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Facilitators and barriers to ad hoc team performance

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ABSTRACT

Most teams in hospital medicine are ad hoc, meaning that the teams vary in participants. Ad hoc teams can be found in academic teaching hospitals where team members change across shifts and rotations. Due to varying team membership, these teams face significant hurdles, because they lack an opportunity to develop a team identity, shared mental models, and trust. This article discusses facilitators and barriers to effective functioning of ad hoc teams. Communication, conflict management, power, and leadership are areas that either serve as facilitators or barriers to positive team function. In addition to discussing these aspects, solutions and recommendations from practice are shared. Solutions include data about successful teams, communication in those teams, and data about how to improve education and team training. These practical applications can be applied in practice to improve team functioning. Finally, we recommend that additional research be conducted in the area of ad hoc teams, because this type of team is a large part of medicine with a gap in evidence.

KEYWORDS Ad hoc teams; communication; conflict management; group dynamics; interprofessional collaboration; leadership; medical education

Exceptional teams reach goals and produce outcomes beyond the capacity of any individual member. Higher team functioning is associated with more positive patient experiences, better teamwork culture ratings, and lower nurse resignation rates.[1] Team dysfunction tends to have negative consequences. Poor communication is a leading cause of medical error and serious events.[2,3] Despite the call for high-functioning teams, medical education and subsequent training produce autonomous individuals or groups that are later expected to collaborate.[4,5]

This article discusses facilitators and barriers to the effective functioning of teams with varying membership—ad hoc teams.[6] Varying membership means that different people fill roles over time. For example, ad hoc teams are common in academic teaching hospitals where team members change across shifts and rotations. This type of team may comprise up to 72% of medical teams.[1,6]

The inconsistent makeup of ad hoc teams results in a lack of cohesion, potentially preventing groupthink.[7] Still, ad hoc teams face significant hurdles. For example, they have less opportunity to develop a team identity, shared mental models, and trust. Additional challenges include lack of geographical co-location in the hospital, a relatively rigid power hierarchy (e.g., senior resident over intern, senior attending over a junior resident), changing technology tools such as electronic medical records, and a lack of teamwork training.[8–10]

COMMUNICATION AND CONFLICT MANAGEMENT FOR AD HOC TEAMS

Traditional hierarchical structures in health care, social barriers, differences in professional training, and environmental distractors such as interruptions and noise can negatively affect team communication.[2,11] Ad hoc teams may be impacted more severely because members are not familiar with the other members' styles and patterns. Although ad hoc teams are at a disadvantage, individuals can adopt several behaviors to help promote effective team communication. Examples include selecting terminology that facilitates sharing major chunks of information quickly, minimizing unnecessary communication, ensuring that team members share clear and audible information, and sharing information in a predictable order.[6] One example of ordered communication is the SBAR (situation, background, assessment, and recommendations) technique.[12] Nursing and other health care team members use SBAR during handoffs or calls with providers about patient care. Both the sender and receiver can follow the anticipated cadence of

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communication. In general, tools such as SBAR provide a framework, allowing both team members to have shared expectations, quickly building team rapport and trust.

Ad hoc team members should know potential pitfalls in team communication. Communication in general involves individuals with different perceptions attempting to understand alternative perspectives. Discrepancies in perceptions, understanding of communication, teamwork, and situational awareness among members can make team communication more challenging. There is a tendency to overestimate how effectively one delivers one's own message.[11,13,14] Chang et al[14] found that interns failed to communicate the most important piece of information during sign-off in 60% of exchanges. More important, the intern signing off believed that the information was conveyed.[14]

Comprehension is largely influenced by nonverbal behaviors called *social signals*, which include gestures, verbal tone, mimicry, and facial expressions.[15–17] Spoken words are not always the most salient contributor to comprehension.[16,17] In social contexts like teams, gestures, facial expressions, mutual gaze, interpersonal distance, and posture trigger unconscious behaviors and automatic behaviors.[15,18] Attention, empathy, politeness, playfulness, agreement, and disagreement tend to be reciprocated in groups and are signals that affect the function of a team.[15,18,19]

