HIM Role in Patient Safety and Quality of Care

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History

"First, do no harm" has resounded as a guiding principle of the medical profession further back than most of us remember. The goal and expectation for quality in healthcare can be traced back centuries.

Beyond the foundational obligation of the physician's Hippocratic oath, pioneering individuals have worked to bring the truth about healthcare quality to the attention of those who could affect it. The road was often a lonely one for early quality improvement leaders. Disincentives outnumbered incentives, and reputation threats instilled fear outside closed circles.

In the early 1900s the American Medical Association's (AMA) Abraham Flexner worked to disrupt the practice of graduating physicians with no residency or caregiver experience. In the shadow of Florence Nightingale's work to encourage standardized surgical outcome reporting, Ernest A. Codman became the father of the "end result idea," known today as outcomes measurement. His efforts were met with the major obstructive forces of cost, difficulty, threat—and indifference. In 1914 John G. Bowman tried to perpetuate AMA's dying hospital standardization project, but AMA felt it too expensive to continue. Subsequently, fellows of the American College of Surgeons (ACS) and organized hospital superintendents from what would become the American Hospital Association (AHA) developed the "minimum standard." These early efforts gave birth to a hospital standardization program, but the results of the 1918 field trials were so shocking they were suppressed and destroyed. Eighty-seven percent of surveyed leading hospitals failed to meet the five points of the minimum standards.

In 1951 unresolved quality concerns sparked a formal relationship between four formidable healthcare organizations. ACS, AMA, AHA, and the American College of Physicians collaborated to form the Joint Commission on Accreditation of Hospitals, now known as the Joint Commission on Accreditation of Healthcare Organizations. The formation dissolved the ACS hospital standardization program started in 1918, and this period saw the term "standardization" subtly replaced by "accreditation." The need for oversight of quality and patient safety within the healthcare industry had been clearly established. Today, the creation of additional, competitive accreditation organizations brings volunteer organizations a cadre of oversight bodies to publicly display their dedication to healthcare quality.

The private sector has significantly led the healthcare industry in quality and patient safety efforts. Declaration of quality as a fundamental healthcare goal by accreditation agencies and healthcare organizations served to raise the quality bar over the years. Organizations such as the Joint Commission, National Committee for Quality Assurance, Accreditation Association for Ambulatory Health Care, and American Osteopathic Association exist for healthcare quality and collectively represent hundreds of related standards. Professional associations and trade groups developed specialty-focused quality guidelines in response to consumer demand for documentation of professional competence. Risk management programs emerged to address altruistic missions and litigation concerns. The 1980s saw a shift as federal reimbursement was tied to quality to ensure optimal care for the healthcare program dollar. Deemed accreditation status was supplemented by the formation of peer-review organizations, which would become quality improvement organizations (QIOs) in 2002.

The attention to quality has become keener and attempts to measure it more sophisticated as healthcare has advanced in complexity—and become more litigious. Many quality and patient safety issues have played out in the courts. Fear of exposure and reputation damage in an environment of growing consumer knowledge has sometimes immobilized the healthcare industry, preventing it from dealing openly with this challenge.

Quality Organizations

In addition to accreditation bodies, many organized groups working independently and from varying platforms carry the torch for quality and patient safety. The Markle Foundation and Robert Wood Johnson Foundation have teamed to commit resources toward development of a national clinical systems benefits database. The National Alliance for Health Information Technology espouses technology for a unified, safe, and efficient health system. The Agency for Healthcare Research and Quality, part of the Department of Health and Human Services (HHS), exists for quality, safety, efficiency, and effective healthcare. The National Quality Forum (NQF) is focused on development and use of consensus-based standards for quality measurement and public reporting.

In 1999, the National Academy of Science's Institute of Medicine (IOM), a delegate of the Centers for Medicare and Medicaid Services (CMS), released a staggering report. "To Err Is Human: Building a Safer Health System" was the healthcare industry's wake-up call to the uncontrolled number of hospital deaths from preventable medical errors in the United States—an estimated 44,000 to 98,000 annually. If the statistics are not disturbing enough, one shudders at the unfathomable truth of real numbers in the absence of underreporting. Then comes the deeper question: What is the extent of quality problems that do not result in death? Two of IOM's subsequent reports—*Crossing the Quality Chasm: A New Health System for the 21st Century* (2001) and *Patient Safety: Achieving a New Standard for Care* (2004)—expand the picture and leave the industry and federal government little room for inaction toward the embarrassing reality. The latter report stresses the importance of IT, a national health information infrastructure (NHII), and standards development as critical to addressing patient safety problems, further described as indistinguishable from quality of care delivery.

