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Author: Derse Arthur R. MD, JD

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Medical Training and Errors: Competence, Culture, Caring, and Character

Arthur R. Derse, MD, JD

A.R. Derse is Julia and David Uihlein Chair in Medical Humanities, professor of bioethics and emergency medicine, and director, Center for Bioethics and Medical Humanities, Medical College of Wisconsin, Milwaukee, Wisconsin; ORCID: https://orcid.org/0000-0003-1896-1849.

Correspondence should be addressed to Arthur R. Derse, Center for Bioethics and Medical Humanities, M1100, Medical College of Wisconsin, 8701 Watertown Plank Rd., Milwaukee, WI 53226; email: aderse@mcw.edu; Twitter: @aderse.

Editor's Note: This is an Invited Commentary on Myers LC, Gartland RM, Skillings J, et al. An examination of medical malpractice claims involving physician trainees. Acad Med. 20XX;XX:XX–XX.

Abstract

Medical trainees will inevitably make errors as they learn. Errors should be minimized by a stronger focus on competence through better supervision and increased opportunities for simulation, as well as by reinforcing a culture that supports open identification of errors, disclosing errors to patients and families, and focuses on prevention through quality improvement. Yet, errors are also opportunities for education and remediation. Medicine's duty of care includes care for those harmed through errors and should also include care for those who have made the error. Errors that cause harm to patients challenge trainees to engage the character traits of honesty, humility, trustworthiness, and compassion, and to strengthen the practical wisdom to know when and how to exercise these character traits. The moral core of medicine—care of the patient in circumstances that may be uncertain and imperfect—as well as the duties of honesty, disclosure, repair, and redress may make equanimity (the calmness, composure, and evenness of temper needed in difficult and challenging situations) one of the most important character traits medical educators should identify, nurture, and encourage in trainees.

Why would someone sue a medical trainee? Residents and fellows are, by definition, trainees who are in the process of developing their clinical judgment through education and experience to reach the level of competence needed to practice independently. But they have not yet achieved that independent status. They will inevitably make errors as they learn. If they make an error that results in harm to a patient, shouldn't the attending physician responsible for supervising these physicians-in-training ultimately be held liable? Under the legal doctrine of *respondeat superior* ("let the master answer"), the attending physician who holds the supervisory responsibility for the care of the patient may well be liable for harm caused by a trainee. But the trainee might also hold some legal responsibility.

Competence

Myers and colleagues[1] identify the incidence of medical malpractice suits in which a trainee was a defendant—an incidence not heretofore well-documented. The fact that residents and fellows are involved in the care of patients who might be harmed by an error in a teaching hospital should not be remarkable—the authors recognize that trainees are often at the bedside during patient crises since they are a front-line workforce in many high-acuity hospitals—but the fact that residents and fellows are sued for malpractice in their roles as trainees may be surprising to some. These trainees are not yet deemed competent to practice their chosen specialty independently; yet, as the authors demonstrate, they are sued and may be held liable for malpractice.

These malpractice suits turn out to be uncommon, but training programs should still expect them: using the Comparative Benchmarking System (CBS), 581 malpractice claims with residents or fellows directly involved in harm events (as determined by CBS-trained nurse coders) were identified from 32 teaching hospitals over a 5-year span.[1] The incidents tend to occur in

procedural specialties, such as surgery and obstetrics/gynecology, or while treating patients in the emergency department, as is also the case for physicians who have completed their training.[2] In these specialties and situations, the stakes are often high with significant risk of adverse events. Myers and colleagues[1] further show that claims with trainees directly involved in harm events were more likely to result in payment than those without. It may be easier to demonstrate a mistake made by someone in training than it is to demonstrate a mistake by someone who has completed training. The authors make recommendations, among others, for increased supervision of trainees via trainees and attendings cosigning logs after procedures and the use of simulation to decrease errors that might lead to claims.

The fact that trainees are involved in adverse events does not necessarily mean that the trainee should be sued for malpractice. Medicine is a profession where adverse events may occur without being caused by a preventable error. Even if a trainee has made a preventable error, the mere fact of that error—an expected occurrence in training—should not necessarily mean the trainee is responsible for malpractice. Proving medical malpractice requires the elements of establishment of a duty, proximate causation of harm resulting in damages, and an additional element, namely, falling below the standard of care to which a prudent, similarly situated physician would adhere. Thus, it would seem that the trainee could only be held to a standard of care expected of a resident or fellow at the same specific point of advancement in the residency or fellowship program.

