The Oncologist
Schwartz Center Rounds

Medical Mistakes: A Workshop on Personal Perspectives

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ABSTRACT

Shortly before his death in 1995, Kenneth B. Schwartz, a cancer patient at Massachusetts General Hospital (MGH), founded the Kenneth B. Schwartz Center at MGH. The Schwartz Center is a non-profit organization dedicated to supporting and advancing compassionate health care delivery, which provides hope to the patient, support to caregivers, and sustenance to the healing process. The center sponsors the Schwartz Center Rounds, a monthly multidisciplinary forum where caregivers reflect on important psychosocial issues faced by patients, their families, and their caregivers, and gain insight and support from fellow staff members.

Medical errors are difficult to discuss. Significant medical errors occur in approximately 3% of hospitalizations. Two-thirds are preventable. Despite an entrenched belief that doctors should be infallible, errors are inevitable. *Dr. Wendy Levinson* of the University of Chicago facilitated a discussion of the impact medical errors have on staff. Staff broke into small groups to share their personal experience and then discussed common themes: the sense of shame and guilt, the punitive culture, guidelines for disclosure to patients and colleagues, and changes in medical practice that can prevent future mistakes. Auditing and improving systems has led to considerable improvements in the field of aviation safety. However, in medicine people are more important than the process. While we should never cease to aim for the very best in delivered care, we must acknowledge how prone we all are to mistakes and that we can learn from and prevent errors. Openly sharing experiences in a confidential setting, such as the Schwartz Rounds, helps defuse feelings of guilt and challenges the culture of shame and isolation that often surrounds medical errors.
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PRESENTATION

Medical errors can have a disastrous effect on patients, staff, and institutions. Our errors will always be a taboo subject. Medical mistakes haunt the conscience of those involved and we very naturally find them difficult to discuss. Confidentiality mandated that no recording was made of this Schwartz round, and the format of this article has been altered to report the broad scope of the sensitive issues that were raised.

Novel Format

Dr. Wendy Levinson, Professor of Medicine at the University of Chicago, has written widely on the issue of doctor-patient relationships, including issues related to medical errors. *Dr. Levinson* facilitated a one and one-half hour lunchtime seminar attended by approximately 90 members of staff. She started by describing her own experience of missing an important diagnosis. She relayed the profound feelings attached to this experience with a clear

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note of emotion in her voice, and explained how this experience clashed with her self-perception. *Dr. Levinson* then encouraged staff to form groups of four or five to share their own experience of making medical mistakes. The groups were asked to identify one person to report back to the larger group in a discussion of the themes that were raised. The format of the discussion was negotiated and broad categories listed on poster boards. Written comments on the evaluations of the rounds were extremely positive with a request to have further discussion on the ethics of disclosure to patients. Twenty-three of 26 respondents (92%) agreed completely (5/5) that the discussion had been helpful to them.

DIALOGUE

Nature of the Error

Errors were typically isolated events and happened outside the caregivers' usual scope of practice or expertise. Errors tended to happen at times of pressure or distraction. The most common errors included prescribing the incorrect drug or dosage, procedure-related problems, or diagnostic errors. Staff found errors of omission easier to gloss over than errors of commission where patients had suffered or died as a direct consequence. Although most felt the need for full disclosure there was less agreement about what constitutes a mistake and how the bad news should be broken to the patients or family.

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Emotional Reaction: Guilt

Spokesmen for the break-out groups identified feelings of guilt as the most common response. There was a strong sense of "personally taking responsibility" for errors. Other emotions included shame, vulnerability, fear of criticism, and anxiety about a soiled reputation. The "if only" sense of frustration was also a common thread, with staff still agonizing over how things could have been different if they had only been able to predict the future or extended themselves just a little further. These feelings were understandably associated with a loss of self-confidence. Many reported an overwhelming sense of responsibility. They relived the experience over and over again with the strong emotional reaction preventing their subsequent adjustment. It was clear that staff reconnected with much of the shame that they felt at the time of the accident. Some were still troubled by guilt acknowledging that they still tried to minimize, qualify, or justify their mistake. Others commented that they had found colleagues' attempts to minimize the problem unhelpful. A physician expressed the opinion that to be forgiven too quickly was unhelpful. He felt that for the sake of personal integrity as much as for the present medical culture, problems should be clearly identified and a concrete plan for change should be set in place.

