

Co-debriefing for Simulation-based Education

A Primer for Facilitators

Adam Cheng, MD, FRCPC, FAAP;

Janice Palaganas, PhD, RN, NP;

Walter Eppich, MD, MEd;

Jenny Rudolph, PhD;

Traci Robinson, RN, BN;

Vincent Grant, MD, FRCPC

Summary Statement: As part of simulation-based education, postevent debriefing provides an opportunity for learners to critically reflect on the simulated experience, with the goal of identifying areas in need of reinforcement and correcting areas in need of improvement. The art of debriefing is made more challenging when 2 or more educators must facilitate a debriefing together (ie, co-debriefing) in an organized and coordinated fashion that ultimately enhances learning. As the momentum for incorporating simulation-based health care education continues to grow, the need for faculty development in the area of co-debriefing has become essential. In this article, we provide a practical toolbox for co-facilitators by discussing the advantages of co-debriefing, describing some of the challenges associated with co-debriefing, and offering practical approaches and strategies to overcome the most common challenges associated with co-debriefing in the context of simulation-based health care education.

(*Sim Healthcare* 10:69–75, 2015)

Key Words: Simulation, Facilitation, Debriefing, Co-facilitation, Co-debriefing, Education.

Simulation-based education (SBE) in health care is emerging as an important educational modality for teaching knowledge as well as technical, clinical, and behavioral skills.^{1–4} Effective SBE requires skilled facilitation to guide learners to derive meaning from simulated learning opportunities. When applied to SBE, one form of facilitated learning is debriefing, defined as a “discussion between two or more individuals in which aspects of a performance are explored and analyzed with the aim of gaining insight that impacts the quality of future clinical practice.”⁵ Effective debriefing supports learning that is then transferred to clinical practice with the goal of improving patient care and outcomes.

Recent reviews of the simulation literature highlight the critical role of debriefing as part of SBE.^{1–3,5–8} Existing literature describes instructional design features of debriefing that may lead to improved learning outcomes,^{5,9–16} but no studies have discussed the impact of multiple facilitators involved in a single debriefing. In this article, we define *facilitator* as an educator who participates in the debriefing for the

purposes of promoting discussion to enhance learning. Furthermore, we define co-debriefing as more than 1 facilitator conducting a debriefing session, when these facilitators may be from the same or different professional backgrounds or specialties. Ideally, the goal of co-debriefing is for co-facilitators to work together to manage discussion in fluid fashion that promotes effective learning.

The goal of this article is to provide an overview of key considerations for effective co-debriefing for SBE. We acknowledge the importance of the dynamics between facilitators and learners and between the learners themselves during debriefing. However, for this article, we have deliberately chosen to focus on discussing the interaction *between co-facilitators* and specifically how co-facilitator dynamics can be managed to enhance learning. We aim to provide a practical toolbox for co-facilitators by (1) describing the advantages of debriefing with more than 1 facilitator; (2) discussing the common challenges encountered during co-debriefing; (3) proposing structured approaches for co-debriefing; (4) describing mitigation strategies to overcome challenges specific to co-debriefing; and (5) suggesting future directions for research related to co-debriefing in SBE.

Benefits of Co-facilitation

As in many educational activities, 2 or more facilitators participating in a single educational session may impart benefits for learners and faculty alike. Although there is no research to support this notion from the simulation literature, the concept of co-facilitation has been explored in other fields.^{17–24} Some of the key advantages of co-facilitation are the potential for facilitators to complement each other's styles, to provide a larger pool of expertise with potentially diverse view points and to help cross-monitor and collectively manage learner expectations and needs.^{17,18} Two or more facilitators

From the KidSIM Simulation Research Program (A.C., T.R., V.G.), Department of Pediatrics, Alberta Children's Hospital, University of Calgary, Calgary, Alberta, Canada; and Center for Medical Simulation (J.P., J.R.), Massachusetts General Hospital, Harvard Medical School, Boston, MA; and Department of Medical Education (W.E.), Northwestern Feinberg School of Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL.

