

Role of Effective Teamwork and Communication in Delivering Safe, High-Quality Care

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ABSTRACT

Healthcare is delivered in an extraordinary complex environment. Despite highly skilled, dedicated clinicians, there are currently unacceptably high levels of communication failures and adverse events. Effective teamwork, in conjunction with reliable processes of care, is essential for the consistent delivery of high-quality care. Practical concepts and tools are provided that address the team behaviors of structured communication, effective assertion/critical language, psychological safety, situational awareness, and effective leadership. Examples of the mounting clinical evidence of improved patient outcomes and reduced harm resulting from effective teamwork training are cited. *Mt Sinai J Med* 78:820–826, 2011. © 2011 Mount Sinai School of Medicine

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Effective teamwork and communication is essential to the delivery of safe and reliable healthcare. Currently, some 25%–33% percent of hospitalized patients experience an adverse event, a large percentage of which are deemed avoidable.^{1,2} The successful approach to more effective care and reduced clinical risk will require a combination of more reliable processes of care, such as simulating and drilling for emergencies, as well as effective teamwork. A cultural shift that focuses on how skilled individuals work collaboratively in complex systems is necessary for the training and implementation of effective teamwork. Historically, we have trained clinicians to be expert individuals with the belief that we can come together without agreed-upon norms of team behaviors and deliver high-quality, error-free care.³ Given the complexity of the current clinical environment, the increasing operational pressures of patient care, the frequent lack of complete clinical information, and progressively sicker patients, the premise that we can deliver high-quality care without reliable care systems and effective teamwork is highly unrealistic. High-risk industries outside of healthcare, including aviation and nuclear power, have learned over the last 2 to 3 decades that effective teamwork is essential for safe performance. Over the last decade in medicine, we have learned a great deal about defining practical and effective team behaviors, and the elements necessary for successfully implementing and sustaining teamwork, and have begun to realize the clinical benefits of such work.

Effective teamwork requires not only the teaching and practice of specific teamwork tools and behaviors, but also effective leadership and an acute understanding of safety culture, the environment in which the team operates. The attributes and importance of effective leadership will be addressed, followed by a discussion of safety culture. Subsequently, a description of practical, effective teamwork tools

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and behaviors with examples of how they have been applied will follow.

EFFECTIVE LEADERSHIP

Leadership is an essential skill for high-performing teams, and it has to exist at 2 levels within the organization, both within senior leadership and clinical leaders. Senior leaders have to continually send the message within the organization that safety, quality, and effective teamwork are essential and a priority. Front-line clinical leaders have to consistently model and reinforce the appropriate behaviors that support effective teamwork. Leadership is not a skill that has been historically taught in healthcare, but there is progressively more awareness that clinicians need to understand and model effective leadership behaviors. Krause's extensive work in industrial safety across many industries is quite insightful. Krause observes that organizations that excel at safety are also good at operational performance and high-quality work. The hallmark of the high-performing organizations is that leaders define a very clear set of behaviors that apply to everyone, whether they clean the floor or are the chief of staff.⁴ This "one set of behaviors" is critically important. It is not realistic to expect a culture of safety in surgery if surgeons are allowed to behave disrespectfully to the degree that we would not tolerate from nurses and other care providers. This clear sense of organizational fairness is an essential element for a culture that supports good teamwork.

Being clear that the culture requires that everyone be treated with respect every day is an essential role of leadership. There is abundant evidence that abusive, disrespectful behavior is an extremely dangerous behavior in healthcare.^{5,6} Another way to look at this is through the lens of psychological safety as defined by Edmondson. In psychologically safe environments, team members feel safe to speak up and voice concerns with the knowledge that they will be treated with respect and their concerns will be acted upon.⁷ Psychological

safety is an essential ingredient for effective teamwork; and, arguably, effective teamwork is quite difficult, if not impossible, in the absence of such.⁸ All too often caregivers are hesitant to speak up if they see a problem with patient care. Effective leaders continually message the importance of speaking up and work to create an environment that makes it safe to do so.

