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David Mayer MD
University of Illinois Medical Center

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Reporting Patient Safety Events: Learning Opportunities for Resident Physicians

By David Mayer, MD

The goal of any medical education curriculum is to prepare trainees to address problems that affect the health of the public.[1] Over the past decade, medical errors and patient safety have emerged as global concerns in delivering quality health care. There has been considerable discussion in both the public and private sectors regarding ways to modify the current medical system to address the concerns raised by the Institute of Medicine's (IOM) 1999 report, *To Err Is Human: Building a Safer Health System*.[2]

In its follow-up report, *Crossing the Quality Chasm: A New Health System for the 21st Century*,[3] the IOM called for change in the education and training of physicians in order to address these problems. The Association of American Medical Colleges has called for a "collaborative effort to ensure that the next generation of physicians is adequately prepared to recognize the sources of error in medical practice, to acknowledge their own vulnerability to error, and to engage fully in the process of continuous quality improvement (CQI)."

Clearly, future physicians will need to be as competent in areas such as behavioral science, social science, resource management, teamwork, error science, leadership, quality improvement, root cause analysis, risk management, and interpersonal communication as they are in diagnostic medicine. Without these newer skills and competencies, health care practitioners will continue to fall prey to the numerous safety and quality "pitfalls" in the clinical environment.

Serious discussions regarding the design, implementation, assessment, and faculty development needs of patient safety education at both the undergraduate and graduate medical education levels have been sparse. In its white paper on the status of patient safety education at the trainee level, the Lucian Leape Roundtable on Patient Safety Education concluded "For the past 100 years, the singular focus of medical education has been on teaching the basic sciences and clinical knowledge and related skills. This can no longer be accepted as an adequate medical student education and training process in today's health care environment, for it simply will not permit the significant improvements in patient safety that are so desperately needed."[4]

At the graduate education level, David Leach, past chief executive officer of the Accreditation Council for Graduate Medical Education (ACGME), noted that all 6 of the ACGME competencies relate to patient safety in some way.[5] "Residents should be able to demonstrate that they can gather accurate information about the patient, that they know the cognate science of safety, that they can do a root cause analysis in the analysis of errors. They should demonstrate patterns of communication that promote safety, as well as professionalism needed to tell the truth about how safe the system is. However, it is probable that systems-based practice is the competence in which safety is most prominently featured. It is here that skills can be acquired to design safer systems."

The reporting of patient safety events – including near misses and unsafe conditions – is essential for patient safety and a critical characteristic of high reliability organizations. More than 10 years ago, the IOM reported deaths of up to 100,000 patients per year due to preventable adverse events. The authors of the report asked health care organizations to create voluntary reporting systems to improve the understanding of factors that contribute to medical errors and unsafe conditions[2] and The Joint Commission responded by requiring that accredited organizations establish reporting systems for adverse events.[6]

Despite these mandates and the perceived benefits of reporting, a survey in teaching hospitals revealed that only 54.8% of physicians knew how to report medical errors and only 39.5% knew what errors to report.[7] In our institution, fewer than 1% (<30 total reports) of safety event reports come from the more than 500 resident physicians who rotate through our medical center.

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In a questionnaire survey, White et al found that only 31% of interns or residents reported receiving instruction in error disclosure techniques.[8] Kaldjian et al identified factors that may facilitate (eg, responsibility to the patient and profession) or impede (eg, attitude, fears, anxieties) reporting of adverse events.[9] To investigate whether attitudes toward reporting and reporting skills could be improved through education, a patient safety and medical fallibility curriculum was developed by Madigosky et al.[10] The researchers found that this curriculum improved some attitudes and skills toward error reporting in the short term, but improvements were not sustained after 1 year.

The response to any patient safety event begins with a report to the organization's safety and risk management department. Reporting can occur in a variety of ways – phone call, written report, online messaging, or in person discussion – and can be provided anonymously. Because they are at the front line of patient care and routinely see adverse events, unsafe conditions, and near misses within the health system, it is essential that resident physicians have appropriate training, mentoring, and support in reporting of these events. Parker Palmer concluded that residents can serve as "moral agents" in protecting patients from the hazards inherent in health care today.[11]

Resident reporting may identify adverse events, unsafe conditions, or near misses that other reporting mechanisms may miss.[12] Patient safety events reported by residents can trigger quality improvement initiatives at the bedside while serving as excellent educational opportunities for the resident.[13]

As with many quality improvement initiatives, multiple barriers exist to reporting unexpected adverse events. Commonly encountered barriers include the fear of retribution or "shaming" and the assumption that nothing will come from reporting the event. Program directors must eradicate the "shame and blame" mentality that plagues many departments and institutions. In addition, appropriate follow-up with resident physicians and other care providers, including outcomes of investigations, patient interactions, and process improvements, should be a mandatory component of future resident reporting.

Educational Intervention

At the University of Illinois Medical Center, an educational intervention increased the number of adverse event reports by anesthesiology residents, improved their attitudes about the importance of reporting, and produced a source for learning opportunities and process improvements in the delivery of anesthesia care.[14]

In a prospective assessor study, anesthesiology residents participated in a training program focused on the importance of adverse event reporting in patient safety and reporting methods. Quarterly adverse event reports were analyzed retrospectively for the 2 years prior to the intervention and then prospectively on a quarterly basis. The residents also completed a survey prior to and 1 year after the intervention to evaluate their attitudes, experience, and knowledge regarding adverse event reporting.

The number of adverse event reports increased from 0 per quarter in the 2 years pre intervention to over 20 per quarter for the 6 quarters post intervention. Several categories of harm events, near misses, and unsafe conditions were identified. Over half of the harm events associated with procedural complications were associated with lack of supervision. Significant progress was also observed in the residents' ability to appropriately file a report, improved attitudes regarding the value of reporting and available emotional support, and a reduction in the perceived impediments to reporting.

In conclusion, residency programs that ascribe to a culture where reporting of patient safety events by residents is encouraged are ideally situated to provide training and assessment to their residents in the 6 areas of the ACGME core competencies while identifying additional areas for patient care improvement.

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***David Mayer, MD**, is Associate Professor of Anesthesia and Vice Chair for Safety and Quality in the Department of Anesthesiology, Co-Executive Director of the Institute for Patient Safety Excellence, and Director of Graduate Patient Safety Education at the University of Illinois Medical Center. He can be reached at: DMayer1@uic.edu*

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