

## Leadership

# Patient Safety Leadership WalkRounds™ at Partners HealthCare: Learning from Implementation

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**R**eports about health care errors in the 1990s<sup>1,2</sup> generated momentum for change that has permanently altered the landscape of health care delivery systems. A clear goal has been to deploy tools to ensure safer, more reliable, and simpler systems in health care. For example, computerized physician order entry<sup>3</sup> makes information more usable, pay-for-performance plans reward better outcomes,<sup>4,5</sup> and work flow methods improve patients length of stay and smooth variability.<sup>6,7</sup> The implementation of such tools ultimately requires active participation by front-line care providers and their willingness to alter their patterns of work. Yet this will not happen unless health care and safety leaders promote the belief in all providers that they can effectively participate in improving their work domain and that their interest and efforts are aligned with the overall interests of their organization and leaders.<sup>8,9</sup>

Outside health care, companies such as Alcoa and Southwest Airlines have shown that leadership involvement in safety and reliability is essential to develop appropriate employee attitudes and is a key ingredient to financial success.<sup>10,11</sup> This focus on leadership stems in part from operations management research that shows that leaders do not address important problems because they do not hear about them and that they underestimate front-line employee dissatisfaction with service quality.<sup>12–14</sup> For example, Tucker et al.<sup>8</sup> found that nurses tended to adapt to the inadequacies in

## Article-at-a-Glance

**Background:** Brigham and Women's Hospital (BWH) began Patient Safety Leadership WalkRounds™ in January 2001; its experience, along with that of three other Partner Healthcare hospitals, is reported.

**Collecting Data on WalkRounds:** Data were obtained from interviews with patient safety personnel, WalkRounds scribes, and senior leaders.

**Findings:** A total of 233 one-hour WalkRounds during 28 months yielded 1,433 comments—30% related to equipment, 13% to communications, 7% to pharmacy, and 6% to workforce. Actions occurred quickly in small hospitals. Formal processes for managing larger issues were necessary in large organizations. Implementation feasibility featured more prominently than severity in determining actions.

**Discussion:** The study generated essential guidelines for success—for example, the supporting resources must include the maintenance of effective information databases that identify actions taken, and the discussions during WalkRounds are influenced by who in leadership is participating, their ability to quietly listen, and whether they have clinical or nonclinical backgrounds.

**Conclusions:** WalkRounds appears to be an effective tool for engaging leadership, identifying safety issues, and supporting a culture of safety.

their environment rather than speak up about them. These nurses, like physicians, were no doubt trained to display (albeit never manage) endless capacity for vigilance and adaptability.

Traditionally, health care has had a culture of blame, where people are punished for making errors. Patient safety efforts strive to create a culture of safety where front-line staff are comfortable speaking up about errors and adverse events and leadership encourage this dialogue. Health care's need to better address this problem is underscored by the Joint Commission on Accreditation of Health Care Organizations' requirement that leadership participate in promoting safer care delivery<sup>15</sup> and in the emphasis on the development of a "Culture of Safety," as articulated in the National Quality Forum's Safe Practices<sup>16-18</sup> and The Leapfrog's Group 4th Leap<sup>19,20</sup> and by the United Kingdom's National Patient Safety Agency.<sup>21,22</sup>

Patient Safety Leadership WalkRounds™<sup>23</sup> is a simple but rigorous management tool designed to assist hospital leaders in implementing mechanisms for promoting safety, learning about and hearing the concerns of front-line providers, supporting appropriate accountability concepts, and allocating resources to areas of greatest risk. Brigham and Women's Hospital (BWH) began WalkRounds in January 2001,<sup>23</sup> which generated interest by other organizations in Partners HealthCare (Partners is composed of two acute care tertiary organizations, four community hospitals, two rehabilitation hospitals, and a psychiatric hospital.) The Shaughnessy-Kaplan Rehabilitation Hospital began implementing WalkRounds in November 2001, followed by Newton-Wellesley Hospital (NWH) and Spaulding Rehabilitation Hospital in January 2002. (Other Partners hospitals have since also started WalkRounds.) We examined these four hospitals' joint experience to address, in a natural experiment, the following questions:

- Would hospital leadership be willing to openly discuss operational failure, safety, and harm with front-line providers?
- Would frank and open discussion occur in a public setting?
- Could the information elicited be collected and aggregated in a useful manner?
- Would the information collected affect actions or resource allocation?

## Implementing WalkRounds

As the leadership and safety/quality personnel in the four hospitals—BWH, Spaulding Rehabilitation, Shaughnessy-Kaplan Rehabilitation, and NWH—agreed to implement WalkRounds, we [A.F., S.P.G.] gave a two-hour presentation to the hospital executives and members of the safety and quality departments about theories promoting leadership involvement in safety and quality,<sup>11</sup> high reliability,<sup>24</sup> blame-free reporting,<sup>25</sup> and useful data categorization.<sup>26</sup> A framework and timeline for implementation were suggested, including a method for aggregating data. Data collection began either on paper or in a spreadsheet program, but BWH, soon after beginning WalkRounds, developed a computerized database to facilitate data manipulation and to improve reporting of information. The software was available for use by the other hospitals.

Although WalkRounds inevitably is shaped by individual personalities and organizational culture, some basic components, as shown in Table 1 (page 425), were encouraged. After those components were suggested, leadership and safety/quality officers considered the process and resources available. Some organizations chose to perform WalkRounds weekly, others biweekly or monthly. Regardless of the scheduling, WalkRounds were occasionally cancelled secondary to executive schedules or because the floors were too busy when the WalkRounds groups arrived (Table 2, page 426).

Mechanisms for feedback for reporting of comments provided during WalkRounds is described and depicted in Figure 1 (pages 427–428). At all four hospitals, the persons charged with responsibility for patient safety participated in implementing WalkRounds. The role of the scribe (Table 1) was assigned to persons with markedly different positions—a patient safety project analyst, the administrative assistant to a patient safety director, the senior administrative secretary for a quality department, and a quality improvement coordinator.

