# Christiana Care Health System: Safety Mentor Program

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## Abstract

According to the Institute of Medicine, as many as 98,000 patients die each year because of preventable medical errors. The Christiana Care Health System is committed to eliminating preventable medical errors. A staff survey in 2001 showed that there were opportunities for improvement related to error reporting. Staff across the board felt they had responsibility for error prevention but viewed the error-reporting process as less than user friendly. Survey respondents also expressed fear of the consequences of being associated with an error. In 2003, the concept of a Safety Mentor program was first proposed during a focus group discussion. As conceived, the Safety Mentor would be an interdepartmental "ambassador" who could help staff navigate the system of error reporting, safe practices, and infection control. By May 2004, approximately 75 frontline staff had assumed this role. Safety Mentors now represent virtually all areas of the organization, including clinical and support departments. Through the Safety Mentor program's additional efforts to identify barriers and implement best safety practices, Christiana Care has demonstrated a decrease in reported events with major outcomes and an increase in reported near-miss medication events that were corrected before they reached the patient. These trends reflect our efforts to provide reliable health care by detecting failures before they occur, thus mitigating harm to our patients. This increase in near-miss reporting allows us to place emphasis on learning and implementation of practice changes to improve safety. A Safety Mentor program can be implemented in a diverse range of health systems. It has proven to be effective in engaging frontline staff in patient safety efforts. This innovative program was reviewed by the Agency for Healthcare Research and Quality's High-Reliability Network learning organization and found to be a promising practice.

## Introduction

### Background: Medical Errors and Need for Culture of Safety

According to the Institute of Medicine, as many as 98,000 patients die each year because of preventable medical errors, exceeding deaths attributable to motor vehicle accidents, breast cancer, or AIDS.[1] The Christiana Care Health System is committed to eliminating preventable harm to patients. Implementing clinical best practices or improved technologies—such as barcoding for medication administration and electronic medical records—is important to this objective. However, the best technology alone will not eradicate error. Rather, a combination of "best practices" and technology within a culture of patient safety is essential for error prevention.

The formal journey to building a patient safety organization at Christiana Care began in 2000 with the formation of the Patient Safety Committee. At that time, it was perceived that reporting of errors was difficult, and many employees were fearful of disciplinary action or professional liability related to reporting events. The committee sanctioned a Patient Safety Opinion Survey in 2001 to elicit staff perceptions of medical errors occurring in our organization. All categories of respondents, including physicians and residents, felt that physicians were most responsible for preventing errors. Nurses felt largely responsible, and all respondents felt some degree of responsibility for patient safety.

Results of this survey confirmed that fear of disciplinary action and professional liability were the most commonly cited reasons for not reporting errors. Only 55 percent of respondents felt that error reporting was widely encouraged and nonpunitive. Fear of punitive consequences for individuals after they report an error is believed to be a strong incentive to report only those errors that cannot be hidden.[2] An organization in which errors cannot be reported without fear of retribution is going to have greater difficulty identifying system issues that contribute to errors. When asked in the survey if our organization ever improved patient care in response to medical errors, 53 percent (including 34 percent of senior management) replied, "No." This health care system was not perceived as a learning organization. Lack of reporting was inhibiting the ability to learn.

## Seeking a High-Reliability Approach to Improving Patient Safety

High-reliability organizations (HROs), such as those in the aviation and nuclear power industries, commonly operate in a reliable and safe manner, even during uncommon and hazardous circumstances. While insisting on training and high standards of performance, these organizations recognize that performance expectations alone are insufficient to ensure safety.[3] The Institute for Healthcare Improvement identified a three-step model for applying the principles that guide high-reliability organizations: (1) prevent failure, (2) identify and mitigate failure, and (3) redesign processes based on critical failures that have been identified.[4]

Another high-reliability model emphasized a "flattened hierarchy" to encourage two-way communication of divergent opinions at every staff level.[5] This type of environment fosters open communication. The "Safe Passage Council" model from Clarian Health Partners also provided further understanding of essential program features.[6] With these models and with information gathered from our 2001 staff survey, Christiana Care continued its journey toward building a culture of safety through improved reporting and error prevention.

