Changing Systems Means Changing Behaviors

Marion J. Ball, Johns Hopkins University School of Nursing, Baltimore, MD

In its groundbreaking series of reports on patient safety, the Institute of Medicine (IOM) quotes Goethe, “Knowing is not enough; we must apply. Willing is not enough; we must do.” This commitment to knowledge and to action is essential to the magnitude of change transforming health care entails. The 10-year goal of an electronic health record for all Americans in 2014 is driving the move to the new health system for the 21st century—safe, effective, patient-centered, timely, efficient, and equitable—defined by the IOM. This carries forward the IOM’s vision of the computer-based patient record as “an essential technology for health care” set forth in 1991, when using the term “patient record” rather than “medical record” was a major step forward. Today, patient-centeredness is acknowledged as a key attribute of safer, higher-quality health care, as evident in the growing emphasis on personal health records.1 This shift in the center of care will change roles and responsibilities for patients and clinicians.

The informatics community has long called for such changes. In 1979, the International Federation on Information Processing sponsored a working conference on hospital information systems in Capetown, South Africa.2 It had four major findings, which I summarized as program chair: (1) The importance of behavioral and people issues in effecting technical and structural change; (2) The centrality of the patient to health care; (3) A focus “not so much the technological capability, but technological performance conjoined with medical, nursing and administrative staff’s perceived need to improve the effectiveness of their components of Health Care”; and (4) The need for health information systems that “will allow education to be linked to real events in practice at the time that the physician is preparing his diagnostic and therapeutic plans.” These findings are still salient. We are still learning how to address behavioral and people issues—and to give them their full due. Even today, we too often fail to understand these issues and their impact on our efforts to integrate enabling technologies into health care. Transforming our health system to the extent envisioned by the IOM requires that we appreciate fully the role of human factors.3 Changing systems means changing behaviors across all sectors and all areas of human activity. Medical informatics has made major strides since the 1990s in utilizing the “soft sciences” to better understand the impact of technology on clinicians. Cognitive scientists are exploring the nature of human errors and clinical decision making. The understanding of cognition—how clinicians think—will ultimately allow us to use technology to support the subtleties of thoughtflow as well as the mechanics of workflow. Lessons from as far a-field as Formula 1 racing are contributing to patient safety efforts by helping interdisciplinary teams understand how communications function in high-speed, high-risk, high-stress situations. Recent studies of unintended consequences offer valuable insights into ways to improve physician adoption.

Much remains to be done. Patient centered care will require understanding how individuals make their own health decisions; it will also require presenting health information in ways that are meaningful to non-clinicians and that can help them adopt healthy behaviors. The evolving field of consumer informatics is beginning to address these issues. Like patients, nurses have received short shrift until recently. Thanks to the Technology Informatics Guiding Education Reform (TIGER) Initiative, this is changing. Through its agenda and 3-year action steps for key stakeholder groups, TIGER is working to enable practicing nurses and nursing students to fully engage in the unfolding digital era of health care.

To achieve safer, higher-quality health care, the IOM has called for core competencies—patient-centered care, interdisciplinary teams, evidence-based practice, quality improvement, and informatics—for all health professionals. Informatics is the enabler that makes the other competencies possible. It holds the power to link education to real events in practice, and to link clinical practice to the most relevant and most recent scientific knowledge.