Communication, Teams, and Medical Mistakes

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Williams and his colleagues have demonstrated in their manuscript, "Surgeon information transfer and communication: factors affecting quality and efficiency of inpatient care," that medical errors happen. Because of evidence like this, the public is increasingly regarding the care they seek as potentially hazardous. The hazards are born not only from the hierarchy, complexity, and burgeoning technology recognized as characteristic of health care, but also from the system's overdependence on flawless individual performance and consequent opportunity for personal failure. Conversely, high reliability and ultrasafe industries, such as commercial aviation and the nuclear power industry, are characterized by systems that recognize their interdependence and have clear communication processes to effectively link their interdependent components. As Williams and colleagues have demonstrated, breakdown in communication results in failure to achieve optimal patient outcomes. The safety paradigm traditionally taught in medical training programs has been that flawless individual performance will lead to perfect patient outcomes. Care processes, which in reality are interdependent, have relied on these silos of individual performance. Combined with inadequate standards of clinical communication, this leads to failure. Such a system does not inculcate individual or team accountability but rather leaves opportunity for accountability avoidance. As the authors have demonstrated, this too often leads to adverse outcomes.

Our systems of care must be based on highly functioning teams. Optimally functioning processes of health care might be likened to a symphony orchestra, clearly interdependent on specialized individual performances, but centralized around a leader responsible for the symphonic interpretation and overall synthesis. Through failed leadership and inadequate communication, too often the silo system of medical care allows for cacophony instead of symphonic perfection. Our health care teams must have defined leadership, with specialized care participation closely bound by clear communication. Someone or some team must be clearly in charge: that leadership must be acknowledged by all care participants to allow for optimal care coordination and appropriate adaptive problem solving in pursuit of patient goals. Further, no issue can be regarded as "not an area we deal with" because all of the patient's care issues belong to the entire team, and any single issue will impact overall care. Although it might seem impossible to the public, trauma teams have been known to lose awareness of an injury as obvious as a lower extremity fracture in a complex burn patient for 2 months. As the authors have demonstrated, a frequent common denominator of such failure is ineffective communication. Analysis of sentinel events reported to the JCAHO over the last decade reveals failure of communication as the most frequent problem, cited in most of the events.[1] Additionally, Lingard et al have demonstrated that communication failures in surgery and critical care are frequent and impact not only the process of care, but also the health care team, causing tension, polarity, and information-withholding behaviors.[2–4] Clinical care rooted in interdependent and adaptive team performance as opposed to the old model of autonomous perfect performance will improve performance and accountability in these areas.

Communication is challenging. In our Medical Center's team training program, we have a module dedicated to communication, emphasizing the vulnerability of communi-

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cation to assumptions we too often fail to acknowledge and clarify. A simple 6-piece jigsaw puzzle provides an interactive exercise in verbal communication introducing the module. Interdisciplinary pairs participate while sitting back to back; the "teller" shares verbal reconstruction of the image on the puzzle solution template, as s/he instructs the "doer" on how to assemble the puzzle. Seldom do the teams solve the puzzle in the allotted time. The goal is to transfer a shared mental model, a critical component of team performance establishing common aims. As I watch these exercises, an inconsistent orientation and reorientation to task and the lack of clear definitions, a consistent lexicon, and affirmation and reaffirmation of what each member understands leads to garbled communication and frustration. The limitations of verbal communication alone as a means of effective communication are made obvious. These two-person teams often outwardly manifest frustration when placed under time pressure and frequently acknowledge in debriefing that they felt they were not being heard, or not understood. These are familiar themes often identified in analysis of clinical failures characterized by communication lapses.

The complexity of information transfer in the care of the multiply injured patient with the primary goal of restoration to full function is daunting. The inconsistency of our lexicon, the disorganization impeding information transfer in most of our medical records, and lack of team accountability leads to failures such as those identified in this manuscript. I am excited when surgical research teams focus on this issue, and am hopeful that through our mutual efforts we will be able to adopt a standardized lexicon. Such a lexicon needs to be defined and standardized for handoffs, patient information reporting, and requests for specialty care consultations. To facilitate the integrity of patient information across the components of the health care process, we need a consistently organized information transfer process. Too often information is lost across multiple providers, handoffs, and time. It would be novel to be able to look in the exact same place in any medical record at any time, and in any institution for the information needed to effectively manage care. Novel to have the documentation systematically and chronologically organized to create a transcript of care rendered and outstanding issues yet to be resolved through every patient encounter. Novel to have a common list of current patient conditions and resolution status consistently present in the record at any time, accenting outstanding issues and pending results. Perhaps the evolution of the electronic record will contribute to the environment of safety if these basic conditions are primary in development. Williams and colleagues have demonstrated the need.

Teams can be effective. In studying medical error, Leape noted "All humans err frequently. Systems that rely on error-free performance are doomed to fail."[5] This was one of the initial indictments of the autonomous function without error paradigm, which has driven medical education and accountability for too long. Under that paradigm, failure resulted in seeking out the responsible provider, and the remedy was blame and discipline. But high reliability systems recognized and accepted that conditions inherent in the system itself would predictably lead to similar failure unless the conditions were identified and remedied. Effective patient safety and error management require systems analysis, with nonpunitive open disclosure by the individuals involved, to avoid masking latent conditions for failure. Therefore, an essential component of team accountability is not only individual accountability, but also analysis of how the team itself performed within the complex system of care.

