

ADVANCING QUALITY THROUGH IMPROVED Patient Safety

Despite the most sophisticated medical care in the world, each year more Americans die at the hands of our health care system than from some of life's deadliest diseases. So says the Institute of Medicine's (IOM) 1999 report, *To Err Is Human: Building A Safer Health System*, which estimates that between 44,000 and 98,000 lives are lost annually as a result of preventable medical errors – more than car accidents (43,458), breast cancer (42,297), or AIDS (16,516).

Worse, these estimates are conservative since they only consider incidents with hospitalized patients. Figures for medical errors occurring in outpatient or other institutional settings – where the majority of today's health care is actually delivered – are not included. If they were, the estimated death count could rise significantly.

Above and beyond the toll in human suffering, medical errors cost the nation between \$17 billion and \$29 billion annually in additional treatments, longer hospital stays, or more intensive courses of care to correct medical mistakes. Lastly, the opportunity costs of medical errors are incalculable, contributing to increased insurance costs for unnecessary or improper care, decreased satisfaction among patients and providers alike, and, ultimately, the erosion of public trust in the health care system.

What causes medical errors and, more importantly, what can be done to prevent them? As the IOM's report shows, there is no single solution to the problem. Medical errors occur in all sectors of health care and in the provision of all types of care. To reduce such events, the IOM set forth a broad series of recommendations, several of which are already being adopted while others continue to be studied and discussed. It has also established a national goal of reducing medical errors by 50 percent over the next five years.

This *Issue Focus* is based upon a February 28, 2001, GIH Issue Dialogue, *Advancing Quality Through Patient Safety*, and presents information on what medical errors are, how they occur, and what strategies grantmakers can adopt to prevent them.

DEFINING MEDICAL ERRORS AND PATIENT SAFETY

The IOM defines medical error as “the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.” The Federal Quality Interagency

Coordination Task Force (QuIC) (2000) – formed as a direct result of the IOM's findings – further acknowledges the broad scope of errors, noting that they can occur in practice, products, procedures, and systems.

Adverse events are injuries resulting from medical management. Given the current state of medical knowledge, not all adverse events are preventable. Medical errors are a subset of adverse events that are preventable. These preventable adverse events are caused by a medical intervention, not an underlying patient condition.

Because not all errors result in injury, the IOM further defines patient safety as “freedom from accidental injury.” Again, expanding upon the IOM's work, the QuIC views patient safety as including “initiatives designed to prevent adverse outcomes from medical errors.”

Patient safety is thus achieved by focusing on the interactions of components within our health care system, not just the successful avoidance of a specific adverse outcome or preventable error. Reducing medical errors is an important part of this equation.

REDUCING MEDICAL ERRORS

Medical errors are rarely the result of individual misconduct; rather, they are caused by failures in health care systems. Because of the complexity of medical care, a single patient may have hundreds of encounters with multiple health professionals during a hospitalization; problems can occur at any point during the treatment process. Patients may be at risk of overuse or underuse of necessary care, of missed or delayed diagnoses, of mistakes with medications or treatments. Patient falls or high salt content meals given to a patient on a low sodium diet are additional examples of preventable medical errors.

A systems approach takes into account interactions among health professionals, between human beings and technology, and the complex organizations in which health care services are delivered. Medication errors are an excellent example of preventable adverse events caused by system failures. Research conducted by the Agency for Healthcare Research and Quality (AHRQ) in 1993 found that 78 percent of adverse drug events were due to system failures. Some, as simple as misreading a handwritten prescription, can cause serious errors.

System improvements have been shown to reduce errors.

For example, bar-coding systems for dispensing drugs can dramatically reduce medication errors. When the U.S. Department of Veterans Affairs (VA) required all of its hospitals to have such systems in place, medication errors dropped by 70 percent over five years (Findlay 2000). Similarly, LDS Hospital in Salt Lake City, UT, reduced antibiotic drug complications in hospitalized patients by 30 percent following installment of a computer-assisted decision support system for physicians (Findlay 2000).