Reprints: Adam Cheng, MD, FRCPC, FAAP, KidSIM Simulation Program, Department of Pediatrics, Alberta Children's Hospital, University of Calgary, 2888 Shaganappi Trail NW, Calgary, Alberta, Canada T3B 6A8 (e-mail: chenger@me.com).

W.E. teaches on multiple simulation educator courses. He receives salary support from the Center for Medical Simulation, Boston, MA. All salary support is paid to his institution to offset clinical duties. He receives intermittent per diem honoraria from PAEDSIM, a pediatric simulation collaborative in German-speaking countries, to teach simulation educator courses.

The other authors declare no conflict of interest.

Copyright © 2015 Society for Simulation in Healthcare

DOI: 10.1097/SIH.0000000000000077

can support each other and help to resolve challenging situations if they arise.¹⁸ Pertinent issues may come into focus more sharply with multiple facilitators, and having more than one facilitator perspective may help to provide clarity when confusion exists.^{17,18} Co-facilitators may also model effective teamwork, communication, and negotiation skills to help further enhance the learning outcomes from the simulation session.¹⁸ Finally, co-facilitation also offers the opportunity for enhanced faculty development through direct observation and peer feedback.¹⁷

Challenges With Co-debriefing

When applied to SBE, co-facilitation takes the form of co-debriefing. If co-facilitators are not prepared to deal with the challenges of collaboration and coordination, adverse learning may result.¹⁷⁻²³ In our collective experience, we have identified a series of challenges that frequently arise among co-facilitators. Failure to recognize and manage these issues may lead to discordance, perceived authority and subordination (ie, power struggle), and possibly even open disagreement between facilitators. The main issues that commonly arise during co-debriefing between facilitators are as follows (Table 1):

- Lack of knowledge of learning objectives. Clear learning objectives are key to high-quality debriefing. Difficulties may arise when co-facilitators are not on the same page about the learning objectives and their degree of importance for a given simulation event.
- Facilitators have differing personal agenda. Facilitators with personal agenda may lead the discussion toward their particular area of interest that may not be aligned with the predefined objectives of the session.
- Facilitator expertise is not used optimally during debriefing. Facilitators have a wealth of experience and knowledge that may not be optimally used during the debriefing. This may occur if facilitators are not familiar with and/or do not appreciate the strengths and potential contributions of their cofacilitator(s). Consequently, when opportunities arise for a content expert to contribute to the debriefing, a co-facilitator unaware of his or her colleague's expertise may subsequently miss opportunities to bring that valuable perspective to bear for the benefit of the learners.
- One facilitator interrupts another facilitator's train of thought. Co-facilitators may be out of sync during a debriefing because of lack of shared mental models

TABLE 1. Co-debriefing Challenges and Mitigation Strategies

Co-debriefing Challenge	Mitigation Strategies	
	Proactive	Reactive
Lack of knowledge of learning objectives (and how they relate to various professions)	Facilitator prebriefing Set the stage for learners Post-simulation huddle Post-debriefing huddle	Open negotiation Post-debriefing huddle
Facilitators have differing personal agenda	Facilitator prebriefing Set the stage for learners Post-simulation huddle Post-debriefing huddle	Open negotiation Post-debriefing huddle
Facilitator expertise is not used optimally during debriefing	Facilitator prebriefing Set the stage for learners Post-debriefing huddle	Open negotiation Post-debriefing huddle
One facilitator interrupts another facilitator's train of thought (hijacking)	Facilitator prebriefing Nonverbal communication Listen, observe, reflect Open negotiation Previewing Post-debriefing huddle	Open negotiation Post-debriefing huddle
One facilitator dominates discussion	Facilitator prebriefing Nonverbal communication Listen, observe, reflect Open negotiation Previewing Post-debriefing huddle	Open negotiation Pulse check Post-debriefing huddle
One facilitator speaks directly or only to learners from one specific profession/group	Set the stage for learners Facilitator prebriefing Nonverbal communication Open negotiation Post-debriefing huddle	Open negotiation Pulse check Post-debriefing huddle
Open disagreement between facilitators	Nonverbal communication Listen, observe, reflect Previewing Post-debriefing huddle	Open negotiation Pulse check Post-debriefing huddle

about how to proceed. By *hijacking* a line of questioning or interrupting the flow of discussion, a co-facilitator may hinder the learning process by disrupting a discussion related to a specific learning objective. Sometimes, this occurs before specific performance issues have been fully addressed, thus leaving the learners without a clear resolution to the issue at hand.

