Invited commentary

Medications, mistakes, and American priorities: It's time to make health care safe

In this issue of *BUMC Proceedings*, Rosen provides a good introduction to the evolving challenges of safely providing medications to patients (1). This review builds nicely on the thorough and wide-ranging review of the history of quality at Baylor provided by Ballard et al (2). In framing the broader issue of patient safety—into which the important points in Rosen's review fit—it is important to emphasize several important concepts: 1) our nation's health system commonly provides what would have been considered miracles less than a century ago, and 2) justifiable pride has tended to distract from seeing significant problems that still deserve attention.

The 2000 report from the Institute of Medicine (IOM) shocked both the lay and professional communities by the magnitude of hospital-associated deaths due to errors (44,000–98,000 per year) (3). Unfortunately, the ensuing debate about the accuracy of these figures tended to distract investment in efforts to address this crisis. A recent report by HealthGrades indicates that the IOM figures may well underestimate the problem by a factor of two (4). To move past the debate about accuracy and create a case for both commitment and action to reduce errors, the IOM and HealthGrades data might better be considered in practical terms:

- The annual death toll in US hospitals from medical errors is equivalent to 1) the total death toll of all four September 11, 2001, disasters happening every 1 to 2 weeks for a year; 2) loss of all aboard a jumbo jet every day for a year; or 3) 2 to 4 times the annual number of US traffic fatalities.
- Hospital patients face a risk of dying from a medical error that is nearly the same as the risk of dying from skydiving and about 3000 times higher than the risk of dying from a crash of a commercial flight.
- Error-related death in hospitals (excluding ambulatory errors) is between the third and the sixth leading cause of death in the USA, depending upon which estimate is used.

Table 1. Comparison of major threats in the USA

Issue	Terrorism	Hospital errors
Source of threat	External fanatics willing to die for their "cause"	A "swiss cheese" system of care that does not sufficiently respond to the natural frailties of professionals (memory lapses, inaccurate assumptions, communication gaps, etc.); viewed as difficult to change
Loss of American lives	<5000 during the last 4 years	250,000–750,000 during the last 4 years
Awareness of the problem	Everyone in the USA is aware and concerned; government is committed; relevant professionals are actively engaged	Concern is growing by the public and employers (Leapfrog); very limited government action; professionals typically discount the problem or are too busy to engage in improvement
Financial investment in improving safety	Approaching $1000 per US resident during the last 2 years in federal initiatives to combat terrorism	<$1 for every US resident spent by the US Agency for Healthcare Quality and Research to improve patient safety
Efforts under way	Major military actions in Iraq and Afghanistan; new mandatory airport screening; restructuring of the intelligence agencies of the US government; worldwide monitoring of electronic communication	Institute of Medicine reports; new national organizations and meetings; required reporting of quality of care to receive a 0.4% increase in the government payment rate; encouragement of public reporting of hospital actions taken to improve patient safety

Comparing the national response to the September 11 disasters and to the crisis of medical errors is worthwhile and, hopefully, thought provoking *(Table 1)*. This comparison is meant to imply not that the US war on terrorism might be excessive but that the investment in improving our safety when we are hospitalized is far too small.

Table 2. Characteristics of high-reliability health care organizations

• Vigilantly identify errors/problems	• Develop good communication
• Display high levels of teamwork	• Use system thinking to minimize risk
• Nonpunitively report errors	• Have strong leadership support
• Learn from mistakes	• Develop structures that support safety
• Allocate resources to safety to ensure progress	• Engage everyone (including patients) in safety

Making mistakes is part of being human. All of us must engage in efforts to improve our ability to consistently deliver the care that patients need and deserve, even when it involves effort to change our systems and habits. The golden rule applies here: the care we and our families receive will be no better than the care that we typically deliver to others.

Baylor Health Care System facilities have recently required physicians to participate in both surgical site marking and a "time out" before all procedures to ensure the identity of the patient, the intended procedure, and the presence of necessary personnel, equipment, charts, and relevant radiographs. A few physicians were irate over the inconvenience and argued that they hadn't made a mistake of the kind that was being prevented. Would we feel as comfortable flying if the preflight checklist done by pilot and copilot were done only when they felt like it or when they had had a prior problem? We take a few seconds every day to put on seatbelts, even though the risk of having a fatal accident is only about one in a million per day, so what's different about taking 30 seconds to ensure everything is right before a procedure?

It is important for all those involved in caring for patients to raise their expectations and build a culture that embraces the characteristics of the high-reliability organizations shown in *Table 2*. Consider the culture issues surrounding hand-washing. Nosocomial infections are common, and while only some are preventable, it is estimated that 20,000 to 50,000 people die annually as a result. How routinely do health providers wash their hands before seeing a patient? Some of the time, most of the time, nearly all of the time? When surgeons and operating room nurses prepare for surgery, they *always* scrub. The culture of the operating room is such that a professional who was in too much of a hurry to scrub would not be permitted access to the patient. Are professionals who fail to wash their hands before a patient visit doing so as a result of a conscious decision? Typically not, but to make it easier to remember, alcohol foam dispensers are in every patient room. How do you think you might react if a patient or nurse reminded you to wash your hands? Would you find this a constructive reminder or would you be irritated? If you'd be irritated, why? These are important and sometimes difficult issues. Progress will be required to fully deliver on Baylor's commitment to be "the most trusted source of comprehensive health services" and indeed for us all to realize in a fuller way our own professional potential.

How can those in health care participate? When standardized order sets are being developed or revised, join the groups working on them to make sure they meet the needs of you and your patients. Care paths, protocols, guidelines, and order sets are not "cookie-cutter" medicine; they provide reminders so that human oversights are less likely to result in poor patient care. When reminded to wash your hands or perform a procedure-related "time out," consider it a helpful reminder for the benefit of the patients, not an assault on your autonomy. Medicine is practiced in teams, and we need to value every team member's contributions and to build effective relationships. When mistakes happen, consider them opportunities to learn, and let patient safety or quality personnel know about them. Doing so will not expose you to greater threat of licensure revocation or malpractice litigation. For physicians, when nurses ask for clarifications about orders or read them back to ensure they are right, be patient. They are following policy and acting professionally in the interests of *your* patients. When clinical transformation begins where you work during the next several years, help in the planning and use of the tools that will help you have access to more useful information to make the best decisions about your patients.

Real progress has been made in patient safety at Baylor, and more is planned. Risk-adjusted mortality in Baylor Health Care System hospitals has dropped by 10% in 3 years. Baylor has achieved very high objective performance in the care of patients with acute myocardial infarction, congestive heart failure, and pneumonia. These data are publicly available on the Centers for Medicare and Medicaid Services website (5).

Only by investing our energy and other resources will the care of patients realize the 6 major quality goals defined by the IOM: care that is safe, timely, effective, efficient, equitable, and patient-centered (STEEEP). This issue is owned by us all. It is not a physician, nurse, administrator, or patient "problem" to handle. Only by raising our shared expectations and by working together will the care we deliver to patients be as good as we would like it to be for ourselves and our families.

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4. HealthGrades. *HealthGrades Quality Study: Patient Safety in American Hospitals, July 2004*. Lakewood, CO: HealthGrades, 2004. Available at http://www.healthgrades.com/media/english/pdf/HG_Patient_Safety_Study_Final.pdf; accessed August 10, 2004.
5. Centers for Medicare and Medicaid Services. Hospital Quality Initiative. Available at http://www.cms.hhs.gov/quality/hospital/default.asp; accessed August 10, 2004.