Different combinations of administrative and clinical leaders chose to participate at each hospital (Table 2). Leadership involvement seemed to be determined by personal interest and by who was initially asked. In those hospitals where the chief executive officer showed interest, more involvement by a greater variety of personnel was apparent. No chief information officers or chief financial officers were asked to join initially, and

**Table 1. Basic Concepts for WalkRounds Hospitals**

- An identified individual, and probably the patient safety manager or director, should participate in all the WalkRounds
- Another person should perform the function of scribe during the WalkRounds and document (a) location, (b) who participated, (c) the topics discussed, and (d) other factors that may be pertinent to context when reviewing comments
- Administrative and clinical leaders should participate in WalkRounds on a rotating basis
- Middle management should be informed when WalkRounds would occur in their areas and be provided with sample questions to help their staff prepare to discuss actual or potential patient harm that results from system complexity
- Concerns expressed by all individuals should be heard sympathetically but attempts should be made to lead the conversations to correlate the concerns with specific episodes of patient or provider harm or potential harm
- WalkRounds should be performed in all locations that affect clinical care, including laboratories, radiology, pharmacy, emergency departments, and all patient care floors
- WalkRounds should be scheduled up to one year in advance, choosing times not based on leadership availability but on the likelihood of front-line provider availability, taking into consideration nursing shifts, lulls in activity, and when physicians perform clinical rounds
- All possible personnel in the rounds, from physicians to cleaning staff, should be included, and including patients in some rounds should be considered
- The discussions should begin by explaining that the rounds primarily seek insights about systems failures, that the purpose of the rounds was to act and to use the information elicited to identify where to allocate resources to improve safety, quality, and efficiency
- At the end of the WalkRounds participants should be asked, as a way of disseminating the concepts discussed, to find two other persons with whom they work and tell them about the WalkRounds and its purpose

ownership of the WalkRounds seemed to settle on the administrative leadership, especially but not exclusively those with clinical backgrounds.

### Collecting Data on WalkRounds

Data were obtained from structured interviews with patient safety personnel who participated in the rounds, interviews with the WalkRounds scribes, and evaluation of the collected information. Unstructured interviews were used to elicit how information was used in the organization, to identify the reporting structure within the administration, and to identify who took responsibility for feedback to front-line employees and higher-level administrators.

Concerns or events presented during WalkRounds were divided into categories modified from Vincent et al.'s incident analysis categories<sup>26</sup>: Communication, Equipment, Information Systems, Laboratory, Pharmacy, Patient Related, Staff Related, Department Specific, Miscellaneous, for a total of 48 subcategories nested within the categories. For example, Patient Related subcategories were as follows—infant transport, monitoring, patient flow, patient issues, and patient transport.\*

Category modifications were made over time to make the information more useful in identifying specific actions to perform or to allow the information to be aggregated so that reports would be more useful to administrative heads and middle managers. As stated, BWH maintained its data in a computerized database. Most other information was on paper or was in the process of being moved into a spreadsheet program or computerized database.

A “comment” was defined as any concern or event raised by an individual during the WalkRounds, and both concerns and events were considered “operational failures.”<sup>3</sup> The patient safety personnel in each hospital categorized the comments (to allow the information to be most effectively tailored for operational use), which one of the authors [S.P.G.] then recategorized into the research study database to ensure consistency.

Actions performed at BWH were added to its database in real time. Actions performed at other hospitals

\* The list of categories and subcategories of comments in the computerized database can be obtained by e-mail request to Dr. Frankel.

**Table 2. Demographics of WalkRounds, January 2001–May 2003\***

	Brigham and Women's Hospital	Newton-Wellesley Hospital	Spaulding Rehabilitation Hospital	Shaughnessy-Kaplan Rehabilitation Hospital
WalkRounds initiated	January 2001	January 2002	January 2002	November 2001
Bed size	700	310	296	160
Frequency of rounds	Weekly	Initially weekly but occur almost biweekly. Moving to monthly	Weekly	Initially weekly. Currently 2 times a month
Method of scheduling	3 months in advance	Set time of 10 A.M. every Wednesday	Cycle of all areas/departments scheduled at once	One month in advance
Number of clinical areas/departments visited (all departments with clinically relevant activities)	65	35	20	10
Number of rounds conducted	73	23	60	45
Months between visits to each unit <sup>†</sup>	12	15	5	3
Persons participating	372	70	150	135
Involvement of senior leadership	CEO, COO, CMO, CNO, CFO, VPs	Senior VP Medical Affairs, Senior VP of Patient Services, Director of Quality and Safety	CEO, VP Clinical Affairs	President, VP of Patient Care Services, VP of Rehab Services, Director of Program Development, President of Medical Staff, Medical Director/Chief of Patient Care Services, Chief of Rehab Medicine Service, Director of Quality Management
Person(s) responsible for coordinating and managing data	Director of Patient Safety, Manager of Patient Safety, Project Analyst	Director of Quality and Safety, Patient Safety Project Manager, Administrative Assistant	Director of Nursing, Director Quality Management, Senior Secretary for Quality Management	Director of Quality Management, Quality Improvement Coordinator
Method for managing data	Computerized data-base	Worksheet placed in binder; summary in spreadsheet program	Minutes typed after each round	Worksheet
Person(s) with best overview of WalkRounds process	Patient Safety Manager	Director of Quality/Safety, Patient Safety Project Manager, Administrative Assistant for Quality/Safety	Senior Secretary for Quality Management, Director of Quality Management (intermittently vacant)	Director of Quality Management

