

# Chapter 33. Professional Communication and Team Collaboration

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## Background

In today's health care system, delivery processes involve numerous interfaces and patient handoffs among multiple health care practitioners with varying levels of educational and occupational training. During the course of a 4-day hospital stay, a patient may interact with 50 different employees, including physicians, nurses, technicians, and others. Effective clinical practice thus involves many instances where critical information must be accurately communicated. Team collaboration is essential. When health care professionals are not communicating effectively, patient safety is at risk for several reasons: lack of critical information, misinterpretation of information, unclear orders over the telephone, and overlooked changes in status.<sup>1</sup>

Lack of communication creates situations where medical errors can occur. These errors have the potential to cause severe injury or unexpected patient death. Medical errors, especially those caused by a failure to communicate, are a pervasive problem in today's health care organizations. According to the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations, JCAHO), if medical errors appeared on the National Center for Health Statistics' list of the top 10 causes of death in the United States, they would rank number 5—ahead of accidents, diabetes, and Alzheimer's disease, as well as AIDS, breast cancer, and gunshot wounds.<sup>1</sup> The 1999 Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System*, revealed that between 44,000 and 98,000 people die every year in U.S. hospitals because of medical errors.<sup>2</sup> Even more disturbing, communication failures are the leading root cause of the sentinel events reported to the Joint Commission from 1995 to 2004. More specifically, the Joint Commission cites communication failures as the leading root cause for medication errors, delays in treatment, and wrong-site surgeries, as well as the second most frequently cited root cause for operative and postoperative events and fatal falls.<sup>1</sup>

Traditional medical education emphasizes the importance of error-free practice, utilizing intense peer pressure to achieve perfection during both diagnosis and treatment. Errors are therefore perceived normatively as an expression of failure. This atmosphere creates an environment that precludes the fair, open discussion of mistakes required if organizational learning is to take place. In the early 1990s, Donald Berwick wrote about patients needing an open communication system instead of experiencing adverse events stemming from communication failures.<sup>3</sup> More than a decade later, this concept still has profound implications on our method of health care delivery. As such, this chapter will review the literature on the important role of communication and team collaboration in helping to reduce medical errors and increase patient safety.

## Research Evidence

### What Are Communication and Team Collaboration?

Webster's Dictionary defines communication as "the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs." It is important to consider that communication is not just verbal in form. One study states that 93 percent of communication is more affected by body language, attitude, and tone, leaving only 7 percent of the meaning and intent based on the actual words said.<sup>4</sup> Whereas the spoken words contain the crucial content, their meaning can be influenced by the style of delivery, which includes the way speakers stand, speak, and look at a person.<sup>1</sup> However, critical information is often transmitted via handwritten notes, e-mails, or text messages, which can lead to serious consequences if there is miscommunication.

Collaboration in health care is defined as health care professionals assuming complementary roles and cooperatively working together, sharing responsibility for problem-solving and making decisions to formulate and carry out plans for patient care.<sup>5,6</sup> Collaboration between physicians, nurses, and other health care professionals increases team members' awareness of each others' type of knowledge and skills, leading to continued improvement in decisionmaking.<sup>7</sup>

Effective teams are characterized by trust, respect, and collaboration. Deming<sup>8</sup> is one of the greatest proponents of teamwork. Teamwork, he believes, is endemic to a system in which all employees are working for the good of a goal, who have a common aim, and who work together to achieve that aim. When considering a teamwork model in health care, an interdisciplinary approach should be applied. Unlike a multidisciplinary approach, in which each team member is responsible only for the activities related to his or her own discipline and formulates separate goals for the patient, an interdisciplinary approach coalesces a joint effort on behalf of the patient with a common goal from all disciplines involved in the care plan. The pooling of specialized services leads to integrated interventions. The plan of care takes into account the multiple assessments and treatment regimens, and it packages these services to create an individualized care program that best addresses the needs of the patient. The patient finds that communication is easier with the cohesive team, rather than with numerous professionals who do not know what others are doing to manage the patient.<sup>9</sup> Table 1 is a compilation of some of the components found in the literature of a successful teamwork model.<sup>10-14</sup>

It is important to point out that fostering a team collaboration environment may have hurdles to overcome: additional time; perceived loss of autonomy; lack of confidence or trust in decisions of others; clashing perceptions; territorialism; and lack of awareness of one provider of the education, knowledge, and skills held by colleagues from other disciplines and professions.<sup>15</sup> However, most of these hurdles can be overcome with an open attitude and feelings of mutual respect and trust. A study determined that improved teamwork and communication are described by health care workers as among the most important factors in improving clinical effectiveness and job satisfaction.<sup>16</sup>

**Table 1. Components of Successful Teamwork**

- Open communication
- Nonpunitive environment
- Clear direction
- Clear and known roles and tasks for team members