## Safety Mentor Program Design

The concept of a Safety Mentor program was first proposed in 2003 during a focus group discussion. As conceived, the Safety Mentor would be an interdepartmental "ambassador" who could help staff navigate the systems of error reporting, safe practices, and infection control. By May 2004, the program was launched with the role of the Safety Mentor well defined (Table 1). Approximately 75 frontline staff who had been identified as informal leaders were selected by their managers to assume the mentor role. Safety Mentors currently represent virtually all areas of the organization, including, but not limited to, all disciplines of nursing, respiratory therapy, laboratory, home care services, environmental services, pharmacy, radiation oncology, dialysis center, laundry, materials management, maintenance, occupational safety, and employee health.

**Table 1. Safety mentors: Role description and meeting structure**

| Role description | Safety mentor |
| --- | --- |
| **Responsibilities** | *The patient/employee safety mentor serves as an interdepartmental ambassador for safety and infection control. The mentor:*<br>• Serves as a support to staff throughout the system to heighten everyone's awareness of and responsibility for developing a culture of safety.<br>• Assists staff to identify and report key patient/employee safety and infection control issues to the Patient Safety Committee via designated contact.<br>• Fosters communication of patient/employee safety practices to staff, e.g., National Patient Safety Goals.<br>• Functions as a resource to staff and mentors staff in patient/employee safety and infection control behaviors.<br>• Facilitates patient/employee safety activities within their unit or department, e.g., Unit Level Practice PI committee activities, implementation of patient safety activities.<br>• Serves as a focus group member for the Patient Safety Committee and work teams.<br>• Facilitates learning to develop a culture of safety.<br>• Participates in monitoring/surveillance activities as needed. |
| **Requirements** | *The safety mentor shall possess the following skills and abilities:*<br>• A minimum of 6 months' experience working on unit/department.<br>• Desire or interest in learning.<br>• Knowledge of unit/departmental PI and patient/employee safety activities.<br>• Skilled in oral and written communications.<br>• Ability to collaborate with staff and clinicians.<br>• Ability to gain confidence and establish support. |
| **Meetings** | • Safety mentors will collectively meet every other month or more frequently as needed. |
| **Meeting composition** | *Membership will include representatives from the departments listed below and be facilitated by the Patient Safety Program Manager in collaboration with the Corporate Director, Patient Safety and Accreditation and the Patient Safety Officer:*<br>• Respiratory therapy.<br>• Radiology technician.<br>• Laboratory phlebotomist.<br>• Unit level nursing practice PI committees chairpersons (includes Riverside).<br>• Primary care representative.<br>• Home Care Services (VNA) representative. |

**Table 1. Safety mentors: Role description and meeting structure (continued)**

| Role description | Safety Mentor |
|---|---|
| **Meeting composition** *(continued)* | • Home infusion.<br>• Satellite office representative (Foulk Road).<br>• Environmental services/escort representatives/laundry.<br>• Pharmacy.<br>• Physician representative.<br>• Radiation oncology/Cancer center representative.<br>• Materials department.<br>• Maintenance department.<br>• Occupational safety.<br>• Employee health.<br>• Dialysis unit. |
| **Meeting purpose** | ***To utilize principles of dialogue for communicating safety activities, to serve as a barometer of the organization's culture of patient/employee safety, and to develop strategies to promote and strengthen a culture of patient safety. To accomplish this, mentors will:***<br>• Learn about culture and how to identify the difference between a safe and an unsafe culture.<br>• Receive regular contact, communication, and tools from the designee from the Patient Safety Committee and its work teams.<br>• Define patient safety behaviors.<br>• Support safe behaviors through the development of a recognition of staff for preventing adverse events.<br>• Assist with measuring effectiveness of safety practices. |