Dr. Levinson continually encouraged the specific identification and expression of emotional responses. Acknowledging how people felt effectively gave a very real sense that this was a universal experience. It was apparent that people could actively recall exactly how they felt at the time that the error was realized and that these emotions can imprint a permanent emotional scar.

In situations when the right thing had been done but an unpredictable adverse outcome or a foreseen detrimental outcome occurred, staff often found solace in the fact that they had done or attempted to do the right thing to the best of their ability at that time. In such situations, teams often shared responsibility in a protective liaison.

Beliefs

While acknowledging that they are not perfect professionals, many believe that they should never make a mistake. Many felt that they fell short of external or internal standards. Doctors should be "in control" of the outcome. They shouldn't make mistakes. Safeguards should prevent errors. Others rationalized mistakes as being their best effort. Some blamed the disease seeing iatrogenic problems as part of the complexity of patient care. Many felt the tug of denial, "This couldn't possibly happen to me." These various beliefs of perfectionism, determinism, and denial spanned the whole spectrum of the medical population, doctors, nurses, and social workers.

Coping

Facing up to a medical error when it has occurred is never easy. Many participants expressed the temptation to keep the error hidden and the burden of guilt that this brought. Some skills that participants of the discussion had used include seeking support, minimizing the problem (typically done by colleagues), blaming the patient, and ruminating about the experience. While it is difficult and uncomfortable to recognize one's personal failings, it is necessary to face the problem and to try to learn why it happened in the hope that it can be prevented in the future.

Changes in Practice

Medical errors often precipitate significant changes in that person's practice of medicine—some very positive, some

negative, some unnecessary, and some based on feelings or based on facts. These changes represented another form of coping with the error and moving on from it. Common responses were that those who had made a mistake now sought greater support from the entire team with whom they worked. They also found that they overcompensated with an unnecessarily defensive practice, in which the missed test was performed needlessly on every patient. Some wanted to challenge or change the system, while others searched more introspectively for reasons.

The Morality of Disclosure

The basic responsibility of a caregiver to disclose properly, fully, and openly all details of a serious medical error was not questioned. It was common for a structured explanation to be given to patients and their families in an attempt to clear up any uncertainties as candidly and thoroughly as possible. However, one physician related the allegory of a tree falling in a forest with no witnesses. Does it matter? If a potentially serious error occurs but there are no consequences, is a physician still compelled to disclose the error? How should that be weighed against a trivial variation in clinical practice that is associated with devastating consequences? To what extent should the motive and the mechanics of a medical error be balanced with the consequences of the error? Another physician expressed the opinion that written orders carry far greater weight when compared with verbal orders when questioning the degree of disclosure that had to be made. To each of these exceptions, there was voiced clear support for maintaining honest and open communication of the facts between caregiver and patient.

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The consequences of a failure to disclose on the physician-patient relationship were addressed. When the truth regarding a serious error is revealed to a patient later or through a third party, the patient is likely to experience a far greater sense of betrayal. There is still a pervasive sense that doctors are only comfortable breaking good news. Patients trust their doctor to tell them both good and bad news. They also want doctors to take their time, to cover all the details, to have frank discussions, and to answer their questions. Patients and their families want as much information as possible so that they can know exactly what is going on and can be an integral part of the decision-making process.

Apparently random "human" errors may represent a systematic problem that could be prevented in the future if disclosed. A social worker voiced her concern that reluctance to discuss issues related to medical error robs us of a chance to learn and improve, and a physician reminded everyone that substandard practice must be identified and stopped.

The nature and length of the relationship with the patient appeared to be a strong influence on the experience for all parties and having an established relationship with the patient clearly buffers against the adverse effects of disclosing medical errors. The integrity of the caregiver may foster trust. No convincing defense exists for any common exceptions to full and complete disclosure.

