

Virtual Mentor

Ethics Journal of the American Medical Association
April 2005, Volume 7, Number 4

Medicine and Society

Error in Medicine: The Role of the Morbidity & Mortality Conference

by Vincent Liu, MD

During the last several years, error in medicine has increasingly become a national concern, generating significant discussion about patient safety in the public media as well as in the medical literature. For physicians, however, medical error remains an unpleasant and often neglected reality. This attitude, which prevents necessary examination and change from occurring, may stem, in part, from lack of exposure to disclosure and discussion of error while physicians are in residency training. The morbidity and mortality conference (M&MC) can be a setting in which resident physicians become equipped to address errors in an educational forum and to focus on improving health care delivery and patient safety.

Reframing Error

More than 5 years have passed since the Institute of Medicine (IOM) released its report on the state of patient safety in America entitled, *To Err is Human: Building a Safer Health System* [1]. Based on 2 large-scale studies, this report estimated that between 44 000 and 98 000 people die in hospitals each year as a result of preventable medical errors [2-4], accounting for more annual deaths than automobile accidents. Not surprisingly, these staggering statistics promptly captured the attention of the American media and public. The IOM report focused on the concept of *latent error*, meaning “errors...caused by *faulty systems, processes and conditions* that lead people to make mistakes or fail to prevent them,” rather than on individual error [1] (emphasis added). The shift of focus away from individuals and on to systems had previously led to significant safety improvements in other high-risk industries including aerospace and nuclear power [5]. Furthermore, the IOM called on leaders in the health sector to make system redesign a national priority. The report has galvanized a substantial response among governmental agencies as well as among private and public organizations aimed at making patient care safer. Several groups, including the National Patient Safety Foundation, the Joint Commission on Accreditation of Healthcare Organizations, the Leapfrog Group, the Veterans Health Administration, and the American Board of Medical Specialties, have invested resources in accomplishing the goals outlined by the report [6-9].

Physician Views on Error

In addition to the focus on system-wide improvement, the IOM's recommendations also underscored the important role of physicians—individually and collectively—in improving patient safety by recognizing the need for their participation in voluntary error identification and reporting [1]. Studies on physicians' views of error disclosure, however, reveal a fundamental discordance. A survey of physicians who had

experienced errors in their own medical care or in that of a family member found that, while more than 70 percent assigned “a lot” of responsibility for the error to the physicians administering that care, less than 25 percent believed that mandatory hospital or voluntary physician error reporting would be a “very effective” solution [10]. Only a very few physicians even viewed medical errors as a major problem. Most study participants thought medical error was less important than the mounting burdens of malpractice insurance, the rising cost of health care, and the problems with insurance companies and health plans [10]. Similarly, interviews with physician focus groups have shown that, while the majority of doctors believe that the disclosure of medical errors that result in serious harm is an ethical imperative, they simultaneously admit to many situations in which they might not disclose such error [11]. Recurrent themes of litigation fears, loss of respect, outward and inward expectations of perfection and infallibility, and a strong ethic of personal responsibility were used to explain the lack of error reporting among physicians. Physicians also consistently describe the potential for such errors to become emotionally isolating events, further limiting their likelihood of disclosure [12-15].

Error Disclosure in Residency Training

The “see one, do one, teach one” mantra of medical training appears to have effectively encouraged new resident physicians to respond to medical error in the same way that physicians responded. A survey of internal medicine house staff revealed that 76 percent did not discuss their “most significant medical mistake in the last year” with the patient who suffered from the mistake or the patient’s family, and only about 50 percent discussed the case with the supervising attending physician [16]. These mistakes were significant enough to engender housestaff responses of remorse, anger, guilt, and inadequacy in 81, 79, 72, and 60 percent of cases, respectively. Despite their reluctance to discuss their mistakes, residents reported that the errors had led to positive changes because they sought more advice and were more vigilant. Notwithstanding their personal and clinical significance, however, these mistakes were infrequently addressed in an educational setting, with fewer than 1 out of 3 discussed at either morning report or M&MC. Thus, it comes as no surprise that both practicing physicians and physicians-in-training view error disclosure with hesitation.