PI = performance improvement; VNA = Visiting Nurse Association

## Role of the Safety Mentor

After a department manager selects a Safety Mentor representative, a letter of appointment is provided, and a Safety Mentor Information Guide is shared. The guide includes an overview of the patient safety movement, specific Safety Mentor roles and responsibilities, safe practice tools used in our organization to facilitate patient safety, National Patient Safety Goal educational PowerPoint® presentations reviewing implementation expectations for Christiana Care, and contact information for internal Patient Safety teams and unit based Medical Directors. The Information Guide also serves as a unit resource for staff to assist in understanding and operationalizing safe practice tools and strategies. The Information Guide is formatted in a three-ring binder, so that new information can be easily added and obsolete information removed. A tab for agendas and minutes of each meeting is included to prevent over-reliance on memory and to promote wider sharing of important information. Detailed information on the use of our Safety

First Learning Report (formerly, event report) is also included to facilitate appropriate use in reporting errors and near misses.

The Safety Mentor attends the bimonthly Safety Mentor meetings. These meetings are facilitated by the Patient Safety program manager in collaboration with the Corporate Director of Patient Safety and Accreditation and the Chief Medical Officer (Patient Safety Officer). At each meeting, data are reviewed from Christiana Care's safe practice behavior monitoring "report card" to assess how well the safety practices are being operationalized.

The Patient Safety program manager and invited presenters then share stories and discuss lessons learned from sentinel events or other adverse outcomes/near misses and address concerns about error reporting. Presentations are viewed as an opportunity to learn, and a blameless environment is encouraged. In addition, efforts to engage patients in their own care by encouraging two-way communication between patients and caregivers are evaluated.

The meetings also provide the Safety Mentors with an opportunity to share patient safety challenges that they face on a daily basis. Barriers to safe practice are readily identified by frontline staff. Safety Mentors represent their unit-based staff and their own experiences, and they know their comments are valued and will lead to change. By incorporating each of these strategies, the patient safety leaders can also determine whether the program is succeeding at fostering trust, encouraging collegiality, and improved teamwork among disciplines and departments.

Communicating, learning, identifying problems, measuring progress, and providing advocacy and enthusiasm for adopting new processes are important roles that Safety Mentors fulfill for their departments. They interact not only with their peers and management but also with multiple disciplines. Safety Mentors are instrumental in providing a channel of communication among frontline staff and the unit-based and system-wide quality and safety councils and committees. Information and expectations about safe practice behaviors are shared with staff, while concerns from staff are heard in a system-wide forum. The following description of Safety Mentor roles provides an overview of specific mentor activities.

**Adopt best practices.** Consistent with national initiatives, Safety Mentors facilitate patient and employee safety activities within each department. Initiatives include the Joint Commission's National Patient Safety Goals, which are promoted through organizational safety teams. Each Safety Mentor serves as liaison between his/her unit and the Safety Teams to build workable solutions to patient safety issues.

