



Using IT to Improve Clinical Teamwork and Communication

Executive Summary

- ▶ Reports from the Institute of Medicine strongly encourage the use of technology to improve clinical teamwork and workflow, thereby improving patient safety.
- ▶ New clinical information tools are enabling workflow changes that make it easier for clinical professionals to work together, communicate, and share their professional expertise.
- ▶ This in turn creates opportunities to provide safer, more patient-focused care.

PATIENT CARE is provided by a multidisciplinary team of professionals, with each person possessing a unique skill set appropriate to his or her assigned responsibilities. For safe, high-quality patient care, the team must work synergistically, remain focused, and efficiently communicate the patient information that individual team members need to do their jobs effectively. Without effective communication, health care professionals may inadvertently work at cross-purposes, which can lead to suboptimal care and compromised patient safety.

These and other patient safety issues have been in the spotlight of the health care industry, the media, and the American public since 1999 when the Institute of Medicine (IOM) released its stunning report on medical errors entitled *To Err is Human*. Recently, the Institute of Medicine released a new report called *Fostering Rapid Advances in Health Care: Learning from System Demonstrations*. This latest report calls for initiating numerous demonstration projects to research the current problems in health care, and it makes special mention of using information technology to address patient safety issues.

This emphasis on patient safety is very much an extension of the discussion in the 2001 IOM report, *Crossing the Quality Chasm*, which recommended several specific actions to bridge the quality gap in health care. The report also asserted that cooperation and communication are suboptimal among different health care professionals, and that this problem was one cause of poor quality of care. Taken together, these reports strongly encourage the use of technology to improve clinical teamwork and workflow, thereby improving patient safety.

GINNY MEADOWS, RN, is Director, Clinical Product Marketing, McKesson Information Solutions.

BARRY P. CHAIKEN, MD, is Vice President, Medical Affairs, McKesson Corporation.

Causes

Effective communication among care team members is not easy to accomplish. Although all clinical disciplines rely upon each other while providing care to patients, the specific care processes, customary interactions, and professional hierarchy usually in place do not facilitate a team approach to care. Much of this originates with professional training. Professionals in different disciplines train in separate environments with little opportunity to develop a foundation for smoothly working with professionals from other disciplines. The traditional curricula for these disciplines typically does not include critical team and communication skills.

In addition, traditional paper-based processes only reinforce the communication silos between members of the multidisciplinary care team. Members of each discipline document their patient findings in separate sections of the chart when they have the time to enter them, which is often at the end of the shift or — at best — an hour or two after the fact. This makes it difficult for an individual clinician to locate and synthesize critical patient data. Often the clinician needs to review information from prior patient visits, which presents even more challenges. Much physician and nurse time is devoted to searching for patient data and communicating the findings, a terrible use of professional time.

Clinical team members constantly struggle to use the latest patient data when making care decisions. This inefficiency in the workflow presents inherent opportunities for errors and missteps.

Information Technology Tools for Transforming Clinical Processes

Fortunately, the introduction of new clinical information technology tools is breaking down some of these communication barriers. These new clinical tools are enabling workflow changes that make it easier for clinical professionals to work together, communicate, and share their professional expertise. This in turn creates opportunities to provide safer, more patient-focused care.

For example, by using a clinical documentation system, clinicians complete charting in real time at the point of care in a way that complements their workflow. Information automatically posts to the multidisciplinary record of care so it is instantly available to all care team members. In addition, key patient data are available for clinical decision support during the ordering process.

Integration with ancillary department systems,

such as laboratory, radiology, and pharmacy, gives clinicians instant access to information at the bedside, from PCs anywhere in the hospital, or remotely. Through access solutions such as Web portals or personal digital assistants that display current patient data from the hospital remotely, physicians and nurses can work from identical data sets to provide more collaborative patient care. Additionally, alerting systems can notify physicians and other clinicians about potential adverse events. Clinical data repositories also assist by providing instant access to longitudinal patient data, giving clinicians more detailed historical patient information needed to make better clinical decisions.

Another example of clinical information technology that can improve care team communication is computerized physician order entry (CPOE). Traditional paper orders represent a process that forces a physician to use handwriting (a widely variable and inconsistent skill) to convey important facts and messages. Nurses, in turn, are required to interpret those variable orders and use their judgment on when to clarify or question them. Pharmacists face the same challenges. Although some institutions believe that training physicians in handwriting skills will solve this problem, others recognize that handwriting is an unreliable means of communication in situations where exactness is a requirement.

CPOE allows a physician to convey a treatment plan, represented by a set of orders, in a clear, concise way, with distribution of those orders to each professional involved in the patient's care. For medication orders, the interpretation of the drug ordered is rarely in doubt when using CPOE. The nurse no longer "interprets" the order. The pharmacist, when verifying the order, reviews an accurate electronic representation of the physician's intent, eliminating another area of interpretation. Extra steps are eliminated and the process is simplified, thereby reducing the potential for error.

At the time of medication administration, the nurse can use bar-code technology that performs automatic medication error checking to ensure the right patient, right medication, right dose, right route, and right time. Each patient and medication are bar coded in advance for tracking during the hospital stay. Specific instructions associated with that medication

are presented to the nurse at the point of care during the time of medication administration. This process, using clinical information technology, builds a continuous thread of communication and intent from the physician's order through the nurse's administration of a medication.

Benefits of Improving Care Team Processes

Improving processes and enhancing communication provide clear benefits. Physicians, nurses, pharmacists and others can now focus on activities that truly affect patient care rather than those that are associated with clinical or administrative rework. Clinicians have immediate access to all the information they need to make patient care decisions, regardless of their setting. Physicians receive fewer calls requesting clarification of orders. Nurses spend less time interpreting, debating, and clarifying orders, and more time providing patient care. Pharmacists devote less time interpreting physician intent and more time assisting physicians in developing effective pharmaceutical treatment. Lastly, more efficient communication can help patients get better faster. Delays in care delivery can negatively affect recovery time, length of stay, and overall treatment costs.

As health care organizations deploy clinical information technology tools, careful planning is required to best take advantage of their inherent capabilities. Implementing technology solutions along the lines of current work processes is a plan destined to failure or, at best, maintenance of the status quo. Effective use of these tools requires that the care processes themselves be reviewed and redesigned. This approach helps ensure that the solutions that can deliver the greatest benefits are implemented.

Clinical information technology solutions can significantly enhance teamwork among clinical professionals by improving information transfer, workflow, and communication, resulting in marked improvements in patient safety and overall quality of care.\$

ADDITIONAL READINGS

- American Hospital Association. (2000). *AHA guide to computerized physician order-entry systems*. Chicago: Author.
- Ball, M.J., Garets, D.E., & Handler, T.J. (2002). *Leveraging IT to improve patient safety*. [On-line.] Retrieved from www.himss.org