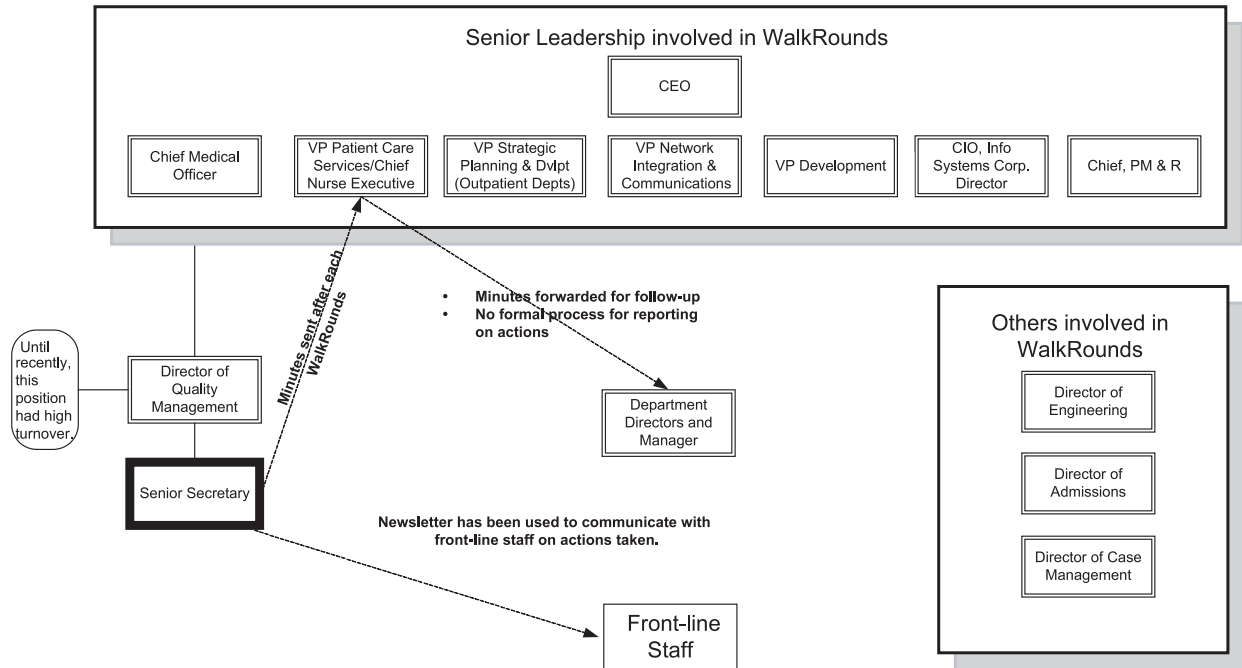
\* CEO, chief executive officer; COO, chief operating officer; CMO, chief medical officer; CNO, chief nursing officer; CFO, chief financial officer; VP, vice president.

<sup>†</sup> Calculations based on some WalkRounds visiting two or more units.

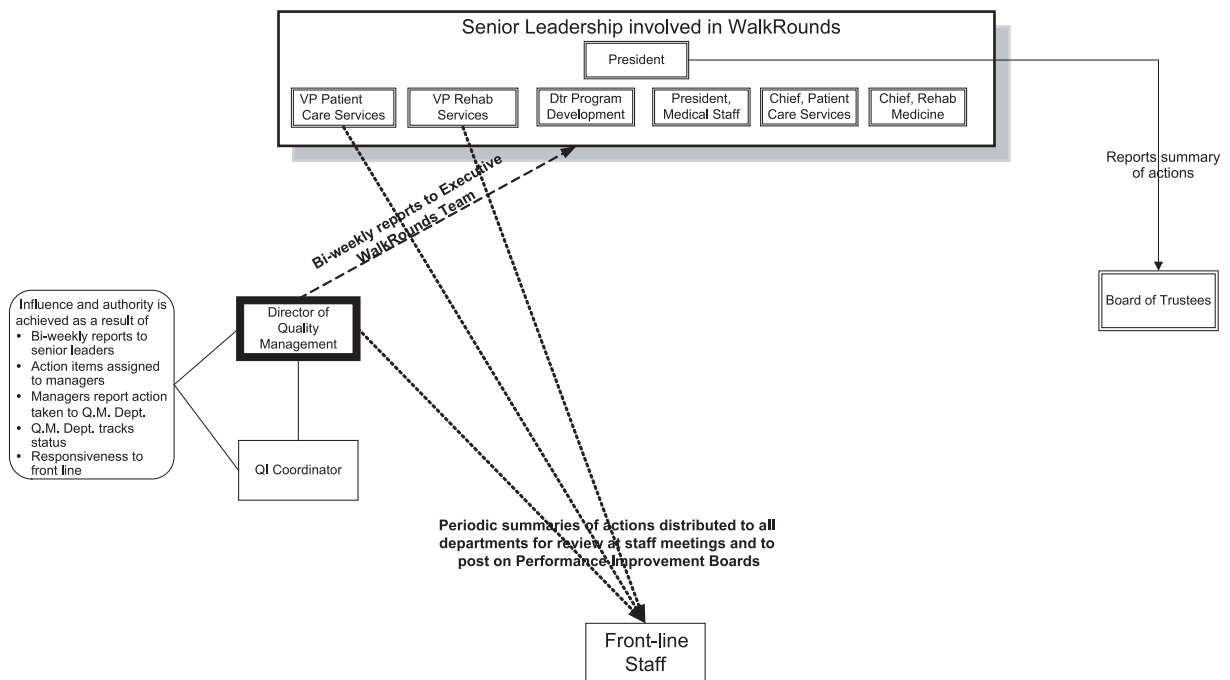
## Mechanisms of Feedback and Reporting at the Four Partners HealthCare Hospitals

### CURRENT PROCESS

### Spaulding Rehabilitation Hospital



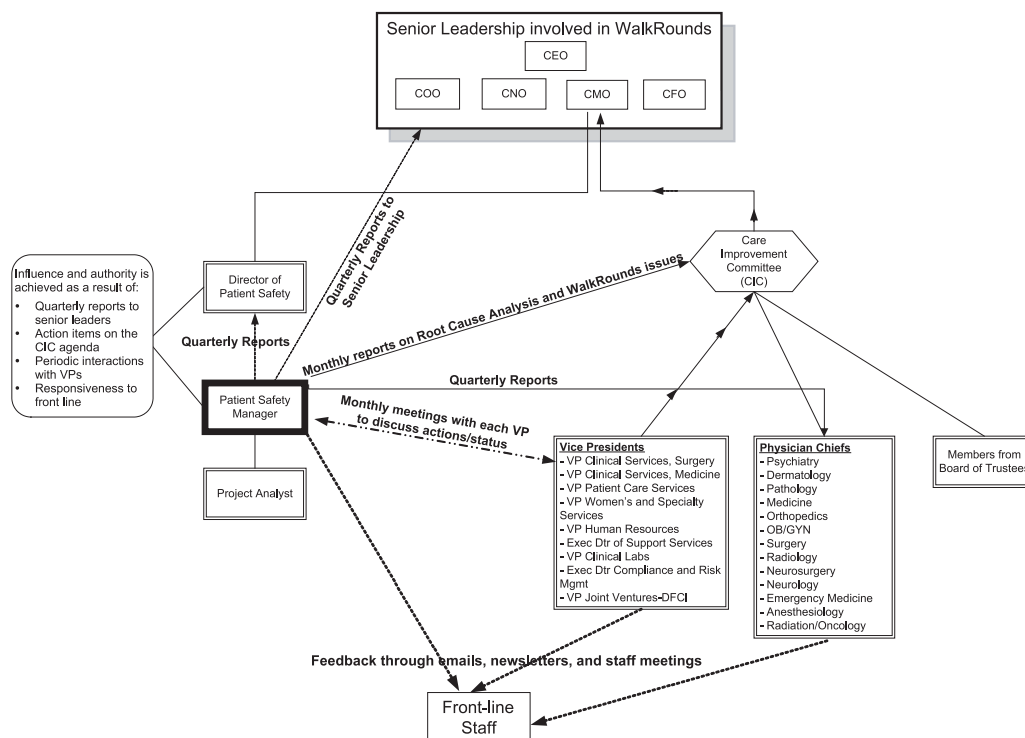
### Shaughnessy-Kaplan Rehabilitation Hospital