In this role, Safety Mentors have succeeded in the creation of learning tools, such as an educational video depicting "read back" processes for confirming telephone orders and "job aids" such as SBAR (Situation, Background, Assessment, Request) and DATAS (Demographics, Assessment, Tests, Alerts, Status) (Figure 1) communication tool pocket cards that are used at the departmental level to reinforce "best practices." In addition, informal sharing of patient stories at Safety Mentor meetings ultimately led to a system-wide formal storytelling forum, "No Harm Intended: Lessons Learned in Patient Safety."
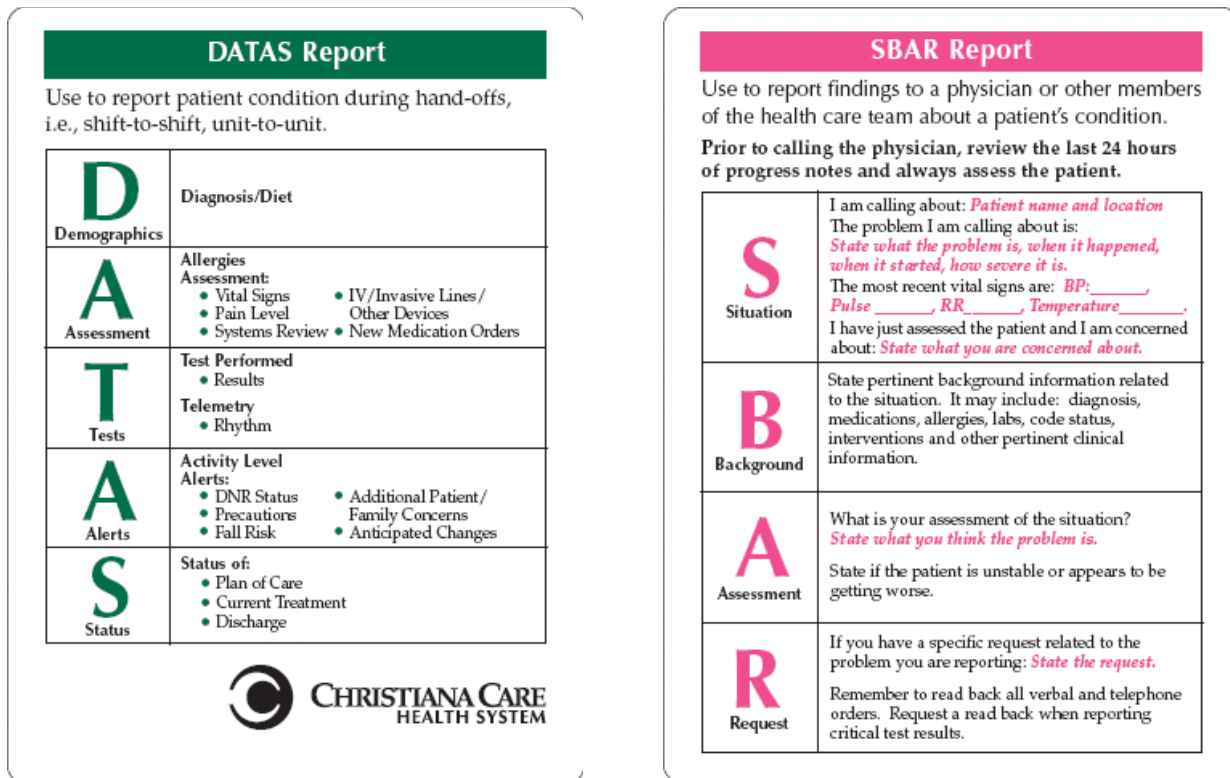
**Figure 1.** SBAR and DATAS communication tool pocket cards, which are used at the departmental level to reinforce "best practice."

**Facilitate learning.** The mentor guides staff to a better understanding of expectations surrounding safe practice behaviors. When unit-specific barriers and work-arounds are identified, the mentor can "bring home" organizational policies and give them context within the unit's day-to-day operations. When the mentors identify barriers such as the unit's environment, excess workload, staffing shortages, or other resource shortfalls, they are empowered to advance strategies to enhance a safe environment for patients and staff. This includes chain-of-command reporting and direct access to the organization's Patient Safety Officer.

**Awareness.** Data and information on safe practice behaviors related to safety measures are shared with department staff. Each Safety Mentor receives a monthly report of progress in our measurement of safe practice behaviors. The Safety Mentor is also involved in communicating Safety First Alerts, which are concise notices describing a particular safety concern with safe practices to be implemented (Figure 2). These alerts cover a variety of safety issues such as errors in verbal communication of critical test results and key bounces on electronic IV pumps potentially causing wrong dose infusions. Alerts are prescribed to be shared with all staff affected within a timeframe based on a risk score.