- One facilitator dominates discussion. Instead of adopting a collaborative approach to debriefing, which capitalizes on the expertise of his or her co-facilitators, a dominant facilitator may take over the debriefing. This often results in a predominantly didactic session with minimal reflective learning and discussion.
- One facilitator speaks directly or only to learners from one specific profession/group. A facilitator may speak primarily to only a few learners with whom they are familiar. For example, in an interprofessional debriefing, a physician facilitator may choose to speak only to physician learners. This compromises the goal of equality in learning between professions.
- Open disagreement between facilitators. Facilitators may not see eye-to-eye on how to best address a specific performance issue, leading to open disagreement during the debriefing. This issue may arise when facilitators react to assumptions without taking the time to ascertain a clear understanding of each other.¹⁷ Disagreement during the debriefing may serve as a poor example of interprofessional collaboration, thus undermining the integrity of the safe learning environment.

There may be other reasons why some simulation programs deliberately choose not to conduct co-debriefings. Some programs lack the volume of facilitators required to implement co-debriefing across curricula, whereas others may lack the breadth and variety or expertise of facilitators necessary to deliver a rich co-debriefing experience for learners. Implementing co-debriefing may require additional facilitator training and buy-in from facilitators, both of which may be issues depending on the availability of resources and existing educational culture within programs. Challenges aside, we believe that when conducted effectively, co-debriefing offers a learning environment that is enriched by the mutual presence, expertise, and collaboration of multiple facilitators.

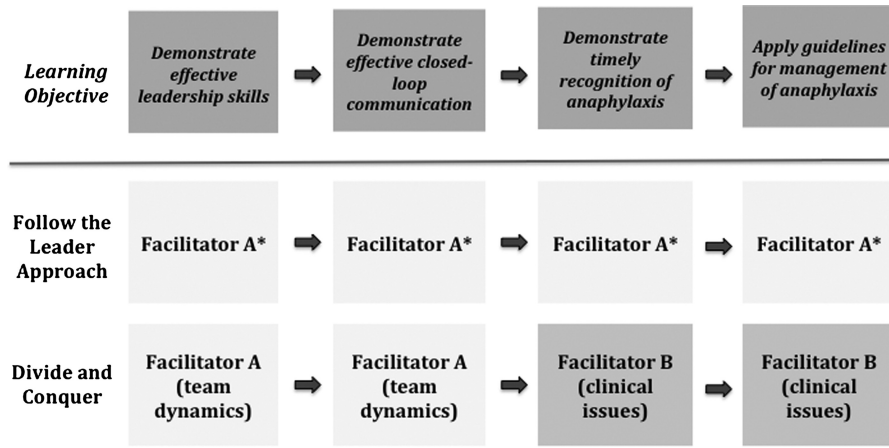
Structured Approaches to Co-debriefing

Applying a structured approach to co-debriefing allows facilitators to preplan certain aspects of the debriefing session and subsequently reduce the need for explicit in-the-moment coordination between facilitators. When co-debriefing, facilitators may struggle to manage the flow of discussion, prioritize content, and identify who should facilitate various aspects of the discussion. A predetermined approach to co-debriefing may help facilitators develop a shared mental model about how to coordinate the process, flow, and content of the debriefing.¹⁹ Although there is growing body of literature describing various methods of debriefing,²⁴⁻²⁷ there has been nothing published to date that offers guidance on how these existing methods may be adapted for co-debriefing.

