

# MEDICAL ERROR: SOME ETHICAL CONCERNS

In the past few years, medical error has surfaced as a prominent concern among health care professionals. The event that drew attention to the problem was the publication, by the Institute of Medicine (IOM), of *To Err Is Human: Building a Safer Health Care System*.<sup>1</sup> This study informed us that more lives are lost each year to medical errors than to breast cancer, highway accidents, or AIDS. While admitting that human beings in all lines of work commit errors, the study's authors maintained that errors can be prevented by designing systems that make it hard for people to do the wrong thing and easy for people to do the right thing. They offered four recommendations to reduce medical error and thus improve patient safety:

- Congress should establish a national Center for Patient Safety that, by establishing leadership, research tools, and protocols, would enhance the knowledge base concerning safety.

- Congress should establish a mandatory reporting system that would enable people to identify and learn from errors.

- Congress should pass legislation extending peer-review protection to the activities of oversight organizations and professional societies.

- Health care organizations should create safety systems through the implementation of safe practices at the delivery level.

*To Err Is Human* was followed a year later by another IOM publication: *Crossing the Quality*

*The Best  
Protection  
against  
Error  
Remains the  
Physician's  
Traditional  
Sense of  
Professional  
Responsibility*

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*Chasm: A New Health System for the 21st Century*.<sup>2</sup> As the title indicates, this second study was designed to supplement the initial work by presenting more specific plans for the renewal of health care in the United States.

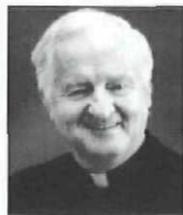
Since 2001, as a result of the publicity surrounding the IOM studies, medical error has become the subject of many other books, articles, seminars, and symposia. Although the experts do not agree on the specific causes of medical error, they do say it arises not only from negligence on the part of physicians and other health care professionals but also because of systemic errors—that is, as a result of processes and practices in the provision of medical care. They also agree that errors in health care can be reduced dramatically.

In this article, I do not propose to offer solutions to the medical error problem. Instead, I want to suggest some fundamental truths about medical care, truths that, I will argue, have been insufficiently considered by those writers who *have* offered solutions to the problem.

## WHY HAS THE PROBLEM ATTRACTED ATTENTION?

Errors have occurred in medical practice since its very beginning. Why such great concern about them at this time? Two main factors have focused public attention on medical error. The first factor, I would argue, is the contemporary concentration on “informed consent.” The second factor is society’s success at reducing error in other organized forms of human endeavor, in aviation and nuclear energy plants, for example.

**Informed Consent** For many years, the patient was considered a passive person in the physician-patient relationship. The physician was considered the only person in the relationship with the knowledge necessary to make decisions about the proper methods of combating illness. The patient was relied upon mainly to describe the symptoms that



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had persuaded him or her that medical care was needed in the first place. The physician saw no need to tell the patient much about the illness, or to offer him or her a choice concerning the therapy through which the illness was to be alleviated.

In the 1960s, however, the physician-patient relationship began to change. As the result of agitation by a new type of health care professional—the bioethicist—physicians began to see that patients *did* have the right to be informed concerning their medical conditions, as well as the right to choose among an array of therapies, in accordance with their values. As a result of the bioethicist movement and other influences, both doctors and judges began to recognize patients' ethical and legal rights.

In 1973 the American Hospital Association formulated a document entitled *Patients' Rights*, which, although it was never adopted universally by hospitals, did give a good summary of what a patient should be aware of when evaluating his or her rights vis-à-vis a physician or health care facility. Those rights could be summarized as follows:

- The right to be told the whole truth
- The right to privacy and personal dignity
- The right to refuse any test, procedure, or treatment
- The right to read and copy medical records<sup>3</sup>

Some lawyers and ethicists were so intent upon promoting informed consent as a patient right that they envisioned a time when the patient would be equal to the physician, insofar as knowledge is concerned, and would be considered legally and ethically on a par with the physician. They proposed patient autonomy as a basic building block of the physician-patient relationship. Error detected on the part of the medical provider evoked the thought that "someone has to pay." Some bioethicists, contemplating the future of health care, seemed to advocate the slogan *caveat emptor* (let the buyer beware). There was a growing tendency to view the therapeutic relationship as adversarial.

