



Error reduction through team leadership:

The surgeon as a leader

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Authors' note: This is the third in a series of articles we have prepared for publication in the Bulletin, focusing on how the crew resource management (CRM) training techniques used in aviation may be applied in surgery. In the first article of the series (Bull Am Coll Surg. 2006;91[2]:10-15), we presented the basic concepts of CRM training and its possible application in the operating room. In the second article (Bull Am Coll Surg. 2006;91[6]:24-26), we focused on the seven principles for leading high-performance teams. In this article, we discuss the learned behaviors of effective leaders.

Given the intensity of surgical training, many individuals assume that once a resident has mastered the technical skills and scientific knowledge involved in surgery, his or her education is complete. However, research in other industries shows that technical excellence alone does not always guarantee a positive outcome. Because the systems in which surgeons work are becoming increasingly complex, and because of the heightened emphasis on patient safety and performance measures, surgeons must position themselves not only as trained technicians, but also as leaders of high-performance teams. Furthermore, effective leadership is rooted in formal training targeted at developing the behaviors necessary to bring out the best in each member of the operative team.

Soon after starting his practice, one of the authors of this article (GBH) encountered a patient in extreme airway distress with a massive obstructing carcinoma of the larynx. Feeling immense confidence in his surgical ability after five years of training and two years in the military, the author took the patient to the operating room for an emergency tracheotomy. Believing that no unmanageable problems would arise, the surgeon chose not to discuss a plan of care with either the nurses or anesthesiologist assigned to the case. But suddenly, as the patient was being prepared, he arrested. The young anesthesiologist assigned to the case had never experienced this situation and literally froze. He was helpless to establish an airway by intubation. The nurses present were giving lunch relief to the regular nurses assigned to the room and were inexperienced in this type of situation and, thus, of no help. Thus, this surgeon had placed himself on a surgical island of his own creation, surrounded by a group of individuals who were of no assistance to the most important person in the room: the patient. After shouting numerous commands to a dysfunctional team, the surgeon was able to perform a cricothyrotomy and establish an airway while getting cardiac function to resume.

This inexperienced surgeon failed to exercise any leadership and to evaluate the skills of

the team assembled. In addition, he neglected to educate the team and develop a plan of action to deal with any eventuality. In spite of his military training, the author had failed his first test of leadership. Needless to say, the valuable lesson this experience provided remains with him to this day.

As this example demonstrates, being a good leader and getting the most from a team are not directly linked to clinical expertise. Leadership requires formal training centered on advancing the associated behaviors. Because leadership is a learned skill, it requires constant practice and reinforcement until it becomes second nature. Furthermore, the culture within which one operates must reinforce these behaviors.

Command

Before discussing leadership, a closely related but significantly different concept must be addressed: command. Command involves a governing figure granting another individual the power to exercise authority in a formal and, oftentimes, impersonal way. Command is prevalently addressed in military, aviation, and some business circles, but it is infrequently discussed in the health care setting.

Because representatives of many different specialties often collaborate on a case, it is common for people of equal rank to compete for final authority. However, if a team or an organization can formalize who is in command for any given procedure, more effective teamwork is possible. In the operating room or a catheter laboratory, it is much more evident who will be in command. Nonetheless, that individual must still serve as a good leader.

In discussing leadership in aviation, it is important to remember that a commander who seeks to capture the team's collective wisdom is not suffering from "paralysis by analysis" or encouraging "groupthink." Rather, he or she is employing a highly effective model for achieving the best outcomes. Nothing we discuss regarding gathering input or even changing an opinion based on that input reduces the real or perceived authority of the person in charge.

Again, no direct parallel exists in health care, but the federal regulations and com-

pany manuals that apply to aviation all state unequivocally that the pilot is in command and is responsible for the safety of the passengers, crew, cargo, and aircraft. The captain is accountable for every aspect of a flight. Although maximum collaboration is encouraged, for a team to operate effectively, there must be one—and only one—final decision maker.

Leadership

Leadership is defined by the commander's willingness to let team members exercise their rights and responsibilities to ensure a safe and positive outcome. In other words, although there can be only one commander, anyone on the team can exhibit leadership. Also note that leadership is both a right and a responsibility. Team members may have a right to speak up, but they also have a responsibility to do so—in terms of health care, this means a responsibility to the patient, to fellow team members, even team members' own professional conscience.

