Sharendipity Enterprises, Inc., a healthcare consulting firm in Sterling Heights, MI. She is JHQ's q&a Co-Editor.*

This *JHQ* feature provides members with up-to-the-minute, interesting resources that will help them navigate in the constant flood of health-care quality information. Brief descriptions of recently released media are provided, as well as ordering and Internet access information. New product announcements and company contact information are also provided.

## Products

### **Isabel Healthcare launches clinical diagnosis reminder system for adults**

Isabel Healthcare announced the launch of its eagerly anticipated diagnosis reminder system for adults. The Isabel diagnosis system, formally available only for pediatrics, is set to have positive effect on the way doctors diagnose and treat patients throughout the world, supporting clinicians working in all major specialties and with all ages.

The new system, developed using Autonomy software, equips doctors with a sophisticated decision-support system that has been developed and validated over the last 5 years. It covers diagnosis decision support for clinicians in all major specialties including internal medicine, surgery, gynecology and obstetrics, pediatrics, geriatrics, oncology, and toxicology.

In clinical trials Isabel has been proven to significantly enhance clinicians' diagnosis decision-making capability. The reminder system works in a matter of seconds and will result in a decrease in errors of diagnosis and in treatment delays.

The new "suggest related diagnoses" feature allows more instinctive searching. For example, if a doctor has a hunch about what a diagnosis might be, he or she can simply enter a specific diagnosis and get an instant list of all related diagnoses. Doctors can rely on their own instincts while having their experience supported by Isabel's exhaustive knowledge base compiled from continually updated textbooks, images, and journal abstracts.

In addition to differential diagnoses of diseases, Isabel provides a unique functionality. Doctors can enter symptoms and signs, and the Isabel system will offer a list of likely medications that may be causing symptoms. In an attempt to answer clinical questions that invariably arise, Isabel offers doctors the ability to search a selection of textbooks, journal abstracts, and images.

Isabel is an award-winning clinical decision support system and a global leader in diagnosis reminder and knowledge mobilizing systems for physicians. Its unique feature is a diagnosis reminder system, which instantly gives the physician a checklist of likely diagnoses for a patient's condition. Using the same proprietary technology that powers the diagnosis reminder tool, Isabel mobilizes knowledge to help physicians find relevant and specific answers to clinical questions quickly and easily.

The Isabel Healthcare Ltd. customer base includes hospitals in the United Kingdom, United States, and India; the company currently has offices in London, Maryland, Texas, Utah, and India.

*For more information about Isabel Healthcare please visit [www.isabelhealthcare.com](http://www.isabelhealthcare.com).*

### **The Optio QuickRecord Suite provides new model for creating the essential foundation of a community-based EHR**

Optio Software launches the Optio QuickRecord® Suite, a new model for achieving the electronic health record (EHR). The QuickRecord Suite is a secure, cost-effective way to provide physicians and other caregivers with real-time access to patient information across the continuum of care. It establishes the foundation upon which a true community-based electronic health record system can be built.

At healthcare organizations such as the Colorado Region of Banner Health and Scripps Health in San Diego, QuickRecord Suite is already providing many of the components of an EHR today. More than 700 healthcare organizations use Optio's forms automation, electronic health record, and clinical document management solutions to capture, format, scan, archive, and deliver real-time access to patient information at the point of need.

Optio Software's imaging, output, and print management solutions help enterprises reduce the cost, time, and complexity of managing the entire life cycle of their transactional documents and achieve higher levels of efficiency and accuracy in their document-driven business processes. Founded in 1981, Optio Software has world headquarters in Alpharetta, GA, European, Middle East and Asia (EMEA) headquarters in Paris, and sales offices in Germany and the United Kingdom.

*More information about Optio Software is available at [OptioSoftware.com](http://OptioSoftware.com).*

## Resources

Compiled by Susan L. Yeager-Chowning

### National health insurance myths debunked

Although prominent supporters of government provision of healthcare are discussing plans in Washington, DC, a Cato Institute study suggests that leaders should steer clear of such schemes. Data from foreign governments with such systems contradict many claims made about national healthcare insurance by its U.S. supporters.

