

## So Many Roads: Facilitated Debriefing in Healthcare

R. Key Dismukes, PhD, David M. Gaba, MD, and Steven K. Howard, MD

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The article by Rudolph and colleagues<sup>1</sup> addresses a subject that is important to many involved in simulation in healthcare, but is not a traditional part of the training or experience of healthcare personnel. The topic is “facilitated debriefing,” but what exactly is this and why should we care? A little background may help explain.

In the 1970s, several airliners piloted by highly skilled pilots crashed with no mechanical malfunction and under conditions not considered especially challenging.<sup>2</sup> These accidents, plus NASA research that examined the performance of crews in full-mission flight simulation, led the airline industry and the US Air Force to realize that the technical skills of individual pilots are not sufficient by themselves to guarantee good outcomes. In the following years, the industry and NASA developed concepts that fundamentally changed the ways pilots are taught.<sup>3</sup> “Crew resource management” (CRM) evolved as a set of principles that help pilots with crew communication and coordination, workload management, decision-making, and leadership. Pilots, both trainees and highly experienced “old hands,” now practice using these principles in challenging simulated flight scenarios. After the simulated flight, an instructor “facilitates” a “debriefing” in which the crew critically analyzes the events of the flight and their own performance.<sup>4</sup>

Facilitated debriefing required a substantial mind-shift by both instructors and trainees in aviation, and the same has been true in healthcare. Traditionally, training in most skill-based professions has been dominated by transfer of information from instructors to trainees. But research in several fields shows that individuals learn far better as active participants responsible for their own learning process, rather than as passive recipients of wisdom imparted from instructors.<sup>5</sup> Furthermore, for trainees to become true experts and to continue their professional growth beyond formal training, they must also develop subtle metacognitive skills. Among these skills is the ability to critically analyze one’s own performance retrospectively—not just what went well and what went wrong, but *why* it went that way—which requires practitioners to critically re-examine how they mentally framed the situation confronting them. Individuals must also learn to critically assess how well they operated as a team. This assessment must go beyond rating performance; the team must be able to analyze how they interacted and how the interaction affected the outcome.

Recognizing that the hidden part of the iceberg of errors in medicine is analogous to the situation in aviation, leaders in medicine have been adapting the concepts of CRM to team performance in healthcare, applying to both real-world activities and simulation-based training paradigms.<sup>6,7</sup> Much of this work has borrowed extensively from the practices of CRM training including the use of facilitated debriefings as a key component of the exercises. In fact, practitioners of simulation-based CRM-oriented training in healthcare have described the debriefing session as the most important component of the simulation endeavor.

From the Human Factors Research and Technology Division (R.K.D.), NASA Ames Research Center, Moffett Field, California; Patient Simulation Center of Innovation (D.M.G., S.K.H.), Veterans Affairs Palo Alto Health Care System, Palo Alto, California; and the Center for Immersive and Simulation-based Learning and the Department of Anesthesia (D.M.G., S.K.H.), Stanford University School of Medicine, Stanford, California.

Reprints: David M. Gaba, MD, Anesthesia Service, 112A, 3801 Miranda Avenue, Palo Alto, CA 94304 (e-mail: gaba@stanford.edu).

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Instructors conducting facilitated debriefing do in fact have both technical knowledge and wisdom concerning individual and team performance to impart—how can they convey these, while at the same time helping the team perform their own critique as active learners? The conceptual paper by Rudolph and colleagues provides an approach to resolving this dilemma. They argue that the goal of the instructor should be to help the team identify the cognitive schema with which they framed the challenges of the simulation and trace the ways in which this framing affected their actions, for good or ill. However, they argue, the instructor cannot be a neutral observer but must lead the team to the issues he or she observed affecting the team's performance. One way of doing this, consistent with active learning, is to combine advocacy with inquiry, as the authors describe. We support the authors' endeavor, but at the same time we caution instructors who attempt facilitation that teams of medical professionals, even when they are just trainees, often have insight into team processes. Thus, a large part of the job of the facilitator is to help them articulate and explore those processes, and to develop their metacognitive skills in this regard, so that they can readily explore the same issues arising in real patient care settings.