- Respectful atmosphere
- Shared responsibility for team success
- Appropriate balance of member participation for the task at hand
- Acknowledgment and processing of conflict
- Clear specifications regarding authority and accountability
- Clear and known decisionmaking procedures
- Regular and routine communication and information sharing
- Enabling environment, including access to needed resources
- Mechanism to evaluate outcomes and adjust accordingly

Extensive review of the literature shows that communication, collaboration, and teamwork do not always occur in clinical settings. For example, a study by Sutcliff, Lewton, and Rosenthal<sup>17</sup> reveals that social, relational, and organizational structures contribute to communication failures that have been implicated as a large contributor to adverse clinical events and outcomes. Another study shows that the priorities of patient care differed between members of the health care team, and that verbal communication between team members was inconsistent.<sup>16</sup> Other evidence shows that more than one-fifth of patients hospitalized in the United States reported hospital system problems, including staff providing conflicting information and staff not knowing which physician is in charge of their care.<sup>18</sup> Over the past several years, we have been conducting original research on the impact of physician and nurse disruptive behaviors (defined as any inappropriate behavior, confrontation, or conflict, ranging from verbal abuse to physical or sexual harassment) and its effect on staff relationships, staff satisfaction and turnover, and patient outcomes of care, including adverse events, medical errors, compromises in patient safety, poor quality care, and links to preventable patient mortality. Many of these unwanted effects can be traced back to poor communication and collaboration, and ineffective teamwork.<sup>19-22</sup>

Unfortunately, many health care workers are used to poor communication and teamwork, as a result of a culture of low expectations that has developed in many health care settings. This culture, in which health care workers have come to expect faulty and incomplete exchange of information, leads to errors because even conscientious professionals tend to ignore potential red flags and clinical discrepancies. They view these warning signals as indicators of routine repetitions of poor communication rather than unusual, worrisome indicators.<sup>23</sup>

Although poor communication can lead to tragic consequences, a review of the literature also shows that effective communication can lead to the following positive outcomes: improved information flow, more effective interventions, improved safety, enhanced employee morale, increased patient and family satisfaction, and decreased lengths of stay.<sup>1, 24-26</sup> Fuss and colleagues<sup>27</sup> and Gittell and others<sup>28</sup> show that implementing systems to facilitate team communication can substantially improve quality.

Effective communication among staff encourages effective teamwork and promotes continuity and clarity within the patient care team. At its best, good communication encourages collaboration, fosters teamwork, and helps prevent errors.

## **Barriers to Effective Communication**

Health professionals tend to work autonomously, even though they may speak of being part of a team.<sup>29</sup> Efforts to improve health care safety and quality are often jeopardized by the communication and collaboration barriers that exist between clinical staff. Although every organization is unique, the barriers to effective communication that organizations face have

some common themes. Table 2 indicates some common barriers to interprofessional collaboration that we have learned from our research and focus groups with hospitals across the country.

**Table 2. Common Barriers to Interprofessional Communication and Collaboration**

- Personal values and expectations
- Personality differences
- Hierarchy
- Disruptive behavior
- Culture and ethnicity
- Generational differences
- Gender
- Historical interprofessional and intraprofessional rivalries
- Differences in language and jargon
- Differences in schedules and professional routines
- Varying levels of preparation, qualifications, and status
- Differences in requirements, regulations, and norms of professional education
- Fears of diluted professional identity
- Differences in accountability, payment, and rewards
- Concerns regarding clinical responsibility
- Complexity of care
- Emphasis on rapid decisionmaking

The barriers indicated in Table 2 can occur within disciplines, most notably between physicians and residents, surgeons and anesthesiologists, and nurses and nurse managers.<sup>30, 31</sup> However, most often the barriers manifest between nurses and physicians. Even though doctors and nurses interact numerous times a day, they often have different perceptions of their roles and responsibilities as to patient needs, and thus different goals for patient care. One barrier compounding this issue is that because the United States is one of the most ethnically and culturally diverse countries in the world, many clinicians come from a variety of cultural backgrounds. In all interactions, cultural differences can exacerbate communication problems.<sup>1</sup> For example, in some cultures, individuals refrain from being assertive or challenging opinions openly. As a result, it is very difficult for nurses from such cultures to speak up if they see something wrong. In cultures such as these, nurses may communicate their concern in very indirect ways. Culture barriers can also hinder nonverbal communication. For example, some cultures ascribe specific meaning to eye contact, certain facial expressions, touch, tone of voice, and nods of the head.

Issues around gender differences in communication styles, values, and expectations are common in all workplace situations. In the health care industry, where most physicians are male and most nurses are female, communication problems are further accentuated by gender differences.<sup>32</sup>

A review of the organizational communication literature shows that a common barrier to effective communication and collaboration is hierarchies.<sup>33–37</sup> Sutcliff and colleagues' research<sup>17</sup> concurs that communication failures in the medical setting arise from vertical hierarchical differences, concerns with upward influence, role conflict, and ambiguity and struggles with interpersonal power and conflict. Communication is likely to be distorted or withheld in situations where there are hierarchical differences between two communicators, particularly

when one person is concerned about appearing incompetent, does not want to offend the other, or perceives that the other is not open to communication.