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SAFETY CULTURE

Culture is a very powerful driver of behavior. Effective teamwork requires an environment of collaborative culture where caregivers feels their input is valued, they work effectively as a team, and they have very positive, concordant views of their clinical environment. In the Michigan Keystone ICU Project, which focused on reducing central-line infections across the state through the implementation of a predictable process for insertion and care of central venous lines, the culture of the participating hospital intensive care units (ICUs) related to the ability to achieve the goal of no infections for ≥ 5 months in a 12-month period. The clinical units in the upper third of the safety culture scores related to comfort in speaking up were more than twice as likely to achieve the clinical goal as the units in the lower third.⁹ A recent study looking at the characteristics of the best-performing hospitals regarding clinical outcomes after acute myocardial infarction found the highest performers had an important focus on improving organizational culture.¹⁰

As the ability to measure and analyze safety culture at a clinical-unit level has become progressively more sophisticated, this has provided a very powerful and effective mechanism to engage front-line clinical staff and leadership to drive teamwork. Understanding how positive and concordant the perceptions of various caregivers in a clinical environment are provides important insight as how to engage the culture to enhance teamwork and improve care. It is essential to measure culture at a clinical-unit level, as there is 5 \times more variation at a unit level than across the hospital. One of the important aspects of high-quality safety-culture data (with response rates of >60% of the individuals

working in the unit being statistically valid) is being able to share the perceptions in a respectful way that focuses on improvement. The power of high-quality, unit-level data is that it becomes personal (ie, “This is what you said.”). This is quite important, as there is a natural tendency in medicine for us to say that “We’re special and different, and you must be talking about someone else.” The demonstration that there are very different perceptions of teamwork and comfort speaking up among care givers working within the same clinical environment is a very powerful device for engaging clinicians around the need and value of adopting practical and effective teamwork behaviors. It is essential that the dialogue with caregivers debriefing their safety-culture data be a “bottom-up” discussion that is focused on improving both the care process and the work environment for clinicians. Avoiding any sense of blame or judgment is critical, as that perception will greatly inhibit the ability to openly debrief and learn.¹¹

EFFECTIVE TEAMWORK BEHAVIORS

There are basic components of effective teamwork and communication: structured communication, effective assertion/critical language, psychological safety, situational awareness, and effective leadership behaviors. These team behaviors have been migrated

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into medicine after extensive experience in other high-risk industries, such as commercial aviation, military operations, and nuclear power. Being clear as to what the plan is, setting the tone for the team to work effectively together, creating an environment in which all team members feel invited to speak up, and maintaining a common mental model is the goal.

Structured communication relates to tools such as briefings, multidisciplinary rounds, huddles, using checklists, situational briefing models like Situation-Background-Assessment-Recommendation (SBAR), and debriefings. Structured communication creates predictability and agreement as to how team members will communicate.¹² Effective communication

cannot be situationally dependent (“We’re busy, so I won’t bother them with my concern about the patient.”). It also can’t be personality dependent, where an experienced nurse will insist the physician

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come to the bedside to see a deteriorating patient, but the new, novice nurse may be hesitant to assert himself for fear of being chastised or being wrong. It is always better to voice a concern and let the team prioritize its competing clinical tasks than to not speak up about something that may turn out to put the patient at risk.

Briefings are quick, effective mechanisms to get the team together for 1 to 2 minutes and create a common mental model of what the team is going to do. High-performing teams routinely use briefings to share the plan and “get everyone on the same page,” create a broader awareness of the context in which the team is going to work, and help ensure they have the information, resources, and personnel they need to work effectively. Briefings are applicable in every

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care setting, from primary care offices to high-acuity interventional areas within hospitals. In a procedural setting like interventional cardiology, the team can spend 1 minute briefing to look at the schedule for the day, anticipating needs, equipment, information, and specific skills. Now the team has the “big picture” and can be proactive, rather than reacting to events as they unfold. Additionally, the team should quickly and efficiently brief each procedure to ensure that everyone knows the plan and they have the necessary equipment, skills, medication, and resources to work effectively and deliver optimal care. An important part of this discussion should focus on specific risk factors related to the patient or the procedure, so the team can be aware of where they could possibly get into trouble. Studies show that briefing can reduce avoidable delays, which are both frustrating and a waste of valuable resources. For example, the implementation of perioperative surgical briefings in one study was associated with a 31% reduction in intraoperative delays.¹³

Building structure around briefings with checklists provides additional value. Examples include

daily goals in intensive care and enhancing teamwork through a comprehensive safety program.¹⁴ Recent experience with the World Health Organization Surgical Checklist has shown clear clinical benefit and fewer surgical complications.¹⁵ De Vries and colleagues, in a Dutch multicenter study, examined the impact of a Surgical Patient Safety System (SURPASS) that incorporated 11 checklists across the patient's continuum of surgical care within 5 hospitals. The benefit was striking, as shown by a 30% reduction in surgical complications and almost a 50% reduction in mortality across a broad population.¹⁶

Primary care environments are great places to use briefings at the beginning of the day. A typical briefing would answer the questions "How many patients do we have?" "Are any complicated?" "Do any have extra emotional needs today?" "Is the team short-handed?" "Is there anything we need to know?" and "Are there any test results or information we need to get ahead of time?" Now all members of the team have situational awareness, a clear picture of the context in which the team will be delivering care. Knowing what is expected to happen minimizes surprises and makes it much easier for team members to speak up when things seem to be going in the wrong direction.¹⁷ It is ideal to get all the team members together for briefing, but if that is not feasible there is value in having the manager and the nurses in an office look at the day's schedule and plan ahead. A primary care physician can brief or huddle with one nurse and a medical assistant to set the tone for the clinic schedule, coordinate their efforts, and think ahead.