The sheer number of independent organizations, associations, and agencies committed to affecting healthcare quality is tribute to the magnitude of concern and the need to reverse the trend. Many of these organizations have developed guidelines and best practices, powerless to do more than make suggestions within an industry lacking universal mandates. An accompanying challenge is the minimal coordination among these organizations. Even as the quality network has grown, many building on collegial efforts and the work of forerunners, the fragmentation and lack of a unified approach in the big picture are undeniable. Individuated efforts and inconsistent provider quality reporting have resulted in pockets of quality improvement. While individually laudable, disparity among accreditation, third-party payer, government, and provider-designed care maps and profile approaches creates significant disconnects and makes sweeping improvement virtually impossible.

Pockets of Influence

Within the private sector, joining competitive local market activity, special interest groups have emerged to apply pressure to healthcare providers by combining financial incentives with quality. In exchange for publicly reporting quality levels, providers are competitively positioned to win healthcare benefit contracts from purchasers. An influential example is Leapfrog, an organization of large, private-sector employers working to lower healthcare costs while improving quality through application of technology to healthcare, among other strategies.

Other programs and initiatives play a role. AHA's National Voluntary Hospital Reporting Initiative and the Joint Commission's Sentinel Event Program are two examples. Their voluntary nature recognizes the risk-taking position of early participants within a litigious society. The CMS Medicare Prescription Act requires participating hospitals to report select quality factors for all patients, not just Medicare and Medicaid patients. The Joint Commission initiated the National Patient Safety Goals (NPSGs) in 2003. With the approval of NQF, these goals form a mandate for Joint Commission clients and an example for the rest of the industry. (Full text of the National Patient Safety Goals is available on the Joint Commission web site, http://www.jcaho.org/) The addition of an ethics standard by the Joint Commission lifts a cloak of secrecy. Standard RI.2.90 requires clients to address medical mishaps with patients: "Patients and when appropriate, their families, are informed about the outcomes of care, treatment and services, including unanticipated outcomes." Quality report cards aid consumer discretion with provider selection as accreditation agencies make survey results easy to access. Health plan report cards measure clinical quality along with member satisfaction.

Although difficult to measure, payment programs are cited for negatively affecting patient safety. Struggling providers point to decreasing reimbursement as impetus for cutting costly operations to accommodate business needs. The attempts of employers and managed care programs to obtain the lowest priced third-party contracts have driven providers to lower their costs, causing a ripple effect of cutbacks. When providers make deep operational cutbacks to survive, the result can be less conscientious quality of care.

Quality pioneers may deserve the credit for triggering industry floodlights. The tolerance level for quality of care has reached critical mass in the United States, spilling over to a presidential directive to implement an electronic health record (EHR) for most US citizens within 10 years. Cost, effort, and inconvenience are no longer convincing or powerful disincentives for turning the healthcare industry's head to the benefits of technology for greater patient safety. The industry is invited to set aside all points of separation and embrace technology as the answer through development of the EHR and an NHII to support it. In his 2004 State of the Union address, President George W. Bush started the momentum: "By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care."[1]

Legal and Regulatory Environment

To date, an EHR has not been legislated, yet the president's creation of the Office of the National Coordinator of Health Information Technology (ONCHIT) and the April 2004 appointment of David Brailer, MD, PhD, as national coordinator of health information technology punctuate federal intention to move only in the direction of a state-of-the art healthcare industry that provides the safe environment consumers deserve. Brailer's charge is to "coordinate the development and deployment of health IT solutions across all federal departments and agencies, and to coordinate the associated technology transfer to and from the private government."

The adoption of standards and development of an NHII to accomplish this charge further relate to major federal programs of homeland security and public health reporting, leading to quality improvement through evidence-based medical management and impact on population health.