In health care environments characterized by a hierarchical culture, physicians are at the top of that hierarchy. Consequently, they may feel that the environment is collaborative and that communication is open while nurses and other direct care staff perceive communication problems. Hierarchy differences can come into play and diminish the collaborative interactions necessary to ensure that the proper treatments are delivered appropriately. When hierarchy differences exist, people on the lower end of the hierarchy tend to be uncomfortable speaking up about problems or concerns. Intimidating behavior by individuals at the top of a hierarchy can hinder communication and give the impression that the individual is unapproachable.<sup>1, 38</sup>

Staff who witness poor performance in their peers may be hesitant to speak up because of fear of retaliation or the impression that speaking up will not do any good. Relationships between the individuals providing patient care can have a powerful influence on how and even if important information is communicated. Research has shown that delays in patient care and recurring problems from unresolved disputes are often the by-product of physician-nurse disagreement.<sup>39</sup> Our research has identified a common trend in which nurses are either reluctant or refuse to call physicians, even in the face of a deteriorating status in patient care. Reasons for this include intimidation, fear of getting into a confrontational or antagonistic discussion, lack of confidentiality, fear of retaliation, and the fact that nothing ever seems to change. Many of these issues have to deal more with personality and communication style.<sup>40</sup> The major concern about disruptive behaviors is how frequently they occur and the potential negative impact they can have on patient care. Our research has shown that 17 percent of respondents to our survey research in 2004-2006 knew of a specific adverse event that occurred as a result of disruptive behavior. A quote from one of the respondents illustrates this point: "Poor communication post-op because of disruptive reputation of physician resulted in delayed treatment, aspiration, and eventual demise."<sup>19</sup>

Leaders in both medicine and nursing have issued ongoing initiatives for the development of a cooperative rather than a competitive agenda to benefit patient care.<sup>5, 39, 41, 42</sup> A powerful incentive for greater teamwork among professionals is created by directing attention to the areas where changes are likely to result in measurable improvements for the patients they serve together, rather than concentrating on what, on the surface, seem to be irreconcilable professional differences. The fact that most health professionals have at least one characteristic in common, a personal desire to learn, and that they have at least one shared value, to meet the needs of their patients or clients, is a good place to start.

## **Practice Implications**

### **Known Benefits of Communication and Team Collaboration**

A large body of literature shows that because of the complexity of medical care, coupled with the inherent limitations of human performance, it is critically important that clinicians have standardized communication tools and create an environment in which individuals can speak up and express concerns. This literature concurs that when a team needs to communicate complex information in a short period of time, it is helpful to use structured communication techniques to ensure accuracy. Structured communication techniques can serve the same purpose that clinical practice guidelines do in assisting practitioners to make decisions and

take action. Research from aviation and wilderness firefighting is useful in health care because they all involve settings where there is a huge variability in circumstances, the need to adapt processes quickly, a quickly changing knowledge base, and highly trained professionals who must use expert judgment in dynamic settings. Research shows that in these disciplines, the adoption of standardized tools and behaviors is a very effective strategy in enhancing teamwork and reducing risks.<sup>1, 17, 43–54, 60, 61</sup>

**Crew Resource Management (Aviation).** Experts in aviation have developed safety training focused on effective team management, known as Crew Resource Management (CRM). Improvements in the safety record of commercial aviation may be due, in part, to this training. Realizing that 70 percent of commercial flight accidents stemmed from communication failures among crew members, CRM sought to standardize communication and teamwork. The concept originated in 1979, in response to a NASA workshop that examined the role that human error plays in air crashes. CRM emphasizes the role of human factors in high-stress, high-risk environments. John K. Lauber, a psychologist member of the National Transportation Safety Board, deemed CRM as “using all available sources—information, equipment, and people—to achieve safe and efficient flight operations.”<sup>44, 45</sup> CRM encompasses team training as well as simulation, interactive group debriefings, and measurement and improvement of aircrew performance. This represents a major change in training, which had previously dealt with only the technical aspects of flying. It considers human performance limiters (such as fatigue and stress) and the nature of human error, and it defines behaviors that are countermeasures to error, such as leadership, briefings, monitoring and cross-checking, decisionmaking, and review and modification of plans. From a practical standpoint, CRM programs typically include educating crews about the limitations of human performance. Trainees develop an understanding of cognitive errors and how stressors (such as fatigue, emergencies, and work overload) contribute to the occurrence of errors. Operational concepts stressed include inquiry, seeking relevant operational information, advocacy, communicating proposed actions, conflict resolution, and decisionmaking. CRM is now required for flight crews worldwide.