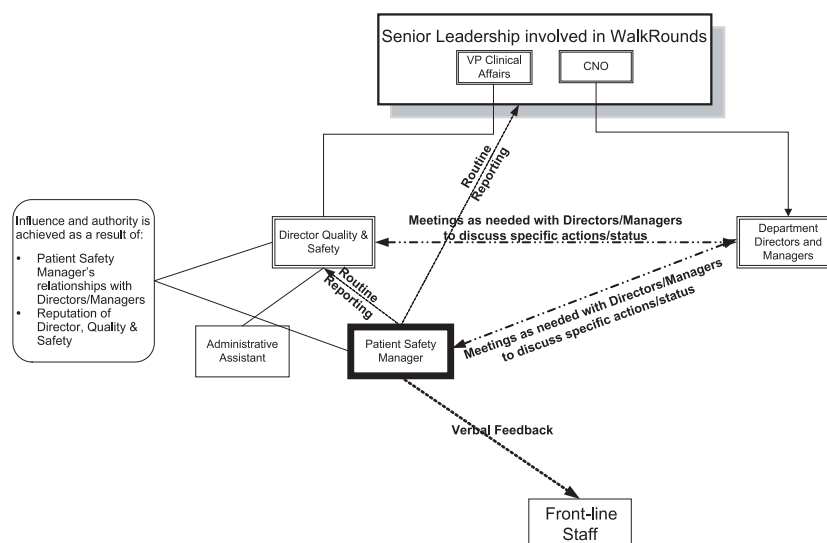
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## Mechanisms of Feedback and Reporting at the Four Partners HealthCare Hospitals (*continued*)

### Brigham and Women's Hospital



### Newton-Wellesley Hospital



**Figure 1.** Mechanisms for feedback of information about comments expressed during WalkRounds and subsequent actions differed are shown for Spaulding Rehabilitation Hospital, Shaughnessy-Kaplan Rehabilitation Hospital, Brigham and Women's Hospital, and Newton-Wellesley Hospital.



**Table 3. Categories and Subcategories Containing > 6% of the Comments Elicited**

	Brigham and Women's Hospital  (N = 924)	Newton- Wellesley Hospital  (N = 89)	Spaulding Rehabilitation Hospital  (N = 221)	Shaughnessy- Kaplan Rehab Hospital  (N = 199)
(N = Comments elicited)				
<i>Categories</i>				
<b>Communication Related</b>	115 (12.4%)	17 (19%)	28 (12.7%)	20 (10%)
Incomplete/Inconsistent Documentation		8 (9%)		
<b>Equipment/Supply/Facility Related</b>	206 (22%)	24 (27%)	76 (34.4%)	120 (60%)
Equipment functionality/maintenance	60 (6%)	7 (8%)	33 (15%)	40 (20%)
Supply availability/organization		8 (9%)		
<b>Pharmacy Related</b>	90 (9.7%)			
<b>Staff Related</b>		9 (10%)	22 (10%)	13 (6.5%)
Work Overload		8 (9%)	20 (9%)	
<i>Specific Items or Departments</i>				
Education/Training			13 (6%)	
Policies/Procedures/Protocols		8 (9%)		
Housekeeping			14 (6%)	

were not identified or collected in real time because resources were not allocated to this effort. Structured interviews were used to obtain, or supplement, database information regarding actions taken.

Frequency of the WalkRounds and the total number of locations per hospital affected the number of times each area was visited. During 2½ years, BWH, the largest hospital, conducted 73 rounds in 65 locations compared with Shaughnessy-Kaplan Rehabilitation Hospital, which, in the course of two years, conducted 45 rounds to 10 locations. We considered the choice of frequency an indicator of leaders' and safety personnel's interest in WalkRounds.

## Findings

### Number of Comments

The BWH elicited on average 12 comments per WalkRounds, whereas the other hospitals elicited between 3 and 4. No single category stands out, although specific issues are predominant in some organizations, such as equipment at both rehabilitation hospitals. All the hospitals initially reported that the volume of information collected was overwhelming. The BWH requested, as a formal part of the WalkRounds, that the persons participating in data collection decide on the most

important issues. The other hospitals prioritized actions according to severity and feasibility.

### Categories of Comments

The categories with significant comments at all four hospitals were equipment and communication-related issues, followed by staff-related issues (three hospitals), especially work overload. Information systems, pharmacy issues, education and training, policies/procedures/protocols, housekeeping, and infection control appeared in more than 6% of the comments for at least one of the hospitals (Table 3, above).

### Actions Taken

The BWH monitored actions and compiled more than 118 actions. Information about actions taken at the three other hospitals was collected for this article through interviews with the personnel who organized WalkRounds. NWH noted 12 actions during 18 months that were specifically taken as a result of information elicited during the WalkRounds, and Shaughnessy-Kaplan noted 27 actions taken in 2 years as a result of WalkRounds-obtained data.

The actions included small local changes, such as a change in a bathroom's designation from house staff to

patient use, to major structural or resource allocations, such as the hiring of a liaison to greet and guide patients in an emergency room, the building of new intensive care unit doors, and policy changes requiring hearback or readback of telephone orders (Table 4, page 431–433).

Some comments voiced during WalkRounds were not addressed—for reasons of expense; the infrequency of the comment or low-risk nature of the problem; or the impracticality or infeasibility of a solution. For example, there usually was no simple resolution for staff-shortage complaints. For example, a comment was voiced that the hospital needed more unit assistants (but the hospital had been unable to attract applicants for these positions) or significant architectural changes. In a few cases the issues were felt to occur too infrequently to be worthy of effort.

Persons—whether patient safety personnel or scribes—participating regularly in the WalkRounds tended to become skillful at identifying whom to turn to for specific actions or projects. At the BWH, the patient safety manager meets with the persons she believes can best address a problem, and responsibility for those actions is then discussed during operations management meetings and formalized. Other hospitals had similar but less formal mechanisms to identify the locus of responsibility for an action, although the scribes, even in assistant positions, could identify after a few rounds where and to whom to turn.