The determination of the standard of care to which a trainee could be held may have been difficult to determine in the past. But now, with better delineated competencies, as determined by the Accreditation Council for Graduate Medical Education, and extensively spelled out, specific milestones that trainees achieve as they advance in their ability to engage in entrustable

professional activities, it may be possible for plaintiffs to better identify an applicable standard of care for trainees based on their level of training at the time the incident occurred. Additionally, suing a trainee may require that the resident or fellow give a deposition under subpoena and may require testimony in court which might establish or support evidence or lead to new evidence. With the benefit of this additional evidence, the plaintiff's attorney might then drop the resident or fellow from the lawsuit, even as the suit against the attending physician and hospital goes forward. Because of these factors, it is somewhat remarkable that adverse events in teaching hospitals that result in litigation do not include trainees as defendants more often.

The purpose of a training program is for the trainee to achieve independent competence, which only education and graduated responsibility can confer. One might think that treatment by trainees, who learn in part from their errors, might lead to a poorer quality of care at teaching hospitals, but the opposite has been shown to be the case. For example, treatment at teaching hospitals has been shown to produce higher-quality outcomes than treatment in hospitals that do not have a mission of education and training.[3] That is, attention and treatment in academic medical centers by trainees coupled with knowledgeable and experienced supervision may result in fewer errors that cause harm rather than more. Similarly, the archaic training system known by the adage, "see one, do one, teach one," has long been deemed inadequate for the high degree of supervised training and oversight required in the modern health care milieu. It is the responsibility of supervisors of trainees to identify and correct errors and inadequacies in trainees' knowledge, developing skills, and emerging professional judgment. Performance-related cognitive errors of trainees should be identified and addressed, including knowledge deficits, lack of recognition, attention and memory lapses, cognitive biases,[4] and errors in how trainees analyze and resolve problems.[5] Remediation, if necessary, should provide trainees with

the opportunity to learn from errors so they can advance in knowledge and skills.[6] Myers and colleagues'[1] recommendations concerning supervision and simulation are aimed at expanding training and oversight to reduce the occurrence of errors made by trainees to the extent possible.

Culture

In his 1979 book, *Forgive and Remember: Managing Medical Failure*, Charles L. Bosk described the surgical culture and how it addressed errors in training.[7] Errors by trainees in technique or surgical judgment were seen as professional errors that were forgivable, though the trainee must never forget the lesson of the error. Errors that were deemed a failure in performing the duties of the surgical service or of the profession were seen as personal failings. Trainees faced the prospect of identification of errors of either type—done confidentially in a closed professional process—with terror and shame.[7] Patients and families might never learn of the error or how it was addressed. Over the past few decades that culture of closed professional identification of errors in surgery and other specialties has undergone a major transformation.[8] Rather than focusing on an event as an individual failure and doing so in secret via a closed process, physicians and others now use more open processes and techniques to identify errors, disclose them to patients and families, and, when possible, use quality improvement to address the failure of the system that produced or may have contributed to the errors—a process that has been successful in the airline industry and has transformed efforts to reduce errors in the health care system.[9]

But systems-based approaches to preventing errors in complex technical procedures have limitations. Technology and systems approaches took the Apollo 11 astronauts to the moon and back 50 years go, but the same technology and systems were regrettably unable to prevent the alleged medical error that caused the death of the first astronaut who walked on the moon.[10]

Even as artificial intelligence shows the promise of using technology and systems to further reduce error,[11] we are still in the "moon shot" phase of reforming the medical culture and refining health care systems to prevent errors.

A central feature of U.S. culture concerning errors is the legal system. The fact that Canadian physicians are sued per capita one eighth as often as U.S. physicians is not because they make proportionally fewer errors, but instead is related to Canada's malpractice law, its health insurance for all citizens, and its culture.[12] In the United States, litigation may be the cultural choice of redress for medical errors, but there is a mismatch between litigation and adverse events caused by error—that is, litigation for adverse events may be more closely related to the severity of the adverse event than to the event having been caused by physician malpractice.[13] Unsurprisingly, like Myers and colleagues' finding for trainees,[1] U.S. physicians in procedurally focused specialties are more likely to be sued than physicians in other specialties.[14] Nonetheless, over time there *is* arguably a relation between the incidence of litigation and practitioners who consistently are determined to have caused harm by falling below the standard of care.[15] Whether or not the U.S. malpractice system is the better way to address errors and competence (as opposed to Canada's system, which limits use of contingency fees, infrequently uses jury trials, limits awards for pain and suffering, and requires the losing party to bear the costs of litigation), U.S. trainees should understand the high likelihood that they will face litigation in their career, which means they should acquire an understanding of the U.S. medical malpractice system and its implications for them as they move forward in their training and into practice.

