



SAEM Simulation

A Collaboration between the SAEM Simulator Task Force and Interest Group

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Getting Started

By Ernest Wang, MD, Interest Group Chair and Newsletter Editor

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Task Force Goals 2006-2007

-Develop Simulator Website

-Develop AEM Consensus Conference Proposal

-Continue development of a Simulation Case Bank with the AAMC

***JOINT TF-IG Meeting at the International Meeting on Simulation in Healthcare in Orlando, 1/15/07 5-6:30pm**

Submit an Article!

Deadline:

May 1, 2007

Next Issue:

June 1, 2007

Hi all! Hopefully the holidays and New Year treated you all well. This is the first official newsletter of SAEM Simulation. My goal is to provide a biannual report of the news, events, and successes of our members in all areas related to the utilization of high-fidelity simulation in emergency medicine education and research.

I want to thank everyone for the superb on-line discussions. Clearly this is an expert, passionate, and focused group of individuals.

Thanks to John for his leadership as past president of the interest group. His help and guidance has been invaluable to the success of this organization.

This group is really for you. If you have an idea for an article, a proposal for a collaborative project, an announcement, or have something you want to discuss, please contact me and use this as your forum.

Interest Group Subsections

We created subsections within the interest group better organize our interests and put like-minded individuals together to promote scholarly efforts.

The four subsections and chairs are:

- 1) Education Research & Methodology, *Linda Spillane, MD, University of Rochester*, Linda_Spillane@URMC.Rochester.edu
- 2) Simulation Technology, *Thomas Nowicki, MD, Hartford Hospital*, Tnowick@harthosp.org
- 3) Patient Safety, *William Bond, MD, Lehigh Valley/Penn State*, william.bond@lvh.com
- 4) Education Product & Content Development, *Richard Lammers, MD, Michigan State University*, lammers@kcms.msu.edu

Please see *SIG Subsections* on page 3

Highlight: Patient safety

"I think a primary goal would be to develop a curriculum that would be easy to share with EM residency programs to be used as the foundation for teaching patient safety."

- Steve McLaughlin, MD



"Simulation provides a safe environment for health care practitioners, teams, and systems to improve the safety of health care without placing patients at risk."

- AHRQ

One of the high priorities of this subsection is to develop deployable patient safety simulation curricula to be disseminated through our simulation centers. Clinicians are more receptive to non-traditional topics such as teamwork when it is combined with clinical teaching. Providing a clinical context will enhance the message that safety is a fundamental aspect of patient care.

Other items the subsection considers important to address are:

- What are the incentives that drive people to the training?
- Target goal - of an IEME exhibit for the National Meeting in May - <http://www.saem.org> (Deadline: February 7th, 2007)
- Determination of simple metrics for basic outcomes research (i.e. improvements in teamwork processes - communication, transfer of care). If interested, contact Rose Fernandez, clinical coordinator, HPS Complex, at fernanre@comcast.net.
- The concept of a Best Practices video for debriefing. Contact Bill Bond at william.bond@lvh.com
- Develop simple strategies for incorporating principles of patient safety into cases scenarios that we already have.

AHRQ Grants \$5 Million for Patient Safety Research

In 2006, the Agency for Healthcare Research and Quality (AHRQ) awarded more than \$5 million for 19 new grants under its Improving Patient Safety Through Simulation Research portfolio. These projects focus on assessing and evaluating the roles that simulation can play to improve the safe delivery of healthcare. Full project descriptions are available at: <http://www.ahrq.gov/qual/simulproj.htm>.

AAMC MedEdPortal and SAEM partner in Simulation Case Bank

One way to foster experimentation and research in medical simulation is by providing a venue for faculty to share their experience, and to receive academic credit for their contributions. SAEM and the AAMC are collaborating to peer-review and publish a collection of simulator-based case materials on-line.

This effort will link the "case bank" developed by the Simulation Interest Group over the past few years <http://www.emedu.org/sim>, hosted by John Vozenilek at Evanston Northwestern Healthcare/ Northwestern University) with the AAMC's new publication venue for educational material, MedEdPORTAL (www.aamc.org/mededportal).

For more information on how to submit your cases, please see page 5 for details or contact Jim Gordon (jgordon3@partners.org), Chair, SAEM Simulation Task Force or John Vozenilek (vozonline@ameritech.net)

Highlight: A Transportable Simulation-based Patient Safety Curriculum

Marc Shapiro, MD and his colleagues at Rhode Island Hospital have developed a modular transportable simulation-based patient safety curriculum for GME education. This work was supported by a grant from the Centers for Medicare and Medicaid Services. The curriculum is comprised of six comprehensive scenarios complete with case background, checklists, case stimuli (radiographs, laboratory data), and PowerPoint presentations.

The cases and other teaching materials can be found at:

<http://www.lifespan.org/rih/services/simctr/training/materials/>

Congratulations, Marc!



"Many of these scenarios are EM based but most are also applicable to pediatrics, trauma surgery, radiology, and internal medicine. They worked with us to develop these cases and now use them routinely."

– Marc Shapiro, MD

Simulator Task Force Update:

1. A research agenda for Simulation in Emergency Medicine was codified into a manuscript led by Bill Bond, and is currently in press at Academic Emergency Medicine: Bond WF et al, The Use of Simulation in Emergency Medicine--A Research Agenda. Acad Emerg Med 2007, in press.
2. The first official consultation of the SAEM Simulation Consult Service was conducted at Wright State University Department of Emergency Medicine this fall (Glenn Hamilton, Chair). Jim Gordon and John Vozenilek provided the consultation visit and completed the report.
3. The SAEM Simulator Case Collection has completed its first round of peer-review in collaboration with the AAMC's MedEdPORTAL, conducted by a panel of SAEM expert reviewers and editors.