Discussion

Definitions

Although every one of us knows a "medical error" when one has just happened, there is no one universally accepted definition for a medical mistake. The way in which adverse events are classified varies widely, typically reflecting the political agenda. Negligence implies failing to meet the reasonable standards of a prudent practitioner given the specific circumstances [1]. A helpful definition of a "medical error" given by *Wu et al*. is, "A commission or an omission with potentially negative consequences for the patient that would have been judged wrong by skilled and knowledgeable peers at the time it occurred, independent of whether there were any negative consequences" [2, 3]. Some authors have attempted to score the severity of medical errors. *Guly* developed the Misdiagnosis Severity Score (MSS), a measure of the potential seriousness of a diagnostic error, and compared it with doctors' perceptions of the severity of the errors made [4]. The MSS seems valid and rather than a measure of individual blame, it can be a tool to assess an error and to learn from it. Medical errors represent a uniquely sensitive issue. Under the current system, blame is typically placed on an individual and results in shame and isolation with the fear of litigation, inhibiting an open and honest debate about medical errors.

Incidence

The clearest data on the incidence of medical errors in American hospitals have come from the Harvard

Medical Practice Study, which analyzed 30,121 randomly selected records from 51 randomly selected acute care hospitals in New York State in 1984 [5, 6]. Two physician-reviewers independently identified and evaluated adverse events. Adverse events occurred in 3.7% (1 in 27) of hospitalizations: 27.6% of the adverse events were due to negligence, 2.6% caused permanently disabling injuries, and 13.6% were fatal. Rates of adverse events rose with the age of the patient ($p < 0.0001$) and varied among clinical specialties, the highest being surgical subspecialties ($p < 0.0001$). Drug complications were the most common type of adverse event (19%), followed by wound infections (14%), and technical complications (13%). Nearly half the adverse events (48%) were associated with an operation. Errors during surgery were less likely to be caused by negligence (17%) than were nonsurgical errors (37%). The proportion of adverse events resulting from negligence was highest for diagnostic "mishaps" (75%), "errors of omission" (77%), and events occurring in the emergency room (70%).

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The Harvard Medical Practice Study is further supported by a similar study undertaken in Utah and Colorado in 1992 [7]. Adverse events occurred in 2.9% (1 in 35) of hospitalizations. Approximately 30% of adverse events were due to negligence and 7% of the 2.9% (2 per 1,000 hospitalizations) were fatal. Operative adverse events comprised 44.9% of all adverse events, and most adverse events were attributed to surgeons (46.1%, 22.3% negligent) and internists (23.2%, 44.9% negligent).

The results of these two studies therefore suggest that between 44,000 and 98,000 Americans die each year as a result of medical errors [8]. Both the New York and the Utah and Colorado studies concluded that medical error is common, that many are preventable, and that improving medical systems, particularly surgical care and drug delivery, could substantially reduce iatrogenic injury [5-7].

Benchmarking and Education

When studying medical mistakes a common factor is poor supervision of inexperienced physicians, and the resulting lack of compliance with hospital guidelines [9]. Discontinuity of care and coverage by "cross-care" more often results in potentially preventable adverse events [10]. Fatigue is associated with making more mistakes [11]. However, the self-perception of exhaustion or a feeling of being overwhelmed was associated with minor, rather than major mistakes in one study [12]. More serious mistakes appeared to be due to ignorance and inexperience. The existence of a punitive medical hierarchy, denial of exhaustion, inexperience, or inadequate training may cumulatively contribute to medical error. More mistakes occur through carelessness than ignorance [2]. The common causes of medical errors are hurry, distraction, lack of knowledge, premature closure of the diagnostic process, and inadequately aggressive patient management. Typically multiple factors contribute to any single error. Physicians who are aware of the more common causes of errors may be better prepared to prevent them [13].

A study conducted in five Harvard teaching hospital emergency departments found an improvement in emergency care when benchmarking was added to quality improvement efforts [14]. When guidelines were followed, there was a significant decrease in patient-related medical errors. In a retrospective review of closed malpractice claims by the Department of Emergency Medicine (EM), Denver, Colorado, differences in occurrence of claims and indemnity and defense costs were compared [15]. The total cost (indemnity + defense costs) per physician-year of malpractice coverage was $4,905 for non-EM residency-trained physicians compared with $2,212 for EM residency-trained physicians. The difference was mainly due to significantly fewer claims against EM residency-trained physicians.