At press time, the US Senate and House of Representatives had not resolved the differences between their respective Patient Safety and Quality Improvement Acts: S 720 (Jeffords, I-VT) and HR 663 (Bilirakis, R-FL). As Congress neared its final stages for 2004, it was unclear whether this important legislation would find its way to the president's desk for approval. The intent of the legislation is to provide for the improvement of patient safety through a voluntary reporting system. Once enacted, the secretary of HHS will be required to develop or adopt voluntary national healthcare IT interoperability standards.

CMS's Medicare Modernization Act of 2003 ties quality reporting to payment. Inpatient acute hospitals not reporting by the August 15, 2004, deadline can expect a reduction in Medicare reimbursement, making the voluntary nature of the reporting somewhat forceful.

Data Standards

Industries such as the airlines, banking, and libraries are decades ahead of healthcare in standard setting. Absence of standards obstructs effective external information sharing and data aggregation, further impeding priority setting to affect patient safety and population health.

While ACS is credited with early realization of the importance of standards in healthcare, the debate over what they should be and how they should be measured continues. In the absence of universal agreement, standards-setting organizations have voluntarily led industry effort and professional and trade groups have developed best practices to influence and standardize care toward high-quality outcomes, all without muscle or authority.

The IOM report "Patient Safety" addresses the importance of a standards-based NHII. What we need is a "system that is capable of preventing errors from occurring in the first place, while at the same time incorporating lessons learned from any errors that do occur." The report goes further: "Without federal leadership in the establishment of standards for data that support patient safety, information technology systems built over the coming decades will be inadequate to support the delivery of safe and effective care."[2]

The US government is answering the call by creation of ONCHIT and sharing the government's approach to uniform standards use through adoption by HHS, the Department of Defense, and the Veterans Administration.

Technology

Prior to the creation of ONCHIT, a subcommittee of the President's Information Technology Advisory Committee issued a national call for health IT with these goals, all supportive of high-quality and safe patient care:

1. Accelerate the adoption of IT in the healthcare sector
2. Achieve substantial economic and social benefits: reduce medical errors, reduce unproductive healthcare expenditures, and improve quality and consistency of care
3. Focus on four essential elements:

    - Maximize information availability
    - Compliance with evidence-based medicine
    - Electronic order entry
    - Information exchange and integrate disparate data across multiple sources

Technology benefits for enhancing quality of care and patient safety are many and varied:

- Simultaneous information availability
- Reduced information loss
- Improved input accuracy (such as with bar coding to avoid transposition errors)
- Pick lists
- Menus
- Alerts and warnings
- Spell out of abbreviations, acronyms, and symbols
- Illegibility elimination
- Faster transfer of information to point of care
- Built-in system rules to catch and avoid errors (for example, drug interactions)
- Real-time test results
- Abnormal result flags for immediate attention
- Computerized physician order entry (CPOE); avoidance of communication mishaps around verbal orders
- Decision support (for example, allergy alerts)
- Electronic pharmacy
- Medical management
- Cost-benefit prompts (for example, brand name versus generic drugs)
- Disease epidemic detection; possible bioterrorism source
- Elimination of test duplication and inherent treatment delays
- Aggregated outcomes data and support research for evidence-based practice
- Standardized medical language for universal understanding
- Alert caregivers to potential drug side effects (for example, institute fall precautions for a drug that causes dizziness)
- Evidence-based medicine
- Radio frequency identification (RFID) bar coding: machine-readable bar codes for unit-dose preparations employing a national drug code number

Return on Investment

The decision to invest in technology influencing patient safety has been a business balance decision within an organization, affected by multiple factors including organization philosophy, budget, and high-level leadership. Some have found technology costs to be prohibitive. Most agree that value is difficult, if not impossible, to quantify and measure. Those convinced that technology is the answer are calling for governmental financial support and incentives to adopt.

Perhaps a cost-benefit analysis approach can give insight into cost and help establish priorities for concentrating funds if they must be rationed. The cost of prevention must be pitted against the cost of misadventure: impact on the future life and care of affected individuals, extended length of stay, negligence lawsuits triggered, and damage to provider reputation.