The development and implementation of CRM in aviation over the last 25 years offers valuable lessons for medical care. Sexton and colleagues<sup>51</sup> compared flight crews with operating room personnel on several measures, including attitudes toward teamwork. This landmark study included more than 30,000 cockpit crew members (captains, first officers, and second officers) and 1,033 operating room personnel (attending surgeons, attending anesthesiologists, surgical residents, anesthesia residents, surgical nurses, and anesthesia nurses). Questionnaires were sent to crew members of major airlines around the world (over a 15-year period). The operating room participants were mailed an analogous questionnaire, administered over a period of 3 years at 12 teaching and nonteaching hospitals in the United States, Italy, Germany, Switzerland, and Israel.

The Sexton study and other analyses suggest that safety-related behaviors that have been applied and studied extensively in the aviation industry may also be relevant in health care. Study results show successful CRM applications in several dynamic decisionmaking health care environments: the operating room, labor and delivery, and the emergency room.<sup>26, 31, 55, 56</sup> As with aviation, the medical application of CRM has required tailoring of training approaches to mirror the areas in which human factors contribute to mishaps. In anesthesiology, 65–70 percent of safety problems (accidents or incidents) have been attributed at least in part to human error. In response, several anesthesiologists from the Veterans Affairs Palo Alto Health Care System and Stanford University developed Anesthesia Crisis Resource Management (ACRM), modeled on CRM.<sup>55</sup> Kaiser Permanente, a nonprofit American health care system providing care for 8.3

million patients, has also adopted CRM with successful results.<sup>54</sup> In response to the occurrence of a sentinel event—a medical error with serious consequences—Eglin U.S. Air Force (USAF) Regional Hospital developed and implemented a patient safety program called Medical Team Management (MTM) that was modeled on the aviation industry’s CRM program and focused on communication, teamwork, and reporting to determine the impact of a patient safety program on patterns of medical error reporting.<sup>57</sup> This study was a retrospective review of 1,102 incident reports filed at Eglin USAF Regional Hospital in Florida between 1997 and 2001. Collected data from the comparison periods (1998 and 2001) were statistically analyzed using the chi-square test. This study indicates that, since the implementation of MTM, there has been a statistically significant increase in the number of reports filed at Eglin USAF Regional Hospital and a decline in the severity of incidents. These findings suggest that since the implementation of MTM, there have been changes in the patterns of error reporting, and with training, staff are able to prevent more serious incidents. Table 3 highlights the application of a CRM model to medicine.

**Table 3. Application of a CRM Model to Medicine**

- Design of systems to absorb errors through redundancy, standardization, and checklists
- Movement from placing blame to designing safe processes and procedures, i.e., applying a systems approach
- Assurance of full immunity while implementing a nonpunitive approach
- Debriefing of all events, including near misses, that have learning potential. Focus on the severity of the potential risk rather than on the severity of the event's final outcome is more conducive to establishing effective prevention programs.
- Institutionalization of a permanent program for risk identification, analysis, and dissemination of the lessons learned throughout the professional community

**Kaiser Permanente, SBAR (Situation, Background, Assessment, Recommendation) Tool, 2002.** Doctors and nurses often have different communication styles in part due to training. Nurses are taught to be more descriptive of clinical situations, whereas physicians learn to be very concise. Standardized communication tools are very effective in bridging this difference in communication styles.

Michael Leonard, physician coordinator of clinical informatics at Kaiser Permanente, along with colleagues, developed a technique called SBAR (Situation-Background-Assessment-Recommendation). This technique has been implemented widely at health systems such as Kaiser Permanente.<sup>1, 17, 58</sup> Many other hospitals have embraced the SBAR communication tool or a similar tool created by the Studer Group (see Table 4).<sup>59</sup> For example, the Queen’s Medical Center in Honolulu has incorporated the SBAR tool as a key component of its patient safety program. The SBAR technique provides a framework for communication between members of the health care team about a patient’s condition. SBAR is an easy-to-remember tool used to create mechanisms useful for framing any conversation, especially critical ones, requiring a clinician’s immediate attention and action. It allows for an easy and focused way to set expectations between members of the team for what will be communicated and how, which is essential for information transfer and cohesive teamwork. Not only is there familiarity in how people communicate, but the SBAR structure helps develop desired critical-thinking skills. The person initiating the communication knows that before they pick up the telephone, they need to provide an assessment of the problem and what they think an appropriate solution is. Their conclusion may not ultimately be the answer, but there is clearly value in defining the situation. Table 5, Guidelines for Communicating with Physicians Using the SBAR Process explains how

to carry out the SBAR technique in detail. The guidelines use the physician team member as the example; however, they can be adapted for use with all other health professionals.

**Table 4. Studer Group Communication Guidelines for Nurses**

- Have I seen and assessed this patient myself before I call?
- Are there standing orders?
- Do I have at hand
  - The chart?
  - List of current meds, IV fluids, and labs?
  - Most recent vital signs?
  - If reporting lab work, date and time this test was done and results of previous tests for comparisons?
  - Code status?
- Have I read the most recent MD progress notes and notes from the nurse who worked the shift ahead of me?
- Have I discussed this call with my charge nurse?
- When ready to call,
  - Remember to identify self, unit, patient, room number.
  - Know the admitting diagnosis and date of admission.
  - Briefly state the problem, what it is, when it happened or started, and how severe it is.
- What do I expect to happen as a result of this call?
- Document whom you spoke to, time of call, and summary of conversation.
- Engage and treat physician with respect.