Several models for effective co-facilitation have been proposed and discussed in the education literature.¹⁹⁻²³ Recognizing that there are features of SBE that distinguish it from traditional classroom education, we offer 2 structured approaches for co-debriefing that are tailored to debriefing after simulation. Both approaches can be integrated with the debriefing method(s) of choice. Practicing these approaches will help to promote an understanding of the nuances associated with co-debriefing. Ultimately, co-facilitators may choose to mix or blend approaches within one debriefing, but doing so effectively requires an appreciation for the merits of both approaches. Regardless of the approach taken, we recommend that one facilitator take on the responsibility of opening the debriefing (eg, reactions phase) and one being assigned the task of facilitating a summary at the end of the debriefing. The following approaches for co-debriefing involve the phase of debriefing between the opening and the summary where understanding, reflection, and analysis take place.

The “follow the leader” approach identifies one facilitator as the lead, who holds responsibility for guiding discussion, prioritizing topics, and managing the time allocated to each topic. The “associate” facilitator may serve to assist the lead facilitator by keeping a focus on how the learners appear to be receiving the learning, by keeping time, or by filling in gaps. Although other approaches may have a lead and associate facilitator, in the “Follow the Leader” approach, the lead facilitator engages the associate facilitator through purposeful solicitation of input at various points in time during the debriefing or the associate facilitator makes specific inquiry to ascertain when it is a good time to join discussion. The associate facilitator may be the content expert, being called on by the lead facilitator when a specific question related to his or her context expertise arises. The benefit of this approach is that the lead facilitator can manage the flow of discussion to ensure that all key learning objectives are covered sufficiently. The disadvantage of this approach is that the leader may monopolize the discussion and choose not to engage the other facilitator(s) in the debriefing process. If the facilitators have different professional backgrounds or experience levels, learners may perceive this imbalance as a sign of either hierarchy or disagreement, possibly creating anxiety or discomfort between individuals or professional groups.

The “divide and conquer” approach describes a process where facilitators decide before the simulation or debriefing what topics they will cover, the order in which they will be covered, and who will lead the discussion for each topic. This may mean dividing up broad categories of topics (eg, clinical management vs. teamwork issues) or dividing up individual learning objectives specific to the simulation session. Facilitators may also decide to deliberately take turns addressing performance gaps as they arise in discussion and contribute to the discussion as a thought arises. Although this approach sounds practical and easy to implement, facilitators often struggle when learners bring up new topics or when discussion strays from the intended path. Furthermore, facilitators may not effectively link topics sequentially in a manner that is logical or that best promotes learning. Facilitators choosing to use this approach need to be prepared to improvise and



*With Follow the Leader, Facilitator A leads discussion, and invites participation from other facilitators

FIGURE 1. Example of structured approaches to co-debriefing: a case of anaphylaxis.

collaborate, remaining flexible and ready to adapt their approach to the needs of their learners and their co-facilitator. Figure 1 illustrates how each of the two structured approaches would be applied to sample learning objectives for a simulated case of anaphylaxis.

Experienced co-facilitators may elect not to apply a structured approach to co-debriefing and instead attempt to manage the highly dynamic and unpredictable flow of discussion using more active techniques. This “naturalistic” approach to co-debriefing describes a process that follows the natural evolution of discussion. Co-facilitators adapt actively to the needs of the learners and explore new sub-topics as they arise in discussion. The unstructured and dynamic nature of this approach allows the conversation to feel less contrived. Effective co-facilitators work together as one unit by recognizing and responding to both verbal and nonverbal cues. This typically requires a high degree of proficiency in applying specific strategies to manage the cofacilitator relationship.

Strategies for Effective Co-debriefing

Various strategies can assist in overcoming the challenges encountered during co-debriefing. In this section, we offer suggestions identified from the co-facilitation literature^{17,18,28} and from our own personal experiences and categorize them according to where they fit in the SBE process: (1)

pre-debriefing (ie, before the debriefing occurs), (2) during the debriefing, and (3) post-debriefing (ie, after the debriefing has occurred) (Fig. 2).

