Chapter 20a. [Vignette] Transforming Health Care for Patient Safety: Nurses' Moral Imperative To Lead

Diana J. Mason

Background

On July 16 and 17, 2004, the *American Journal of Nursing*, University of Pennsylvania School of Nursing, Hospital at the University of Pennsylvania, and Infusion Nurses Society held an invitational State of the Science Symposium on Safer Medication Administration in Philadelphia. Funded by a small conference grant from the Agency for Healthcare Research and Quality (AHRQ grant no. 1 R13 HS14836-01) and educational grants from industry, the meeting brought together diverse health care professionals and groups —nurse clinicians, educators, administrators, and researchers; pharmacists; physicians; industry representatives; consumers; and professional organizations—to examine the current research on safe medication administration, barriers to improving the integration of this research into practice, and recommendations for overcoming these barriers.

Research Priorities and Barriers

The participants identified the following research priorities[1] (p. 8–9):

1. How do safety climate, error reporting, and root-cause analysis affect patient safety, quality of care, and both patient and clinician satisfaction?
2. How can individuals and organizations integrate and sustain best practices to detect, reduce or eliminate, and mitigate the errors that occur?
3. What patient-centered approaches result in medication error reduction in ambulatory and long-term care settings?
4. How do current practices and near misses make medication administration safer?
5. What is the impact of safer medication administration practices on health care costs and patient outcomes?

The participants identified the following barriers to safer medication administration[1] (p. 6–7):

1. There is a lack of a "just culture of safety" in many health care facilities.
2. There is a lack of interdisciplinary collaboration and communication.
3. Nurses' work environments do not support safety.
4. Voices of frontline nurses are missing in decisionmaking and systems design related to medication safety.
5. There are difficulties in translating research into practice.
6. Policies to effect medication safety are not driven by evidence.
7. There is insufficient funding for research on medication safety.

Note that the use of technology to reduce medication errors—or the lack of such technology—is not specified as a research priority or as a barrier to improving care. This may seem curious since health care systems are lagging behind other industries in the development and use of technology for reducing error, but its absence highlights other concerns. For example, while it is often assumed that technology will help only to reduce errors, there is evidence that it

sometimes introduces errors, often because of factors such as inadequate training of the users of the technology and poor communication.[2–4] At a national nursing conference in 2003, some of the companies that make bar-coding technology and advanced intravenous pumps (referred to as "smart pumps" because of their ability to track and report data about their use) noted that nurses often develop work-arounds when they believe that the technology is not efficient. For example, one company representative said that some nurses using his company's bar-coding technology would print out a list of all of the unit's patients with their bar-codes, then swipe these bar-codes—instead of the one on the patient's wristband—against the medication bar-codes, clearly defeating the purpose of the bar-coding technology. In the nurses' eyes, they were making more efficient a process that they viewed as cumbersome and time consuming.

Technology's absence from the research priorities and barriers also reflects the pressing reality of working nurses: too many work in environments that give lip service to patient safety, but seldom recognize that nurses are the key to quality and safety. Technology alone will not make patients safer. We must focus on decisionmaking and communication if patients are to be safer.

Defining "Error"

While companies work on developing cutting-edge technologies and health care facilities focus on root-cause analyses and systems of care, Cook and colleagues[5] found that health care workers don't even agree upon what constitutes an error.[*] In the landmark report, *To Err Is Human: Building a Safer Health System,* error is defined as a "failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim"[6] (p. 3). But Cook and colleagues found that nurses, physicians, pharmacists, and administrators don't all embrace this definition. Their findings suggested that the staff may "fail to appreciate complex, less easily categorized" errors. Indeed, many reported that they were reluctant to identify diagnosis and treatment errors as such. In fact, one glaring theme of this research was that nurses' actions can lead to errors, but physicians make "practice variances." These "practice variances" were also referred to as "suboptimal outcomes" or "differences in clinical judgment," not errors. Some of the practice variances or suboptimal outcomes included

- Delays in treatment
- Use of outmoded treatments
- Failure to employ necessary diagnostic tests
- Failure to act on the results of tests
- Errors in administration of treatment
- Failure to communicate with staff and patients

Note that this variance in the definition of error occurred despite respondents reporting that their facilities were genuinely concerned about safety (90 percent of all respondents) and didn't punish people who reported safety discrepancies (94 percent).

Assigning Responsibility for Patient Safety

One conclusion that can be drawn from the study is that nurses are viewed as having the responsibility, but not the authority, for ensuring patient safety. In a prior study, Cook and Hoas[7]

[*] While this was a multimethod study conducted in rural hospitals, reviewers of the paper noted that the findings were consistent with what existed in their regions of the country that were urban and suburban.

found that only 8 percent of physicians viewed nurses as key members of the decisionmaking team in their institutions. And in their 2004 study, Cook and colleagues[5] reported that 96 percent of nurses and more than 90 percent of all others viewed nursing as having primary responsibility for patient safety. How can nurses be responsible for patient safety if they don't feel safe in challenging a physician's order?