[Source: Studer Group. Patient Safety Toolkit – Practical tactics that improve both patient safety and patient perceptions of care. Gulf Breeze, FL: Studer Group., 2007.]

**Table 5. Kaiser Permanente, SBAR (Situation, Background, Assessment, Recommendation) Tool, 2002**

- SBAR – a technique for communicating critical information that requires immediate attention and action concerning a patient’s condition
- Situation – What is going on with the patient?  
*“I am calling about Mrs. Joseph in room 251. Chief complaint is shortness of breath of new onset.”*
- Background – What is the clinical background or context?  
*“Patient is a 62-year-old female post-op day one from abdominal surgery. No prior history of cardiac or lung disease.”*
- Assessment – What do I think the problem is?  
*“Breath sounds are decreased on the right side with acknowledgment of pain. Would like to rule out pneumothorax.”*
- Recommendation – What would I do to correct it?  
*“I feel strongly the patient should be assessed now. Are you available to come in?”*

[Source: Institute for Healthcare Improvement. Guidelines for communicating with physicians using the SBAR process. <http://www.ihl.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.htm>. Accessed Nov. 18, 2004.]

STICC (Situation Task Intent Concern Calibrate) is another type of structured briefing protocol used by the U.S. Forest Service to give direction to firefighters.<sup>1, 17, 60, 61</sup> The following five steps are involved:

- Situation: Here's what I think we face.
- Task: Here's what I think we should do.
- Intent: Here's why.



- Concern: Here's what we should keep our eye on.
- Calibrate: Talk to me. Tell me if you don't understand, can't do it, or see something I do not.

## Establishing Culture To Support Communication and Team Collaboration

The literature reviewed shows that effective teams are characterized by common purpose and intent, trust, respect, and collaboration. Team members value familiarity over formality and watch out for each other to make sure mistakes are not made. Health care teams that do not trust, respect, and collaborate with one another are more likely to make a mistake that could negatively impact the safety of patients.

One of the first crucial steps is organizational commitment and willingness to address the situation. Commitment needs to come from the top down and bottom up, making a statement about the way the organization does business. The rallying point should be around behavioral standards and their relationship to patient safety. It's ironic that ever since the publication of the original IOM report, *To Err Is Human*, organizations have spent the bulk of their time and efforts in improving patient systems rather than addressing the human factor issues highlighted in the original report.<sup>2</sup> Several recent reports have suggested that while we have made progress in the patient safety movement, we have a long way to go in meeting the IOM recommendations.<sup>62</sup> Addressing defects in communication that affect collaboration, information exchange, appreciation of roles and responsibilities, and direct accountability for patient care are key components of any patient safety program. Clinical and administrative leaders must set the tone by establishing and adhering to behavioral standards that support agreed-upon code of conduct practices backed by a nonpunitive culture and zero-tolerance policy.

The next step in the process is recognition and self-awareness. Organizations must be able to assess the prevalence, context, and impact of behaviors to identify potential opportunities for improvement. Doing an internal assessment will help pinpoint the seriousness of the situation and provide clues to areas that need to be addressed. Assessment information can be gained from formal methods such as incident reports, survey tools, focus groups, department meetings, task forces or committees, direct observation, suggestion boxes, and hot lines. Informal methods such as casual meetings and gossip can also provide valuable surface information and should be evaluated more deeply as to the source, relevance, and significance of the events to determine next steps. In many organizations there are still remnants of reluctance to address the issue head on for fear of antagonizing a prominent surgeon or staff member. With growing concerns about workforce shortages, staff satisfaction and retention, hospital reputation, liability and patient safety, and the need for compliance to the latest Joint Commission proposed standards addressing disruptive behaviors, organizations can no longer afford to take a passive approach to the situation.<sup>63-66</sup>

Creating opportunities for different groups to just get together is a highly effective strategy for enhancing collaboration and communication. These group interactions can be either formal or informal. Encouraging open dialogue, collaborative rounds, implementing preop and postop team briefings, and creating interdisciplinary committees or task forces that discuss problem areas frequently provides an upfront solution that reduces the likelihood of disruptive events. When a disruptive event does occur, some organizations have implemented a time-out, code

white, or red light policy that addresses the issue in real time to prevent any further serious consequences.<sup>59</sup>

Developing and implementing a standard set of behavior policies and procedures is vital. These policies need to be consistent and universally applied. There should not be a separate policy for any one particular discipline or service. For the medical staff, the policies should become part of the medical staff bylaws with signed agreements to abide by these policies at the time of appointment and recredentialing. Included in the policies should be a standardized protocol outlining expected standards and the process for addressing disruptive behavior issues, recommendations, followup plans, and actions to be taken in the face of individual resistance or refusal to comply. Prior to implementation, make sure all employees are familiar with the existence, purpose, and intent of the policies and procedures.

