A Safety Initiative

Redesigning the Fall Incident Report

Joanne Elkins, MSN, RN, CPHQ, Lula Williams, MN, RN, CPHQ,
Andrea M. Spehar, MS, DVM, MPH, Patricia A. Quigley, PhD, ARNP, CRRN,
Tamala Gulley, MSCE, and Josefina Perez-Marrero, PhD

Representing up to 89% of all reported adverse clinical incidents, falls are costly in both human and financial terms. Here's how VISN 8 transformed their fall reporting process so that it could be used to drive system changes that would prevent falls.

There seems to be a general consensus among clinicians in this country that most adverse health care events result from system errors. To correct such errors, in February 1999, the VA established the National Center for Patient Safety (NCPS), which implemented the process of root cause analysis (RCA) to investigate and review findings from all actual and potential sentinel events, with the goal of improving the quality and safety of patient care.[1,2] In order for the RCA process to be successful in improving systems, investigators must gather accurate, timely, and relevant data regarding clinical events that are both ubiquitous and underreported.[3–6]

In the fall of 1999, VA medical center and clinic administrators throughout Veterans Integrated Service Network (VISN) 8 acknowledged that the incident reporting forms then in use were very limited in permitting the collection of pertinent data. These leaders made a commitment to standardize incident reporting procedures for adverse events—in particular, patient falls, which represent between 25% and 89% of all such reported clinical incidents and are the most costly category in both human and financial terms.[7]

In this article, we'll discuss the VISN 8 incident reporting system and the process through which it was redesigned. We'll outline the barriers we faced in implementing a VISN-wide incident report form for patient falls and review the types of data that must be gathered in order for patterns, trends, and root causes of such falls to be analyzed successfully.

IDENTIFYING THE NEED FOR CHANGE

The VHA's increasing emphasis on improving patient safety and the mounting national focus on medical errors, typified by the 1999 Institute of Medicine report on patient

Continued on page 33

Ms. Elkins is a quality systems coordinator and **Ms. Williams** is a utilization manager, both at the Bay Pines VA Medical Center, Bay Pines, FL. **Dr. Spehar** is a project manager and **Dr. Quigley** is an associate director of the clinical division at the Veterans Integrated Service Network 8 Patient Safety Center of Inquiry, both at the James A. Haley Veterans' Hospital, Tampa, FL. **Ms. Gulley** is an industrial engineer and, at the time of submission, **Dr. Perez-Marrero** was a research assistant, both at the Bay Pines VA Medical Center.

Continued from page 29

safety,[3] provided an ideal backdrop for a VISN-wide redesign of the system for reporting adverse incidents. After being awarded one of four VHA grants to create a Patient Safety Center of Inquiry, VISN 8 established such a center in 1999, under the direction of Dr. Audrey Nelson. As part of this effort, a patient safety improvement (PSI) board was created, consisting of risk, patient safety, and quality managers from each VISN 8 medical center. The initial focus of the PSI board was developing a standardized system of reporting and managing data about patient falls. The board concentrated on falls because of the prevalence, cost, and impact of these incidents on quality of life.[7]

Patient falls tend to be underreported by hospital and nursing home staff for a number of reasons. For one, there may be some confusion among staff about which falls to report. A noninjurious fall, for example, may go unreported because it's believed to be insignificant. Another factor that may inhibit reporting is the belief that management and other administrative staff don't act on incident reports, so the reports are simply unnecessary paperwork. Finally, staff may be hesitant to report a patient fall because they fear disciplinary action from supervisors.[7]

But incident reporting, as a process intended to detect and characterize patient falls, is an important component of any risk management program aimed at fall reduction. According to Guido and colleagues, such forms were "designed to be part of the overall risk management or quality assurance effort of any health-oriented institution."[8] Ideally, incident reporting and subsequent RCA creates an awareness of falls and engenders a learning culture among staff, ensuring that action will be taken to minimize the incidence of falls in the future.[7] Used correctly, incident reports aren't merely "paper compliance," but beneficial tools for communication.[9]