Another nonverbal group dynamic that requires team member awareness is group emotions. Group emotions are the combination of individual affective factors and group- or contextual-level factors[16,20,21] that may affect group performance when there is a sharing of positive or negative emotions by a process called *emotional contagion*.[16,21] Individual affective factors include personal moods, emotions, and individual emotional intelligence, which are derived from personal or professional factors. Group or contextual factors include impression management or an attempt to influence or harmonize with coworkers' behavioral cues such as happiness.[16,21] Additional examples of contextual factors include group dynamics or leadership issues, because both can suffer from disagreements or preexisting perceptions affecting work relationships. An angry patient or a poor patient outcome can contribute to group emotions or context and, in turn, group performance. *Emotional contagion* is an unconscious tendency to mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person to converge emotionally. The combination of emotional contagion with the conscious intention of attempts to influence the emotions of others affects overall group emotions.[16,21] Emotional contagion can occur as well when positive or negative emotions are expressed in social media.[22] Positive emotions may improve cooperation, reduce conflict, and improve perceptions of team task performance. Contagions of unpleasant emotions lead to the reverse. In general, members of a team perceive negative words as more negative than they perceive positive words as positive.[16] Contagion can negatively influence group dynamics and information that is disseminated across the team. For example, a leader with a negative disposition about a certain patient may influence the team with his or her negative contagion. This is likely amplified in academic medical centers, where each team consists of several disciplines.

When communication is done well, positive outcomes follow. One positive outcome of effective communication is conflict management. Conflict has the potential to improve team performance through more creativity and better decision making. O'Neill et al[23] identified a positive impact of team task conflict on performance when team activity requires decision making. For example, when disagreements about the appropriate course of treatment are constructively managed, teams have the potential to generate new ideas, facilitating critical thinking about options suggested.

However, not all conflict is beneficial, and it can be detrimental to team relationships or performance.[20] Negative conflict has the potential to reduce information sharing, requests for help, and feelings of psychological safety.[24] Psychological safety is a shared belief that the team members feel comfortable respectfully challenging the leader and safe with interpersonal risk-taking. Psychological safety is associated with a sense of confidence that the team will not embarrass, reject, or punish anyone for speaking up. If team members are confident in sharing creative but potentially embarrassing or controversial ideas, cohesion and performance will increase.[20]

POWER AND LEADERSHIP

Power and leadership are related concepts in teams. Power is a social phenomenon. It is one's ability to impact the group. Teams perform better when power hierarchies emerge.[25] In ad hoc multidisciplinary medical teams, power is influenced by existing hierarchies but may not always belong to the person at the "top" of a hierarchy when others have more knowledge or expertise in the specific task at hand.[25,26] For example, a trainee familiar with the patient may have the most power on a team during an emergent situation if others are less familiar with the situation. More specifically, a senior resident or fellow may have more power than an attending physician due to familiarity with or knowledge of a specific patient.

Members' expectations and preexisting perceptions about one another influence power in ad hoc teams and influence how individuals seek help, speak up about concerns, and imagine others' perspectives.[26] Power is therefore both established and presumed in ad hoc teams, and both types may affect the communication and effectiveness of the team for carrying out the task at hand.[26]

There is extensive literature about the role of the formal leader in the context of group performance.[2,8–10,27–31] However, formal leadership is only one aspect of leadership within a team. Leadership strategies and behaviors also play a role in team dynamics. Senior physicians in settings such as the intensive care unit adapt their leadership strategies to different clinical situations.[28] This leadership strategy is commonly known as *situational leadership*, meaning that leaders adapt or adjust their leadership strategy to accommodate the specific situation. Leadership strategies and behaviors are important, because they influence team performance and create conditions to

perform effectively by coordinating efforts, solving problems, structuring and transmitting information, and managing resources.[27,28]

Leadership and power impact group dynamics both positively and negatively. Team leaders and team members should recognize their power and roles in an ad hoc team and own their influence with humility to encourage positive interactions. The overall goal is to create an emotional space with a high ratio of positive to negative interactions, which facilitates positive group contagion and a well-connected team.

SOLUTIONS AND RECOMMENDATIONS

Successful teams share similar communication and social characteristics across different industries. Members talk and listen in roughly equal measure, contributions are usually short and clear, members face one another, and gestures and conversations are energetic. Members connect with one another and the team leader. Members periodically break to exchange ideas and opinions with other teams and then bring information back.[32] Successful teams share expectations for behavior that will help overcome common barriers like intragroup hierarchies. One example is an expectation for action from any member, regardless of position in the hierarchy. For example, many health care teams have adopted tools from Toyota Production System such as "stop the line," which empowers team members to interrupt processes when a situation is in question.[33] As another example, a leader may influence team decision making with humility by encouraging the team to seek outside expertise when needed. This acknowledges that the leader does not have all of the answers and is willing to consider others' opinions and perspectives for the good of the team or, in many instances in health care, for the good of the patient.

