THE "SENTINEL EVENTS" STUDY

For Our Ministry, Building a Culture of Safety Should Be a Leadership Responsibility

BY THOMAS G. HOOYMAN, PhD; & NANCY W. HOOYMAN, MD

The U.S. Postal System in Denver has proudly reported achieving its highest performance level ever during the last six months of 2003. The office notched an impressive 96 percent accuracy rate in delivering 8 to 10 million pieces of mail every day. A 4 percent error rate seemed to be an acceptable level of mistakes (unless your letter was one of the 320,000 pieces of mail that was misrouted daily). Some errors are more easily corrected than others. Misdelivered mail is mostly a nuisance that can be both tolerated and easily corrected. However, mistakes made in the health care system can result in lifelong disability or even death.

The shocking 2000 Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System,* said that 98,000 Americans die annually because of medical errors—the equivalent of a jumbo jet crash every day of the year.[1] The IOM report served as a wake-up call for the U.S. health care system.

To Err Is Human emphasizes prevention of mistakes by designing multilevel safety programs that make it easier to do work correctly and more difficult to do something wrong. The IOM's goal is a 50 percent reduction in errors over a five-year period, achieved through regulatory and market-based initiatives that involve both organizations and professions. In 2001, the IOM issued a follow-up report, *Crossing the Quality Chasm: A New Health System for the 21st Century,* in which the institute focused on six critical elements: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity.[2] Each element has 10 principles for redesigning the U.S. health care system. Both reports zero in on patient safety as a key element of a high-quality health care system. Patient safety is also perhaps one of the most fundamental criteria for a just health care system.[3]

CHA's Physician Committee, concerned about patient safety in its members' respective organizations and in the Catholic health care ministry as a whole, recommended that CHA study how its members were addressing patient safety, specifically the reporting and management of medical errors. Between November 2003 and January 2004, CHA conducted a study it called the "Sentinel Events Survey." In this article, we will outline the study's findings and suggest some fundamental actions that the Catholic health ministry should take in order to assume a leadership role in ensuring a safe health care system in the United States.

Dr. Thomas Hooyman and Dr. Nancy Hooyman are the founders of the Hooyman Group, Inc., Denver.

About the Survey

The Sentinel Events Survey was designed by CHA and sent electronically to all CEOs and vice presidents for medical affairs of member organizations. Distribution duplication was intended to maximize the rate of return. However, organizations responding to the survey provided a single response. Survey recipients were allowed two weeks to respond; they could choose to reply anonymously. However, anonymity was reduced because the survey format required participants to fax in their responses. Survey questions were rather straightforward (see **Box,** p. 34, for the survey questions).

The Survey's Results

The survey was sent to 111 CHA member organizations. Thirty-six members responded, representing a 32.4 percent response rate. The respondents were 32 individual acute care facilities and four health care systems that responded on behalf of their affiliates. Responses from two other acute care facilities and two other systems were not included in the survey analysis because of incomplete information. In all, results from 30 individual facilities and two systems provided the data for analysis. Responses from the two systems (representing a collective 27 hospitals) indicated that they were responding on behalf of their affiliates and that their answers to the survey were applicable across their respective organizations. Therefore, the data ultimately represents responses from 57 Catholic acute care hospitals across the United States.

In addition to answering the survey questions, 15 hospitals and both systems provided their respective patient safety policies. Six other hospitals stated that they would be willing to share their policy but did not include it with their survey answers.

All of the respondents reported having a policy that addresses sentinel events. The vast majority (83 percent) entitled the policy "Sentinel Event"; only two respondents (7 percent) referred to the policy as a "Safety" policy.

Only 10 percent of respondents cited a direct relationship between their particular organization's values and its policy's rationale or purpose. Of those, half cited "performance improvement" as the fundamental value for pursuing such a policy, while the remaining half directly related the policy to values such as respect, compassion, excellence, and truth telling. Only two respondents emphasized a "culture of safety" and linked it to mission and vision statements that call for "compassionate and trustworthy care" as the basis for their respective policies. All of these policies focused on compliance and reporting. The language used in most of them could be characterized as defensive and legalistic, which is consistent with a sample policy from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

When asked how they organize to respond to a sentinel event, half of the survey's respondents said that their organization's risk manager is responsible for overseeing sentinel event reporting. The other 50 percent had a variety of staff responsible for overseeing a response to a sentinel event. Among those named as having responsibility were the director of patient education, director of quality, director of performance improvement, director of surgical services, attending physician, hospital president, patient safety advisory council, crisis management, and the sentinel event team, or a combination of the above.

