Training to Meet Tomorrow's Healthcare Delivery Model

The American healthcare system is in need of change and is rapidly undergoing a transformation that is as subtle as an earthquake. The forces of change are multi-factorial and have been emerging for quite some time. Internal forces include workforce shortages, wide variation in the quality and competence of nursing graduates; a physician education model that is decades old and still overvalues individual competence over best team care, an inpatient model of care that is inconsistent with current consumer demand for safe, high quality, cost-effective care; and a preventable medical error rate that is unacceptable to both healthcare providers and to society at large. External forces include an aging and increasingly diverse population; a strong consumer movement; an explosion of new medical knowledge and technologies with poor guidance as to best use of these tools; demand for transparency; and healthcare organizations operating in an economically strained, competitive environment. These forces of change have merged quickly into what seems to be the perfect storm: an indictment that the delivery of healthcare services is unreliable, costly, unsafe, inefficient and ineffective. The external environment has changed at a much more rapid pace than the healthcare industry resulting in a misalignment between delivery of healthcare services and the market served. The call for change has never been more thunderous than it is today.

There is an enormity of innovative change that needs to occur to achieve the 21st century healthcare system as we envision it. There are many solutions being proposed for these changes. However, an emphasis on improved teamwork and communication among healthcare professionals is central to many of these changes.   This discussion will focus on the need for new skills and competencies that healthcare professionals need to adopt in order to operate effectively in complex work environments.

New Skills and Competencies for the 21st Century Healthcare System

The Institute of Medicine, in its seminal work *To Err is Human* (1999), exposed the 100,000 preventable deaths that occur annually in this country. Lack of teamwork and communication among healthcare professionals have emerged as root causes in 70% of poor clinical outcomes and preventable medical errors. The absence of these skills comes

from belief systems that are deeply embedded in healthcare culture. A combination of physician education grounded in a strong sense of autonomy ("captain of the ship" attitude) and a work environment that supports a hierarchy gradient so steep that the notion of nurses or other allied health professionals "speaking up" to the physician is unacceptable. These practices have created a workforce culture that is not only adverse to teamwork but one in which it is blatantly discouraged. The strongest evidence for a call to action regarding a cultural shift as it relates to teamwork in healthcare comes from an extensive body of research that identifies the factors that contribute to an undesirable patient outcome. Lack of teamwork and communication are at the top of the list.

The contemporary approach to patient safety on systems thinking recognizes that most errors are made by the brightest and the best, and preventing medical errors often involves improving teamwork and communication among clinical teams. Effective team culture promotes openness, collaboration, teamwork, communication and learning from mistakes. A preponderance of evidence suggests that where safety is a priority, highly complex interrelated processes and tasks are best performed by teams. The team is the safety net, not the individual. In other words, **Teamwork Trumps Autonomy**.

Train in Teams Those that Work in Teams: Early and Often

Effective teams must be created and maintained. Yet all healthcare professionals are educated in silos – each discipline in its own unique school - learning how to become independent practitioners. Traditional educational models of medical and nursing education do not prepare these professionals to practice in the complex collaborative environments in which we work today. Designing educational programs that prepare future physicians, nurses and allied health professionals together not only prepares them to practice in these complex environments, but prevents autonomy and hierarchy from being embedded in the workplace. These are the root causes of the majority of preventable medical errors. Team training is a fundamental mechanism to cultural change.

Teamwork training using a didactic approach may address the issues of awareness and historical attitudes, but the most effective training method to educate individuals about teamwork skills and alter traditional mental models is experiential learning. No

single course or program will effectively instill new skills and attitudes. Deliberate practice utilizing long–term, repetitive actions with feedback and reflection, is necessary. Using high fidelity simulation as a learning technique, in which the dynamic healthcare environment is replicated, is optimal to learning these new skills and attitudes. High fidelity simulation has been used for training teamwork skills in high-risk industries for decades (aviation, aerospace, nuclear power).

Simulation is a powerful training technique because it allows the team to practice and reflect in a safe setting…..over and over again. The power of video in review and reflection of "real and emotionally charged" learning exercises is powerful. Simulation in team training is designed for participant involvement in clinically challenging situations that link directly to previous work. Recreating clinical scenarios that can induce or suppress environmental distractions that challenge teamwork and communication skills fosters an environment where "speaking up" is not only acceptable but encouraged. Immediate feedback and reflection of practice occurs during debriefing sessions that follow immediately after the simulation.

The principles of Crew Resource Management (CRM) used to train flight personnel is applicable to healthcare and can be used for team training in simulation. (CRM) is defined by the National Transportation Safety Board as using all available resources - information, equipment, and people –to achieve safe, efficient flight operations. CRM was originated in 1979 to address the impact of human errors on the safety of commercial aviation. The CRM principles that are included in simulations for team training in healthcare include:

- Team Structure: role clarity for leader and followers
- Situational awareness: awareness of environment, cross monitoring, knowing when to call for help
- Mutual support: collaboration among team members with respect
- Communication: closed loop, check back, using SBAR tool (situation, background, assessment, and recommendation), getting specific timely information to team
- Resources: awareness of resources, getting what you need when you need it

CRM safety training in aviation has been credited with the decrease in fatal airline disasters, a reduction in safety-related task errors and an improvement in team performance. Using simulation as a learning technique to conduct interdisciplinary team training that utilizes CRM is occurring in innovative healthcare institutions across the country. Research is currently under way in many of these centers to evaluate the effectiveness of CRM on patient safety.

Conclusion

      The transformation of healthcare is a monumental undertaking. There is no one solution as the forces of change are many. Innovative change will occur in many healthcare systems across the country and over time substantial improvements will be realized as we move toward becoming the 21st century healthcare system. At the core of many of these innovations will be healthcare professionals working as effective teams. New skills and competencies are essential for healthcare professionals to practice in the complex, collaborative work environments that exist today. This, in turn, necessitates new educational models that are aligned with the transforming healthcare market. Innovations in education are necessary to develop interdisciplinary teams where effective teamwork and communication skills thrive in a culture of collaboration.

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