**Identify potential failures.** The mentor guides staff in identifying key patient/employee safety and infection control issues. Serving as a focus group member for patient safety teams, the mentor identifies safety issues in the unit/department and communicates them to the staff for learning or developing change in practice. In 2005, the work of one safety team led to significant changes in the electronic event reporting system. Electronic reporting is now less time consuming (with fewer questions) and more user friendly (with prompts and pre-filled

## CHRISTIANA CARE

**Safety First Alert:** Potential for errors in verbal communication of orders and critical test results.

**Date:** March 9, 2006

**Safety Concern:** Communication has been identified as a major root cause in sentinel events. Errors occur because communication can be incomplete, unclear, misunderstood, or confusing.

**"Read back"** of all verbal orders, telephone orders, and critical test results is required whenever possible. In an emergency, the information may be repeated back.

The "**read back**" process requires that information be written down and read back as a means of verification.

**Areas Affected:** All staff taking verbal orders, telephone orders and critical test results reported verbally or by telephone.

**Safe Practices:**

☑ Expect the receiver of the order or test result to read back the information.

☑ Ask for a "read back" if the receiver has not asked to have the information read back.

☑ Verify that the information that is read back is correct.

**Contact Person:**

**Department: Performance Improvement**

**Telephone:**

Thank you for implementing these safe practices to enhance patient safety.

**Figure 2.** Sample Safety First Alert. Each is a concise notice describing a particular safety concern with safe practices to be implemented.

demographic information from the hospital information system). Additionally, the mentor facilitates the department's use of the Performance Improvement Safety Hotline. The Safety Hotline is used for proactively communicating near-misses, "good catches," and potential safety hazards that may need review or investigation but not rise to the level of a required event report. The hotline is also used for staff to ask safety questions or request clarification of a regulatory concern. By advocating the use of these reporting tools, the mentor's preoccupation with identifying and reporting ensures that everyone receives the information needed to learn from errors and near misses.

**Peer-to-peer feedback.** Safety Mentors facilitate peer-to-peer monitoring and feedback of safe practices at the point of care. The Safe Practice Behavior Monitoring Program was developed to assist mentors in assessing their department's progress and to identify peers who exemplify safe behaviors. Conversely, peers who need assistance with safe practices are identified and mentored. Monthly results expose weaknesses and strengths to help the mentor lead improvement of expected behaviors with frontline staff. Individual departments are rewarded when goals are achieved. In addition to a departmental focus on our safe practices, the measurement program is organized uniformly across the system. This allows for specific population and aggregate system level reporting. At Safety Mentor bimonthly meetings, communication about organizational level goals becomes more meaningful as we review results for units and departments and compare these to the system level report.

These defined roles provide a path for communication to flow from the front line up and from the top down. The Safety Mentor program is a model designed to engage frontline staff in fulfilling organizational goals. The model will be shaped over time to meet the diverse needs of our staff as they fulfill the mission of Christiana Care Health Services.

# Results

## Improved Reporting of Errors

Data from our Safety First Learning Report (event reporting system) show evidence of improved safety awareness and empowerment among the staff. From 2004 to 2006, the data reflect increased reporting of medication near misses (Table 2, Figure 3). The proportion of reported medication near misses to total reported events also increased. Whether the number of near misses doubled or the number reported was simply better, the improved reporting is

**Table 2.    Improved near miss reporting**

| Year | Total reported events (N) | Medication near misses[a] (N) | Near misses Total events (%) |
|---|---|---|---|
| 2003 | 7,321 | 46 | 0.6 |
| 2004 | 7,047 | 46 | 0.7 |
| 2005 | 6,897 | 56 | 0.8 |
| 2006 | 6,464 | 85 | 1.3 |

a    Corrected before reaching patient.

providing us with valuable information to learn and make system changes that will be effective in preventing harm to our patients.