According to respondents, the number of persons called in after a sentinel event occurs ranged from two to 11. About half of the respondents said that the responding team comprised six people: the vice president of medical affairs, chief medical officer, chief executive officer, attorney, chief nursing officer, and the attending physician. For the other half of the responding organizations, the type of personnel involved after a sentinel event varied greatly and was not statistically valid.

Respondents noted that a wide range of staff attend meetings to discuss and respond to a sentinel event. Most consistently, they cited the vice president of medical affairs, chief nursing officer, attending physician, and risk manager. As for speaking to the patient or his or her family after an event, 88 percent of the organizations said the attending physician was the primary communicator. More than half the time, the attending physician was the sole communicator.

The "Sentinel Events" Survey Questions

1. Does your facility have a policy regarding the reporting and handling of sentinel events?
2. If your facility does not have a policy regarding the reporting and handling of sentinel events, is there a policy under discussion?
3. What is the name of your policy?
4. Would you be willing the share the essence of your policy with other Catholic health care facilities through the CHA website?
5. Please describe the core values (either general or explicit to your organization) that are cited as rationale for the policy?
6. Who oversees the response to the sentinel events?
7. Please indicate all of the roles/functions represented by persons called in after a sentinel event?
8. Who would attend a meeting after a sentinel event?
9. Who speaks to the patient or the family?
10. Who communicates with the media?
11. Do you have a mechanism in place for subsequent counseling with the physicians, nurses, and other staff who have been caring for the patient in question?

For questions 7 through 10, the following options were offered: vice president, medical affairs; chief medical officer; attorney; CEO; vice president, mission services; corporate compliance officer; public relations officer; chief nursing officer; attending physician; other _____.

Respondents were also consistent in identifying the person assigned to communicate about a sentinel event with the media. For 84 percent of respondents, media relations is entirely the responsibility of the public relations officer, although 6 percent said that the CEO performed this function. Respondents were also consistent in noting that counseling is available to hospital and medical staff responsible for caring for a patient involved in a sentinel event; 91 percent have a mechanism in place for such counseling.

It is somewhat noteworthy that responding organizations seldom mentioned involvement by the vice president for mission services or the corporate compliance officer. Only 17 percent of respondents indicated that they routinely involved mission and compliance when responding to a sentinel event.

Of the 17 organizations that provided their policies, all employed a policy based on the JCAHO recommendations for sentinel-event reporting. The JCAHO urges health care organizations to decide, among other things, how the reporting of medical errors will be initiated, who will handle the reporting, how the results will be managed, how families will be notified, and whether the policy should be altered as the result of a sentinel event. The JCAHO has clearly become the model for such policies. One spokesperson, when asked what core values are cited as a rationale for the policy, responded, "I followed the language of the JCAHO."

Only three of the policies submitted include prefaces that emphasize the need for creating a culture of safety in a patient-centered organization. The best rationale for developing a sentinel-events policy is framed in the context of patient safety in general. This was stated eloquently in one respondent's policy, which said that to ensure patient safety the organization must develop a "culture that openly discusses patient safety at all levels of the organization and seeks mechanisms to foster such communication, to reinforce patient safety as an organizational priority, and to demonstrate that all persons' contributions and concerns about patient safety are valued and respected."

Of some concern is the fact that the sample policies, generally speaking, would do less to foster a culture of safety and more to ensure a culture of blame in which those reporting errors could be penalized.

Thinking Systemically

Surveys such as this are limited by the specific survey questions they ask. An organization's approach to developing a culture of safety might be addressed in areas other than its sentinel events policy. Culture of safety is also at the heart of quality initiatives and performance improvement activities.

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We were disappointed in the number of respondents who addressed sentinel events from the posture of building the organization's legal defense. In that regard, there is little if any distinction between the majority of policies originating in faith-based organizations, on one hand, and those one might expect from for-profit, publicly traded health care providers, on the other. The apparent lack of connection between an organization's stated Catholic identity and values and its policy is potentially alarming. Perhaps even more disturbing is the apparent lack of involvement in patient-safety policies and in responding to sentinel events on the part of the mission leader. Further attention might be paid to whether this absence has to do with sentinel events alone or is indicative of how an organization values the role.

A significant amount of literature, involving many industries besides health care, is concerned with eliminating mistakes and failures existing in systems. In creating cultures of safety, health care leaders should acquaint themselves with the leading practices of other industries. For instance, Charles Perrow, in analyzing the Three Mile Island accident, identified ways that accidents can be either caused or prevented by systems.[4] According to Perrow, an accident is an event that involves damage to a defined system and disrupts, or threatens to disrupt, its output. Perrow created the acronym DEPOSE (for design, equipment, procedures, operators, supplies, and environment) to identify potential sources of failure ("design" may include organizational design).