Caring

Patient and family feelings of shock, sadness, and anger after an adverse event, and their demand to know what went wrong are natural and understandable. Patients and families often experience

feelings of isolation and alienation.[16] When a death has occurred due to error, it is natural that family members who feel they have been wronged would wish to pursue compensation for that wrong. In some cases, they may want punishment for the perceived wrongdoers. When Libby Zion died as a result of an error made by the residents caring for her, her father, Arthur Zion, wanted the residents to be criminally charged, which would both punish them and make an example of them to prevent future harms. After review by a grand jury, prosecutors declined to issue criminal charges against the residents or their faculty supervisors.[17] The error was thought to be due in part to the trainees' lack of sleep. The consequent Bell Commission restricted trainee duty hours in New York, an action that was later adopted for trainees nationally.[18]

Patients who have experienced harm are still our patients and require our continued care. Most patients and families are looking for truth, the prevention of future errors, and just compensation—not punishment of trainees. The recognition of the duty of truthfulness (to the extent known) and the duty of providing caring support to the harmed patient (and to the patient's family and loved ones) has resulted in a sea change concerning disclosure and expressions of sorrow. In the past, physicians were reluctant to use the word "sorry" for an adverse event because of its potential use in court as a spontaneous utterance that implied culpability. So called "apology laws" in many states now allow expression of sorrow for the patient's adverse outcome without the ability for the statement to be cited against the physician in a malpractice suit.[19] Care of the patient and family requires that sorrow and empathetic concern be expressed. To paraphrase Francis Peabody's insight that the secret to the care of the patient is in caring for the patient: The duty of care of the patient includes caring for the patient and family who have been harmed.[20]

Beyond the needed caring for the patient and family, we must also care for our own wounded healers. "Blaming and shaming" of trainees and practitioners for adverse outcomes has devastating personal consequences.[21,22] Blaming and shaming of trainees might also harm patients. The symptoms of depression and the concomitant decrease in empathy that trainees report from having made a major error[23] can impair their judgment and may result in even more errors.[24] Thus, addressing the blaming and shaming of trainees for errors is not only important in caring for trainees but may also result in improved patient care. Residents and fellows should be educated about errors and their consequences both for their patients and for themselves. They should be prepared for the weighty professional and personal ramifications of errors, including the potential for subsequent litigation.

Trainees need empathy and support subsequent to having caused major harm from errors, including confidential counseling that minimizes the adverse legal implications of such discussions. Insight and support from other physicians who have endured medical errors may be helpful. Faculty development programs to preserve and foster humanism in medicine should include modules on breaking bad news, error disclosure, and modeling caring attitudes in the aftermath of medical errors.[25] Medical humanities, especially narrative medicine, may provide a needed resource for insights into the human experience of medical error.[26] Attention and receptivity to the patient's narrative may help to prevent error by aiding the physician in gathering medical facts and learning about the patient's concerns and values, and narratives themselves can contribute to an empathetic understanding of the patient's, family's, and physician's experience of the consequences of adverse events due to errors.[27]

Character

The commission of an error that causes harm to a patient during training is a test of the trainee's honesty, humility, trustworthiness, and compassion. Though many of the trainee's character traits will have been developed in the years prior to medical training, there is a growing recognition of the importance of identifying and strengthening the character traits that will be required of the emerging physician. For example, the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education at the Medical College of Wisconsin, along with its network partners, is devoted to the aim of identifying and strengthening character traits that are essential for physicians as well as to the traditional educational aims of developing competence and promoting caring.[28]

The crucible of the challenge to trainee character posed by the commission of an error that causes harm to a patient provides an opportunity to further strengthen these essential character traits and to develop the practical wisdom (or "phronesis") to know when and how to exercise these character traits. Responding to these challenges to character when adverse events occur also offers the trainee an opportunity to further develop yet another important character trait for physicians—equanimity.

Equanimity is the calmness, composure, and evenness of temper needed in difficult and challenging situations. Sir William Osler understood the importance of this vital character trait and encouraged physicians to develop it.[29] Equanimity can help the trainee to avoid error and adhere to the right course during high-stakes endeavors that may be fraught with uncertainty or become confusing or chaotic.[30] Equanimity can also help the trainee to accept appropriate responsibility for harms caused to patients and to endure blame—justifiable or not—that may

include medical malpractice litigation. Equanimity may also help the physician to remain compassionate to the patient and family throughout the ordeal.

Equanimity can help trainees understand that, even with the best education, training, and oversight, the slings and arrows of errors and their consequences will come. The moral core of medicine—care of the patient in circumstances that may be uncertain and imperfect—as well as the duties of honesty, disclosure, repair, and redress may make equanimity one of the most important character traits we, as medical educators, should identify, nurture, and encourage in our trainees. Our patients' health and lives may depend on it.

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