Cook and colleagues[5] found that nurses were reluctant to discuss physician "practice variances" or errors with them because of nurses' perceived lack of authority to question the physician, a desire to maintain collegial relationships with physicians, prior experience with being rebuffed by a physician when the nurse questioned a medical practice, and a lack of support from administration when nurses do question or challenge physician practice.

The administrators' views of the situation supported the nurses' perceptions. Administrators believed that administrators had a limited role in questioning medical practice because of their own lack of clinical expertise. "According to many administrators, the responsibility for determining that an error has occurred rests with the physician"[5] (p. 36, 39). And pharmacists concurred that, while they were confident in their ability to recognize errors, they acknowledged that "differences among the four professions concerning definitions of error and scope of practice limit their ability to record problems as errors or initiate procedural changes"[5] (p. 39).

The participants in the study by Cook and colleagues[5] acknowledged that a lack of consensus about what constitutes an error leads to an underreporting of errors. As one nurse participant noted, "The physician told me it's not an error, so we don't need to file an incident report"[5] (p. 40), illustrating the relationship between agreed-upon definitions of error and the willingness to document, correct, or prevent errors. How can safe systems of care be developed to avoid more complex errors involving diagnosis and treatment if physicians define such mistakes as "practice variances" rather than errors, and others are not willing to correct this misconception?

Communication

Interdisciplinary communication is crucial to patient safety. In 1986, Knaus and colleagues[8] reported in the *Annals of Internal Medicine* that nurse-physician communication was the single most important predictor of mortality rates in 13 intensive care units in academic medical centers. But the study did little to prompt a concerted effort to improve such communications. Rosenstein and O'Daniel[9] reported on a convenience survey of 1,500 VHA[†] nurses and physicians. The survey found that 75 percent of respondents had witnessed "disruptive behavior" by physicians, and 68 percent had witnessed such behavior by nurses. Furthermore, 17 percent reported that adverse events occurred as a result of the disruptive behaviors. Some of the participating physicians said that nurses' reports of the patients' conditions are sometimes frustratingly inadequate.[9] On the other side, nurses reported that they will not call abusive physicians about their patients. Consider the following quotes from nurses in this study"[9] (p. 61-62):

- Delay in patient receiving meds because RN was afraid to call the MD.
- Most nurses are afraid to call Dr. X when they need to, and frequently won't call. Their patients' medical safety is always in jeopardy because of this.
- Adverse event related to med error because MD would not listen to the RN.

[†] VHA, formerly Voluntary Hospital Association, is a national consortium of nonprofit hospitals and medical practices.

- RN did not call MD about change in patient condition because he had a history of being abusive when called. Patient suffered because of this.
- RN called MD multiple times re: deteriorating patient condition. MD upset with RN calling. Patient eventually had to be intubated.
- Poor communication post-op because of disruptive reputation resulted in delayed treatment, aspiration, and eventual demise.

The Moral Imperative

Why and how is the moral imperative to act in the best interests of the patient lost in the turf battles and rigid organizational hierarchies that exist in most health care facilities? Health care leaders must come to grips with this question if patients' lives are to be spared and we are to live by the adage of "First, do no harm." These are long-standing issues, but the current focus on patient safety provides nurses with the opportunity to call for, demand, and lead organizational and interdisciplinary changes that will put patients first.

Current initiatives that are focusing on improving team communication, improving patient safety and quality, and ensuring that nurses are at the tables where quality of care and patient safety are discussed—whether within health care facilities, in national patient safety initiatives, or in public policy arenas—are encouraging. For example, the Robert Wood Johnson's Nursing Initiative embraces the idea that nurses are the key to quality. One project under its initiative is Transforming Care at the Bedside (TCAB), a joint project of the foundation and the Institute for Healthcare Improvement that focuses on empowering the bedside nurse in medical-surgical units. Using a rapid-cycle feedback method of quality improvement, interdisciplinary teams at select hospitals have examined interventions to improve the quality of care, such as rapid-response teams to assist nurses on these units to evaluate and intervene appropriately on patients with deteriorating conditions, and color-coded systems to alert administrators when staff are overloaded on a unit to the point of jeopardizing patient safety. For more information on TCAB, go to http://www.ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm.