Unfortunately, the generic VHA incident report form widely used in 1999 (form VA 10-2633) had a number of deficiencies that did not facilitate the collection of complete, relevant, useful fall-related information. Such deficiencies were highlighted in the standards issued by the Joint Commission on Accreditation of Healthcare Organizations in 1995 and revised in 2001.[5]

Ultimately, PSI board members would concur that incident report forms should include objective terms and succinctly document any action taken to provide care at the scene. We would further determine that if the collected data were in an electronic form that could be integrated into the existing computerized patient record system (CPRS), it would enable VA providers and risk and patient safety managers to track patients who have fallen and follow up on their treatment interventions. We would discover that in order to make the system changes necessary to improve patient and environmental safety, we would need to implement a standardized, computerized, incident reporting system (SCIRS). Our undertakings would bring us back to the fundamentals of risk management: developing good documentation and educating staff members on incident reporting policy and procedure.[10]

PLANNING FOR CHANGE

Traditional models of planned change include Shewhart's "plan-do-check-act" (PDCA) cycle and Lewin's planned change and force field analysis.[11] For the purposes of this project, however, our team selected Jacob's real time strategic change model, in which large numbers of people work together over a few days to bring about character and performance changes in a very large organization.[11] According to this model, resistance to change in large organizations is overcome only when there is agreement among a critical mass of people on: (1) dissatisfaction with the status quo, (2) a clearly articulated vision of a possible future, and (3) concrete steps to be taken to realize that vision.[8]

To help a critical mass of people accept dissatisfaction with the status quo, PSI leadership planned a workshop to address VISN issues related to incident reporting and the patient safety improvement system. As a preface to this workshop, they conducted a telephone survey of PSI board members to obtain their input on reporting, barriers to data collection, quality and use of data, and the components of an ideal patient safety improvement system. Board members consistently identified the lack of a relevant, useful, and usable reporting system as one of the most significant barriers to gathering data necessary to manage risk in their facilities.

Survey results served as the framework for the first meeting's agenda and were presented to participants at the PSI board training session. Faculty, which included leaders from risk and patient safety management, quality improvement, executive management, behavioral sciences, and information management, pro-

vided information and facilitated discussion groups regarding the importance of incident report data, barriers to reporting adverse events, the necessity of collecting data in order to examine practice and process, and use of computer technologies to facilitate documentation and data collection and analysis. The discussions served as a basis for building a consensus around the need for a better incident reporting system.

The SCIRS emerged as a clearly articulated vision of a possible future. The critical mass of people participating in this training session agreed that an SCIRS would facilitate the implementation of system changes needed to improve patient and environmental safety and that a necessary first step in launching an SCIRS was a VISN-wide redesign of the incident report form. The commitment to redesign the incident report form prompted discussion that laid the groundwork for the third step in the planned change model: agreement by the critical mass upon the concrete steps required to realize their vision.

Prior to the training session, PSI leadership had, through e-mail exchanges and conference calls, gathered information about incident reporting systems and forms from participants as well as from quality managers working in other VISNs. While some facilities were using the standard form VA 10-2633 issued by the VA Central Office, others had developed facility-specific incident reporting forms. The forms elicited subjective entries and relied on the memory of the provider or recorder. Since each facility used one form for all adverse events, information specific to a particular type of incident, such as a fall or a medication error, was not collected.

Participants voiced their frustration in devising a form or method for collecting data that could be used to drive system changes to prevent falls. They also expressed a strong interest in comparing data and sharing learning experiences with other facilities in the VISN. As participants discussed their forms and processes, they repeatedly reported that recognition of a fall was just one barrier to effective patient safety improvement. A second barrier was the multistep reporting process, through which information transfer to risk management frequently was delayed.