Because health care is a complex industry in which many players must communicate and cooperate in order to effectively and safely treat patients, a culture of safety needs to be fostered. This culture should identify safety as a priority and align organizational objectives and rewards. It should also acknowledge that health care is a high-risk activity and that everyone in health care shares responsibility for error prevention.

Health organizations' leadership is critical to establishing a culture of safety. Trustees, hospital executives, and other administrators need to make safety a key priority, placing it on the same level as market share, financial performance, and strategic planning. Creating a culture of safety also requires establishing a nonpunitive environment in which health care professionals can report and learn from adverse events and near misses.

Policymakers, health professionals, public and private organizations, researchers, and many others are actively engaged in reducing medical errors and improving patient safety. Some of these activities have been ongoing for several years, such as work by the Anesthesia Patient Safety Foundation. Other initiatives are more recent and were undertaken in direct response to the IOM report and its recommendations. QuIC, for example, was established after the IOM called for a patient safety center within the AHRQ to set national goals for medical errors reduction and tracking patient safety progress.

A number of grantmakers are actively engaged in reducing errors and improving safety. Their work takes place at all levels of the health care system and involves a range of activities in public policy, consumer education, and advocacy. For example, the California HealthCare Foundation awarded a grant to the University of California at San Francisco to both educate a broad medical audience on the process of medical error analysis and to provide quality care improvement through the development and publication of *Quality Grand Rounds*. Case studies of patients suffering adverse medical outcomes are presented in the publication, with expert analyses of the systems and human factors that placed patient safety in jeopardy and that are amenable to improvement. The Jewish Healthcare Foundation was instrumental in creating the Pittsburgh Regional Healthcare Initiative, partnering the foundation with local business and health care leaders to address medical errors. To date, the Initiative has taken such specific actions as developing

electronic patient records that can be shared across facilities and implementing computerized physician order entry systems. Additionally, The Robert Wood Johnson Foundation has announced a new \$20.9 million initiative to help hospital and physician organizations improve the quality of care they provide. Twelve organizations will be funded to develop business plans for pursuing perfection in their health care processes. Up to six of these organizations will then receive major grants and technical assistance to implement their plans.

CONCLUSION

The IOM's goal of reducing medical errors by 50 percent is achievable, but will require a comprehensive, coordinated approach. This approach must include public and private actions, combined with market and regulatory strategies that are implemented both within health care organizations and in the external environment.

Medical errors is an area in which foundations of all types can contribute, regardless of size, geographic focus, or experience. It is an issue that grantmakers can address with local grants of several thousand dollars or through national initiatives costing millions. Medical errors and patient safety are relatively new areas of funding for grantmakers, but, as the momentum continues, grantmakers will find fresh opportunities and challenges to help improve the nation's health.

SOURCES

Findlay, Steven, ed., *Reducing Medical Errors and Improving Patient Safety: Success Stories from the Front Lines of Medicine* (Washington, DC: National Coalition on Health Care and Institute for Healthcare Improvement, February 2000).

Institute of Medicine, *To Err Is Human: Building A Safer Health System* (Washington, DC: National Academy Press, 1999).

Quality Interagency Coordination Task Force, *Doing What Counts for Patient Safety: Federal Actions to Reduce Medical Errors and Their Impact: A Report to the President* (Rockville, MD: February 2000).

Rosenthal, J., T. Riley, and M. Booth, *Medical Errors and Adverse Events: A Report of a 50-State Survey* (Portland, ME: National Academy for State Health Policy, April 2000).

RESOURCES ON THE WEB

Agency for Healthcare Research and Quality
www.ahrq.gov/qual/errorsix.htm

National Patient Safety Foundation
www.npsf.org

GRANTMAKER CONTACTS

California HealthCare Foundation
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