Although trainings on team communication and team behaviors within ad hoc teams can improve communication and leadership behavior, the results are not robust and the behaviors tend to fade over time without continued practice and leadership support in the form of policies and role modeling.[2] One of the difficulties with sustaining the effects of training may be that all types of teams are generally treated the same. Tailoring team training to specific team types as outlined by Andreatta[6] may make training more meaningful. In addition, creating team training that corresponds to the most common modes of communication used within the team is important. For example, if a portion of team communication is done via telephone, it would be prudent to develop and teach strategies for better communication that minimize the limitations associated with this type of communication. Training might address communicating when nonverbal cues are not available by phone, tactics for checking understanding by phone, and tips for identifying distractions and additional barriers to communication by phone. Once teams are aware of the barriers to phone communication, they may choose to utilize technology that allows for face-to-face communication (secure video conferencing), giving a more holistic picture of communication. However, the communication methodology chosen is less important, because each methodology has pitfalls. Instead, team awareness of communication pitfalls and tailoring training to the needs of the specific team are most important. Adapting training to team types and modes of communication would facilitate the perspective needed to create shared belief in the mission of the team, create achievable goals, recognize all members independent of the hierarchy, and reward team behavior in tangible ways.[34]

With this literature in mind, development of future training that spans undergraduate medical education and postgraduate training should include both the generalizable and proven aspects of team communication that bring success, as well as the team-specific aspects needed to ensure success in specific situations. Basic skills that are applicable to all specialties such as understanding the effect of emotional contagion, knowing how to listen, recognizing trigger words, understanding the impact of social signals including body language, and being aware of self and others should be taught in the undergraduate medical education curriculum and reinforced longitudinally throughout a career. Building on those basic skills, graduate medical education should introduce more specialty and environmentally specific needs; just as it is important to contextualize clinical skills, it is important to contextualize team-based training and skills to the specific environment.[35]

Even after medical training, situations requiring new daily workflows in health care require advanced choreography, defining roles and expectations of the team members that were agreed upon ahead of time. One example of this is in the nurse–physician dyad rounding. Each team member is expected to be prepared to round at a certain time, having already reviewed charts and accomplished certain agreed-upon tasks. In this situation, everyone benefits. The benefits of the synergy created by a prepared nurse and physician at the bedside providing collaborative care are anecdotally noted by the patient and in early pilots are showing improved length of stay as well as engagement of both nurses and physicians. Other team members such as pharmacy and case management may be included in portions of these rounds, because each patient situation dictates a different combination of expertise.

Finally, another potential solution is encouraging standardized communication as a way of facilitating communication among ad hoc health care teams. An example of this is short 15-minute meetings or huddles that are held among health care teams as part of lean management. Lean management has had proven success in the auto industry, and health care has adapted some of the principles, which continue to be under review for effectiveness.[36] Huddles can occur among front office staff, nurses, physicians, operations managers, etc. Some huddles may be attended by a homogenous group of employees from one area. Other huddles may include a cross-sectional group of participants whose workflows intersect. Regardless of the setting or type of huddle, generally predictable types of questions are asked. This promotes an anticipated pattern of information exchange among the huddle attendees, making it easier for

team members to know when and how to mention specific concerns or events. Predictability in communication creates a shared expectation, reducing miscommunication. Huddles also serve as regularly scheduled, face-to-face communication, providing a forum to quickly address unexpected problems, decreasing delays in information dissemination, and ensuring that ad hoc teams have an opportunity to gather ideas and solutions.

CONCLUSION

When considering the importance of team performance in medicine, it is no surprise that the body of scientific evidence is expanding rapidly. Still, a few areas lack sufficient evidence. Little is known about how nonverbal communication, group dynamics, contagion, and psychological safety interact to affect team communication—all of which would benefit from additional research. Another gap is the lack of evidence specific to ad hoc teams. Improving the work of ad hoc teams in teaching hospitals may require training on individual and group behaviors, which may differ from a more general approach to teams.

Until more is known about these factors, it is important to highlight solutions to improve ad hoc team functionality. Highlighted in this article were literature and application-based solutions and recommendations. Literature solutions include data about successful teams and communication in those teams, as well as data about improving team training. Recommendations for application include an outline of education and training, as well as application-based examples. Each solution was derived from either literature or clinical application, but all can be used as recommendations for leaders working with challenges in ad hoc teams.

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