The new emphasis on informed consent and an adversarial relationship led to a prolific increase in malpractice litigation. While some health care professionals berated the increase in malpractice cases as an affront to the medical profession, others realized that one constructive way to limit malpractice cases was to reduce the number of medical errors.

The effort to reduce error was aided by the studies of human error in other sectors of the economy and by a more structured study of human error itself.<sup>4</sup> Especially helpful was the realization that error may be the result of a system failure, as well as of human negligence. Simplifying and standardizing procedures, build-

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ing in safety checks, seems to reduce the possibility of negligence. It has, for example, aided a restructuring of the methods used in prescribing medications. Today most hospitals utilize computers to generate prescriptions, thereby eliminating the potential for errors that might result from trying to decipher physicians' handwriting.

**Success in Other Fields** A second factor in the effort to reduce medical error is the success that other industries employing sophisticated technology have had in limiting adverse events. The aviation and nuclear energy industries, for example, both realized that it is helpful to study not just events that actually cause damage, but also those events known as "near misses" in which damage *could have* occurred but, for some reason or another, did not. In general, these high-tech industries did not penalize people when error or near misses occurred, unless obvious negligence was involved.

My purpose is not to consider in detail the means that other industries employed to reduce error and adverse events, but simply to call attention to the fact that the results of serious efforts to limit errors in these industries encouraged leaders in medicine to face the same task openly.

#### THE PHYSICIAN-PATIENT RELATIONSHIP

Any effort to reduce medical error must begin with an accurate understanding of the physician-patient relationship. It is erroneous to presuppose that the relationship should be adversarial. The health care professional is not simply a scientist-technician; he or she is a quasi-religious figure as well. Asclepius, an ancient Greek hero who is considered the father of Western medicine, was looked upon as a god. His priests presided over shrines where the sick came to worship, sleep, and have their dreams interpreted. The caduceus, a staff with entwined serpents—the serpent was the cult animal of Asclepius's shrines—remains today the symbol of the medical profession.

The Asclepian myth manifests a basic truth about the medical profession: the physician retains something of a priestly aura. The medical profession's direct relation to life and death inevitably gives it a fundamentally religious character. A patient's trust in the physician resembles a religious trust. One well-known medical ethicist has referred to the physician-patient relationship as a "covenant," suggesting that the physician holds a position similar to that of Yahweh in his relationship to the Chosen People.<sup>5</sup> To this day, trust remains a basic characteristic of the physician-patient relationship.

No wonder, then, that the physician is a charismatic figure surrounded by a religious or priestly atmosphere, as current television programs about doctors demonstrate. Although this trust has

been at times abused, and although some modern bioethicists and lawyers would like to make a more "deconstructed" and legalistic relationship the basis for the practice of medicine, patients will continue to have an element of trust in and a trace of religious respect for their physicians.

People working in other occupations are not looked upon as quasi-religious figures by the people they serve. This does not mean that some of the methods used to reduce error in those occupations cannot also be applied successfully to health care. But it does suggest that the medical profession should keep people's quasi-religious respect for it in mind as it plans for the future.

### PHYSICIANS AS SCIENTISTS

The contemporary medical professional is also seen as a scientist. The scientific, or empirical, side of medicine already was understood in the time of Hippocrates, about 400 B.C. It was recognized as well by medieval Arabian, Jewish, and Christian physicians. But not until the 19th century did science become a notable characteristic of the profession, probably because it was during that century that modern chemistry and biology began to make their great modern strides.