Also, re-briefing when something changes—a patient acutely deteriorates, the workload increases—is valuable. Getting the team together for 1 to 2 minutes and discussing what has happened or what has changed allows optimal deployment of team resources and maintaining the situational awareness. The key with briefing is to be quick and efficient, which sends the message that people's time is valued and respected. When practiced well, providers see briefings as valuable tools that make their day simpler, safer, and easier.^{18,19}

Debriefing is an essential tool for effective teamwork and an environment of continuous learning and improvement. Uhlig's work in cardiac surgery showed the value of debriefing and focusing on the care processes that did not happen the way the team expected. By capturing and working to fix these "glitches," or defects in care, the team drove consistent improvement.²⁰ A debriefing session gets the team together for 1 to 2 minutes and asks for input on 3 questions: "What did we do well?" "What did we learn?" and "What would we like to do differently

the next time?" This can be done at the end of a procedure, at the end of a shift on a medical-surgical unit, or at the end of the day in a medical office practice. Effective debriefings are never judgmental or

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critical. If the leaders have concerns with someone's behavior or technical performance, that is a separate, individual conversation; it is never done publicly. It is essential to be mindful that historically medicine has a culture where "skilled practitioners do not make mistakes." The process of debriefing requires building trust and psychological safety for learning. The role of the leader is to always keep the dialogue framed to the positive and geared toward learning. If the debriefing process does not feel safe, team members will very quickly become quiet, which not only leads to lost valuable opportunities to learn, but also can degrade teamwork more broadly. Two things are critical to the success of a debriefing process: that it feels safe to speak up, and that there is a systematic process to capture the information from the debriefing and take action. Providing feedback to the front-line staff who provided the insights is essential to sustain the process. This is an area of fundamental need and opportunity within healthcare. Rarely are there effective mechanisms in place to capture information for front-line providers as a source of consistent learning and improvement. By making the debriefing process quick and efficient, it does not interfere with the delivery of care, and captures information when the experience is fresh in people's minds.

Debriefing in high acuity areas with consistent team members present, such as in ICUs and operating rooms, is easier to structure with the participants more readily available. Primary care areas or medical-surgical areas require a bit more creativity, as the team members may be working quite independently or it may be hard to get them back together. In primary care, getting the team of the doctor, the nurse, and the office staff together for 2 minutes at the end of the day can provide insight into what went well, what happened that was different than they expected, and where the opportunities for improvement are. Even 2 caregivers having a debriefing can be quite valuable. Medical-surgical units are challenging, as physicians often have patients on multiple floors or have gone to their offices at the end of the shift. Getting the nurses and other staff together is a good place to

start. Once that process is ongoing, then nurses can think about how to engage the physicians in the process. It is better to have small teams debriefing and learning than to make the process so complicated by requiring multiple caregivers to be present that it does not happen at all.

Done well, debriefing provides valuable insight into the opportunities and care failures that exist within an organization. This helps to guide leaders as to where to provide resources and engage clinicians. The more insight that leadership has with regard to the context in which front-line providers are providing care and the “work arounds” they are dealing with, the greater the potential for improvement. High-performance healthcare organizations are always focused on ways to not only provide better care, but also make the care process more efficient and reliable.

Effective assertion through the use of critical language is a central part of effective team performance. Critical language refers to a single phrase or word that, when it is spoken, signals to everyone that it means “Please stop and talk to me, and let’s take a minute to ensure we are doing the right thing for this patient.” This is essential, as often providers

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see things that are concerning or do not make sense but are hesitant to speak up for fear of looking dumb or offending another team member.²¹ Having one clear term that everyone knows and that everyone has agreed to makes it much easier to speak up. A very effective term that came out of Allina Hospitals in Minnesota is “I need a little clarity.” The beauty of asking for “clarity” is that it is a nice, neutral term that can be used in the presence of the patient and family members, and will not upset them. Also in a culture where people keep score by knowing the answers and being competent, asking for “clarity” is a very neutral request and is not perceived as questioning anyone’s judgment or skills. This is really important within the culture of medicine.²²

