

Healthcare is a team sport, so train your teams

BA. Bassa, F. Ni Ainle, F. O Keeffe, T. Breslin

School of Postgraduate Studies, Royal College of Surgeons Ireland (RCSI).

Department of Emergency Medicine. Mater Misericordiae University Hospital (MMUH), Dublin 7.

Abstract

Effective healthcare teams are fundamental to patient safety and impact the quality of care received by patients, as well as individual team member satisfaction. Central to effective teams are individual and team competency, clear communication strategies, and a shared mental goal. This, coupled with strong team leadership and a sense of teamness, creates resilient teams. To enable healthcare teams to function effectively with and alongside each other, training in technical and non-technical aspects of collective team reasoning, influence, and behaviours is required. Various teaching strategies have been shown to positively influence healthcare team processes and performance. Future commitment of resources and time to training healthcare teams is imperative in delivering safe care.

Introduction

A patient's care journey is shaped and influenced by the multidisciplinary team responsible for their healthcare. From acute admission through to management and rehabilitation, the ability of a team to provide safe, patient-and-kin-centered care depends on their ability to perform effectively with and alongside one another. High-performance teams significantly impact quality of care, team member satisfaction, and cost of care, particularly in surgical, intensive, ambulatory, and primary care.^{1, 2, 3, 4} Above all, higher team effectiveness is associated with improved patient outcomes.¹ This sentiment is supported by the American Institute of Medicine (IOM) quality of healthcare report, *Crossing the Quality Chasm*, that recommends the development of effective teams as fundamental to organisational change and improvement.⁵ Developing a safety culture is central to achieving such improved patient outcomes. Since the publication of *To Err is human*, there has been considerable focus on better understanding preventable errors and patient harm in healthcare.⁶ Current literature shows that teamwork failures are a pivotal contributing factor toward medical error. This is supported by the findings of the Joint Commission International (JCI), an international leader in quality of care and patient safety accreditation, that breakdown in teamwork contributes toward (68.3%) of patient harm events.^{7, 8}

Fundamental to high-performance teams is individual and team competency, clear communication techniques, collective orientation, and a shared mental goal.^{9, 10} Underpinning this is individual and collective task ownership, driven by solid team leadership and an ability to anticipate and adapt to change.¹⁰ As explained by Mcintyre and Salas,

integrating taskwork and teamwork skills is central to effective teams, proposing areas of team behaviour and performance standards that strengthen the quality of team dynamics, communication, and coordination.^{10,11} These include critical performance monitoring, a climate of constructive feedback, closed-loop communication, backing-up behaviours, and team self-awareness.¹¹

Effective team models exist across many disciplines. Since the introduction of trauma systems to healthcare, managing severely injured patients by multidisciplinary (MDT) trauma teams has been associated with time reductions to critical interventions.¹² In those patients who survive beyond the first day, inpatient, consulting trauma teams provide comprehensive management to decrease associated risks of sepsis and venous thromboembolism (VTE), the principle causes of death in surviving trauma patients. In cases of VTE, high-risk pulmonary embolus (PE) is associated with significant morbidity and mortality.¹³ In response to often variable and delayed management of these high-risk patients, pulmonary embolus response teams (PERT) were developed to function as rapid MDT response teams facilitating prompt consultation and defining coordinated treatment plans in patients with acute PE.¹⁴

By clearly understanding effective teams, we can better define teamwork training approaches in healthcare. Team training consists of theoretical and practical education strategies in which team members acquire teamwork knowledge, skills, and abilities (KSA) to build on their collective team reasoning, influence, and behaviours.⁸ Current evidence indicates that overall team performance benefits from training focused on team behaviours.¹⁵ A large meta-analysis of healthcare team training indicated that healthcare team training is effective. Using the Kirkpatrick model,⁸ the study found that healthcare team training appears to '(a) surpass employees' pre-training utility and enjoyment expectations, (b) induce learning, (c) transfer learned material to the job, and (d) lead to improved organisational and patient results.'⁸