Mitigation Strategies: Pre-debriefing

Before the debriefing occurs, *proactive strategies* can be used to prevent co-debriefing issues from arising. Proactive strategies optimize the chances of creating a positive co-facilitator dynamic and foster effective collaboration between co-facilitators by (1) encouraging facilitators to build rapport by getting to know each other; (2) sharing philosophies, teaching skills, and perspectives; and (3) planning joint instructional activities.²³ Proactive strategies include the following:

- *Facilitator Pre-briefing.* Facilitators should meet to familiarize themselves with the learning objectives and to develop a shared understanding of how the debriefing will be conducted.^{18,23,28} Establishing the “rules of engagement” includes clarifying facilitator roles and responsibilities, setting ground rules for discussion (eg, how to handle interruptions, how to transitions), sharing their personal agenda, determining time limits for the scenario and debriefing, and discussing which debriefing method(s) and approach(es) to co-debriefing will be used.²⁸ Facilitators should briefly review their areas of expertise and discuss how that expertise may be applied for the session(s) of the day.²⁸

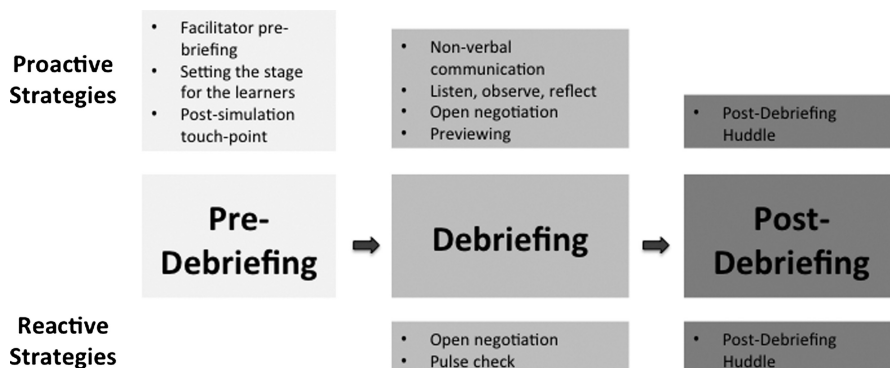


FIGURE 2. Strategies for effective co-debriefing.

- *Setting the Stage for Learners (ie, Learner Pre-briefing).* Before the scenario and subsequent debriefing, facilitators should take a moment to explain to the learners the role of multiple facilitators during the debriefing.
- *Post-simulation Huddle.* Before the end of the simulation event, facilitators should discuss their observations, prioritize topics for discussion, and finalize how they will approach managing the debriefing.²⁸ Recognizing the importance of capturing the initial emotions of the learners immediately upon ending the simulation, we recommend running the scenario in a “steady state” near the end, where the clinical variables (including vital signs) remain stable, thus providing the facilitators time to briefly touch base before the scenario is over.

Mitigation Strategies: During Debriefing

Proactive strategies may also be used by co-facilitators during a debriefing to help prevent issues from arising. These strategies include the following:

- *Using Nonverbal Communication.* Facilitators should position themselves across from each other during the debriefing.¹⁸ A facilitator often loses sight of the nonverbal gestures of participants in their immediate periphery. By positioning themselves across from each other, facilitators are better able to collectively observe the body language and facial expressions of all learners and make clear eye contact with each other during the debriefing. Experienced co-facilitators use deliberate eye contact and nonverbal gestures to facilitate coordinated discussion and smooth transitions.
- *Listen, Observe, Reflect.* By actively listening to discussion and observing the body language of learners, facilitators can better predict the anticipated line of questioning of their co-facilitator and more effectively identify when and how to contribute to the conversation without interrupting.^{18,28} Before engaging in discussion, the facilitator reflects by asking themselves, “Will I be interrupting my co-facilitator’s line of questioning by speaking up now?” “Has the current topic of discussion been brought to a close?” “Am I concerned about something, and [if so] will my contribution help to address this concern?”
- *Open Negotiation.* There may be time during a debriefing when facilitator B would like to add to the topic of discussion or transition away from the current topic that is being managed by facilitator A. To promote transparent communication between facilitators, we recommend that facilitator B address facilitator A directly to share his or her train of thought and the reasoning supporting the suggested course of action. For example, if facilitator A is engaged in discussion about leadership skills, facilitator B may say something like, “I am wondering if we would be able to switch gears and talk about communication now as I believe it is complimentary and supportive of our current discussion.” Communication in this manner between facilitators permits open dialogue as well as negotiation of flow and