For the process to unfold, the organization needs to encourage its employees to report disruptive behaviors. The organization needs to address issues related to confidentiality, fear of retaliation, and the common feelings that there is a double standard and that nothing ever gets done. Reporting mechanisms should be made easy and must be supported by the presence of a nonpunitive environment. The ideal vehicle for reporting is to address the situation in real time, but concerns about position, appropriateness, receptiveness, fear, hostility, and retaliation are significant impediments.<sup>67</sup> Appropriate vehicles for reporting may include reporting of the incident to a superior, filing an incident report, using a complaint or suggestion box, or reporting directly to a task force or interdisciplinary committee with assigned responsibilities for addressing these issues.<sup>59</sup> Besides maintaining confidentiality and reducing risks of retaliation, one of the most crucial aspects of the reporting system is to give recognition and assurance that the complaints will be addressed and actions will be taken. Responses should be timely, appropriate, consistent, and provide necessary feedback and followup.

Taking action through appropriate intervention strategies is next. On one level, generic educational programs can do a lot to spread the message and teach basic skills necessary to promote effective communication. Appropriate topics should include sessions on team dynamics, communication skills, phone etiquette, assertiveness training, diversity training, conflict management, stress management, and any other courses necessary to foster more effective team functioning and communication flow. Courses should be offered to all staff and employees at the organization: physicians, physicians in training, nurses, nursing students, and all other staff who have patient contact or play a role in the delivery of patient care. For individuals who have consistently exhibited disruptive behavior, education may need to be supported by more focused sessions and specific counseling. Another important strategy is to promote and assure competency training at all levels of the health care team. This is a key factor affecting trust and respect, which have such a strong influence on team collaboration.

Focused team training programs have been of particular value. One of the newer approaches to improving team collaboration and patient safety is through the principles learned from the aviation industry. Fostering an environment of trust and respect, accountability, situational awareness, open communication, assertiveness, shared decisionmaking, feedback, and education, interdisciplinary CRM training has brought significant improvements to communication flow in the perioperative setting.<sup>52, 53</sup>

Having a clinical champion or early adopter who actively promotes the importance of appropriate behavior, communication, and team collaboration can be an extremely valuable asset. Champions can come from the executive ranks or through the voluntary interest and enthusiasm of other staff members. Co-champions may be even more effective. Some

organizations have reported that having a nurse and physician (or other health care professional) go through a joint training program will help foster mutual cooperation and collaboration between the different disciplines.<sup>59</sup> Followup and feedback bring closure to the process. It is important to let people know that their input is welcomed, followup actions will be taken, and appropriate feedback will be provided.

## Research Implications

The existing literature adequately outlines structured communication techniques that will help minimize medical errors. However, more research is needed on how to effectively deal with miscommunication and barriers to communication in real-time crisis situations. Also, the existing literature lacks concrete research confirming a cause-and-effect relationship between human factors and clinical outcomes of care.

## Conclusions

Effective clinical practice must not focus only on technological system issues, but also on the human factor. As shown in this chapter, good communication encourages collaboration and helps prevent errors. It is important for health care organizations to assess possible setups for poor communication and be diligent about offering programs and outlets to help foster team collaboration. By addressing this issue, health care organizations have an opportunity to greatly enhance their clinical outcomes.

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## References

1. Joint Commission on Accreditation of Healthcare Organizations. The Joint Commission guide to improving staff communication. Oakbrook Terrace, IL: Joint Commission Resources; 2005.
2. Institute of Medicine. To err is human: building a safer health system. Washington, DC: National Academy Press; 2000.
3. Berwick DM. Seeking systemness. *Healthc Forum J* March/April 1992;35:22-8.
4. Allesandra T, O'Connor M. The platinum rule: discover the four basic business personalities and how they lead you to success. New York: Warner Books; 1966.
5. Fagin CM. Collaboration between nurses and physicians: no longer a choice. *Nurs Health Care* 1992;13(7):354-62.
6. Baggs JG, Schmitt MH. Collaboration between nurses and physicians. *Image: J Nurs Scholarsh* 1988;20:145-9.
7. Christensen C, Larson JR. Collaborative medical decision making. *Med Decis Making* 1993;13:339-46.
8. Deming WE. Out of crisis. Cambridge, MA: MIT Center for Advanced Engineering Study;1982.