Facilitated debriefing of any sort is a challenge, and adopting sophisticated techniques like those described by Rudolph et al. may be even more demanding. Who will train the trainers? Unfortunately, instructors are rarely explicitly trained in the art of facilitation and students are also seldom asked to actively participate in this manner, hence this requires techniques orthogonal and sometimes contrary to the traditional techniques of instruction. Rudolph and colleagues point out counterproductive ways in which well-intentioned instructors sometimes fail to facilitate effectively. Facilitators need both a structure (such as that presented in Rudolph's paper) and specific techniques to make facilitation work. Among the techniques that facilitators should master are: the use of questions to elicit team participation, lead the team to topics, and to deepen discussion; the strategic and tactical uses of silence; active listening (e.g., nonverbal, echoing, reflecting, and expanding), and effective use of videos of team performance. In aviation, structures have been worked out for debriefing simulation sessions, critical incidents, and normal line operations.<sup>5</sup> These structures can be adapted for analogous situations in medicine. At a few centers around the world, the healthcare community has begun to master these techniques, and a handful of debriefing training modules have been developed. Translating the theoretical ideas in the paper of Rudolph, et al into the practical conduct of debriefings may not be easy, even for instructors who are already familiar with facilitated debriefing. Further exploration is warranted on how best to implement these, and other innovations in debriefing. We encourage the healthcare community to expand the use of facilitated debriefings, especially following challenging simulations of individuals and teams, and to further develop explicit training for instructors so that this approach can be used to its greatest benefit in these important arenas. To have the maximum effect, these facilitated team debriefings should be performed after real patient care situations as

well, not just during training exercises. This would reinforce the lessons learned in simulation and have the best chance of improving behavior.

In fact, the concept of debriefing team performance goes beyond the training realm, and has applications to organizational learning and safety research. Complex real-world situations often play out rapidly and demand all the cognitive resources of team members. Much can be learned after the event when professional teams debrief themselves to analyze *why* things went the way they did. This approach has been useful for military flight crews as well as in commercial aviation. Thus, developing expert debriefing skills in healthcare personnel may have multiple payoffs for medical organizations, and may help to improve patient safety in diverse ways.

The optimal methods of teaching might depend on the types of simulations being performed and what the teaching goals are for a particular session. Although facilitated debriefings may be the appropriate route of instruction for team-based simulation scenarios, more familiar teaching methods might be appropriate for other types of simulation. Drill and practice simulation sessions where the goal of the exercise is to learn a specific response to a problem (e.g., a management approach to the hypoxemic patient) might be best taught in the traditional instructor-student mode. Traditional instruction may also be the best way to explain important technical issues arising during CRM-oriented simulations. Experienced instructor/facilitators learn to balance traditional instruction with facilitation in ways to keep trainees engaged as active (rather than passive) learners. In aviation settings, facilitated debriefings address both technical and CRM issues because the debriefing allows trainees to examine and discuss the ways technical issues play out in complex, realistic scenarios that require more than simple regurgitation of memorized facts. However, in some medical simulations the ratio of instructor/trainee technical knowledge is considerably greater than is the case with most aviation simulation debriefings; thus medical instructor/facilitators must determine to what extent facilitation techniques will be used to address technical issues.

A number of interesting generic issues are yet to be answered. Which kinds of simulation activities will benefit from or "require" facilitated debriefing? Due to its complexity and need for specially trained personnel, facilitated debriefing is time-consuming, costly, and logistically challenging. Are other forms of feedback possible that do not require such intensive use of specially trained debriefers? Our view is that this might well be true for some sorts of teaching (the boundaries of which should be explored), but when it comes to reflecting on complex decisions and behaviors of professionals, complete with confrontation of ego, professional identity, judgment, emotion, and culture, there will be no substitute for skilled human beings facilitating an in-depth *conversation* by their equally human peers.

## REFERENCES

1. Rudolph JW. There's no such thing as "nonjudgmental" debriefing: a theory and method for debriefing with good judgment. *Simulations in Healthcare* 2006; 1:49-55.

2. Billings CE, Reynard WD. Human factors in aircraft incidents: results of a 7-year study. *Aviat Space Environ Med* 1984; 55:960-965.
3. Weiner E, Kanki B, Helmreich R. Cockpit Resource Management. San Diego: Academic Press, 1993.
4. McDonnell L, Jobe K, Dismukes R. Facilitating LOS Debriefings: A Training Manual (NASA Technical Memorandum 112192). *Moffett Field, CA: National Aeronautics and Space Administration*, 1997.
5. Dismukes K, Smith G. Facilitation and debriefing in aviation training and operations. *Aldershot, UK: Ashgate*, 2000.
6. Gaba D, Howard S, Fish K, et al. Simulation-based training in anesthesia crisis resource management (ACRM): a decade of experience. *Simulat Gaming* 2001; 32:175-193.
7. Rall M, Gaba D. Patient simulators, anesthesia. 6th Ed. Miller R, ed. *New York: Elsevier*, 2004: 3073-3103.