With the advent of innovative surgical procedures comes an inevitable learning curve. Laparoscopic "keyhole" surgery has made that right of passage, and high profile cases of negligently poor surgical technique have spurred better training programs [16]. Laparoscopic complications occur in approximately 6 of 1,000 procedures [17, 18]. The latest report from the Physicians Insurers Association of America found that payments to plaintiffs for laparoscopy errors totaled $34 million [19].

With respect to the most vulnerable patients, the poor, the elderly, and the uninsured appear to be most at risk for medical mistakes. However, these are the groups least likely to sue [20, 21].

Intrinsically Imperfect

The present culture still perpetuates the myth that doctors cannot make mistakes. Medical care is a complex system with infinite permutations because each one of us is so unique. Accidents usually begin in conventional ways but rarely proceed along predictable lines. Doctors, too, are human, and "to err is human" [8]. Human error occurs and is sometimes unavoidable. In his book Human Error, *James Reason*, a British psychologist, argues that "our propensity for certain types of error is the price we pay for the brain's remarkable ability to think and act intuitively," that the brain's real brilliance sets up its own propensity to skip or assume [22].

We see our frailty in starkest contrast when told of our limitations and mistakes. The role of the nurse, often caught in the middle as an observer of medical error, can be unenviably difficult. The responsibility of "telling a physician he's wrong" is never easy. Hospital policies clearly describe a nurse's primary responsibility to the welfare of the patients. Approaching the physician in a professional, courteous, non-accusatory manner, and asking them to evaluate the situation is most likely to be effective [23]. The two most cited ways to reduce the impact of medical error are system management and improved communication.

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Systems

Another complex field that has pioneered a change to a more open and nonpunative system is aviation safety. Aviation authorities now accept the inevitability of error. This has allowed open discussion of ways that their system can be changed to provide better safety for passengers. Checklists are now being replaced by real-time computer monitoring, which feeds back assessment or alerts the pilot. Similar systems are being considered in anesthesiology, but progress is slow because of the threat of prompting litigation [24]. The aviation industry has reduced the frequency of operational errors to one in one hundred thousand flights, and most of those errors have no harmful consequences. The fierce personal ethic, which mandates striving for individual perfection, may slow progress to safer systems [25]. However, limiting medicine to defensively following nominal best practice rarely serves patients' best interests. Changing the current system may be dependent on influential physicians who will champion these issues, changing the entire culture and opening a new understanding of accountability that moves beyond blaming individuals [2].

Professional Culture

The balance between striving for perfection and perfecting the system is delicate. In his book Forgive and Remember, *Charles Bosk* of the University of Pennsylvania reported how surgeons categorized and punished medical errors [26]. He concluded that technical errors were tolerated, even forgiven, in contrast to moral lapses: "It is not the patient dying but the patient dying when the doctor on call fails to answer his page" that incurs sanction. *Bosk* hypothesized that forgiveness of technical error obligates the doctor-in-training to seek continual improvement as a high ethic. Moral standards remain the organizing principle within self-regulated professional organizations. Differences that are treated as acceptable matters of style among peers become a matter of moral censure between ranks [26]. *Atul Gawande* wrote in the *New Yorker* of his experience of being responsible for a botched emergency tracheotomy [25]. He describes his personal self-recrimination as brutal in the court of hindsight; "Whatever the limits of the M&M [surgical morbidity and mortality meetings], its fierce ethic of personal responsibility for errors is a formidable virtue…No matter what measures are taken, medicine will sometimes falter, and it isn't reasonable to ask that it achieve perfection. What's reasonable is to ask that medicine never cease to aim for it." So the defense in anticipation of an error is to do "everything possible in good faith."

Communication With Patients Regarding Mistakes

In general, a physician has a moral obligation to disclose his or her error to the patient [2]. There have been no clearly articulated exceptions. However, the obligation of a physician to disclose an error made by another is less clear. Physicians have argued that nondisclosure may be ethically appropriate if an error is inconsequential or if disclosure would unnecessarily distress the patient, or if disclosure is likely to result in unwarranted diminution of patient trust. In these cases, promotion of autonomy may not be the overriding obligation compared with beneficence and justice, the other ethical tenets.