James T. Reason, studying errors in the airline industry, incorporated the human component in system errors. Reason defines a system as "a set of interdependent elements interacting to achieve a common aim. The elements may be both human and nonhuman (equipment, technologies, etc.)."[5] Simply stated, when an error is made, it is not necessarily the last person in line who is responsible for it. There is a *system* failure somewhere, and it is essential to get to the bottom—or root cause—of the problem. We believe that tracing the root cause may be where health care organizations often fail to act. Rather than blame the last person who had contact with the patient, system analysis can identify the multiple faults that, occurring together in an unanticipated

interaction, create a chain of events in which those faults grow and evolve. Reason describes what he calls the "Swiss cheese" effect.[6] Like a brick of Swiss cheese, whose holes are rarely aligned all the way through, processes and procedures contain stopgaps that normally prevent mistakes. However, on those rare occasions when the "holes" *do* align, an error can make its way all the way through to the patient.

For example, a person scheduled for a cardiac catheterization may have his or her ID bracelet checked by numerous staff before the test. The physician may speak to the patient and sign the order. The desk clerk may know when and for whom the catheterization is scheduled. And the patient's medical records may be reviewed before the procedure is begun. Everything should go well in a system with such multiple checkpoints. The chances of the wrong person having the test are diminished. However, if the desk clerk were to be absent—or the patient were given the wrong chart, or if the ID bracelet were to go unchecked, or the catheterization were to be performed by a physician unfamiliar with the patient—gaps could synchronize in such a way that that the procedure is performed on the wrong patient.

Approximately 60 to 80 percent of hospital accidents can be assigned to human error, according to one study.[7] This does not mean that specific individuals should be blamed for an error. In fact, blaming an individual neither makes the system safer nor prevents future errors. Historically, hospitals have often blamed errors on someone or something. Health care executives' and professionals' preoccupation with potential litigation is a likely cause of this prevailing atmosphere of blame. However, health care organizations can foster a culture of safety—instead of blame—by making safety a higher priority and by refusing to take a minimalist approach that focuses merely on adhering to regulations that require reporting and on looking for individual mistakes.

Approximately 60 to 80 percent of hospital accidents result from human error.

A culture of safety recognizes that each and every employee, board member, and volunteer is responsible for and committed to patient safety. Health care leaders need to develop an organizational culture that is grounded in patient-centered care rather than fear of litigation. This method is proactive rather than reactive and builds on the fourth recommendation of *To Err Is Human*, which suggests that providers should provide safety standards on their own and not wait for costly federal oversight programs to be initiated (see **Box** for specific action steps).

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Guidelines for Building a Culture of Safety

1. Integrate patient safety as part of the organization's mission and ethos.

- Specify in the rationale of every policy and procedure the values and ethical principles that are fundamental to the policy.
- Continually reiterate in all policies the importance of creating and maintaining a culture of safety.
- Emphasize preventive monitoring of specific clinical conditions, such as bedsores, blood clots, wound infection, malnutrition, and aspiration risk.
- Use the title "safety promoter" (rather than "risk manager") to help shift the focus from litigation to safety.

2. Remove the onus of blame from the investigation of errors.

- Reward voluntary and anonymous error reporting.
- Base performance review and incentive compensation on the organization's safety record.
- Create safety incentives rather than error punishments.

3. Implement programs that have already been shown to improve safety.

- Expect teamwork and communication among staff members, including physicians, nurses, and support staff.
- Study other industries for leading practices on improving safety.
- Make safety part of the credentialing process for physicians.
- Allocate resources and institute computer physician order entry.
- Support evidence-based hospital referral.
- Encourage use of autopsy to help prevent other illness or premature deaths.

4. Use transparent reporting to raise public awareness of the success and failure rates of certain procedures and routines and, in turn, match health care needs with service delivery capability.

- Report openly and publicly the organization's safety results and medical errors.
- Encourage the public to use organizations with the highest safety ratings.
- Support a payment system that rewards organizations for transparent reporting.
- Advocate legislation and regulation intended to shape a culture of safety.