9. Schmitt MH. Working together in health care teams. In: Janosik EH Phipps LB, eds. *Life cycle group work in nursing*. Monterey, CA: Wadsworth Health Sciences Division; 1982. p. 179-98.
10. Baldwin DC. The role of interdisciplinary education and teamwork in primary care and health care reform. Rockville, MD: Bureau of Health Professions, Health Resources and Services Administration, 1994. Order No 92-1009(P).
11. Hackman JR, ed. *Groups that work (and those that don't): creating conditions for effective teamwork*. San Francisco: Jossey-Bass; 1990.
12. Bernard M, Connelly R, Kuder LC, et al. Interdisciplinary education. In: Klein S, ed. *A national agenda for geriatric education: white papers*. Rockville, MD: Bureau of Health Professions, Health Resources and Services Administration; 1995. p.57-80.
13. Scholtes PR. *The team handbook*. Madison, WI: Joiner Associates; 1988.
14. Katzenbach JR, Smith DK. *The wisdom of teams: creating the high performance organization*. Boston: Harvard Business School Press; 1993.
15. Catlett C, Halper A. Team approaches: working together to improve quality. In: Frattalie C, ed. *Quality improvement digest*. Rockville, MD: American Speech-Language-Hearing Association; 1992. p.1.
16. Flin R, Fletcher G, McGeorge P, et al. Anaesthetists' attitudes to teamwork and safety. *Anaesthesia* 2003;58(3):233-42.
17. Sutcliffe K, Lewton E, Rosenthal M. Communication failures: an insidious contributor to medical mishaps. *Acad Med* 2004;79:186-194.
18. Cleary PD. A hospitalization from hell: a patient's perspective on quality. *Ann Intern Med* 2003;138(1):33-9.
19. Rosenstein A, O'Daniel M. Disruptive behavior and clinical outcomes: perceptions of nurses and physicians. *Am J Nurs* 2005 Jan;105(1):54-64.
20. Rosenstein A, O'Daniel M. Impact and implications of disruptive behavior in the perioperative arena. *J Am Coll Surg*. 2006 Jul;203(1):96-105.
21. Rosenstein A, O'Daniel M. Addressing disruptive nurse-physician behaviors: developing programs and policies to improve outcomes of care. *Harvard Health Policy Review* Spring 2006;7:86-91.
22. Rosenstein A, O'Daniel M. Disruptive behaviors, communication defects and impact on patient safety. *Jt Comm J Qual Patient Saf*. In Review.
23. Chassin MR, Becher EC. The wrong patient. *Ann Intern Med* 2002;136(11):26-33.
24. Knaus WA, Draper EA, Wagner DP, et al. An evaluation of outcome from intensive care in major medical centers. *Ann Intern Med* 1986;104:410-8.
25. Zimmerman JE, Shortell SM, Rousseau DM, et al. Improving intensive care: observations based on organization case studies in nine intensive care units: a prospective multicenter study. *Crit Care Med* 1993;21(10):1443-51.
26. Shortell SM, Zimmerman JE, Rousseau DM, et al. The performance of intensive care units: does good management make a difference? *Med Care* 1994;32(5):508-25.
27. Fuss MA, Bryan YE, Hitchings KS, et al. Measuring critical care redesign: impact on satisfaction and quality. *Nurs Admin Quart* 1998;23(1):1-14.
28. Gittel JH, Fairfield KM, Bierbaum B, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay; a nine hospital study of surgical patients. *Med Care* 2000;38(8):807-19.
29. Coles C. Educating the health care team. *Patient Educ Couns* 1995;26:239-44.
30. Rosenstein A, O'Daniel M. Survey links disruptive behavior to negative patient outcomes. *OR Manager*. 2005 Mar;21(3):1, 20, 22.
31. Gaba DM, Howard SK, Fish KJ, et al. Simulation-based training in anesthesia crisis resource management (ACRM): a decade of experience. *Simulation & Gaming* 2001;32:175-93.
32. Gray, J. *Men are from Mars, woman are from Venus*. New York: Harper Collins; 1992.
33. Dansereau F, Markham SE. Superior-subordinate communication: multiple levels of analysis. In: Jablin FM, Putnam LL, Roberts KH, et al. eds. *Handbook of organizational communication*. Newbury Park, CA: Sage; 1987. p. 343-88.
34. Frost PJ. Power, politics, and influence. In: Jablin FM, Putnam LL, Roberts KH, et al. eds. *Handbook of organizational communication*. Newbury Park, CA: Sage; 1987. p. 503-48.