The Morbidity and Mortality Conference

Based upon these responses, it would appear that the concept of addressing error is novel in medicine, but, in fact, the practice of reporting and learning from errors has a well-established history. The process of reviewing clinical outcomes in a standardized fashion began in parallel with the rise of the modern teaching hospital. The practice was refined through the work of Ernest Amory Codman, a surgeon at Massachusetts General Hospital in the early 20th century, who developed the “end result system” [17]. He detailed the clinical history and outcomes of each of his patients on a set of cards and used this information to review adverse events systematically and categorize their precedent errors. Although he faced opposition from colleagues and the hospital, Codman’s model went on to influence the standards for hospital practice issued by the American College of Surgeons in 1916. His work was further developed by anesthesiologists working in Philadelphia who, in 1935, created the Anesthesia Mortality Committee—a group whose aim was to review and discuss mortalities

related to anesthesia with a specific goal of choosing cases where an error was suspected [18]. The design and objectives of this group's meetings laid the framework for future M&MC. Since that time, anesthesiology has led the field in improving patient safety through systematic error review and has seen a dramatic decline in mortality related to the complications of anesthesia [19].

The M&MC has also been incorporated within surgery residency programs and has often been called the "golden hour" of surgical training [20]. Since 1983, it has been required by the Accreditation Council for Graduate Medical Education (ACGME) for training program certification. A precise definition and role of M&MC in internal medicine residencies, however, remains elusive, and the literature on its place in internal medicine training is sparse when compared to writing about its role in anesthesia and surgery. The ACGME's 1999 guidelines for the 6 core competencies of housestaff training only indirectly address the need for error appraisal under the heading of "professionalism," broadly requiring that each resident should "demonstrate...adherence to ethical principles...and a commitment to excellence and ongoing professional development" [21].

Morbidity & Mortality Conference in Internal Medicine Training Programs

In a survey of 295 internal medicine residency program directors, 90 percent reported having an M&MC or its equivalent [22]. Of the cases presented at these conferences, however, fewer than 1 out of 8 involved a "suspected error" and in one-third of cases, the suspicion of error was not a primary factor in case selection. Another study conducted at 2 major teaching hospitals revealed that error discussion happened only 10 percent of the time at internal medicine M&MC, as compared to 24 percent of the time at surgery M&MC [23]. Hence a surgery resident attending weekly M&MC for an entire year would observe 48 error discussions on average, while an internal medicine resident would observe fewer than 8 per year. With the near-absence of error disclosure and discussion during medical training, internal medicine residents may be ill-prepared to address errors in their future practice or to actively participate in nationwide voluntary error reporting. M&MC, therefore, has a vital role in the future of patient safety because of its unique place as an educational forum for reporting, addressing, and learning from medical errors.

Orlander et al suggest that a model M&MC in internal medicine training should "identify medical errors in order to learn from them" and "facilitate the open discussion of medical error" in an explicit but supportive fashion [24]. They also recommend that special attention be given to systems problems that can be remedied to prevent similar adverse events in the future. Using this format, M&MC could provide training physicians with a model similar to the IOM's recommendations for improving patient safety.

Conclusion

Medical error that leads to preventable patient deaths or other serious harms is a significant problem. Although attention should focus on sources of system-based latent error, physicians have a unique responsibility in error disclosure and reporting. Currently, several barriers prevent them from addressing this responsibility, and, if

future physicians are to accept this duty, they must change their attitudes and perceptions towards errors while in residency training. M&MC, used in this context, serves an invaluable role in both educating housestaff and promoting patient safety. Residency program directors should refine and revise their current use of M&MC to reach these goals.