Participants agreed that it would be valuable to share information and effective strategies; to establish evidence-based, uniform definitions and core data elements; to streamline the reporting system; and to move from a culture of blame to a culture of shared accountability for patient safety. Participants recognized that the change to an organizational "culture of safety" required a fundamental, attitudinal change throughout the organization and a thorough evaluation of implementation strategies.

The current system, they felt, was inadequate because it had neither a framework nor guidelines that drove incident reporting. They resolved to develop a set of incident report forms to be used throughout the VISN for key adverse incidents, starting with falls. The forms would collect key data critical for system redesigns to improve patient safety. The objectives of the redesigned fall incident report would be to: standardize the evidence-based data collected, streamline the process of incident reporting, facilitate collection of fall-related information that is pertinent and usable for system change, integrate injury-related data into the RCA process as the foundation for systems analysis, examine VISN-wide patterns and trends surrounding patient falls, and increase the completeness of incident report elements. Participants also determined that it would be necessary to develop a new report card to compare fall-related data within VISN 8.

Ray has proposed specific performance indicators for effective systems including consumer-centeredness, accountable reporting, thorough fact finding, prompt identification and implementation of corrective actions, fairness, and cost-effectiveness.[12] Our objectives mirrored those of Ray. Successful deployment, however, would be critical to ensuring staff "buy-in" and accurate use of the newly designed incident report.

DEVELOPING CORE CONTENT

To begin the work of redesigning the fall incident report, a group of practitioners, quality managers, and risk managers volunteered to work with clinical fall experts to review fall-related medical literature and to begin developing a new form with fall-related content. A form that had been developed and was being refined for computerization at the Bay Pines VA medical center in Bay Pines, FL was adopted as the working template.

Since this form had been developed primarily by quality, risk, and patient safety managers, a plan was devised to ensure field review and feedback, targeting high volume users: nurses, nurse administrators, and physicians. Inclusion of nurses and nurse executives in the planning and development was critical because nurses are the primary re-

Continued on page 37

Continued from page 34

FALL INCIDENT REPORT **DRAFT Revision 3/23/01**
(Confidential in accordance with Title 38 U.S.C. 5705)
DO NOT INCLUDE THIS FORM IN THE PATIENT'S MEDICAL RECORD

SECTION A: To be completed by clinical staff

Location at time of fall (ward, clinic, service, etc.): _____ ☐ Inpatient ☐ Outpatient

Date of fall: Time of fall(military):

Name of Physician/ARNP/PA notified:

For inpatients, Date admitted/transferred to this ward:

Description of the event, including any obvious fall-related injuries (e.g., head trauma, change in ROM, pain, bruises, lacerations) and describe what was patient doing or trying to do that may have contributed to the fall:

☐ Found on floor ☐ Staff lowered patient to floor ☐ Patient lowered self to floor

Was next of kin notified? ☐ Yes ☐ No (If no why not?)

Do you wish to download <u>this section</u> into the patient's medical record as a progress note? ☐**Yes** ☐ **No**

Contributory Factors (check all that apply):

Mobility:
☐ Up ad lib ☐ Bed rest
☐ Wheelchair ☐ Ambulate with wheelchair
☐ Ambulate with assistance ☐ Ambulate with walker
☐ Restraints ☐ Other_____

Cognitive & Functional factors:
☐ Incontinent (circle appropriate choice(s): bowel or bladder)
☐ Confused/memory impaired
☐ Altered gait/balance
☐ Altered ADL

Environmental/Equipment (check all that apply):
☐ Floor wet ☐ Lighting poor ☐ Needed item out of reach ☐ Cluttered area ☐ Foot wear
☐ Bed side rails (circle appropriate choice(s): all up or down 1 up (left right) top half up (left right) bottom half up (left right)
☐ Equipment faulty:
☐ Shower chair/commode chair ☐ Cane ☐ Walker ☐ Wheelchair ☐ Unavailable grab bars
☐ Stretcher ☐ Bed ☐ Other, please specify _____