Because medicine's scientific aspects soon overshadowed its traditional priestly aspects, certain difficulties arose. The physician often became a dogmatic figure, both in medicine and in other matters as well. The medical profession began to jealously guard its authority and prerogatives and to refuse to discipline its members or even to admit publicly that they sometimes made errors. As I noted earlier, physicians denied patients the right to have an opinion in regard to proper medical care; malpractice litigation they considered a social abuse.

However, no matter how strongly physicians emphasize the scientific aspects of their discipline, they will never entirely slough off its priestly aspect. The priestly characteristic will remain a significant element in the physician's persona. And, because this is so, trust will always be at the foundation of the physician-patient relationship.

This being so, it would seem that reducing error in medical practice—whether the error stems from negligence or from faulty systems—must rely heavily on the conscientious attitude of medical professionals themselves. Yet neither IOM study emphasizes the intrinsic motivation of physicians as a method of eliminating error. *To Err Is Human*, as its writers say, "focuses primarily on the external environment and the policy and market strategies that can be employed to encourage actions by health care professionals and health care organizations."<sup>6</sup>

But the focus, it seems to me, should instead be on the intrinsic motivation of health care pro-

professionals; intrinsic motivation should remain the key incentive in any effort to reduce errors in medicine. Medical and nursing schools—and other facilities that prepare young people for the profession of medical care—must focus on the personal responsibility of the professional and the covenantal relationship between the professional and the patient. The professional's personal responsibility should be presented as a sacred trust.

As for fostering a more error-free health care system, the IOM studies appear to me to rely too heavily on the "external environment" to solve the problem. Although the Joint Commission on Accreditation of Healthcare Organizations and professional medical societies will certainly play an important role in improving safety in U.S. health care, such agencies—whether governmental or private—will not supplant personal responsibility as a force for renewal of the health care system.

Because this is so, it seems to me that the *continuing* education of health care professionals also must be emphasized. Professionals require intense preparation for licensing as health care specialists; at present, however, they need meet few requirements to *maintain* that licensing. The various professional specializations in medicine (of which there are more than 25) would thus seem to have a serious obligation to strengthen continuing education programs to help remove error from patient care.

### MEDICINE IS NOT AN EXACT SCIENCE

Another factor that must be kept in mind when considering medical error is the *nature* of medical care. As medicine's scientific side grew dominant, the myth was developed (and propagated) that it was an exact science. Some people are led by the myth to believe that the only sources of error in medicine are ignorance and negligence. But medicine is *not* an exact science. One of the foremost principles of medicine enshrines this realization: "First of all, do no harm."

An exact science is a body of knowledge that allows one to draw certain conclusions from causes and to apply that knowledge without fear of error. Mathematics is an exact science. Only human error causes defects in mathematical reasoning. While medicine relies on exact sciences such as biochemistry and pharmacology, it applies this scientific knowledge—not to inanimate objects—but to living human beings. Hence the specifying element of all the knowledge and techniques utilized in medicine is the individual. Medical care can be provided without negligence and still result in error because of this fact. Consider, moreover, that medicine is concerned with preventing and curing illness. In so doing, physicians cannot formulate specific norms that

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are certain for all people at all times.

Some critics of modern medicine maintain that its scientific side has been so overrated as to destroy its true worth.<sup>7</sup> True, general norms can be formulated to limit the occurrence of specific diseases, but there is no certain connection between lifestyle and a particular disease. Some who have a lifelong habit of smoking cigarettes never contract lung cancer. Pharmaceuticals affect different people in different ways. For some people, penicillin is an effective remedy for microbial infection; for others, it may cause a toxic or allergic reaction that could be fatal. People respond to therapy in ways that are not scientifically predictable.

Thus the necessity for an *art* of medicine. This art is operative when science is applied to individuals. Indeed, because a physician assumes responsibility for helping patients improve their health, his or her discipline is a *unique* form of art. In the physician's case, the work of art produced is not a more appealing object but, rather, a better human being.