content of discussion and prevents the issue of hijacking between co-facilitators.

- *Previewing.* Previewing describes deliberate verbalization by a facilitator of the intent to transitions from one topic to the next. In doing so, facilitators are providing a final opportunity for co-facilitator input on the previous topic of discussion before transitioning to the next topic.¹⁸ For example, if facilitator A is finishing a discussion of leadership, they may say, “In summary, I am hearing that effective leaders are clear, concise, and share their mental models on a regular basis. Does anyone have anything to add about leadership? [Pause] At this point, I would like to transition to a discussion surrounding communication.”²⁸

Although proactive strategies may be effective in preventing some co-debriefing issues from surfacing, there are still likely to be challenges that arise during the debriefing. In these situations, we offer *reactive strategies* or solutions that can be applied after issues have already surfaced. These strategies may be uncomfortable to implement and thus require practice to be used in a constructive manner.

- *Open Negotiation.* The technique described earlier may also be used to resolve differences that arise between co-facilitators. By sharing their concerns in a respectful manner, facilitators engage in cordial dialogue to resolve the co-debriefing issue at hand.²⁹ For example, facilitator A may say something like, “I noticed you transitioned the discussion to communication a few moments ago. I was hoping we could tidy up the leadership discussion before changing topics as there were a few key take-home messages I wanted to pass on... What are your thoughts?” By openly communicating to establish a shared understanding of how to proceed, facilitators are also effectively modeling desired communication skills often taught in SBE.
- *Pulse Check.* “Pulse check” describes a strategy used by a facilitator when he or she is concerned that the message passed by his or her co-facilitator is unclear. This usually requires the facilitator to chime in with statements such as, “I am wondering if I could take a moment to clarify...” or asking the learners, “Are there any further questions related to [topic]?”

Mitigation Strategies: Post-debriefing

- *Post-debriefing Huddle.* After the debriefing has occurred, facilitators should meet briefly to discuss any issues that came up during the debriefing.²⁸ We have found it particularly helpful when specific examples (eg, lines of questioning that were hijacked; situations where reactive strategies were used) and their accompanying thoughts are discussed along with potential solutions. Open discussion will help to prevent any future misunderstanding that may have occurred during debriefing. Implementation of a post-debriefing huddle helps to engrain the rules of engagement for co-debriefing and ultimately prevent challenges from arising in the future.²⁸ Table 2 provides a checklist of items for facilitators to discuss during the post-debriefing huddle.