Assistive Devices:
☐ Assistive Devices involved in fall? ☐ No ☐ Yes
If Yes, please complete the following:
☐ Assistive device(s) not appropriate? ☐ No documentation of patient education in proper use?
☐ Needed transfer/mobility equipment NOT within reach? ☐ Equipment not correctly or safely used by patient?
☐ Other, please specify: _____

Preventive Measures prior to incident (check all that apply):
☐ Interdisciplinary Fall Prevention Care Plan implemented & communicated to entire team
☐ Increase level of observation ☐ Fall Alert Identifier (e.g., green armband, signage, computer alert)
☐ Patient close to nurses' station ☐ Motion alarm
☐ Call light/bell in reach ☐ Gait/Safety training
☐ Patient/family involved in care plan ☐ Pain prior to fall. Last pain med given

Witnessed/Reported by: Name: **Position/Title:**

Report prepared by: **Title:**

ADDRESSOGRAPH

VICE VA Form 10-2633-3

Figure. Redesigned fall incident report form currently in use throughout VISN 8 and soon to be modeled nationally.

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SECTION B: To be completed by nurse

MORSE FALL SCALE CHOOSE HIGHEST APPLICABLE SCORE FROM EACH CATEGORY		Circle all that apply at the time of this fall
HISTORY OF FALLING	NO	0
	YES	25
SECONDARY DIAGNOSIS (more than one diagnosis)	No	0
	Yes	15
AMBULATORY AID	None, on bedrest, uses W/C, or nurse assists	0
	Crutches, cane(s), walker	15
	Furniture	30
IV/HEPARIN LOCK OR SALINE PIID	No	0
	Yes	20
GAIT/TRANSFERRING	Normal, on bedrest, immobile	0
	Weak (uses touch for balance)	10
	Impaired (unsteady, difficulty rising to stand)	20
MENTAL STATUS	Oriented to own ability	0
	Forgets limitation	15
Total Morse Fall Scale score at the time of fall (High Risk >50)		

Date of last fall assessment: **Morse Fall Scale score at last assessment:**

Nursing physical assessment and examination findings (if not completed in Section A):

Do you wish to download this section into the patient's medical record as a progress note? ☐ **Yes** ☐ **No**

Date: **Signature and Title:**

SECTION C: To be completed by Nurse Manager/Supervisor (check all that apply)

☐ Patient was not assessed for fall risk prior to falling
☐ Equipment was used incorrectly by: ☐ Patient ☐ Staff
☐ Staff needs education on the fall prevention protocol
☐ Restraints use was not monitored and documented
☐ Staff lack or misinterpreted information regarding patient care needs
☐ Staff distracted/interrupted
☐ Patient condition was not documented and communicated to staff
☐ Patient care environment/equipment unsafe or contributory to fall
☐ Maintenance program for involved equipment was not current
☐ Workload was a factor If yes, complete the following:
☐ Unit/area extremely busy ☐ Some staff worked overtime
☐ Float staff ☐ Change of shift
☐ Actual staff/patient ratio at time of fall _____

Corrective/Preventive measures taken to reduce risk of reoccurrence post fall:

☐ Patient/family education ☐ Staff education ☐ Equipment replaced/repaired
☐ Nursing Care Plan revised ☐ Staffing adjusted ☐ Enhanced safety observation
☐ Rehab Consultation ☐ Biomedical Engineering notified ☐ SPD notified
☐ Patient placed in rehab program. Specify type _____ ☐ Fall prevention team notified

Date: **Signature and Title:**

Revised March 2001FALL INCIDENT REPORT)

Figure *continued.*

SECTION D: To be completed by physician or individual, e.g. ARNP or PA with appropriate credentials

Physical Assessment and Examination findings:
Note: This section can be directly downloaded as a progress note into the patient's record.