Another factor limiting the certainty of medical judgments is the difficulty of obtaining sufficient empirical evidence to ensure the certainty of a medical diagnosis. Clinical judgment combines both inductive and deductive reasoning and is inevitably filled with uncertainty.<sup>8</sup> Different illnesses may exhibit similar symptoms. Moreover, laboratory tests that are used in making diagnoses vary widely in reliability and accuracy. The fact that a person happens to have a high "bad cholesterol" reading does not in itself ensure that his or her arteries will become clogged.

In one study, as many as 100,000 deaths were attributed to medical error or adverse events.<sup>9</sup> This figure was called into question by other studies.<sup>10</sup> Be that as it may, it seems a mistake to associate death with medical error or to think of it as an "adverse event." Death is a *natural* event. No matter how excellent and error free the medical care patients receive, some of them will still die.

Perhaps it would be more accurate to say that many deaths occurred *with* medical error, rather than *because* of medical error. A pathbreaking study of seriously ill hospital patients has shown that many people die as a result of their illnesses despite extensive therapy expended on their behalf.<sup>11</sup> Because death is a natural event, it should not be equated with medical error, unless it clearly results from an error that so alters the patient's condition that he or she would not have died if the error had not occurred.

Verifying this type of error is very difficult, and the data cited in the IOM studies do not, in fact, provide verification. It seems likely that physicians would address the error issue more realistically if they and their leaders were to admit that

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medicine is *not* an exact science and communicate this fact to the public. If physicians were more realistic about error in health care, the public might become more realistic as well and, as a result, reduce the number of malpractice lawsuits.

### PROTECT THE ELEMENT OF TRUST

I have intended in this article neither to excuse the medical profession of errors nor to suggest that the effort to reduce errors in medicine should be minimized. But efforts to reduce error in medicine should not be unrealistic; some error is endemic in medicine because of its very nature. Moreover, although some error is the result of poorly planned systems, the best protection against it remains the personal responsibility of the medical professional. Because that is so, we must, as we strive to make medical care ever more safe, take great care never to attenuate the element of trust in the physician-patient relationship. □

### NOTES

1. Institute of Medicine, *To Err Is Human: Building a Safer Health Care System*, National Academies Press, Washington, DC, 2000.
2. Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century*, National Academies Press, Washington, DC, 2001.
3. Benedict M. Ashley and Kevin D. O'Rourke, *Ethics of Health Care*, Catholic Health Association, St. Louis, 1986, p. 36.
4. H. Van Cott, "Human Errors: Their Causes and Reduction," in Marilyn Sue Bogner, ed., *Human Error in Medicine*, Lawrence Erlbaum Associates, Hillsdale, NJ, 1994; James Reason, *Human Error*, Cambridge University Press, Cambridge, England, 1990.
5. Paul Ramsey, *The Patient as Person: Explorations in Medical Ethics*, 5th ed., Yale University Press, New Haven, CT, 1980.
6. *To Err Is Human*, p. 23.
7. L. E. Goodman and M. J. Goodman, "Prevention—How Misuse of a Concept Undercuts Its Worth," *Hastings Center Report*, vol. 16, no. 2, April 1986, pp. 26-28.
8. See, for example, Atul Gawande, *Complications: A Surgeon's Notes on an Imperfect Science*, Metropolitan Books, New York City, 2002.
9. L. L. Leape, D. M. Berwick, and D. W. Bates, "What Practices Will Most Improve Safety, Evidence-Based Medicine Meets Patient Safety," *JAMA*, vol. 288, no. 4, July 2002, pp. 501-507. An "adverse event" is one that is unforeseen and serious but not fatal.
10. R. A. Hayward, "Counting Death Due to Medical Error," *JAMA*, vol. 288, no. 19, November 2002, pp. 2,404-2,405.
11. SUPPORT Principal Investigators, "A Controlled Trial to Improve Care for Seriously Ill Hospitalized Patients," *JAMA*, vol. 274, no. 20, November 1995, pp. 1,595-1,598. (SUPPORT stands for Study to Understand Prognosis and Preferences for Outcomes and Risks of Treatment.)