



See related article #9 .

Please cite this paper as: Leonard P, Willemssen-Dunlap A. Invited Commentary: Simulation training at a large private hospital. *Proc Obstet Gynecol.* 2012 May 2(3):Article 13 [4 p.]. Available from: <http://ir.uiowa.edu/pog/>. Free full text article.

Corresponding authors: Paul Leonard, MD, PhD, and Ann Willemssen-Dunlap, PhD, CRNA Department of Anesthesia, University of Iowa, Iowa City, IA 52242. paul-leonard@uiowa.edu.

This is an Open Access article distributed under the terms of the Creative Commons Attribution 3.0 Unported License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Invited Commentary:

Simulation training at a large community hospital

We recommend that those who train tomorrow's providers increase their modeling of many of the attitudes displayed by the authors of *The Initiation of Simulation Training at a Large Community Hospital* (Article #9 of this issue of *Proc Obstet Gynecol*). Challenging low-volume, high-risk clinical situations are identified, experienced senior providers are coached using scientifically-informed educational methods with support and resources from leaders in the organization, and an attempt is made to measure progress.

Tomorrow's providers need the opportunity to learn the courage and insight to identify quality of care issues in their practice, and to make changes with the intent of improving patient outcomes.^{1,2} Graves and colleagues³ cite national and international data to suggest their two chosen clinical situations should be addressed. While not as compelling as local data, their intent still illustrates (a) commitment on the part of the practitioners to lifelong learning, and (b) willingness of senior physicians to review their practice for purposes of improvement. Such commitment will be the norm in healthcare someday, but it is long since familiar to commercial airline pilots who culminate recurring classroom and simulation-based training, feedback, and evaluation with a "bet your job day" every 9-12 months.

The stance tomorrow's providers are taught for assessing events retrospectively can either undermine or contribute to the courage to learn.^{4,5} Accordingly, the authors identified debriefing as a valuable skill. Feedback needs to be both useful and delivered in a manner that minimizes personal threat.⁴⁻⁷ For example, the time-honored practice of leading trainees to an

answer using a series of Socratic questions may in fact, attain neither goal. Thus, good debriefing is a learned skill, not a natural ability for most people.^{5,8}

Tomorrow's providers also need to understand the difference between knowledge, skills, and attitudes, and that each is a result of a different sort of learning.^{9,10} Graves et al avoided two common mistakes: they combined didactic training and simulation-based learning, and the simulation was determined by performance goals. On one hand, a common and weak approach to performance improvement is to identify a problem and deliver a periodic lecture on ways to avoid it.^{11,12} Scores on performance-based assessments show little or no correlation with scores on written knowledge tests. (e.g. ref. 13). On the other hand, learning from simulation stems from facilitators addressing with participants carefully identified objectives, not from mere participation in or the physical realism of a simulation.^{8,13,15} Matching learning method to goals seems obvious in retrospect: most of us would not expect to learn from lectures how to be a good cook nor from cooking experiences the principles of good nutrition, but both are important for feeding a family.

Tomorrow's providers are being told that patients need expert teams, but too frequently the models they see before them are teams of experts instead.¹⁶ A promising aspect of the present paper is the involvement of a different type of professional in the simulation to review teamwork skills.

Like any other skill, performance as a team is learned, and results less from declarative knowledge and more from attitude and practice.^{8,12}

The foregoing attitudes modeled by the authors are instructive, but by themselves are only good intentions. Implementation of training is itself the subject of study.^{17,18} A case study such as the present paper can be an important practical example of one way to develop:

- A clear vision, logical methods for achieving it, and involvement of stakeholders
- Commitment of leadership, manifest by some degree of funding and involvement
- Mechanisms for planning, scheduling, and technical support for the program
- Resources for educators to develop and implement the curriculum

Yet, the program is still of unproven return on investment until there is also:

- A set of outcome metrics that is tracked
- Documentation of lessons learned and steps taken to improve performance
- Use of high-impact research opportunities

In conclusion, health care providers need to understand that a profession is not a destination, but a journey that continues after they leave the academic institution, that learning is about performance as well as knowledge, that expertise requires

coaching, not just repetition, and that outcome is the product of a team and a culture, not just an individual. Simulation and debriefing are both part of their future not because they are better than didactic teaching, but because they facilitate and evaluate a different type of learning.