Do you wish to download this section into the patient's medical record as a progress note? ☐ **Yes** ☐ **No**

☐ Rash/erythemia
☐ ROM impairment
☐ Change in LOC
☐ Change in mental status:
☐ Bruise(s) _____
☐ Pain _____
☐ Minor abrasion (s)_____
☐ Bleeding _____
☐ Laceration (s) _____
☐ Fracture (s)_____

Injury from fall:
☐ **No Injury** ☐ **Minor Injury** ☐ **Major Injury** ☐ **Death**

Post Fall Plan of Care:
☐ No follow-up indicated
☐ Keep under observation
☐ First aid given
☐ Pain Management
☐ Other_____
☐ Lab ordered
☐ X-ray
☐ PM&RS consultation
☐ Sutures_____

Date of exam: **Time:** **Signature/Title:**

SECTION E: To be completed by Attending Physician (Review and Comment)

Attending Physician Review/Comments:

Do you wish to download this section into the patient's medical record as a progress note? ☐**Yes** ☐ **No**

Corrective/Preventive measures taken to reduce risk of reoccurrence:
☐ No change in treatment indicated
☐ Treatment Plan modified (How?)
☐ Medication adjusted _____

Date: **Signature and Title**:

Revised March 2001FALL INCIDENT REPORT)

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SECTION E: Service Chief/SHG Leader: Please review the information regarding this incident and provide your comments, e.g. current status of patient, recommendations/action taken or no further action

☐ No further action indicated

Date: **Signature and Title:**

Chief of Staff:

☐ No further action

Investigation indicated: (check type)

☐ Physician Peer Review
☐ Mortality & Morbidity Review
☐ Root Cause Analysis
☐ Administrative Board of Investigation
☐ Other (see comments)

Comments and recommendations:

This event is reportable to: (check all that applies) ☐ VISN ☐ VA Headquarters ☐ JCAHO
Date reported: _____

Date: **Signature:**

Director:

☐ No further action required

☐ Investigate incident and submit report and recommendations to me by (date) _____.

Comments:

Date: **Signature of Director:**

Risk Manager:

☐ Forwarded for ABI ☐ Mortality & Morbidity Review ☐ Root Cause Analysis ☐ Physician Peer Review

☐ Case closed ☐ Other (please specify)

Date: **Signature:**

Revised March 2001FALL INCIDENT REPORT)

Figure *continued.*

Continued on page 43

Continued from page 40

porters of patient falls. Core content included patient presentation upon discovery, patient demographics, medical history and status, environmental factors that contributed to the fall, nursing and medical management, and follow-up.

When the development teams reached a consensus on a uniform incident report form for falls, they agreed to begin implementation in June 2001. The stage was thus set for the next phase in this system redesign.

LINKING TO NATIONAL PROGRAM INITIATIVES

At the first PSI board meeting, a member of the VA's NCPS explained a plan for rolling out the *National Patient Safety Handbook* and demonstrated how to use the safety assessment code to prioritize safety incidents and to determine the most appropriate system interventions to reduce future occurrences. Members of the VISN 8 PSI board agreed to pilot the handbook for the NCPS starting in the fall of 1999. As a result of this piloting, the VISN 8 PSI board gained invaluable experience with the RCA process, and gave the NCPS important feedback on how to refine the handbook for national distribution.

The experience gained by the PSI board in the RCA and aggregated RCA team process also helped us refine the fall incident report form. Data required to perform an RCA of a fall were defined. Team reviewers used triage questions to examine staffing issues, communication, and environmental factors that resulted in the collection of more complete and useful fall-related data. Questions that elicit these data elements ultimately were included in the revised fall incident report form.

THE REDESIGN ROLLOUT

After the core elements and format were agreed upon, one high risk unit in each VA medical center was selected for pilot testing of the new fall incident reporting form. Nurses were trained in proper use of the form and the purpose of the pilot, and the new form was used for a trial period extending from October 1999 through February 2000. Risk managers at each site collected feedback from nurses on the selected unit and reported back to the group so that modifications could be made that increased usability and usefulness. These changes were made and, with the support of the chief nurses and quality managers, the new form was fully deployed in July 2001 (Figure).