## Reduced Severity of Errors

In addition to increases in reported near misses, the rate of events with major outcomes also decreased (Figure 4). Between 2003 and 2006, inpatient volume increased 10 percent, while the count of events with major outcomes did not increase proportionately. The net result was a decrease in the rate of events with major outcomes from 1.21 to 1.12 per 1,000 patients – a reduction of 8 percent.
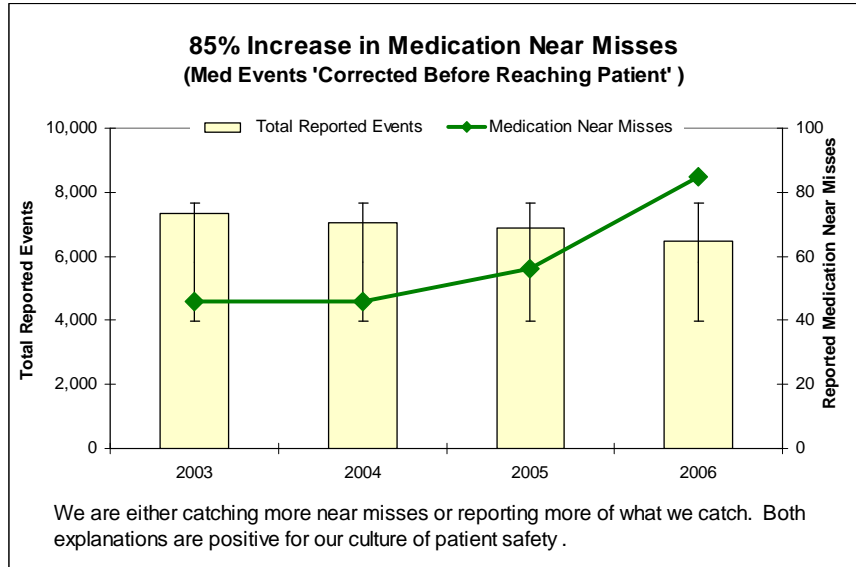
**85% Increase in Medication Near Misses**
**(Med Events 'Corrected Before Reaching Patient' )**

We are either catching more near misses or reporting more of what we catch. Both explanations are positive for our culture of patient safety .

**Figure 3.** Improved near-miss reporting at Christiana Care Health System.

## Safety Culture Changes

Since 2006, Christiana Care has participated in the Hospital Survey on Patient Safety Culture (HSOPSC), which was developed by the Agency for Healthcare Research and Quality (AHRQ).[7] The prior 2001 survey showed that 76 percent of staff feared disciplinary action if caught making a mistake. By 2006, the AHRQ survey results showed that only 28 percent of respondents felt their "mistakes were held against them."

The Safety Mentors have been utilized as a focus group to identify the issues of nonpunitive error

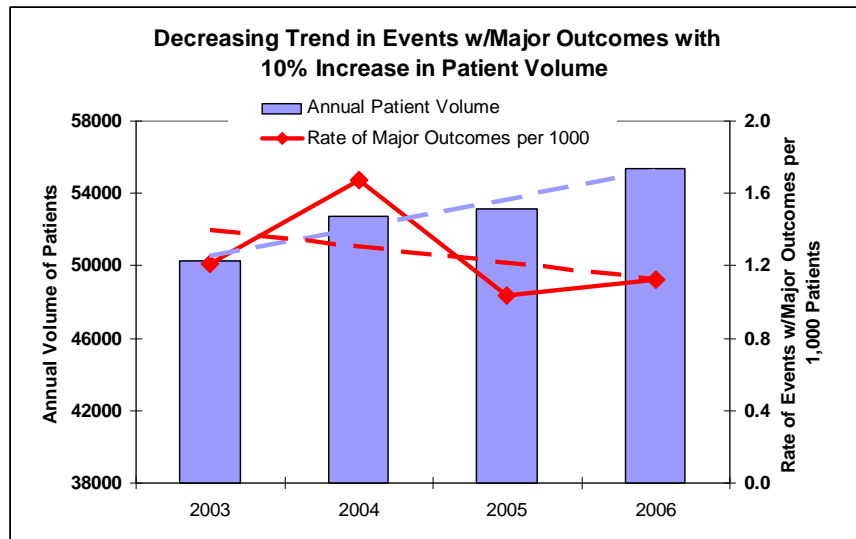**Decreasing Trend in Events w/Major Outcomes with 10% Increase in Patient Volume**