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THE MINISTRY SHOULD LEAD

A hospital, skilled nursing facility, or clinic is the last place a person should feel unsafe, let alone fear death because of a medical mistake. Catholic health care organizations should not be "close followers" in efforts to improve patient safety throughout the continuum of care. Rather, the Catholic health ministry should lead, taking the risk and spending the dollars to develop, maintain, and continually improve a health care delivery system that is fundamentally safe for all and does not—as is currently the case—allow 268 patients to die daily because of preventable errors. We may be able to tolerate a 4 percent error rate in the U.S. postal system, but it is just unacceptable in the U.S. health care system. □

NOTES

1. Institute of Medicine, *To Err Is Human: Building a Safer Health System,* National Academies Press, Washington, DC, 2000. The report recommended a four-tier approach in enhancing hospital safety: (1) Establish a national focus; (2) expect hospitals to have a voluntary reporting system; (3) raise performance standards and expectations; and (4) implement safety systems at the delivery end.
2. Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century,* National Academies Press, Washington, DC, 2001.
3. "Patient safety" is understood to be an inclusive term applicable across the health care continuum; it is not restricted to acute care settings alone.
4. Charles Perrow, *Normal Accidents: Living with High-Risk Technologies,* Princeton University Press, Princeton, NJ, 1999.
5. James T. Reason, *Managing the Risks of Organizational Accidents,* Ashgate Publishing, Aldershot, England, 1997, p. 25. See also James T. Reason, *Human Error,* Cambridge University Press, New York City, 1990.
6. Reason, *Managing the Risks,* p. 9.
7. Robert Wachter and Kaveh Shojania, *Internal Bleeding: The Truth behind America's Terrifying Epidemic of Medical Mistakes,* Rugged Land, New York City, 2004, pp. 165-167.

"MERCY MEDS" BOOSTS SAFETY

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use the new technology and processes in a patient care setting and revealed a need for further modifications and improvements. But it also clearly demonstrated Mercy Meds's ability to detect potential medication errors and improve patient safety.

As of October 2004, Mercy Meds was in service to approximately 900 patient beds at seven system facilities. To date, detailed data has been reviewed on more than 90,000 administrations, indicating that Mercy Meds point-of-care technology has prevented 386 potential errors. Because point-of-care technology alerts staff to a potential medication error *before* the medication can be administered, it is helping the system shift from reactive post-event medication reporting to proactive "near-miss" reporting. Near-miss data can be analyzed even further so as to reduce the possibility of future medication events.

Clinical pharmacy services also are beginning to positively affect the medication use process. As of August 2004, more than 50,000 pharmacist encounters had been documented; each of these encounters contributes to improved patient education and safety, cost-effective care, and positive clinical outcomes.

The entire Mercy Meds experience has strengthened the sense of "systemness" at Mercy, through increased interaction among facilities and professional disciplines, especially nursing and pharmacy. Through process redesign and implementation, staff members have gained a greater appreciation and understanding of the value of collaboration and coordination and of the benefits that can be achieved from them. □

NOTES

1. Institute of Medicine, *To Err Is Human: Building a Safer Health Care System,* National Academies Press, Washington, DC, 2000, p. 2.
2. "Pharmacy-Nursing Shared Vision for Safe Medication Use in Hospitals: Executive Session Summary," *American Journal of Health System Pharmacy,* May 15, 2003, p. 1,046.

DIVERSITY IN MULTI-INSTITUTIONAL SETTINGS

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Carney: I attended a conference on diversity sponsored by the Conference Board.* It was absolutely wonderful, but I was the only participant from a health care *provider,* which was a little surprising to me. There were participants from pharmaceutical and medical supply companies. An organization like the Conference Board is a great source of information.

Sr. Teresa: I think it would be helpful for our members if we could put some of the diversity resources developed by various systems on CHA's website. Could we, for example, put on the site *CultureVision,* the tool developed by BSHSI and Cook Ross? I'm sure that CHA's Diversity Committee could profit from studying it.

Carney: BSHSI would be happy to make available any resource within its domain. However, Rod will have to explore any legal ramifications regarding sharing *CultureVision.* But I expect that if *CultureVision* has the merits we think it has, Cook Ross will certainly be interested in getting a broader visibility for it.

Sr. Karin: *Chris, I want to thank you and Rod for being willing to share your experiences. We hope that others will be inspired by what you have done and will think more seriously about diversity. Diversity is not yet, I suspect, a top priority for all of our CEOs, but I think it's time for it to* become *a top priority. We certainly hope that, through this series of articles, we will enhance awareness of the importance of diversity in Catholic health care.*

Carney: If CEOs are not committed to diversity personally, it will become even more of a challenge than it is now. □

*The Conference Board (www.conference-board.org/) is a not-for-profit organization that advises businesses on management and market questions.