Paul Leonard, MD PhD
Ann Willemsen-Dunlap PhD CRNA
Co-Directors, Dept of Anesthesia
Simulation Center
University of Iowa, Iowa City, IA

References:

1. Dunn W, Murphy JG. Simulation: about safety, not fantasy. *Chest*. 2008 Jan;133(1):6-9. PubMed PMID: 18187737. <http://dx.doi.org/10.1378/chest.07-1719>
2. Pronovost PJ, Wu AW, Sexton JB. Acute decompensation after removing a central line: practical approaches to increasing safety in the intensive care unit. *Ann Intern Med*. 2004 Jun 15;140(12):1025-33. PubMed PMID: 15197020.
3. Graves CR, Smallwood GH, Bressman PL, Brown, DH, VanHooydonk JE, Staggs SM, Newsome HC, Casteel TA, Wells JC. The initiation of simulation training at a large community hospital. *Proc Obstet Gynecol*. 2012 May 2(3):Article 9 [13 p.].
4. Salas E, Klein C, King H, Salisbury M, Augenstein JS, Birnbach DJ, Robinson DW, Upshaw C. Debriefing medical teams: 12 evidence-based best practices and tips. *Jt Comm J Qual Patient Saf*. 2008 Sep;34(9):518-27. PubMed PMID: 18792656.
5. Rudolph JW, Simon R, Dufresne RL, Raemer DB. There's no such thing as "nonjudgmental" debriefing: a theory and method for debriefing with good judgment. *Simul Healthc*. 2006 Spring;1(1):49-55. PubMed PMID: 19088574.
6. Fanning RM, Gaba DM. The role of debriefing in simulation-based learning. *Simul Healthc*. 2007 Summer;2(2):115-25. Review. PubMed PMID: 19088616. <http://dx.doi.org/10.1097/SIH.0b013e3180315539>
7. Rudolph JW, Simon R, Raemer DB, Eppich WJ. Debriefing as formative assessment: closing performance gaps in medical education. *Acad Emerg Med*. 2008 Nov;15(11):1010-6. Epub 2008 Oct 20. PubMed PMID: 18945231. <http://dx.doi.org/10.1111/j.1553-2712.2008.00248.x>
8. McGaghie WC, Issenberg SB, Petrusa ER, Scalese RJ. A critical review of simulation-based medical education research: 2003-2009. *Med Educ*. 2010 Jan;44(1):50-63. Review. PubMed PMID: 20078756. <http://dx.doi.org/10.1111/j.1365-2923.2009.03547.x>
9. Baker DP, Salas E, King H, Battles J, Barach P. The role of teamwork in the professional education of physicians: current status and assessment recommendations. *Jt Comm J Qual Patient Saf*. 2005 Apr;31(4):185-202. PubMed PMID: 15913126.
10. Immordino-Yang MH, Damasio A. We feel therefore we learn: relevance of affective and social neuroscience to education. *Mind Brain Ed*. 2007 Mar;1(1):3-10.
11. Wu AW, Lipshutz AK, Pronovost PJ. Effectiveness and efficiency of root cause analysis in medicine. *JAMA*. 2008 Feb 13;299(6):685-7. PubMed PMID: 18270357. <http://dx.doi.org/10.1001/jama.299.6.685>
12. Weaver SJ, Rosen MA, Salas E, Baum KD, King HB. Integrating the science of team training: guidelines

- for continuing education. *J Contin Educ Health Prof.* 2010 Fall;30(4):208-20. PubMed PMID: 21171026.
<http://dx.doi.org/10.1002/chp.20085>
13. Wayne DB, Butter J, Siddall VJ, Fudala MJ, Linquist LA, Feinglass J, Wade LD, McGaghie WC. Simulation-Based Training of Internal Medicine Residents in Advanced Cardiac Life Support Protocols: A Randomized Trial. *Teach Learn Med.* 2005;17(3):202-208. PubMed PMID: 16104836.
http://dx.doi.org/10.1207/s15328015t1m1703_3
14. Salas E, Burke CS. Simulation for training is effective when.... *Qual Saf Health Care.* 2002 Jun;11(2):119-20. PubMed PMID: 12448801; PubMed Central PMCID: PMC1743617.
<http://dx.doi.org/10.1136/qhc.11.2.119>
15. Dieckmann P, Gaba D, Rall M. Deepening the theoretical foundations of patient simulation as social practice. *Simul Healthc.* 2007 Fall;2(3):183-93. PubMed PMID: 19088622.
<http://dx.doi.org/10.1097/SIH.0b013e3180f637f5>
16. Pronovost PJ, Freischlag JA. Improving teamwork to reduce surgical mortality. *JAMA.* 2010 Oct 20;304(15):1721-2. PubMed PMID: 20959587.
<http://dx.doi.org/10.1001/jama.2010.1542>
17. McGaghie WC. Implementation science: Addressing complexity in medical education. *Med Teach.* 2011;33(2):97-8. PubMed PMID: 21275541.
<http://dx.doi.org/10.3109/0142159X.2011.550971>
18. King HB, Battles JB, Baker DP, Alonso A, Salas E, Webster J, Toomey L, Salisbury M. TeamSTEPPS: Team strategies and tools to enhance performance and patient safety. In: Henricksen K, Battles JB, Keyes MA, Grady ML, editors. *Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 3: Performance and Tools)* AHRQ Rockville, MD (2008): Agency for Healthcare Research and Quality. Accessible at <http://www.ncbi.nlm.nih.gov/books/NBK43686/>