IOM advises that a healthcare organization "may want to target initial investments to the establishment of key capabilities for which a sizable knowledge base already exists with regard to the prevention of errors, e.g. medication order entry systems and where computerized data will be useful in detecting and analyzing errors."[3]

HIM Recommendations

The HIM role in patient safety is not a sideline one. Direct leadership and critical supporting opportunities exist in many areas. Many HIM professionals are directly involved in clinical quality issues and outcomes through quality management programs. Others affect quality through improved medical record documentation, accurate coding, and index integrity.

The vigilance of the HIM profession in upholding documentation principles of accuracy, adequacy, integrity, reliability, and timeliness is inseparable from patient safety and has paralleled quality-of-care activities since AHIMA's organization in 1928. HIM professionals have served a critical and influential design role in documentation, communication, quality programs, and outcomes capture for traditional manual systems and, more recently, for the hybrid setting and the developing EHR environment.

HIM professionals have the responsibility to perpetuate sound HIM principles and the opportunity to create enhancements with the use of technology. Opportunities to affect patient safety are plentiful.

Change Management

Promote patient safety as a filter through which all operational changes, implementations, and upgrades are viewed within your organization. Read the ONCHIT report "The Decade of Health Information Technology" and be able to address its relevance. Keep up with national activities toward the EHR, standards, and infrastructure development. Apply principles of change management whenever you can.

Standards Setting

Work with standards-setting organizations in your area of expertise to develop definitions and guiding principles for the language of the EHR. Advocate for the use of standards within your organizations and influence policies and procedures for their use and maintenance. Learn about minimum standards for the EHR, as certification programs approve products and implementations.

System Functionality

Ask relevant patient safety questions with every change and new implementation:

1. Adequate systems—Can the system capture all needed information? Work with vendors to improve inadequate system functionality.
2. Access and availability—Is information conveniently available to caregivers on a real-time or otherwise timely basis? Do you have a practical balance between privacy and access?
3. Retention—Does system capacity match clinical wisdom for longevity of patient information availability? Are your retention policies adequate and up to date?

Design Involvement

HIM professionals can affect patient safety and care quality through development and design of point-of-care systems, processes, and forms. Data accuracy can be influenced through front- and back-end design options. HIM professionals should seize opportunities for involvement in screen display design, checklist development, must-enter field policy setting, and end-user training.

Master Person Index Management

Health information professionals have a substantial role in ensuring quick and efficient location of patient information in any form through maintenance of patient numbering systems. Existing master person indices (MPIs and eMPIs) may play a major role in the NHII component of patient identification. Accuracy and dependability of local MPI information may affect the national picture. IOM is urging the legislature to revisit the need for a national unique patient identifier for the sake of EHR integrity. Is your MPI cleaned up?

Documentation Principles

Foundational documentation principles governing paper records must be carried into the electronic environment. The right caregiver decision depends on the right information at the right moment. Documentation policies that meet patient and caregiver needs for information (timeliness, accuracy, integrity, and legibility)—not just legal and regulatory directives—continue to be critical in hybrid and electronic environments as in a paper world. HIM professionals continue to be champions for the cause of sound documentation practices that expose problems before harm is caused and ensure the existence of meaningful quality management programs. The electronic environment offers greater opportunity to affect data at the front end than the common back-end approach.

Technology Benefits

HIM professionals are called on to be technology savvy. Educate yourself on the various technologies, their features and benefits, and their impact on known patient safety problems (for example, ability to avoid or immediately detect errors).

Support the shift toward the electronic environment. Understand the benefits of technology features for local application and problem solving, such as those discussed above. Encourage dictation practices over hand-written ones to support legibility and speech technology (voice recognition) for quick turnaround if appropriate.

Performance Improvement Involvement

Seize the opportunity as quality management program leaders, risk managers, participants in total quality management or performance improvement activities, and HIM leaders with committee influence to be a reminding presence of the benefits of technology. Ensure internal analysis and appropriate action steps for risk-related patterns and misadventures related to patient safety. Be well-versed in Leapfrog's challenges to hospitals toward "high-yield improvements" realizable through technology.