### Mechanisms for Feedback About Comments and Actions

Mechanisms for feedback and reporting of information about comments expressed during WalkRounds and subsequent actions differed across the four hospitals (Figure 1). Feedback to front-line staff about concerns, comments, and actions varied from frequent e-mails sent to individual providers to quarterly or six-month summations of data sent to managers for dissemination to staff.

### Leaders' Reactions to WalkRounds

The WalkRounds' effect on leadership decision making and education was assessed by unstructured interviews. The group uniformly found the time spent on WalkRounds worthwhile and mentioned actions that were not listed in the databases, thereby identifying a source of information not tapped by the current data

collection at each hospital. A sample of senior leaders' comments is presented in Table 5 (page 434).

## Discussion

### Guidelines for Success

The power of the WalkRounds is visible in this study in the change in leadership perceptions. Yet there are a series of essential guidelines for success, as follows:

- The supporting resources must include the maintenance of effective information databases that identify, in real time, actions taken. This validates the WalkRounds and aids in timely feedback to front-line personnel. The resources necessary at the BWH, for example, include 25% of a patient safety manager's position and approximately ½-day per week from a research assistant or senior secretarial position. Although it is likely that many topics were discussed in WalkRounds at all four hospitals, the BWH documented almost three times the number as did the others. There are numerous possibilities for this discrepancy. Anecdotally, the WalkRounds conversations appeared equally engaging and tended to last from 40 to 60 minutes. However, early on BWH fortified the mechanisms for collecting and managing data by developing a robust database and assigning a research assistant to the tasks of scribe and data input. The other hospitals built in these processes more slowly and tended to use paper or a spreadsheet program to maintain their data.

- Scheduling and timing of the rounds is a routine secretarial process, but simple tricks can markedly affect the rounds' productivity. For example, informing the unit a day or two before may help elicit more comments during the hour, and scheduling should be primarily based not on a senior leader's availability but on the greatest access to all providers and the ebb and flow of clinical intensity in the locations visited. Scheduling WalkRounds at 5 A.M. in one of the hospitals allowed senior leaders to interact with the night-shift personnel without major disruption to clinical activities. The night rounds tended to visit two units in an hour to maximize exposure and because those shifts tended to be less fully staffed.

- The most effective use of the time occurs if there is a choreographed set of steps performed on the information elicited. The WalkRounds discussions must be carefully monitored and documented, the contributing factors relating to each comment must be identified, and



**Table 4. Actions Taken in Various Departments in the Four Hospitals\***

Department Responsible	Actions Taken (Comments)
Cardiology Stress Testing	Devote one hour a day to inpatient tests.
	Modify low-risk chest pain protocol.
Clinical Labs	During off-shifts, supervisors will alter priorities if RN requests assistance with draw.
	Blood Bank is working with Nursing/Pharmacy on including bar-coding technology for infusions.
	Patient identification process reinforced with phlebotomy staff and is now an annual competency for nursing staff and reviewed with house staff.
Chief Medical Officer	Communication Department created an algorithm to act as a back-up system for paging system outages.
	Partners' Web-based on-call system in place to enable consistent communication regarding physician coverage.
	Web-based attending coverage has increased communication between MDs/RNs regarding coverage.
	Security will attend codes to help enforce crowd control. Roles and responsibilities reviewed with code leader.
	The new ADT system was trialed to assist in the reduction of wait time for meds by improving the admitting process from PACU, L&D, or NICU to CWN/tower floors.
Dana Farber Cancer Institute	To improve the communication between the physician's office and the floor with direct admits from Dana Farber, the patients should be admitted to the infusion room to be received by RN with a report.
	Resident training reviewing guidelines regarding threshold for calling for help.
	Admitting alerted to the need to not admit patients with the same name to the same pod.
	IS looking into putting flags on patients with similar spelling and sounding names.
	Pain service relinquished PCA service to all services to improve response time.
	Pain service will keep epidurals.
	Request for "do not recalculate" message to appear for in-house patient's orders.
Dialysis	Change house staff bathroom to patient bathroom.
	Install bedpan washer.
	Purchase fax machine.
Emergency Department	Liaison to greet and guide patients at check in.
Education	RNs (3) attended Posey in-service on restraints and falls.
	In-service on how to tie and untie restraints.
	Annual nursing competencies will include hot pack/cold pack competencies.
	Instructions for reporting equipment in need of repair reviewed with staff.
	Safety flip chart revised to include a section with instructions on how to handle equipment in need of repair.
Engineering Maintenance	Call light pull cords replaced with more durable material.
	Intercom system on CWN8 replaced.
	Adapting all beds for compatible call system plug-ins for 11C, 4B, and 16.
	Carpet replaced.
Equipment Repair	Rehab Departments pulse oximeters (s) repaired and returned to service.
	UAs assigned to clean IV pole wheels and to identify any preventive maintenance issues.

*continued*

**Table 4. Actions Taken in Various Departments in the Four Hospitals\* (continued)**

Department Responsible	Actions Taken (Comments)
Equipment Acquisition	Footstools ordered to elevate patient's legs when sitting in chair.
	Two Arjo lifts purchased.
	Two Advantax alarm beds on 4th floor added.
	New O2 "E" cylinder rack purchased for the second floor.
	O2 tubing transitioned to color tubing.
	Additional privacy curtains provided to Marblehead Outpatient site.
	Additional commodes purchased, including heavy duty for bariatric patients.
	Additional bed alarms purchased.
	Additional BP cuffs purchased.
	Six new stretchers purchased.
	Additional Geri Chairs ordered.
Facilities	4th floor has become the model for efficient use of space for future renovations.
	ICUs are slated for redesign, which will include installation of privacy doors.
	Additional family waiting space has been added for ICUs.
	Automatic door installed in 8C.
	Replace carpets and buckled floors.
Facility Improvement	Tubes replaced for pneumatic system.
	Wooden hand rails were checked and tightened throughout facility.
	Versaframes (safety handrails that are attached to toilets) were checked and tightened in all bathrooms.
	Telephone jack moved from external wall into Patient Family Lounge on the second floor.
	Hardware installed on windows in Middleton Outpatient site to prevent opening greater than 6 inches.
	New signage for clean and dirty precaution gown bins.
Gastrointestinal Department	Window shutters replaced by pull shades.
	Label equipment with instructions for disposal.
House Officers	Install computer in on-call room.
Materials Management	Determine appropriate par levels (standard numbers) for DNR forms on the floors.
	Mattress-provided bedrail extenders to assist in preventing patient falls from beds with high air mattresses/low side rails.
	Biohazard kits are now stocked on every pod and on-site for easy availability.
	Equipment repair program in progress that will begin with an inventory of all existing equipment; include a tracking and repair process.
	Increased supply of commode buckets.
	Improved materials management support through increased standardization and improvements in customer service.
Nursing	Alaris infusion pumps implemented.
	New monitors for neurology patients installed.
	Nursing policies updated to incorporate "read back" policy for all verbal and telephone orders.