"Relational coordination" was the teamwork model used in a study conducted with the Harvard Business School involving multiple centers. Focusing on frequent timely and accurate communication, mutual problem solving, shared goals, shared knowledge, and mutual respect among health care workers, the study demonstrated positive impact. In total joint surgery, for example, when care was organized according to the relational coordination model, patients did better, staff were happier, and both errors and lengths of stay in hospital were significantly improved.[6] Uhlig and Brown in the Concord Hospital surgery project were also able to demonstrate the positive impact of coordinated teams.[7] Realizing the existing model required an autonomous provider to recognize latent conditions for error and overt errors to prevent failure and harm avoidance, they instead introduced an interdisciplinary team model to recognize, trap, and mitigate error. In their model, the team would mutually identify and acknowledge failures in care processes and team performance what they called "glitches." The team's empowerment then allowed for immediate redesign of the process of care to eliminate the "glitch." Uhlig and Brown were able to demonstrate dramatic reductions ($>50\%$) in actual mortality over risk stratified expected mortality. Additionally, they demonstrated improved health care worker satisfaction and patient satisfaction. The process allowed patient and family empowerment, good standards of communication across the spectrum of care, and team accountability to the goals and outcomes.[7] Although we do not know the denominator of the reported anecdotal failures in the Williams study, the failures identified resulted in significant delays and likely nonoptimal care, heightening the urgency for the evolution of health care culture to an effective interdisciplinary team care model.

Latent conditions for error exist in any system, and teams must be vigilant to identify and eliminate them. When medical error occurs, caregivers often blame themselves, and overlook the complex series of potential contributors. When we as surgeons fail in our goals for patients, we feel accountable. Almost 3 decades ago, Charles Bosk summarized surgical ownership of patient failure. "Deaths and complications present different questions to different specialists. When the patient of an internist dies, the natural question his colleagues ask is, 'what happened?' When the patient of a surgeon dies his colleagues ask, 'what did you do?' By the nature of his craft and his beliefs about it, the surgeon is more accountable than other physicians and he also has much more to account for. Of course this is not at all to say that every time a surgical patient dies the surgeon is at fault, only that it is much harder for him to claim he had no hand in it than it is for other colleagues."[8]

The issue of personal accountability now must be extended to team accountability. If all are committed to the goal, then all must be accountable for the results, good or bad. Inculcation of a team-based culture through interdisciplinary workflow practices that enhance monitoring and cross monitoring of both individual providers and processes of care without malice, adoption of clear and adequate communication standards, and inculcation of a culture where concerns from all members can be expressed with the expectation of being heard and acknowledged will lead to a safer system. Individuals on teams must be accountable not only for individual competence but also to demonstrate team behaviors in their actions if team performance and team competence is to occur. However, teams are only as good as their weakest link, so monitoring of performance is essential, with adaptive responses of the entire team when any individual lapses or fails. Diffusion of accountability across a care team should never be the dilution of individual accountability, but instead redefinition of accountability. The team leader still bears the burden of the patient's trust and therefore the burden of collective accountability.

The goal of team training is to provide surgeons and the entire team with the leadership skills and a dynamic tool kit to build and manage effective health care teams, so as to create an optimal environment of care and safety for our patients. Communication enhancement is a component of the training. Many of the failures documented in this manuscript would have been averted had the basic procedures of highly effective teams been in practice. Although few institutions have fully implemented team training programs, those that have are beginning to report improvement in outcomes. We surgeons, as the principal keepers of our patients' trust, need to lead this cultural transformation. And we must transfer that responsibility of trust across our teams through effective leadership. Patients must trust that we will seek input across our teams for best solutions. They must trust that we will not practice beyond our scope of comfort, without expected monitoring of our fellow team members, or when fatigued beyond our limits of safety. That trust must be maintained as a central value of teams across handoffs, between specialty consultants, and throughout all providers in the system. Communicating that mandate alone across our care teams would go far toward improving patient safety.

Williams and colleagues have provided us with an opportunity to respond with further research and definition in the areas of medical information transfer, effective communication techniques, and interdependent team performance. The failures characterized and the taxonomy defined for the communication lapses they have identified are the initial steps in an exciting health care transformation to come.

REFERENCES

1. Sentinal event analysis statistics, 1995–2004. Available at: http://www.jointcommission.org. Accessed December 14, 2006.
2. Lingard L, Espin S, Evans C, et al. The rules of the game: interprofessional collaboration on the intensive care unit team. *Crit Care*. 2004;8: R403–R408.
3. Lingard L, Espin S, Whyte S, et al. Communication failures in the operating room: an observational classification of recurrent types and effects. *Qual Saf Health Care*. 2004;13:330–334.
4. Lingard L, Espin S, Rubin B, et al. Getting teams to talk: development and pilot implementation of a checklist to promote interprofessional communication in the OR. *Qual Saf Health Care*. 2005;14:340–346.
5. Leape LL. Error in medicine. *JAMA*. 1994;272:1851–1857.
6. Gittell JH, Fairfield KM, Bierbaum B, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay. *Med Care*. 2000;38:807–819.
7. Uhlig PN, Brown JS, Nason AK, et al. John M. Eisenberg Patient Safety Awards. System Innovation: Concord Hospital. *Jt Comm J Qual Improv*. 2002;28:666–672.
8. Bosk CL. *Forgive and Remember, Managing Medical Failure*. 2nd ed. Chicago: University of Chicago Press, 2003.