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It's time medicine stopped burying its mistakes

ACCORDING TO A RECENT, well-publicized report from the Institute of Medicine,[1] medical errors kill an estimated 44,000 to 98,000 patients in American hospitals each year. We can quibble about the numbers, which were extrapolated from several studies,[2,3] but it is clear that a frontal attack on this problem is long overdue.

We in the health care professions, especially those of us in hospitals, routinely look for and learn from medical errors. But despite our current efforts, we continue to make errors, occasionally with disastrous consequences.

We clearly need a better approach to patient safety as our treatments become more potent and effective, but at the same time more complicated and dangerous. And as health care moves out of the hospital into outpatient centers and physicians' offices, the creation of error-identification and prevention systems becomes even more important.

Fortunately, the Institute of Medicine's report is crystallizing and legitimizing these efforts across the country. The challenge is to improve the current systems and remove the barriers standing in the way of error-prevention programs that will work truly well.

HOW ERRORS SHOULD BE ANALYZED

Most medical errors are "minor" in that they result in no discernible harm to the patient, who may not even recognize them as having taken place. In the study of Brennan et al,[2] over half fell into this category. Some errors are not minor, however, and in Brennan's study, 13.7% of them resulted in death of the patient.

Accident theory provides a way to approach this problem. Viewing medical errors as predictable outcomes of imperfect processes provides a rational basis for applying well-studied industrial process-improvement algorithms to health care.

The basic premise of this approach is that complex, tightly coupled processes, such as health care, are prone to accidents, ie, errors.[1,5] Health care delivery processes are made up of many subprocesses that are complex (nonlinear), tightly coupled (highly interdependent), and not always under common managerial control. Although the error rates in each of the subprocesses may be very small, the compounding effect of these small error rates in sequentially occurring subprocesses predictably results in a high error rate for the overall process.[6] This suggests that reducing the number of subprocesses and the number of interfaces between them is likely to be more successful in reducing the overall error rate than trying to perfect each subprocess individually.

BARRIERS TO REPORTING ERRORS

Before the root cause of an error can be fixed and further errors prevented, somebody has to notice that an error has occurred and report it. And two main barriers—fragmentation of medicine and a potential "culture of blame"—impede our ability to obtain and use the data we need to mount an effective attack on medical errors.

Health care is fragmented

Most hospitals have multiple systems for recording errors, and in many cases there is little sharing of data between these systems: they "don't talk to each other." For instance, a typical hospital might have a myriad of separate databases residing in its incident-reporting office, pharmacy, ombudsman service, radiation safety office, quality management office, infection control department, care pathways department, risk management office, and general counsel's office. The systems are directed at recording, archiving, classifying, analyzing, prioritizing, and otherwise studying the errors, not at detecting them in the first place. The existence of these redundant systems reflects the sheer magnitude

and complexity of the error-prone processes with which we are dealing.

At least these systems exist in many hospitals. Not so in most private physicians' offices, where reporting and recording of errors is a highly individual phenomenon. Initiatives to consolidate the many pieces of the health care system into integrated systems and networks provide an opportunity to reduce this fragmentation.

Reporting leads to a 'culture of blame'

The second barrier is the threat of developing a "culture of blame,"[4] with the eagerness of government and internal management to punish a scapegoat for anything that goes wrong.

How the hospital approaches error reporting and its consequences is extremely important in determining the degree to which errors actually get reported. If people who make or observe errors fear for their jobs, they are far less likely to report them than they would be if management viewed errors as an opportunity to learn about and improve the processes of care. This managerial gestalt is probably more important than the physical systems for quantifying and studying errors.

Then there are the personal-injury lawyers. As we gear up to study and publish our errors, our friends in the legal profession will be waiting in gleeful anticipation of the rich table we are setting before them. The problem of tort liability has not been resolved for the modern era of consolidation, networking, and managed care. Currently, peer-review activities, done within a single institution for the purpose of quality improvement, are legally privileged and, hence, not discoverable. All bets are off, however, when we talk about networks of hospitals, outpatient clinics, and physicians' offices. One of the Institute of Medicine's major recommendations is that this issue be addressed legislatively to permit greater openness in sharing information about errors, a prerequisite to learning the lessons needed to prevent them.[1] Tort reform is a difficult path, however, and most of the gates are guarded by lawyers, both in the legislature and the judiciary.

Finally, as we begin to discuss errors more openly, it is important not to confuse the results of better error detection and reporting with increased frequency of errors.

INNOVATORS IN ERROR REDUCTION

The conclusions of the Institute of Medicine report that medical errors that occur frequently should not have come as a surprise to anyone who has spent much time around hospitals or read the newspapers in recent years. A few famous cases—such as the chemotherapy overdose of Boston Globe writer Betsy Lehman[7] and the "wrong leg" surgery in a Florida hospital[8]—were highly publicized years before the report. These incidents prompted several important efforts in confronting the problem of medical errors—efforts that should be recognized even as the Institute of Medicine report galvanizes further reform efforts.

Jerod Loeb of the Joint Commission on Accreditation of Healthcare Organizations and the late Mark Eppinger of the Annenberg Center for Health Sciences conceived the First Annenberg Conference devoted to medical errors in 1996. And the Joint Commission went on to develop and define the concept of the "sentinel event," which uses an event resulting in a serious injury or death to trigger an analysis of the root cause of the error, so that the system can be analyzed and recurrences of the error prevented.

These early efforts at systemizing our approach were an important step. Further reduction of errors is one important aspect of an effective overall quality improvement program. It will be difficult, and the learning curve will be steep, but the payoff will be well worth the effort and the risk.

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