References

1. Kohn LT, Corrigan JM, Donaldson M, eds. *To Err is Human: Building a Safer Healthy System*. Washington, DC: Institute of Medicine; 1999.
2. Brennan TA, Leape LL, Laird NM, et al. Incidence of adverse events and negligence in hospitalized patients: results of the Harvard Medical Practice Study I. *N Engl J Med*. 1991;324:370-376.
3. Leape LL, Brennan TA, Laird N, et al. The nature of adverse events in hospitalized patients: results of the Harvard Medical Practice Study II. *N Engl J Med*. 1991;324:377-384.
4. Thomas EJ, Studdert DM, Burstin HR, et al. Incidence and types of adverse events and negligent care in Utah and Colorado. *Med Care*. 2000;38:261-271.
5. Reason J. Understanding adverse events: human factors. *Qual Health Care*. 1995;4:80-89.
6. National Patient Safety Foundation Research Program: Summary of Progress 1998-2003. Available at: <http://www.npsf.org/download/ResearchSummaryofProgress.pdf>. Accessed January 20, 2005.
7. Sentinel Event Alert. Available at: <http://www.jcaho.org/about+us/news+letters/sentinel+event+alert/>. Accessed January 12, 2005.
8. Eikel C, Delbanco S, John M Eisenberg Patient Safety Awards. The Leapfrog Group for Patient Safety: rewarding higher standards. *Jt Comm J Qual Saf*. 2003;29:634-639.
9. Heget JR, Bagian JP, Lee CZ, et al. John M Eisenberg Patient Safety Awards. System innovation: Veterans Health Administration National Center for Patient Safety. *Jt Comm J Qual Improv*. 2002;28:660-665.
10. Blendon RJ, DesRoches CM, Brodie M, et al. Views of practicing physicians and the public on medical errors. *N Engl J Med*. 2002;347:1933-1940.
11. Gallagher TH, Waterman AD, Ebers AG, et al. Patients' and physicians' attitudes regarding the disclosure of medical errors. *JAMA*. 2003;289:1001-1007.
12. Christensen JF, Levinson W, Dunn PM. The heart of darkness: the impact of perceived mistakes on physicians. *J Gen Intern Med*. 1992;7:424-431.
13. Hilfiker D. Facing our mistakes. *N Engl J Med*. 1984;310:118-122.
14. Applegate WB. Physician management of patients with adverse outcomes. *Arch Intern Med*. 1986;146:2249-2252.
15. Wu AW. Medical error: the second victim: the doctor who makes the mistakes needs help too. *BMJ*. 2000;320:726-727.
16. Wu AW, Folkman S, McPhee SJ, et al. Do house officers learn from their mistakes? *JAMA*. 1991;265:2089-2094.
17. Mallon WJ. *Ernest Amory Codman: The End Result of a Life in Medicine*. Philadelphia, Pa: WB Saunders; 2000.
18. Ruth HS. Anesthesia study commissions. *JAMA*. 1945;127:514-517.
19. Pierce, EC. The 34th Rovenstine Lecture: 40 years behind the mask: safety

- revisited. *Journal of the American Society of Anesthesiologists*. 1996;84:965-975.
20. Gordon LA. *Gordon's Guide to the Surgical Morbidity and Mortality Conference*. Philadelphia, PA: Hanley & Belfus Inc.; 1994.
21. ACGME general competencies. Available at: <http://www.acgme.org/outcome/comp/compFull.asp>. Accessed February 1, 2005.
22. Orlander JD, Fincke BG. Morbidity and mortality conference: a survey of academic internal medicine departments. *J Gen Intern Med*. 2003;18:656-658.
23. Pierluissi E, Fischer MA, Campbell AR, et al. Discussion of medical errors in morbidity and mortality conferences. *JAMA*. 2003;290:2838-2842.
24. Orlander JD, Barber TW, Fincke BG. The morbidity and mortality conference: the delicate nature of learning from error. *Acad Med*. 2002;77:1001-1006.

Vincent Liu, MD, is an internal medicine resident at New York University Hospital Center/Bellevue Hospital. He will be the chief resident at Memorial Sloan Kettering Cancer Center next year and will be pursuing fellowship training in pulmonary and critical care medicine.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Last updated: Mar 31, 2005

Copyright 2005 American Medical Association