While such initiatives are extremely important to the health of nursing and patients, leading changes to promote patient safety requires more than empowering nurses on the unit level. Nurses must be knowledgeable about the factors that lead to errors, be willing to act to fix the problems contributing to the errors, call for public policies that will support safer work environments, conduct research on the compelling questions that touch on nurses' contributions to patient safety, and make personal commitments to modify their own behaviors that may contribute to unsafe care. In this latter case, consider some of the research on nurses' work hours. Rogers and colleagues[10] reported in *Health Affairs* on a study of 363 nurses who volunteered to keep diaries on their workhours and errors. Eighty percent of the nurses reported working longer than their designated shift, with 40 percent of the shifts being more than 12 hours. About two-thirds worked overtime 10 or more times during the 28-day period of data collection, and one-third worked overtime every day. The nurses reported that they committed 199 errors and 213 near errors. In fact, 30 percent reported making at least one error, and 32 percent at least one near error. The researchers found a significant increase in risk of error after 12.5 hours worked, when working more than 40 hours in a week, and when working overtime. While those who volunteered for the study may have been more motivated to report on extended work schedules that were unsatisfactory to them, the study provided beginning data for understanding the relationship between workhours and errors.

In April 2006, Trinkoff and colleagues[11] reported on a work patterns survey of randomly selected nurses in two States funded by the National Institute for Occupational Safety and Health, adding to our understanding of the extent to which nurses are working unsafe hours and schedules. A significant portion of the respondents worked more hours than has been recommended by the Institute of Medicine: 28 percent worked 12 or more hours per day, including 52 percent of hospital staff nurses; 33 percent worked more than 40 hours a week; and 17 percent worked mandatory overtime. Furthermore, 19 percent of respondents worked more than one job. In this group, 37 percent worked 12 or more hours a day, 45 percent worked more than 40 hours a week, and 18 percent worked 6 or 7 days a week.

The Institute for Women's Policy Research[12] notes that hospitals have resorted to unsafe staffing practices (understaffing, overtime, use of contingency workers, and one-time bonuses for new hires) instead of wage increases in response to their inability to recruit sufficient numbers of nurses. Yet nurses who volunteer to work two jobs or extended work hours are associated with fatigue and subsequent errors, compromising patient safety. Nurses must continue to push for institutional and public policies that will support safer work environments, including adequate staffing ratios (for example, through legislating minimum ratios or transparency in public reporting of ratios, and through union contracts that set ratios or require that bedside nurses be involved in staffing decisions), elimination of mandatory overtime, and whistle-blower protections.

Conclusion

The current spotlight on patient safety provides nurses with an opportunity and the moral responsibility to call for changes in health care facilities' policies and operations that we know are detrimental to the safety of patients. The challenge is for all nurses to seize this opportunity. TCAB and other quality improvement initiatives provide nurses with the support and tools for leading changes in their workplaces. Nurse administrators must model leadership behavior if their staffs are to lead on the unit level. Nurses have a moral imperative to act on behalf of their patients. Anything less violates the patient advocacy mantle that we claim as a core nursing role.

Author Affiliation

Diana J. Mason, R.N., Ph.D., F.A.A.N., editor-in-chief, *American Journal of Nursing*; e-mail: diana.mason@wolterskluwer.com

References

1. Barnsteiner JH, Burke KG, Rich VL, eds. The state of the science on safer medication administration. Am J Nur 2005 Mar;3 (Supplement):1-56.

2. Ash JS, Berg M, Coiera E. Some unintended consequences of information technology in health care: the nature of patient care information system related errors. J Am Med Inform Assoc 2004 Mar-Apr;11(2):104-12.

3. Miller RA, Gardner RM, Johnson KB, et al. Clinical decision support and electronic prescribing systems: a time for responsible thought and action. J Am Med Inform Assoc 2005 Jul-Aug;12(4):403-9.

4. Nelson NC, Evans RS, Samore MH, et al. Detection and prevention of medication errors using real-time bedside nurse charting. J Am Med Inform Assoc 2005 Jul-Aug;12:390-7.

5. Cook AF, Hoas H, Guttmannova K, et al. An error by any other name. Am J Nur 2004 Jun;104(6):32-43;quiz 44.

6. Kohn LT, Corrigan JM, Donaldson MS, eds. To err is human: building a safer health system. A report of the Committee on Quality of Health Care in America, Institute of Medicine. Washington, DC: National Academy Press; 2000.

7. Cook AF, Hoas H. Voices from the margins: a context for developing bioethics-related resources in rural areas. Am J Bioeth 2001 Fall;1(4):W12.

8. Knaus WA, Draper EA, Wagner DP, Zimmerman JE. An evaluation of outcome from intensive care in major medical centers. *Ann Internal Med*1986; 104(3):410-8.

9. Rosenstein A, O'Daniel M. Disruptive behavior and clinical outcomes: perceptions of nurses and physicians. Am J Nur 2005;105:54-64, quiz 64-5.

10. Rogers AD, Hwang WT, Scott LD, et al. The working hours of hospital staff nurses and patient safety. Health Aff 2004 Jul-Aug;23(4):202-12.

11. Trinkoff A, Geiger-Brown J, Brady B, et al. How long and how much are nurses working? Am J Nurs 2006;106(4):60-71, quiz 72.

12. Lovell, V. Solving the nursing shortage through higher wages. Washington, DC: Institute for Women's Policy Research; 2006.