In *Health Care in a Free Society: Rebutting the Myths of National Health Insurance*, National Center for Policy Analysis president John Goodman writes that wherever national health insurance has been tried, it produces results at odds with its proponents' intent of equal access to high-quality care. Issues cited are long waiting times for treatment and inequities in accessing healthcare. Examples used to illustrate this point include the following:

- No country with national health insurance has established a right to healthcare or equal access to care by citing disparities in the Canadian and U.K. systems.
- The quality of medical care in the United States is typically higher than in other nations, as illustrated by lower mortality rates in patients with breast or prostate cancer.
- A comparison of Britain's National Health Service and Kaiser Permanente in California found that Kaiser provided members with more comprehensive primary care services and faster access to specialists at roughly the same cost per capita.

Goodman suggests that the United States look at how countries like Germany, Sweden, and Australia are choosing free-market reforms to alleviate the problems with national health systems.

A full copy of *Health Care in a Free Society: Rebutting the Myths of National Health Insurance (Policy Analysis No. 532)* may be downloaded at [www.cato.org](http://www.cato.org) or by contacting Jonathan M. Block at 202/789-5263 or [jblock@cato.org](mailto:jblock@cato.org).

### First report available from the Commonwealth Fund's International Working Group on Quality Indicators

The Commonwealth Fund's International

Working Group on Quality Indicators released its first report and recommendations. This group, established in 1999, comprises representatives from Australia, Canada, the United Kingdom, the United States, and New Zealand. This group is committed to the development of an indicator set to help benchmark and compare healthcare system performance across countries.

The working group focused its initial efforts on five subdomains of health system performance: effectiveness, appropriateness, accessibility, continuity, and acceptability. Beginning with more than 1,000 indicators, the group selected an initial set of 40 indicators. Examples of these indicators include the 5-year survival rates for breast, cervical, and colorectal cancers; 30-day case fatality rates following heart attack or stroke; vaccination rates; and waiting times for primary, emergency, and specialty care.

Key findings show that each country has at least one area of care where it could learn from international experience. Within the report, areas of good performance and opportunities for improvement are identified for each country participating.

First Report and Recommendations of the Commonwealth Fund's International Working Group on Quality Indicators (June 2004) is available from the Commonwealth Fund, 1 East 75th Street, New York, NY 10021 or at [cmwf@cmwf.org](mailto:cmwf@cmwf.org).

### Evidenced-based tools for diabetes care offered

The National Diabetes Education Program (NDEP) has prepared *Guiding Principles for Diabetes Care* to aid healthcare providers in addressing the growing number of Americans with Type 2 diabetes. More than 18 million Americans have been diagnosed, and an estimated 5.2 million have yet to be diagnosed. According to a report in the *Journal of the American Medical Association*, only a small fraction of patients (2.8%–11.9%) are achieving the recommended levels of control. In addition, about 40% of American adults have prediabetes, putting them at increased risk for diabetes and cardiovascular disease.

*Guiding Principles* provides a streamlined evidence-based tool outlining seven patient-centered care principles. This tool aids providers in meeting three key challenges: identifying people with prediabetes or undiagnosed diabetes; offering comprehensive care, including self-

management education; and identifying, treating, and preventing long-term diabetes complications.

A companion booklet, *4 Steps to Control Your Diabetes for Life*, is also available. This booklet is written for people newly diagnosed with diabetes as well as for people who have lived with diabetes for years. *4 Steps* aids healthcare providers in educating patients about self-care principles to help them understand, monitor, and take control of their diabetes.

Both *Guiding Principles for Diabetes Care* and *4 Steps to Control Your Diabetes for Life* include a list of resources that healthcare providers and people with diabetes can use to find more information about diabetes education, care, and control.

To order free copies of both publications, visit the NDEP Web site at [www.ndep.nih.gov](http://www.ndep.nih.gov) or call 800/438-5383. NDEP is a partnership of the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and more than 200 partner organizations.

### **World Health Report 2004 released**

The most important message from the *World Health Report 2004—Changing History* is that the international community has the chance to change the history of health for generations to come by tackling the HIV/AIDS pandemic. According to the report, this disease is the most urgent public health challenge because it is the leading cause of death for young adults worldwide. More than 20 million people have died, and an estimated 34–46 million are infected with the virus. No vaccine or cure are currently available.