**Figure 4.** Decreasing trend in events with major outcomes at Christiana Care Health System.

reporting so that concrete action plans can be developed. This group identified a lack of standardization in event analysis and response by management. As a result, an interdisciplinary team has been formed to develop a standardized approach to event analysis and response with integration of "just culture" principles.

The AHRQ HSOPSC provides reliable measures with more detail than prior surveys and includes national benchmark comparisons with 382 hospitals. When assessing strengths and opportunities from the 2006 survey, one of our top strengths was "Organizational Learning – Continuous Improvement." In addition, compared to national comparative data, learning was also found to be a strength. Frontline staff confirm they are learning from information being shared about errors, and they perceive that positive process changes have occurred because these errors are being identified. Despite these strengths, nonpunitive response, feedback, and communication about errors continue as a focus in our Safety Mentor Program and throughout the Christiana Care system.

## Discussion

Instituting the Safety Mentor program, coupled with efforts to implement "best safety practices," has resulted in a demonstrated decrease in reported events with major outcomes and an increase in reported near-miss medication events that were corrected before they reached the patient. These trends reflect Christiana Care's efforts to provide reliable health care by detecting failures before they occur, thus mitigating harm to our patients. This increase in near-miss reporting allows emphasis on learning and implementation of practice changes to improve safety. In turn, it is expected that awareness and communication of these successes will lead to an increase in Safety First Learning (event) reporting.

## Conclusion

In order to promote consistency and visibility of the Safety Mentor role, formal recognition, appointment, orientation, and education processes were integrated to assist with role development. Formalizing the relationship between the Safety Mentors and unit-based medical directors (physicians) is the next step in improving the program's effectiveness. Involving physicians as members of the team is likely to maximize the impact of the work of the Safety Mentor group.

Implementing a Safety Mentor program has allowed patient safety strategies to reach frontline staff in a highly personalized, meaningful, and less bureaucratic manner. Communication in any large health care organization can be challenging; the closed-loop communication from frontline Safety Mentor staff to the Patient Safety Officer and back has improved dialogue and generated a rich focus group, which has facilitated quick "wins" in our patient safety program. Providing Safety Mentors with the Information Guide resource helps promote increased awareness of existing teams. It may also facilitate their connection with unit- or department-level initiatives, and it makes educational resources readily available, minimizing unnecessary duplication of efforts.

As confirmed in Safety Mentor meetings, storytelling can be a powerful tool for patient safety. As mentioned earlier, this insight led to development of a system-wide storytelling forum called "*No Harm Intended: Lessons Learned in Patient Safety*." These sessions are intended to promote open discussion and sharing of lessons learned from near misses or actual events. These sessions are open to all interested staff, with a particular emphasis on frontline health care providers. Some of these sessions are now being scheduled to coincide with Safety Mentor meetings, so that Mentors can attend more easily. When frontline staff see that processes have actually been changed to reduce error potential based on their feedback, this is extremely powerful in generating a nonpunitive learning environment surrounding error reporting.

Safety Mentor programs can be implemented in a diverse range of hospitals and health care systems and have proven effective in engaging frontline staff in patient safety efforts. This program was reviewed by the Agency for Healthcare Research and Quality's High-Reliability Network learning organization and found to be a promising practice (see HRO guide at www.ahrq.gov/qual/hroadvice/hroadviceapf.htm).

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