Some people may claim that ascribing these duties to all members of the team is just “hot tub” medicine, but exactly the opposite is true. How difficult do you think it would be for a junior team member to suggest a difficult strategy to a department chair, for example, and risk a public dressing down? Or even for a peer to approach a colleague? Team training is designed not to create a perfect world but to improve synergy in an imperfect world.

So, leadership means two things: (1) individual team members have a right and responsibility to voice their opinions and concerns; and (2) the team leader must create a synergistic environment. It cannot be emphasized enough that encouraging and promoting teamwork does not weaken the respect that surgeons receive. Indeed, the experience of the authors suggests that surgeons who encourage teamwork in the operating room engender higher levels of respect.

Leadership characteristics

Teams that have effective leadership are distinguished by the following characteristics: a positive team climate, briefings and timeouts, and professionalism.

A good leader fosters a positive climate that allows for a free and synergistic exchange of ideas.

Think about the different teams on which you have served. How did the teams with a positive climate differ from those with a poor climate? Which ones functioned better?

A study by Robert Ginnett, PhD, shows that the long-term outcome of a team's performance can be determined within its first 90 seconds together.* A team with a leader who gathers the team together to discuss the procedure beforehand always performs better than a team that skipped the preoperative briefing. Briefings allow the team to review the case and set expectations. They also include discussion of contingency plans in the event of complications. Dr. Ginnett's study also showed that teams that conducted briefings performed better when faced with a surprising situation, even if the contingency plan discussed was not the one actually used.

Timeouts are already used in the operating room, but this process should be taken one step further by expanding these timeouts into more comprehensive briefings. Briefings don't have to be exhaustive. An exchange of first names, a brief synopsis of the case, and anticipated outcomes in both normal conditions and abnormal conditions are all that are necessary. People respect strength and humanity. It is a very powerful combination, and briefings provide an opportunity for the person in command to exhibit these traits. In a study at Concord Hospital, Concord, NH, Ginnett found that briefings were either time neutral or even saved time as a result of better understanding of expectations. Briefings are an extraordinarily effective means of building loyal, highly functioning teams, and they establish the attending surgeon as the leader.

Leadership is also defined by professionalism. Interestingly, the very first definition of a “profession” in the dictionary centers on the taking of vows in a religious community. Like religious leaders, professionals in other fields typically have the highest regard for their calling and will strive to meet the highest standards. Although it is important that we have these expectations of ourselves, leaders also seek to draw excellence from their team members.

*Ginnett RC. *First Encounters of the Close Kind: The Formation Process of Airline Flight Crews* [dissertation]. New Haven, CT: Yale University [date not available].

A leadership exercise

During the authors' leadership workshop, physicians are asked to break into smaller groups and discuss the various leadership styles they observed over the years. They are asked to share stories with each other and with the whole class.

Typical behaviors that workshop participants associate with poor leaders are a lack of communication skills, a tendency to guard rather than share information, an "it's all about me" attitude, uncontrolled temper, and arrogance as a cover for low self-confidence. Conversely, the students generally describe strong leaders as excellent communicators who are willing to put the team first (sometimes at great sacrifice to themselves), highly competent, unflappable, and self-confident.

This emphasis on self-confidence—among surgeons, in particular—almost inevitably leads to a discussion of the pitfalls of big egos. However, it could be asserted that surgeons, like pilots, must have tremendous egos and supreme self-confidence. Surgeons and pilots couldn't do what they do without believing in their ability to handle any problem—they couldn't survive. Nonetheless, a good leader knows how to keep that ego in check to achieve high performance.

Surgeon leaders

Unquestionably, the current surgical training process produces professionals of the highest technical caliber and cognitive ability. However, these attributes alone do not guarantee positive outcomes. To achieve excellence and ensure patient safety, surgeons need a complete understanding of their role as leaders and must undergo formal training in team dynamics. A major challenge before the profession is that surgeons know how to fully take on a leadership role in the clinical setting and improve the synergy of operative teams.

Modern medicine makes extraordinary demands on surgeons' time, so some readers may believe that leadership training is too time-consuming and not worth the effort. However, the experience of the authors has shown that obtaining this skill set can lead

to improved performance, reduced effort and mental strain, and better outcomes. Q

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