This report, published by the World Health Organization (WHO), calls for a comprehensive HIV/AIDS strategy that links prevention, treatment, care, and long-term support. Until now, treatment has been the most neglected element in developing countries. WHO and its partners have declared the treatment gap a global emergency and have launched a drive to provide 3 million people in developing countries with antiretroviral therapy by the end of 2005. This is the most ambitious public health initiative ever conceived. This report details how it can be accomplished. The report also looks beyond 2005 to explain how international organizations, national governments, the private sector, and communities can combine their strengths and fortify health systems to address this global pandemic.

*World Health Report 2004—Changing History* is available through the WHO Web site at [www.who.int/whr/2004](http://www.who.int/whr/2004). This report, available in several languages, may be downloaded in its entirety or by chapter.

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Compiled by Gayle A. O'Brien

### **Kaiser Family Foundation survey: Nearly half of U.S. consumers concerned about healthcare safety**

In a recent survey conducted by the Kaiser Family Foundation, 48% of respondents said that they were concerned about the safety of the medical care that they and their families receive, and 40% said that the quality of healthcare has gotten worse in the past 5 years. See this study for consumer concerns on medical errors, solutions, and personal precautions.

To access the complete report, go to <http://www.kff.org/kaiserpolls/pomr111704pkg.cfm>.

### **New AHRQ tool helps hospitals assess patient-safety culture**

The Agency for Healthcare Research and Quality (AHRQ) recently announced a new survey tool to help hospitals and health systems evaluate the culture and attitudes concerning patient safety in their facilities.

*A Hospital Survey on Patient Safety Culture toolkit, including easy-to-use analytic tools, can be downloaded from <http://www.kff.org/kaiserpolls/pomr111704pkg.cfm>.*

### **The Leapfrog Group and the Institute for Safe Medication Practices (ISMP) release survey findings on hospital safety**

Two recently released surveys on hospital safety found some improvement regarding certain patient safety issues. However, the reports also found much room for improvement in many other areas. According to the Leapfrog Group's first *Hospital Quality and Safety Survey*, only 21% of facilities are in compliance with 27 safety practices created by the National Quality Forum, and another

39% of the hospitals had fully implemented at least one of the four measured categories. See [www.leapfroggroup.org](http://www.leapfroggroup.org) for the full report.

The Institute for Safe Medication Practices found that surveyed hospitals had made substantive improvements in reducing and preventing medication errors as well as increasing use of a “nonpunitive, systemized approach to error prevention.”

*For more information, point your browser to <http://www.ismp.org/Survey/Hospital/intro.htm>.*

### **AHRQ releases guide to help hospitals use its quality indicators**

AHRQ recently announced the availability of a new guide—*Guidance for Using the AHRQ Quality Indicators for Hospital-Level Public Reporting or Payment*. AHRQ’s Quality Indicators are measurement tools that were originally developed to help hospitals use their own discharge data to better understand and improve the care they provide. The guide was created to answer questions on how to productively use the Quality Indicators for public reporting and quality-based payment strategies.

*For more information, go to <http://www.ahrq.gov>.*

### **Tool assists pharmacies with USP <797> compliance**

A Web-based tool, co-developed by the American Society of Health-System Pharmacists (ASHP) and Eric Kastango, can help pharmacies comply with USP General Chapter

<797> Pharmaceutical Compounding Sterile Preparations. In addition, organizations such as the FDA, State Boards of Pharmacy, and others may use USP <797> as a guideline for enforcing various quality and procedural standards relating to the compounding of sterile preparations. The tool has more than 600 questions to help users assess risk levels and improve patient safety.

The ASHP Compounding Resource Center provides in-depth information and resources on compounding standards and practices. You’ll find links to important news and journal articles, educational sessions, policy and guidance statements, and a host of ASHP products relating to sterile compounding.

*For more information, visit <http://www.797complianceadvisor.com>.*

### **Minnesota Department of Health reports on adverse events**

The Minnesota Department of Health has released a report on the occurrence of 27 adverse preventable events in Minnesota hospitals (based on the National Quality Forum list of events) reported between July 2003 and October 2004.

*For more information, visit <http://www.health.state.mn.us/patientsafety>.*

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