*continued*

**Table 4. Actions Taken in Various Departments in the Four Hospitals\* (continued)**

Department Responsible	Actions Taken (Comments)
Obstetrics-Gynecology and Labor and Delivery	Plans for bar-coding will address the issue of new ID tags for babies because the current bands are not durable.
	Infant security reviewed with parents to increase awareness regarding not leaving the floor with baby.
	Developed admissions criteria for newborns.
Pediatrics	Tape over all numbers on microwave except "30 seconds" to prevent someone from overheating a hot pack.
	Sign posted on microwave to be used for heating food "Food Only."
	Reorganize IV solutions.
Pharmacy	To improve communication regarding delays in meds, pharmacists are to call if there will be a delay in responding to text pagers.
	NICU obtained a table top Suremed.
	Proposed in FY04 that Pharmacy mix all IVs.
	Coumadin Protocol Sheet reinstituted.
	Clarification that daily dosing medication dispensing time can be flexible.
Radiology	Policy for splitting medication was reviewed.
	Changes to MRI schedule to improve wait time for stat MRI.
	C-spine protocol reviewed to identify failure modes. Dynamic scheduling has improved. standardization for intake information in attempt to increase communication between providers.
	Algorithm developed for nurses to call during patient emergencies in recovery—PAs and fellows to cover.
	FTE added in Radiology CT for 3rd shift.
	Purchased additional MRI compatible pumps.

\* RN, registered nurse; MD, physician; ADT, admission, discharge, transfer; PACU, postanesthetic care unit; L&D, labor and delivery; NICU, neonatal intensive care unit; CWN, Center for Women and Newborns; IS, information systems; PCA, patient-controlled analgesia; UA, unit assistant; IV, intravenous; BP, blood pressure; ICU, intensive care unit; DNR, do-not-resuscitate; ID, identification; MRI, magnetic resonance imaging; C-spine, cervical spine; PA, physician assistant; FTE, full-time equivalent; CT, computerized tomography.

all information must be placed into a database that allows comments to be associated with actions. Use of and input into the computerized database at the BWH was key to the success of its rounds, allowing reports to be generated tying together comments and actions, identifying loci of responsibility, and facilitating effective feedback to front-line providers and up the administrative ladder. Those hospitals using paper and a spreadsheet program noted that documentation was a time-consuming process that was periodically put aside for issues that appeared more urgent. This undermined the power of the rounds.

■ WalkRounds can be performed easily in publicly open areas such as nursing stations and patient care hallways. Visibility of the rounds was perceived as useful in promoting leadership's investment in safety and hospital

administration's interest in identifying problems and addressing them. Concern about confidentiality and the type of sensitive topics that might be discussed (such as episodes of patient harm) was initially voiced by all the hospitals organizations but turned out to be a nonissue.

■ The discussions during WalkRounds are influenced by who in leadership is participating, their ability to quietly listen, and whether they have clinical or nonclinical backgrounds. Patient safety personnel influence the conversations by how effectively they cite human factors and systems theory. All these factors affect front-line workers' willingness to speak up. The types of comments elicited at each hospital differed, with a preponderance of the comments in the two rehabilitation hospitals centering on equipment issues. It is possible

**Table 5. Sample of Senior Leaders' Reactions to WalkRounds\***

- **CEO:** "The WalkRounds reminds me to pay attention to the day-to-day issues that confront staff, and this awareness is in my head when making bigger decisions. For example, the prioritization and speed of resources. For example, we bought the OR equipment necessary for operating on very large patients, but the WalkRounds helped to speed up the purchase of equipment for managing large patients on the floors. This amounted to about a \$30,000 expenditure."
- **CEO:** "It's been helpful in getting me out to hear from the staff . . . I hear about issues from the executives and 'higher ups,' but the rounds help to clarify my perceptions and to alleviate misperceptions, also to talk to staff about these concerns. It's fascinating and helpful to hear the front-line perspective. Other actions we've taken that we wouldn't have been as quick to act on include the development of a liaison position in the emergency department. The writing of the job description was affected by the WalkRounds, and because of my insights I was able to discuss directly with staff how the position should be used and to articulate to the staff what their perceptions about the position should be. We're also working to reconfigure the intake area and intake process in the emergency department. Hearing from the staff during the WalkRounds about the difficulties there helped to push that along faster."
- **VP of Patient Care Services:** "In regards to personal education and insights, I enjoy doing the WalkRounds personally, as I see it as a way to connect with the staff during their routine activities, instead of just at staff meetings or informal lunches. I feel the 'blameless culture' engendered is healthy for any organization and truly fosters a learning environment."

\* CEO, chief executive officer; OR, operating room; VP, vice president.

that these issues arose because, unlike acute care hospitals, rehabilitation hospitals tend to have solid multidisciplinary teamwork structures designed for longer inpatient stays and must make do with less reimbursement for patients who are often no less acutely ill than those in acute care hospitals.

- A concern of patient safety personnel was that they would be assigned to address the problems they

uncovered, whereas the appropriate process would be to use the patient safety personnel to identify problems and then hand off to others the responsibility for action. Formalized associations must be made to delineate how the patient safety personnel will interact with middle managers and executives in identifying who should be responsible for actions. The BWH, after a year of WalkRounds, invited directors and middle managers to participate as the individuals most likely to shepherd actions to fruition. The director of materials management now attends some rounds. However, each hospital discovered that too large a group hindered open and rich discussion and identified an optimal number of individuals to participate. The BWH found that ideally no more than three to four individuals should visit the area designated for the WalkRounds, although they generally had four to five in the group. The size of the group in total would vary by how many individuals from the floor participated.