Communication and Decision making

A meta-analysis by Mesmer-Magnus et al. found that effective information sharing positively predicted a team's performance across a range of industries.¹⁶ Evidence shows that structured communication techniques which improve information exchange can improve clinical management in high-acuity settings.¹⁷ Teaching teams to use tools such as SBAR/ISBAR (situation, background, assessment, and recommendation) positively impacts good quality handovers within teams.^{17,18} Training teams to employ closed-loop communication and the step-back (call out) in high acuity settings and encouraging the practice of escalating concern using PACE (Probe, Alert, Challenge, Emergency) creates concordance within teams and fosters a shared mental model.^{14,17} Such communication tools are best learned and practiced during simulation training, a powerful tool for teaching teamwork and interpersonal skills.^{17,18}

Organisational design and formal team training enhance team decision-making abilities, including training teams in situation assessment and using communication to develop shared mental models.¹⁹ Crew resource management (CRM) and The Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) are common approaches to improve teamwork and patient safety in healthcare settings. CRM focuses on skills to improve situational awareness and decision-making and coping with individual stress and fatigue.²⁰ A systematic review examining various interventions on team effectiveness in healthcare showed that principle-based training (i.e., CRM and TeamSTEPPS) and simulation-based training afford the best opportunity to improve team functioning.²⁰ The study also found that debriefing checklists improved non-technical skills such as communication and improved objective outcome measures such as reductions in procedural complications and errors, unanticipated delays, and morbidity.²⁰ Similarly, a study by Brock et al. examining the effectiveness of simulation based TeamSTEPPS training found 'positive attitudinal and knowledge effects' involving different healthcare professions.²¹ In another meta-analysis examining over 500 studies, simulation training directly improved team knowledge, time management skills, process, and product skills, illustrating its positive effect on technical skills within teams.²²

Situational awareness and Collaborative problem-solving

Situational awareness (SA) is considered essential for improving clinical performance and reducing medical errors, occurring at both individual and team levels and requiring good teamwork and communication.^{23,24} Using *Endsley's model of situational awareness in complex dynamic environments*, Graafland et al. illustrate the importance of teamwork and communication in creating SA in the operating theatre.²⁴ The authors concluded that in addition to a surgeon's technical skills, surgical team crisis management was crucial to good surgical outcomes and advocated for SA training using simulators and serious games.²⁴ Similarly, a randomised controlled study of interprofessional intensive care teams found that a two-hour educational program in SA improved certain areas of team performance in a high-acuity setting.²⁵

In their paper *Medical Team Training Programs in Health Care*, Baker et al. reviewed the evidence for two common groups of medical team training: simulator and classroom-based programs.²⁶ In classroom-based training, they found these programs to have an interdisciplinary, as opposed to a profession-centric approach and used mature and active learning techniques to develop member awareness of team-related skills.²⁶ The authors examined Anaesthesia Crisis Resource Management (ACRM) and Team-oriented Medical Simulation (TOMS) in simulator-based training. They found that positive responses from team members lasted up to six months after training, with healthcare workers reporting ACRM to contribute significantly to the safe practice of anaesthesiology.^{26,27.}

In their review, Ellis et al. evaluated the benefit of generalised teamwork skills training on healthcare teams.²⁸ They found that generic training programs positively influenced cognitive and skill-based outcomes and that individual team members displayed improved awareness and knowledge regarding teamwork competencies and showed improved skills in planning and task coordination, collaborative problem-solving, and communication.²⁸

Patient outcomes

Guzzo and Dickson explain that team effectiveness is indicated by group-produced outputs.²⁹ In the healthcare setting, safety is an important outcome, which can be assessed by errors or accidents.²⁹ In their meta-analysis, Hughes et al. demonstrate that the learning-to-transfer pathway influences bottom-line organisational results and patient outcomes. They argue that teamwork training and transfer are essential for healthcare organisation's broader objectives.⁸

Conclusion

It is clear from this review that team training positively influences the performance and functioning of healthcare teams. Team training can improve a team's technical and non-technical skills and result in improved team reasoning, communication, and adaptability. The stronger the team, the safer the care they deliver. The call for institutions to invest resources and time toward the training of all healthcare teams could not be louder. Healthcare is a team sport, and likewise, we should be training our teams to work as effectively alongside each other to deliver safe care.

Declarations of Conflicts of Interest:

None declared.

Corresponding author:

Bibi Ayesha Bassa
School of Postgraduate Studies,
Royal College of Surgeons Ireland (RCSI).
Dublin 2,
Ireland.
E-Mail: bibibassa22@rcsi.com

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