It has been argued that physicians are obligated to avoid harming patients and to promote patient welfare [2]. The American Medical Association's *Code of*

Medical Ethics clearly states that when an adverse event may have resulted from the physician's mistake or misjudgment, the physician is ethically required to fully inform the patient of all the facts necessary to ensure understanding of what has occurred, and the likely consequences. The physician also has the obligation to report the adverse event to hospital authorities and to their colleagues. Although full disclosure may fracture or tarnish relationships, admitting mistakes may strengthen trust and a sense of community among doctors.

A recent study on patient-physician communication identified specific and teachable communication skills that appear to be associated with fewer malpractice claims against primary care physicians [27]. The first is to lengthen the time of the visit, spending more time with the patient. The second is to let the patient dictate the pace and scope of the discussion. The third is to facilitate the expression of underlying concerns and unvoiced fears that the patient may have. The fourth and final is to bring a little humor or personal anecdote into the consultation. In a survey that reported the negative impact of claims on a physician's mental and physical well being, all those who responded viewed improved patient-physician communication as the most effective way to prevent malpractice claims [28]. Programs have been instituted in hospitals to train staff in communication techniques [29]. While an improvement in physicians' confidence is often evident, there are limited data to support an increase in patient satisfaction and health care outcomes [30]. One study demonstrated that camaraderie among the staff members increased significantly after participating in one of these workshops and suggested that education is the key in improving awareness, understanding, and communication within the medical community [31]. Improved communication may play a major role in reducing the risk of litigation. Furthermore, how we communicate may also influence how well staff process the emotional consequences from a medical error [32].

Changing the current system may be dependent on influential physicians who will champion these issues, changing the entire culture and opening a new understanding of accountability that moves beyond blaming individuals.

Dealing with Feelings of Guilt

In the aftermath of a medical error physicians are left with strong feelings of guilt. The South African Ministry of Reconciliation and Justice has developed a model of social recompense that appears to meet the needs of both the victim and the perpetrator. The "guilty" party is allowed the opportunity for full disclosure in return for a promise of immunity. No such immunity is possible in the context of admission of medical errors.

In-depth interviews suggest that physicians relatively infrequently disclose their mistakes to colleagues, family, and friends [33]. Acknowledging a mistake offers the opportunity to improve the quality of medical practice but is also the first step in minimizing the emotional damage to both the patient and doctor. Being aware of the propensity to project blame, deny or rationalize elements of the error allows the emotions of regret, shame, and anger to be addressed. Expressing regret to the patient and trusted colleagues starts the process of learning from the error, taking measures to prevent recurrence and facilitating emotional adjustment. Hiding a "heart of darkness" [33], soiled by guilt and fear, often causes a physician to harbor significant emotional distress. "I felt a sense of shame like a burning ulcer. This was not guilt: guilt is what you feel when you have done something wrong. What I felt was shame: I was what was wrong. And yet I also knew that a surgeon can take such feelings too far. It is one thing to be aware of one's limitations. It's another to be plagued by self-doubt" [25]. This sense of shame can go beyond guilt and leave in its wake a destructive loss of confidence, and in response, rigorous attention to detail may give way to continual self-recrimination that inhibits a positive adjustment.

People often have similar coping strategies for mistakes made both in their professional lives and their personal lives. It is clear that in other areas of conflict, such as divorce, how people respond significantly alters the outcome. The two most destructive responses seem to be withdrawing from or escalating the conflict, and either can fracture the relationship [34]. Withdrawing in a hostile, detached, or defensive way requires a structured attempt at resolution and independent support or arbitration. In response to medical errors, staff may either unhelpfully invalidate patient's concerns or overcompensate with inappropriate self-criticism. Accepting, evaluating, and

learning from problems is a challenge that all caregivers must face.

Conclusion

Mistakes are common and most are preventable yet the right of passage slogan, "Don't mess up," fails to acknowledge that human fallibility is universal. The caring professions have a responsibility to ensure optimally safe medical systems, and to mitigate the heavy personal cost of medical errors to both patients and caregivers and to learn from their mistakes.

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