- Surveys of participants revealed that four out of five co-workers later discussed the rounds with their peers. However, participants at the two hospitals with a Web-based incident reporting system did not believe that the rounds increased event reporting. The surveys were also useful in eliciting ideas for improving the rounds, with the most common suggestions being to include more and different types of staff and to have the rounds occur more frequently.

- Categorization of data in two of the hospitals started with Vincent's criteria, but these were modified using grounded theory<sup>27</sup> (that is, building categories from the data rather than creating the categories and then assigning the data) when categories were lacking. For example, issues related to computerized physician order entry were common in one organization and this required a specific category. Supply unavailability was subdivided on the basis of where the supplies originated, thereby making it easier to identify who should be responsible for addressing an identified problem.

- Categorization of data by severity scoring (frequency × harm or likelihood of harm) is done in most of the hospitals, but is difficult to use in resource allocation. It is helpful, however, in identifying trends. Completion of most of the actions has been based on ease of implementation rather than risk of harm. We note this with particular interest because of its possible implications. On the one

hand, this might indicate that middle managers' goal is to act judiciously and fix problems most amenable to change. The other, more ominous, possibility is that middle managers don't feel they are adequately positioned to act, or the climate around them is appropriately responsive to risk, and therefore stop trying to make changes even when they know risk is elevated.<sup>28</sup> Although true for those problems documented in the databases, this was less true when evaluating the influence of the WalkRounds on executive behavior overall, as noted by senior leaders' comments provided in this article.

■ At the BWH, initially only negative comments elicited during the WalkRounds were placed into the database. Over time, positive comments have been included too. As a result, reports to the participating senior leaders have a more balanced perspective of operations and may facilitate further support of actions perceived as useful by staff. These positive comments are now also tracked so that changes in their number may be monitored.

■ Before WalkRounds is conducted in a specific area of the organization, review of previous WalkRounds' comments from that floor or unit should be performed. On arrival of the WalkRounds group, the comments should be discussed, including any actions taken or planned to address these previously identified issues. Questions about the effect of those actions and plans should be elicited.

Finally, tying the steps together in introducing WalkRounds requires modest resources and ensures effective use of leadership time (Table 6, right). Applying resources to this process helped promote an environment preoccupied with safety and supportive of greater operational transparency and effectiveness.

## Limitations and Next Steps

Are the resources and leadership time spent to support the WalkRound process appropriate if the majority of the changes that resulted are minor? Indeed, many of the WalkRounds actions were perceived to be small, and a few, even inconsequential. There are three answers to this question.

First, we did not prospectively evaluate whether the WalkRounds experience influenced leadership in making major budget allocations or operational decisions. However, leaders' comments in our debriefs with them did indicate that WalkRounds influenced decision making

**Table 6. Introductory Steps to Implementing Effective WalkRounds**

### Week 1

- Introductory session to Leadership and Safety and Quality Personnel.
- Introductory session to middle management.
- Teach patient safety personnel how to use computerized database to collect and manage information.
- Perform a "pilot" WalkRounds to test concept, followed by discussion about data collected and placement of information into database.

### Week 2

- Identify a central and appropriately authorized committee (one run by the chief operating officer or equivalent) to whom WalkRounds data will be discussed and actions assigned. WalkRounds should be a standing agenda item for this committee.
- Identify how patient safety personnel will learn about and track actions (e.g., participating on committee and debriefs with leadership on a regular basis).

### Week 3

- Send out hospitalwide notice of plans to begin WalkRounds. Ask for floors to volunteer to be the first.
- Identify and develop, with assistance from Marketing if feasible, feedback mechanisms. Perform pilots of feedback and reporting.
- Develop feedback process for immediately after rounds to those who participated, about the concerns discussed that day.
- Develop feedback plan to specific locations and individuals about actions taken—this could be days or even months later.
- Develop monthly or periodic report for the operations committee.
- Develop a report to the Board of Trustees (or its quality subcommittee).

### Week 4

- Identify leadership to participate in WalkRounds.
- Schedule WalkRounds for 6 months to one year.
- Write and sign performance agreements for those participating. Leaders agree to participate, not cancel, and perform X number of WalkRounds per year. Patient safety personnel agree to manage data and feedback in a timely fashion. Operations committee agrees to complete action items in X months with goal to improve cycle times by Y percent in one year.



about some major expenses that were not noted in the hospital databases, primarily because the keepers of the database had no mechanism to elicit that information from the senior executives. Further research is required and would likely entail direct observation of WalkRounds and then executive-level and budget-related meetings to formally associate the discussions.

Second, there is reasonable evidence to suggest that highly effective industries achieve success because front-line workers participate in decision making, openly voice concerns, and are able to modify their environments even to address the small operational failures that lead to inefficiency or error.<sup>29-31</sup> The conundrum is that addressing small operational failures often requires an interdisciplinary effort that is beyond the capacity of an individual or unit but is feasible through facilitation by leadership.<sup>8,9</sup> Resolving many small issues may be precisely the goal of WalkRounds. However, aside from the sometimes-substantial benefit achieved by many small interventions, an alliance formed between the front line and leadership in the course of WalkRounds may ultimately make it easier to implement *major* improvements—and improvements that are more likely to be successful. Such major improvements would not necessarily be evident in the WalkRounds database because it is replete with the concerns of persons who view predominantly their own domains and, unlike the view we hope exists in the executive suite, who don't have an overview of the whole system.

Third, aside from the actions taken, there is early evidence that WalkRounds quickly, positively affects nursing perceptions of their work environments, a component likely to influence nursing retention rates. Data collection and actions taken will ultimately constitute only one measure of WalkRounds' total effect. Its strongest effect may lie in its improvement of the ability to hold onto nurses in a climate of dwindling nursing capacity and increasing health care demand.<sup>32,33</sup>

The research remains to be done, and will require some years to produce, to answer the question of whether addressing many small processes is a key component of safe care. However, some shining examples of success based on a constant drumbeat of attention to detail are evident outside health care.<sup>11,29,34</sup> Proving the value of the WalkRounds based on outcome data is

going to be a daunting task and not one we were able to do in this study. We focussed more on implementing WalkRounds but continue our studies to assess the effect of these rounds.

Are there other tools to achieve this goal? Possibly. Multidisciplinary root cause analyses as developed in the Veterans hospitals<sup>35</sup> brings together leadership and front-line workers to address problems, and behaviorally based teamwork training in various models is sweeping into health care and promotes leadership-team member alliances and the voicing of concerns.<sup>36</sup> Each will have its benefits. All implemented together, this toolkit could reshape how we deliver organized health care.