TABLE 2. Co-debriefing Checklist

Stage	Category	Item
Pre-debriefing	Simulation scenario	<input type="checkbox"/> Review learning objectives
		<input type="checkbox"/> Review simulation case progression
	Facilitators	<input type="checkbox"/> Review equipment, supplies, actor roles
		<input type="checkbox"/> Relevant background, expertise, prior training/degrees
		<input type="checkbox"/> Previous experience debriefing
		<input type="checkbox"/> Area(s) of interest
	Co-debriefing approach	<input type="checkbox"/> Strengths and weaknesses related to potential topics of discussion
		<input type="checkbox"/> Follow the leader (assign leader) or
		<input type="checkbox"/> Divide and conquer (divide up topics) or
	Rules of engagement	<input type="checkbox"/> Ping pong (decide who goes first)
<input type="checkbox"/> Discuss method/framework for debriefing		
<input type="checkbox"/> Clarify roles and responsibilities		
<input type="checkbox"/> Discuss how to handle interruptions		
<input type="checkbox"/> Discuss how to manage transitions		
<input type="checkbox"/> Discuss how to manage disagreements		
<input type="checkbox"/> Determine who will keep time		
Post-simulation huddle	<input type="checkbox"/> Positioning—where will we sit?	
	<input type="checkbox"/> Nonverbal communication and body language	
	<input type="checkbox"/> Are the key learning objectives still the same?	
Post-debriefing	Simulation scenario	<input type="checkbox"/> Prioritize discussion of learning objectives
		<input type="checkbox"/> Are there any hot issues that require specific attention or sensitivity?
	Facilitators	<input type="checkbox"/> Did we adequately address all the predefined learning objectives?
		<input type="checkbox"/> Are there areas for improvement?
	Co-debriefing approach	<input type="checkbox"/> Did we capitalize on our collective expertise?
		<input type="checkbox"/> Was the approach we selected effective?
	Rules of engagement	<input type="checkbox"/> What went well? What needed improvement?
		<input type="checkbox"/> Was the method of debriefing effective? What went well? What needed improvement?
		<input type="checkbox"/> Were there interruptions? How were they handled?
		<input type="checkbox"/> How did we handle transitions?
<input type="checkbox"/> Were there disagreements? How were they handled?		
<input type="checkbox"/> How did we manage time?		
		<input type="checkbox"/> Was our positioning effective?
		<input type="checkbox"/> Were our methods of nonverbal communication effective?

Future Directions

In this article, we have highlighted co-debriefing challenges and potential solutions, but many questions remain. Future research should aim to establish current practices in co-debriefing and identify best practices and/or approaches for co-debriefing specific to learner type and facilitator characteristics. For example, what is the best approach to use if a novice facilitator is paired with an expert facilitator? Should the co-debriefing method change if the learners are very junior and require more didactic teaching? We hypothesize that many of the challenges we have described could be intensified in interprofessional SBE, where issues of status, hierarchy, and profession-related assumptions among debriefers and learners are in play. Whether and how co-debriefing strategies need to be adapted in an interprofessional context is an important area of study. Although the simulation community works to address these questions, we hope simulation educators will use the tools we have provided to conduct more coordinated and effective debriefings with multiple facilitators.

REFERENCES

1. Issenberg SB, McGaghie WC, Petrusa ER, Gordon DL, Scalese RJ. Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. *Med Teach* 2005;27:10–28.
2. McGaghie WC, Issenberg SB, Petrusa ER, Scalese RJ. A critical review of simulation-based medical education research: 2003–2009. *Med Educ* 2010;44:50–63.
3. Cook DA, Hatala R, Brydges R, et al. Technology enhanced simulation for health professions education: a systematic review and meta-analysis. *JAMA* 2011;3306:978–988.
4. Cheng A, Lang T, Starr S, Pusic M, Cook D. Technology-enhanced simulation and pediatric education: a meta-analysis. *Pediatrics* 2014;133:e1313–e1323.
5. Cheng A, Eppich W, Grant V, Sherbino J, Zendejas-Mummert B, Cook D. Debriefing for technology-enhanced simulation: a systematic review and meta-analysis. *Med Educ* 2014;48:657–666.
6. Fanning RM, Gaba DM. The role of debriefing in simulation-based learning. *Simul Healthc* 2007;2:115–125.
7. Raemer D, Anderson M, Cheng A, Fanning R, Nadkarni V, Savoldelli G. Research regarding debriefing as part of the learning process. *Simul Healthc* 2011;6:S52–S57.
8. Cook DA, Hamstra SJ, Brydges R, et al. Comparative effectiveness of instructional design features in simulation-based education: systematic review and meta-analysis. *Med Teach* 2013;35:e867–e898.
9. LeFlore JL, Anderson M, Michael JL, Engle WD, Anderson J. Comparison of self-directed learning versus instructor-modeled learning during a simulated clinical experience. *Simul Healthc* 2007;2:170–177.
10. Boet S, Bould D, Bruppacher HR, Desjardins F, Chandra DB, Naik VN. Looking in the mirror: self-debriefing versus instructor debriefing for simulated crises. *Crit Care Med* 2011;39:1377–1381.

