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Debriefing 101: training faculty to promote learning in simulation-based training

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Abstract

BACKGROUND: Debriefing is recognized as essential for successful simulation-based training. Unfortunately, its effective use is variable. We developed a train the trainer workshop to teach key evidence-based components of effective debriefing.

METHOD: A workshop focusing on best practices for debriefing in surgical simulation-based training was developed for the 2012 Annual Meeting of the Association for Surgical Education. Content emphasized key theoretical concepts related to and evidence-based components of an effective debriefing. Additionally, the workshop incorporated experiential learning via active debriefing following a simulated scenario.

RESULTS: Content of the workshop emphasized effective debriefing as the key to learning in simulation-based education. Key elements of debriefing for educators to keep in mind include the following: approach, learning environment, engagement of learners, reaction, reflection, analysis, diagnosis, and application.

CONCLUSIONS: Effective debriefing is an essential skill for educators involved in surgical simulation-based training. Without it, learning opportunities are missed. Training the trainer in effective debriefing is essential to ensure standardization of practice.

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Since its introduction in surgical education over a decade ago, simulation-based training (SBT) has evolved into an increasingly accepted method for honing the skills of surgeons at every level of professional development in a safe learning environment.[1,2] Evidence in the literature clearly demonstrates that key technical skills acquired in SBT can transfer to improved performance in the actual clinical environment (ie, the operating room [OR]),[3–5] making SBT a highly effective mode of teaching. Recently, innovations in surgical SBT have concentrated on the integration of sophisticated technology into training,[6–8] the development of validated tools for assessment of learner performance,[9,10] and

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the introduction of high-fidelity team-based training curricula for OR teams.[11,12] Such efforts are designed to leverage the benefits of simulation as an educational training tool across the entire surgical professional development continuum.

Although much attention related to SBT has focused on key aspects of simulator technological development and the mechanics of curricular design, implementation, and evaluation, recent high-quality reviews have demonstrated that SBT's most effective feature is in fact the oft overlooked debriefing process.[13,14] This facilitated self-reflection of the learner is the critical component for fostering deep learning and promoting transfer of skills and behaviors to clinical practice. Without it, SBT's large commitment of resources and personnel may not be worth the effort. First developed in the military as a post-mission account of events that served both operational and educational objectives,[15] debriefing has developed into a powerful learning tool integrating components of Kolb's experiential learning cycle[16] and Schön's reflective practice.[17] It is a means of assisting the learner in analyzing, interpreting, and assimilating events in an attempt to bridge the gap between merely "experiencing" them and actually "making sense" of what happened.[15]

Despite debriefing's central importance to learning in SBT, little literature in health care focuses on the key constituents of an optimal debriefing, especially in surgery. Recent work has begun to address this deficiency with the international development of both guidelines for effective debriefing and a validated assessment tool to rate the quality of debriefing.[18,19] Their presence, however, does not in itself guarantee high-quality debriefing or learning. In order to utilize debriefing strategies most effectively, faculty must be adequately trained on how to use these guidelines while maintaining learner engagement in a safe, supportive setting. Such facilitator training is recognized as essential for successful educational outcomes.[20]

Unfortunately, unlike other high-risk, high reliability industries that regularly utilize faculty training programs to teach effective debriefing techniques to potential facilitators,[21] the field of surgery has lagged in such faculty development. Often, the focus has remained on ensuring faculty members are able to teach and assess adequately technical skills. In comparison, the ability to provide a constructive debriefing is seldom formally taught, much less assessed. Faculty are left to provide debriefings based on their own experiences in an unstructured, non–evidence-based manner that results in significant variability and, more importantly, a missed opportunity to embed learning after every simulated encounter.[22,23] Considering the immense resources required for the successful implementation of SBT, having adequately trained faculty to lead post-simulation debriefings is paramount.

Although some formal course offerings in debriefing do exist, they are frequently part of multiday courses on SBT[24] or offered as on-line modules without live instructor input.[25] For busy surgical educators inexperienced in debriefing who are under increasing pressure to increase clinical output, neither option is attractive. They can ill afford to forsake clinical activity to take off several days to attend a course, yet they would benefit from the live instruction lacking in an on-line offering. One solution is to integrate debriefing training into the current framework for continuing professional development of surgeons (ie, within the educational content of an established surgical meeting). In this manner, surgeons seeking training would have the opportunity to learn these important techniques in a familiar educational setting at a time when they are already free from other clinical and administrative responsibilities. This article describes such a train the trainer workshop entitled "Best Practices for Debriefing in Surgical Simulation—the What, Where, When, and Why."

Workshop setting and theoretical underpinning

The workshop was conducted at the Association for Surgical Education (ASE) Annual Meeting 2012 in San Diego, CA, in an effort to introduce surgical educators to key elements of debriefing. A working group within the ASE Simulation Committee was charged with developing the workshop educational format. It consisted of 7 surgeons and 1 physician assistant with extensive experience in surgical education and SBT. Goals and objectives emphasized key elements of effective debriefing (Table 1).

The theoretical underpinning of this workshop was based on using debriefing in fostering both learning and behavioral change based on Kolb's theory of experiential learning (Fig. 1).[16] In this theory, a concrete experience leads to reflection by the learner of the events related to it followed by abstract conceptualization of new rules and principles, which are then tested through active experimentation. Behavioral change occurs when these new rules and principles are accepted by the learner. The learning cycle continues when another experience involving the new behaviors triggers the same process. In SBT, the simulation scenario typically serves as the concrete experience of Kolb's experiential learning cycle. The debriefing provides the opportunity for the learner to undergo the reflection and conceptualization related to this "experience." Thus, although an educator may be required to don several different roles during the debriefing process, he has 3 key duties during debriefing: (1) making it safe; (2) making it stick; and (3) making it last (Table 2).[15,18–20,23,26–28] In making a debriefing safe, the educator must strive to create an environment of trust and support in which the focus is on the "process," not the person; learners are respected; and psychological safety is ensured.[15,20,23] Making learning stick requires the educator to focus on learning objectives and to promote active reflective analysis and synthesis by each learner.[20,23,27] Reference to objective indicators (ie, time to intubation, oxygen saturation values) in lieu of subjective interpretations (ie, poor technique in intubation) is particularly useful to help with such reflection.[20] Finally, to promote behavioral change, the educator must make the lessons learned during the debriefing last by eliciting a commitment to change from each learner through the identification of an improvement

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