## Conclusions

WalkRounds appears to affect resource allocation; influences actions taken to improve safety, quality, and efficiency; and appears to be an effective tool for engaging leadership, identifying safety issues, and supporting a culture of safety. If supported by teamwork training and appropriate accountability policies, WalkRounds will help lead to the culture of safety. **1**

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## References

1. Brennan T.A., et al.: Incidence of adverse events and negligence in hospitalized patients: Results of the Harvard Medical Practice Study 1. *N Engl J Med* 324:370–376, Feb. 7, 1991.
2. Institute of Medicine: *To Err Is Human: Building a Safer Health System*. Washington, D.C.: National Academy Press, 2000.
3. Kuperman G.J., Gibson R.F.: Computer physician order entry: Benefits, costs, and issues. *Ann Intern Med* 139:31–39, Jul. 1, 2003.
4. Milstein A., et al.: Improving the safety of health care: The Leapfrog Initiative. *Eff Clin Pract* 3:313–316, Nov./Dec. 2000. <http://www.acponline.org/journals/ecp/novdec00/milstein.htm> (last accessed Jun. 16, 2005).
5. Milstein A., Adler N.E.: Out of sight, out of mind: Why doesn't widespread clinical quality failure command our attention? *Health Aff (Millwood)* 22:119–127, Mar.–Apr. 2003.
6. McManus M.L.: Variability in surgical caseload and access to intensive care services. *Anesthesiology* 98:1491–1496, Jun. 2003.
7. Litvak E., et al.: Emergency department diversion: Causes and solutions. *Acad Emerg Med* 8:1108–1110, Nov. 2001.
8. Tucker A.L., Edmondson A.C., Spear S.J.: When problem solving prevents organizational learning. *Journal of Organizational Change Movement* 15(2):122–137, 2002.
9. Tucker A.L.: Impact of operational failures on hospital nurses and their patients. *Journal of Operations Management* 22:151–169, Apr. 2004.
10. Arndt, M.: How O'Neill Got Alcoa Shining. *Business Week*, Feb. 5, 2001, p 39.
11. Freiberg K., Freiberg J.: *Nuts! Southwest Airlines' Crazy Recipe for Business and Personal Success*. Austin, TX: Bard Press, 1996.
12. Auty S., Long G.: Tribal warfare and gaps affecting internal service quality. *International Journal of Service Industry Management* 10(1):7–22, 1999.
13. Peters L.H., O'Connor E.J., Eulberg J.R.: Situational constraints: Sources, consequence, and future considerations. In: Rowland K., Ferris G. (eds.): *Research in Personnel and Human Resources Management*, vol. 3, Greenwich, CT: JAI Press, 1985, pp. 79–114.
14. Nelson R., Winter S.: *Organizational Capabilities and Behavior: An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press, 1982.
15. Joint Commission on Accreditation of Healthcare Organizations: *Comprehensive Accreditation Manual for Hospitals: The Official Handbook*. Oakbrook Terrace, IL: Joint Commission Resources, 2004.
16. National Quality Forum (NQF): *The National Quality Forum Safe Practices for Better Healthcare: A Consensus Report*. Washington, D.C.: NQF, 2003.
17. NQF: *A National Framework for Healthcare Quality Measurement and Reporting*. Washington, D.C.: NQF, 2002.
18. McGlynn E.A., et al.: Establishing national goals for quality improvement. *Med Care* 41(1 suppl):I16–I29, Jan. 2003.
19. The Leapfrog Group: Leapfrog Survey Summary (results as of October 31, 2003). <http://www.leapfroggroup.org/Readout.pdf> (accessed Feb. 14, 2004).
20. Birkmeyer J.D., et al.: *Leapfrog Safety Standards: Potential Benefits of Universal Adoption*. Washington, D.C.: The Leapfrog Group, 2000.
21. Ranger C.A., Bothwell S.: Making sure the right patient gets the right care. *Qual Saf Health Care* 13:329, Oct. 2004.
22. National Health System, National Patient Safety Agency: Seven Steps to Patient Safety—Step 1. [http://81.144.177.110/site/media/documents/492\\_Final%20Step%201.pdf](http://81.144.177.110/site/media/documents/492_Final%20Step%201.pdf). (last accessed Apr. 29, 2004).
23. Frankel A., et al.: Patient Safety Leadership WalkRounds.™ *Jt Comm J Qual Safety* 29:16–26, Jan. 2003.
24. Weick K.: *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. San Francisco: Jossey-Bass, 2001.
25. Billings C.E.: Some hopes and concerns regarding medical event-reporting systems: Lessons from the NASA safety reporting system. *Arch Pathol Lab Med* 122:214–215, Mar. 1998.
26. Vincent C., Taylor-Adams S., Stanhope N.: 1998. Framework for analyzing risk and safety in clinical medicine. *BMJ* 316:1154–1157, Apr. 11, 1998.
27. Kuhn T.: *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1970.
28. MacDuffie J.P.: The road to root cause: Shop-Floor problem-solving at three auto assembly plants. *Management Science* 43(4):479–502, 1997.
29. Edmondson A.C., Bohmer R.M., Pisano G.P.: Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative Science Quarterly* 46(4):685–716, 2001.
30. Roberts K.: New challenges in organizational research: High reliability organizations. *Industrial Crisis Quarterly* 3(3):111–125, 1989.
31. Roberts K.: Some characteristics of one type of high-reliability organizations. *Organization Science* 1(2):160–167, 1990.
32. Thomas E.J., et al.: The effect of executive walk rounds on nurse safety climate attitudes: A randomized trial of clinical units. *BMC Health Serv Res* 5:28, Apr. 11, 2005.
33. Thomas E.J., et al.: Correction: The effect of executive walk rounds on nurse safety climate attitudes: A randomized trial of clinical units. *BMC Health Serv Res* 5:46, Jun 10, 2005.
34. Grabowski M., Roberts K.: Risk mitigation in large-scale systems: Lessons from high-reliability organizations. *California Management Review* 39:152–162, Summer 1997.
35. Khuri S.F., Daley J.: The National Surgical Risk Program. In Barbour G.L. (ed.): *Redefining a Public Health System: How the Veterans Health Administration Improved Quality Measurement*. San Francisco: Jossey-Bass/Scribner, 1996, pp. 156–166.
36. Leonard M., Frankel A., Simmonds T.: *Achieving Safe and Reliable Healthcare: Strategies and Solutions*. Chicago: Health Administration Press, 2004.