National Patient Safety Goals

Develop an ongoing plan for meeting NPSGs:

1. Ensure effectiveness in NPSG participation whether or not you work in a Joint Commission–accredited facility. Update internal processes annually with the Joint Commission's release of goals for the upcoming year.
2. Commit particularly to involvement in NPSGs related to communication: verbal order read-back and use of abbreviations.
3. Take charge of or influence your organization's policy and procedures covering abbreviations, acronyms, and symbols lists:

    - Ensure development and appropriate use of a "do not use" list.
    - If used, standardize and enforce use policies for acceptable abbreviations, acronyms, and symbols.
    - Leverage technology to write out abbreviation definitions for universal understanding, as the EHR delivers patient information to distant places.
    - Follow the Joint Commission's national efforts on abbreviations. A summit on medication abbreviations in November 2004 convened industry experts to deal with the scope and approach to address this major patient safety problem.

Truth in Reporting

Develop an external reporting policy supportive of external programs serving to reverse patient safety issues. Work with legal counsel to leverage safety in reporting for your setting type and geographical location: report complication codes on bills used for databases; voluntarily report sentinel events; continue to work closely with QIOs in addressing findings.

Workflow

Anticipate and plan for workflow changes brought on by technology implementations. Ensure involvement of the right players through a multidisciplinary approach. Follow technology development and support updates where improvements in the medical

domain are possible, such as voice recognition conversion systems, automated entry of instrument data, improved data entry templates not needing training, and automated methods for converting both new and legacy electronic data to normalized form.

Hybrid Challenges

Until the EHR is fully implemented, the challenges of having one foot in both worlds will follow us. It may be necessary to employ temporary fixes to ensure correct and timely information is available at the point of care to support quality and patient safety. Careful management of information stored on multiple types of media is important.

Data Quality

The quality of structured and unstructured data is critical for internal and external use. HIM professionals have a central role in monitoring and analyzing the accuracy, quality, and integrity of data. Cutting-edge HIM leaders will anticipate and develop high-level data analysis roles for the electronic environment.

Perform quality audits to measure compliance with organizational policies and procedures on topics such as abbreviations, acronyms, and symbols; legibility; and omitted documentation. Take a lead role in data-user education to avoid misinterpretation of the meaning of data. Participate in national efforts for development of consistent, timely, and reliable shared statistics. Know the difference between quality report cards and flawed quality assessments derived from claims data to represent healthcare organizations in for-profit public performance reporting systems. Claims data can be flawed because of varied organizational practices in complications reporting.

Data Reporting

It is an understatement to say that the HIM opportunity to affect patient safety through data reporting is significant. From the front-end capture of data to back-end compliance with reporting requirements, disparate as they are, no non-clinical department has greater influence. HIM professionals are the coordinators of data quality—the overseers of consistent recording and capture of information that later becomes data, the monitors of ongoing data quality, and the guides to system changes for improving data-handling capabilities.

Internal systems and database practices are the springboard for quality external data reporting of all types. Increasingly sophisticated public health reporting systems over time will offer broad analysis and trending for improvement in healthcare delivery. Data must be accurate and comparative.

Summary

IOM reminds us that technology is only part of the initiative to make the nation's health system a safer one. Another significant factor is the human element. Change will occur when the culture and commitment to patient safety shift. According to IOM, change will "require a culture of safety and the active participation of all health care professionals, organizations and patients themselves."[4] It is up to all of us to create a trusting, safe environment to look at the truth around patient safety and ensure open, blameless dealing with findings. We are letting go of a culture that no longer works. The efforts we make at a local level will play into safety in the larger environment.

It is a journey—we will make patient care safer over time by taking action on what we learn from accurate and complete aggregate data. And it is a balance, with patient safety getting the greatest weight in commitments and difficult resource decisions. Patient safety will come from universal cooperation to uncover the truth—letting go of blame and finding resolution to problems, known and not yet uncovered.

Notes

1. Bush, George W. State of the Union Address, January 20, 2004.
2. Board on Health Care Services, Institute of Medicine. "Executive Summary." In *Patient Safety: Achieving a New Standard for Care*. Washington, DC: National Academies Press, 2004: 5.
3. Ibid, 7.

4. Ibid, 19.

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Additional Resources

AHIMA Body of Knowledge. (Search on "quality management" and "patient safety.") Available online at www.ahima.org.

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