11. Savoldelli GL, Naik VN, Park J, Joo HS, Chow R, Hamstra SJ. Value of debriefing during simulated crisis management: oral versus video-assisted oral feedback. *Anesthesiology* 2006;105:279–285.
12. Sawyer T, Sierocka-Castaneda A, Chan D, Berg B, Lustik M, Thompson M. The effectiveness of video-assisted debriefing versus oral debriefing alone at improving neonatal resuscitation performance: a randomized trial. *Simul Healthc* 2012;7:213–221.
13. Van Heukelom JN, Begaz T, Treat R. Comparison of postsimulation debriefing versus in-simulation debriefing in medical simulation. *Simul Healthc* 2010;5:91–97.
14. Welke TM, LeBlanc V, Savoldelli GL, et al. Personalized oral debriefing versus standardized multimedia instruction after patient crisis simulation. *Anesth Analg* 2009;109:183–189.
15. Bond WF, Deitrick LM, Eberhardt M, et al. Cognitive versus technical debriefing after simulation training. *Acad Emerg Med* 2006;13:276–283.
16. Cheng A, Hunt EA, Donoghue A, et al., for the EXPRESS Investigators. Examining Pediatric Resuscitation Education Using Simulation and Scripting (EXPRESS): a multicenter, randomized-controlled trial. *JAMA Pediatr* 2013;167:528–536.
17. Pfeiffer JW, Jones JE. Co-Facilitating. Available at: <http://www.breakoutofthebox.com/Co-FacilitatingPfeifferJones.pdf>. Accessed September 23, 2014.
18. Peer Education Training of Trainers Manual. UN Interagency Group on Young Peoples Health Development and Protection in Europe and Central Asia. Available at: <http://www.scribd.com/doc/54544925/Peer-Education-Training-of-Trainers-Manual#download>. Accessed September 23, 2014.
19. Austin VL. Teachers' beliefs about co-teaching. *Remedial Spec Educ* 2001;22:245–256.
20. Pugach MC, Seidl BL. From exclusion to inclusion in urban schools: a new case for teacher education reform. *Educ Urban So* 1995;27:379–395.
21. Boudah DJ, Schumacher JB, Deshler DD. Collaborative instruction: is it an effective option for inclusion in secondary classrooms? *Learn Disabil Q* 1997;20:293–316.
22. Villa RA, Thousand JS, Chapple JW. Preparing teachers to support inclusion: preservice and inservice programs. *Theory Pract* 1996;35:42–50.
23. Walther-Thomas CS, Bryant M. Planning for effective co-teaching. *Remedial Spec Educ* 1996;17:255–266.
24. Cheng A, Rodgers DL, van der Jagt E, Eppich W, O'Donnell J. Evolution of the Pediatric Advanced Life Support course: enhanced learning with a new debriefing tool and Web-based module for Pediatric Advanced Life Support instructors*. *Pediatr Crit Care Med* 2012;13:589–595.
25. Kolbe M, Weiss M, Grote G, et al. TeamGAINS: a tool for structured debriefings for simulation-based team trainings. *BMJ Qual Saf* 2013;22:541–553.
26. Dreifuerst KT. Using debriefing for meaningful learning to foster development of clinical reasoning in simulation. *J Nurs Educ* 2012;51:326–333.
27. Rudolph JW, Simon R, Dufresne RL, Raemer DB. There's no such thing as a "non-judgmental" debriefing: a theory and method for debriefing with good judgment. *Simul Healthc* 2006;1:49–55.
28. Important Tips for Effective Co-facilitation. University of Massachusetts, Everywoman's Center. Available at: <http://www.umass.edu/ewc/ea/edlist.html>. Accessed September 23, 2014.
29. Edmondson A, McLain Smith D. Too hot to handle? How to manage relationship conflict. *Calif Manage Rev* 2006;49:6–31.