Clinical Spotlight

Can Team Training Save Lives?

If designed systematically and guided by the science of learning, training and teamwork, team training can save lives. It can impart team-based competencies needed for safe care. It can enhance coordination, cooperation and communication — teamwork — among healthcare providers. This begs the question: What matters in the design, delivery, transfer, and sustainment of team training?

Transforming Healthcare One Team at a Time

Team training has been at the forefront of patient care for the last 10 to 12 years, transforming teams. Despite healthcare’s emphasis on flawless execution of individual technical (clinical) skills, quality patient care requires effective teamwork.2 Patient care is a team sport. Therefore, the need to develop and foster teamwork behaviors in care providers is essential to quality care and patient safety. Team training — the planned instruction that systematically imparts knowledge, skills and attitudes necessary for effective teamwork — has been applied widely in healthcare. This can be seen in the implementation of Crew Resource Management-like programs and TeamSTEPPS, two programs that impart team-based competencies.3,4 These programs have a very compelling empirical base supporting their effectiveness in enhancing team functioning.5

Teamwork is comprised of three competency categories: attitudes, behaviors and cognitions (ABCs). Attitudes, in essence, are the motivational drivers of teamwork in that they influence behavioral action and include constructs such as collective orientation cohesion, collective efficacy and mutual trust. Behaviors include processes such as information exchange, monitoring team process, leadership behaviors and backup/supportive behaviors and action; they are the processes necessary for teamwork.2 Cognitions refer to the knowledge and shared understanding among team members and include team mental models, familiarity, roles, and responsibilities. In other words, the ABCs define how team members feel, do and think, respectively,6 and reflect the emergent states (i.e., moment-to-moment) and processes that are the drivers of team learning, performance, viability, and overall effectiveness. The goal, then, of any team training is to provide team members with these interrelated, team-based ABC competencies. These are transportable competencies that team members can take to their various teams.

Does Team Training Work?

Research supporting the notion that team training interventions improve team effectiveness is extensive and growing. A meta-analysis on team training effectiveness examined 52 effect sizes representing 1,563 teams and found a primary effect size of .34.7 A more recent meta-analytic study of team training and its impact on team outcomes found a direct, positive effect (r = .85, n = 1,413 teams) in relation to affective, cognitive, subjective task-based skill, objective task-based skill and teamwork skill outcomes.8 A number of reviews of the team training literature have summarized the effectiveness of research in domains as diverse as aviation,9 the medical field10 and the military.11 In short, a strong body of evidence shows the effectiveness of team training. It works. Now, does team training improve clinical outcomes?

My doctoral students and I have recently conducted a meta-analysis of medical team training evaluations. This is the first meta-analysis to investigate team training’s differential impacts on Kirkpatrick’s12 four levels of training evaluation criteria. This multilevel framework evaluates training based on trainees’ affective reactions (i.e., whether or not trainees enjoyed the training and perceived it to be useful), learning (i.e., the extent to which trainees acquired the requisite knowledge, skills and attitudes), behaviors (i.e., use of the trained competencies on the job), and organizational outcomes (i.e., results that indicate organizational benefit from the team training program).

We systematically collected and synthesized the literature via Morris and DeShon’s14 meta-analytic procedures. We included 87 studies with 100 independent samples to determine team training effectiveness in a healthcare sample and statistics amenable to calculating a repeated measures Cohen’s d statistic. Six coders double-coded each article for consistency and extracted information for each article. Agreement between coders for all articles was high at 87% agreement.

We found that team training in healthcare is well-liked and received by trainees, fosters learning, transfers to the job, and improves various organizational outcomes such as safety climate, length of stay, turnover, job satisfaction, and patient outcomes. In a deeper look, we discovered that team training improves various types of learning (i.e., skill-based, knowledge and affective15), reduces the event rates on the job, improves clinical performance on the job, and improves safety climate. Most importantly, team training saves lives: we saw a true effect for reduced patient mortality and improved patient health and satisfaction after training.

This meta-analytic investigation demonstrates that team training is effective in improving intended outcomes in medical settings based on what has been published to date. The effects were moderate for reactions, large for learning outcomes, moderate to large for on-the-job performance outcomes, and small for organizational results and patient-related outcomes. While these effects may appear moderate to small, they can make a huge impact. For instance, of the 8,068 patients included in the studies analyzed, 355 lives could be saved because of team training. Now, what matters in successful implementation of team training and the sustainment of teamwork ABCs back on the job?

What Matters

Training effectiveness is not achieved simply by sending unskilled workers to be trained. For training to be effective, one needs to think of it as a system. It is clear from the science of training that what matters more is what organizations do before and after team training than during.11 For example, careful attention to preparing the organization is needed before deploying team training. Supervisors must be onboard and supportive. Also, the coordinating demands (i.e., the interdependencies) of team members within and across teams must be understood. The selected competency-oriented team training program should emphasize the ABCs of teamwork. Further, the training program should provide opportunities to practice (e.g., simulation), and trainees should receive diagnostics and developmental feedback. Table 1 provides more advice. However, the biggest challenge in medical team training is sustainability. How can the ABCs of teamwork be sustained and become part of the organization’s DNA? It is all about creating organizational conditions that create the culture of teamwork. It is about the policies, procedures and signals that top leadership sends. Sustainability is created with conditions that clearly convey to providers that teamwork matters. And creating the conditions is a journey — not an event — that all healthcare leaders should embark on. ▷

References and disclosures are available at www.scm.org/criticalconnections.

Table 1.

WHAT MATTERS IN TEAM TRAINING

1. Understanding the coordination demands in the units
2. Focusing on teamwork-related knowledge, skills and attitudes
3. Preparing the organization and trainees for team training
4. Reliance on the science of learning, training, teamwork, simulation, and organizational change
5. Team training system that provides information, demonstrates behavior and creates opportunities to practice (with simulation) and receive diagnostic feedback
6. Support system that facilitates the application of the trained skills back on the job
   • Supervisory support
   • Opportunity to practice
7. Organizational commitment by leadership to support necessary change
   • Long-term culture change efforts
   • Resources allocated
8. Providing tools for teamwork and collaboration (e.g., checklists, debriefings, huddles, teamwork aids)
9. Team coaching
10. Organizational mechanisms to promote and reinforce teamwork, creating conditions for sustainability

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