35. Jablin FM. Task Force relationships: a life-span perspective. In: Knapp ML, Miller GR, eds. Handbook of interpersonal communication. Newbury Park, CA: Sage, 1987. p 389-420.
36. Jablin FM. Task/work relationships: a life-span perspective. In: Jablin FM, Putnam LL, Roberts KH, et al. eds. Handbook of organizational communication. Newbury Park, CA: Sage; 1987. p. 389-420.
37. Stohl C, Redding WC. Messages and message exchange processes. In: Jablin FM, Putnam LL, Roberts KH, et al. eds. Handbook of organizational communication. Newbury Park, CA: Sage; 1987. p. 451-502.
38. Weick KE. Puzzles in organization learning: an exercise in disciplined imagination. *Br J Manage* 2002;13:S7-S17.
39. Prescott PA, Bowen SA. Physician-nurse relationships. *Ann Intern Med* 1985;103(1):127-33.
40. Rosenstein A. Original research: nurse-physician relationships: impact on nurse satisfaction and retention. *Am J Nurs*. 2002 Jun;102(6):26-34.
41. Rosenstein A, Lauve R, Russell H. Disruptive physician behavior contributes to nursing shortage. *Physician Exec*. 2002 Nov-Dec;28(6):8-11.
42. Mechanic D, Aiken LH. A cooperative agenda for medicine and nursing. *N Engl J Med* 1982;307:747-50.
43. Helmreich RL. On error management: lessons from aviation. *BMJ* 2000;320:781-5.
44. Cooper GE, White MD, Lauber JK. Resource management on the flightdeck: proceedings of a NASA/ industry workshop. Moffett Field, CA: NASA-Ames Research Center; 1980. NASA Conference Publication No. CP-2120.
45. Wiener EL, Kanki BG, Helmreich RL. Cockpit resource management. San Diego, CA: Academic Press, Inc.; 1993.
46. Barker JM, Clothier CC, Woody JR, et al. Crew resource management: a simulator study comparing fixed versus formed aircrews. *Aviat Space Environ Med* 1996;67:3-7.
47. Billings CE, Reynard WD. Human factors in aircraft incidents: results of a 7-year study. *Aviat Space Environ Med* 1984;55:960-5.
48. Wiegmann DA, Shappell SA. Human error and crew resource management failures in naval aviation mishaps: a review of U.S. Naval Safety Center data, 1990-96. *Aviat Space Environ Med*. 1999;70:1147-51.
49. Helmreich RL, Wilhelm JA, Gregorich SE, et al. Preliminary results from the evaluation of cockpit resource management training: performance ratings of flight crews. *Aviat Space Environ Med*. 1990;61:576-9.
50. Helmreich RL, Schaefer HG. Team performance in the operating room. In: Bogner MS, ed. Human error in medicine. Hillside, NJ: Lawrence Erlbaum; 1998. p. 225-53.
51. Sexton JB, Thomas EJ, Helmreich RL. Error, stress, and teamwork in medicine and aviation: cross sectional surveys. *BMJ*. 2000;320:745-9.
52. Leming-Lee S, France D, Feistritz N, et al. Crew resource management in perioperative services: navigating the implementation road map. *JCOM* 2005 July;12(7):353-8.
53. Grogan E, Stiles R, France D, et al. The impact of aviation-based teamwork training on the attitudes of health-care professionals. *J Am Coll Surg* 2004 Dec;199(6):843-8.
54. Leonard M, Graham S, Bonucom, D. The human factor: the critical importance of effective teamwork and communication in providing safe care. *Qual Saf Health Care* 2004;13(Suppl 1):185-90.
55. Howard SK, Gab, DM, Fish KJ, et al. Anesthesia crisis resource management training: teaching anesthesiologists to handle critical incidents. *Aviat Space Environ Med* 1992;63:763-70.
56. Risser DT, Rice MM, Salisbury ML, et al. The potential for improved teamwork to reduce medical errors in the emergency department. The MedTeams Research Consortium. *Ann Emerg Med* 1999;34:373-83.
57. Woolever DR The impact of a patient safety program on medical error reporting medical team management and reporting. In: Henriksen K, Battles J, Marks E, Lewin D (editors). *Advances in Patient Safety, Volume 1. Research Findings*. [AHRQ Publication No. 05-0021-1] Rockville, MD: Agency for Healthcare Research and Quality; 2004. p.307-16.
58. Leonard M. *Achieving safe and reliable healthcare*, Chicago: Health Administration Press; 2004.

59. Building the nurse- physician partnership: restoring mutual trust, establishing clinical collaboration. Washington, DC: The Health Care Advisory Board; 2005.
60. Institute for Healthcare Improvement. Guidelines for communicating with physicians using the SBAR process. <http://www.ihl.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.htm>. Accessed Nov. 18, 2004.
61. Weik KE. The collapse of sensemaking in organizations: the Mann Gulch disaster. *Adm Sci Q* 1993;38:628-52.
62. Longo D, Hewett J, Ge B, et al. The long road to patient safety: a status report on patient safety systems. *JAMA* 2005 Dec;294:2858-65.
63. Federal Court of Appeals broadly defines sexual harassment with serious implications regarding liability for misbehavior by disruptive health care practitioners. *Davis Wright Tremain Health Law Bulletin* 2005 Sep; 1-3.
64. Adams D. Bully case verdict a warning to doctors. *American Medical News* [amednews.com](http://amednews.com) April 18, 2005;1-4.
65. Joint Commission of Accreditation. Candidate 2007 hospital and critical access hospital National Patient Safety Goals (NPSGs) and requirements. [www.jcaho.org](http://www.jcaho.org). Accessed January 2007.
66. Glabman M. The top ten malpractice claims—and how to minimize them. *Trustee* 2004;57(2):12-6.
67. VitalSmarts. Silence kills. [www.silencekills.com](http://www.silencekills.com). Provo, UT: American Association of Critical Care Nurses; 2005.