FUTURE DIRECTIONS

Over the course of our project, the PSI board had identified a number of problems with incident reporting as it was conducted prior to the redesign. For one thing, reports were handwritten. For another, the report forms included long blocks for narrative and insufficient prompts for the necessary information. Furthermore, there was much duplication of effort involved in completing a report (between the patient assessment component of the incident report form and documentation in the patient's medical record), it was difficult to enter the narrative information into any useful database for tracking and trending, and record review suggested that necessary, relevant fall-related information was omitted frequently from the patient's record.

The PSI board had agreed that the best solution would be an SCIRS that enabled downloading of data into a quality management database. Since most sites have computerized patient medical records, an SCIRS also would enable facilities to download information from an incident report into the patient's medical record as a progress note. The database supporting the form would be maintained by the risk management-patient safety team, and only they would have access to completed incident forms and the database. This linkage between electronic fall data and patient records would ensure consistency and accuracy, while preserving patient privacy and confidentiality in both documents.

Maass and Cortezo converted a paper-based incident reporting system to a computerized reporting, notification, and tracking tool at a community hospital in Seattle, WA.[13] In their study, they determined that the computerized system reduced turnaround time for incident reporting from 53 to 12 days.[13]

Maulik, Anderson, and Marwaha took a systems approach to improving error reporting in a multihospital system that incorporated a web-based incident report system.[14] The use of this system resulted in an average annual savings of $25,000 to $35,000 in data collection costs, increased reporting, a 25% to 50% reduction in time spent on follow-up and resolution, and increased staff satisfaction.[14]

In July 2001, we brought two industrial engineers onto the PSI team to help with the computer aspect of the redesign project. The electronic-based incident reporting forms were programmed into the

CPRS at the James A. Haley Veterans' Hospital network in Tampa, FL and were placed as an icon on all networked hospital computer desktops. Now data can be exchanged between the electronic incident reporting form and a designated, secure, quality management database that resides within the facility and is managed by patient safety coordinators and quality managers. In addition to the James A. Haley Veterans' Hospital, this system is now also in place at the West Palm Beach VA Medical Center in West Palm Beach, FL. Our plan is to develop a VISN-wide database, which will be managed by the VISN 8 Patient Safety Center of Inquiry.

Quality systems are able to track the electronic incident reporting process once it has been initiated. Upon entry of a patient's social security number into the form, the program automatically recalls the number of falls that patient has had to date. The electronic fall incident data is tracked to identify trends in location, time, and environment. Additionally, such data as age and current medications can be analyzed to determine whether these were factors in a patient fall. Through the tracking and analysis of fall data, preventive measures can be designed to improve current processes. An electronic fall incident reporting system such as this could be implemented throughout the VA, allowing for a more accurate trend analysis than that which is conducted currently through the paper-based reporting system.

THE BENEFITS OF SUCCESSFUL REDESIGN

Adverse incident data are vital to a thorough examination of all contributing circumstances and systems. Human errors are common in clinical practice, but as a result of underreporting, very little is known about the antecedents and consequences of such errors. This limits our potential to learn from errors and to make improvements in the quality and safety of patient care.[13]

Many health care organizations maintain two systems for documenting incidents: a paper incident report system completed by staff and managers and a computerized system in which clerical staff duplicate the documentation in a database.[15]

In VISN 8, our redesigned fall reporting system provides clinicians and administrators with the evidence-based data they need to analyze patterns and trends surrounding falls and fall-related injuries. In addition, we have reduced paperwork and have standardized fall-related content across seven VA medical centers. Our point-of-service, computerized, fall documentation system makes real time information and trend analyses available to clinicians, administrators, and risk and quality managers, while protecting patient confidentiality and resolving earlier system problems. Our successful reporting redesign provides a valuable link between quality and safety in the provision of care. ●

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