As previously noted, actively creating an environment of psychological safety is critical for effective team performance and an essential function of team leaders. Every member of the team needs

to know that he or she will be treated with respect and that his or her contributions and inquiries are valued. This is an active process by the leaders within the care environment—it does not automatically happen. The assumption that everyone feels valued and safe to speak up is a very dangerous one indeed.²³

Situational awareness is the ability of the team to have the “big picture” and engage in active communication so they maintain such. Effective teams achieve and maintain situational awareness by active communication and “thinking out loud.” A good

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example of this is DeLaval’s work in pediatric cardiac surgery, which showed that the teams that thought out loud and actively thought through potential complications and contingencies had better clinical outcomes.²⁴ This active team behavior is an important counter measure to the natural human tendency to be at risk for task fixation or “tunnel vision” when working hard and things are not going well. Lack of situational awareness, “not seeing the forest for the trees,” is a major risk factor for making mistakes.

Effective leadership behaviors are essential to delivering safe care and good team performance. Effective leaders always set a positive, active tone within seconds of the team coming together. They also share the plan of care and continuously invite the other team members into the conversation, both for their expertise and to voice concerns. This results not only in a bidirectional sharing of information, but actively reduces the inherent power distance between the leader and the other team members. Large power distances or authority gradients are dangerous, as they make it harder for people to speak up. Mazzocco *et al.*, in a surgical observational study of 293 cases, showed better clinical outcomes for the patients when the surgical teams set a positive, active tone for teamwork and consistently displayed effective teamwork. In the patients where the teams consistently failed to engage in effective teamwork, there was progressively more risk to the patient, as measured by complications and 30-day outcomes.²⁵ Effective leaders are always approachable because they have actively worked to reduce power distance. Lack of effective leadership can have catastrophic consequences in high-risk environments.

ROLE OF TEAMWORK TRAINING IN BUILDING EFFECTIVE TEAMS

Effective teamwork training is multidisciplinary and interactive, with physicians playing an active role. The greater the physician involvement, the more effective the training will be. As team members must interact and use agreed-upon tools and behaviors, the only way to ensure they have procedural knowledge and social agreement is to have them learn and practice together. Procedural knowledge means “I know how to do a briefing because we have done one together” and social agreement speaks to the fact that “I know how to use these tools because you and I have agreed how we are going to use them.” Multidisciplinary learning and practicing together addresses both of these important elements. As effective patient care is a team function, it is very hard to learn without structured team interaction and practice. Kaiser Permanente, in its systematic work in perinatal safety across 36 hospitals, used 3 levels of training: multidisciplinary teamwork training; the teaching of reliable clinical processes in an interactive, multidisciplinary environment (ie, fetal heart rate interpretation); and simulation training, where teams could practice emergency scenarios on their clinical units, such as shoulder dystocia or prolonged fetal bradycardia. The simulation experience cemented the other components together and sustained these behaviors in clinical practice. Practical, low-fidelity simulation, when done regularly and systematically, has been shown to have substantial and lasting value in delivering safer care. Draycott’s obstetrical group in England, which requires 100% of caregivers working on their unit to participate in obstetrical drills, has shown a 50% decrease in low Apgar scores, a 70% reduction in brachial plexus injury associated with shoulder dystocia, and sustained the results for >3 years.^{26,27} Lockwood’s experience with perinatal team training and standard processes demonstrated similar value, with a 60% reduction in adverse events and claims.²⁸

A recent study demonstrating the value of systematic implementation of effective teamwork in surgery was done within the Veterans Administration health system. The combination of a workable infrastructure for teamwork training, use of surgical checklists, accountability for implementation and training, and measurement of safety culture before and after resulted in demonstrable benefit. They cited an 18% reduction in mortality, reduced nursing turnover, fewer interruptions during the surgical cases due to nurses having to leave the room to get supplies, improved perceptions of teamwork

and collaboration, and the avoidance of 110 adverse events that were calculated to have cost \$12 million.²⁹

CONCLUSION

The value of effective teamwork and communication in delivering safe care is becoming clearer, as evidenced by the increasing number of clinical studies showing the benefit. Organizations committed to improving the quality and safety of the patient care they provide have to approach this work in systematic fashion. Leadership, safety culture, teamwork behaviors, reliable processes of care, and mechanisms for continuous learning and improvement are all essential components of a comprehensive program. Practical tools that enhance teamwork and communication—structured communication, effective assertion/critical language, psychological safety, situational awareness, and effective leadership—are most effectively taught in collaborative, interactive, multidisciplinary sessions. When committed clinical teams apply these tools and behaviors consistently, the evidence shows that better work environments and safer, higher-quality clinical care are the result.

DISCLOSURES

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