SIG Subsections from page 1

The overall goals of the sections are to:

- Create an electronic Quarterly Report for the IG membership
- Present an update of representative efforts at the annual meeting
- Foster collaboration for purposes of research and education
- Explore avenues for grants and funding

If you have not signed up for a subgroup or are interested in being on the list, please contact the subsection interest group chair of interest.

Academic Announcements

Jeff Disney, MD Assistant Professor at Oregon Health & Sciences University announced the grand opening of their simulation center on November 17, 2006. They will be hosting SAEM Western Regional Conference on March 16th and 17th and he is looking for volunteers to sit on a panel discussion regarding EM research utilizing simulation. Email: disneyj@ohsu.edu.

John Vozenilek, MD Assistant Professor at Northwestern University, Evanston Northwestern Healthcare, Evanston, IL was awarded a \$500,000 from the Agency for Healthcare Research and Quality for "Simulation-Based Training Program to Augment Electronic Medical Record (EMR) Based Hand-off Tool."

2006 EM Simulation Publications

Binstadt et al. A Comprehensive Medical Simulation Education Curriculum for Emergency Medicine Residents. *Ann Emerg Med.* 2006 Dec 8; [Epub ahead of print] PMID: 17161502

Lammers RL. Simulation: The New Teaching Tool. *Ann Emerg Med.* December 19 2006. DOI: 10.1016/j.annemergmed.2006.11.001

Takayesu et al. How Do Clinical Clerkship Students Experience Simulator-Based Teaching? A Qualitative Analysis. *Simulation in Healthcare.* Winter 2006;1(4):215-219.

Wright et al. High fidelity medical simulation in the difficult environment of a helicopter: feasibility, self-efficacy and cost. *BMC Med Educ.* 2006 Oct 5;6:49.

McGugan et al. Accident and emergency training perspectives in Scotland. *Emerg Med J.* 2006 Jul;23(7):512-4.

McFetrich J. A structured literature review on

2006 EM Simulation Publications (cont.)

the use of high fidelity patient simulators for teaching in emergency medicine. *Emerg Med J.* 2006 Jul;23(7):509-11. Review.

Eppitch et al. Emergency and critical care pediatrics: use of medical simulation for training in acute pediatric emergencies. *Curr Opin Pediatr.* 2006 Jun;18(3):266-271.

Kobayashi et al. Multipatient Disaster Scenario Design Using Mixed Modality Medical Simulation for the Evaluation of Civilian Prehospital Medical Response: A "Dirty Bomb" Case Study. *Simulation in Healthcare.* Summer 2006;1(2).

Bond et al. Cognitive versus technical debriefing after simulation training. *Acad Emerg Med.* 2006 Mar;13(3):276-83.

Vozenilek et al. Simulation-based morbidity and mortality conference: new technologies augmenting traditional case-based presentations. *Acad Emerg Med.* 2006 Jan;13(1):48-53.

Gordon et al. Can a Simulated Critical Care Encounter Accelerate Basic Science Learning Among Preclinical Medical Students? A Pilot Study. *Simulation in Healthcare.* January 2006;1(Inaugural):13-17.

McLaughlin et al. The Status of Human Simulation Training in Emergency Medicine Residency Programs. *Simulation in Healthcare.* January 2006;1(Inaugural):18-21.

Disclaimer:

This is only a partial listing of all available simulation publications. My apologies for any inadvertent omissions.

If you have any abstracts, presentations, or articles you would like to announce, please email me so you can be recognized!

ernestwangmd@yahoo.com

Got something to announce? Want to write an article? The deadline is May 1, 2007!

Contact me: ernestwangmd@yahoo.com

Excerpted from: Gordon JA (Chair) on Behalf of the SAEM Simulator Task Force. Emergency Medicine and Patient Simulation: Opportunities for Teaching Evaluation and Scholarship. *Newsletter of the Society for Academic Emergency Medicine* 2006 (May-June); XVIII(3).

Several resources exist to help Emergency Departments and Residency Programs explore and establish simulation capability. Setups can range from a single mannequin-simulator in a small room, to a fully-equipped ED environment with multiple simulator bays. Two of the most helpful resources are listed below, both of which include chapters by EM authors:

- Dunn WF. *Simulators in Critical Care and Beyond*. Des Plaines, IL: Society for Critical Care Medicine Press, 2004. (For starting a simulation lab, see chapters by Loyd GE, “Issues in Starting a Simulation Center” [pp. 84-90] and Kyle RR, “Technological Resources for Clinical Simulation” [pp. 95-113]).
- Loyd GE, Lake CL, Greenberg R. *Practical Healthcare Simulations*. Philadelphia: Elsevier, 2004. (For EM content including curricula and case material, see Chapter 13: Gordon JA, McLaughlin SA, Shapiro MJ, Bond WF, Spillane LL, “Simulation in Emergency Medicine” [pp. 299-337]).

Research on simulator-based teaching and evaluation is limited but growing. Given the number of EM programs now exploring and expanding their use of simulation, there is a substantial opportunity for EM investigators to contribute new knowledge in the field. A white paper detailing an agenda for simulation research in emergency medicine (led by Bill Bond for the Simulator Task Force) is nearing completion. The Society for Simulation in Healthcare (www.SSiH.org)—a new interdisciplinary society conceived and established with input from EM faculty in 2004—just launched a specialty journal entitled *Simulation in Healthcare* (www.simulationinhealthcare.com, published by Lippencott, Williams, and Wilkins). EM physicians serve on the Board of Directors of the Society and on the Editorial Board of the Journal. EM faculty have already published in the initial issue of Journal, and were well-represented at the International Meeting on Medical Simulation in San Diego in January.

An evidence-based review of simulation training in healthcare was published last year, covering the years 1969-2003:

- 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. *Medical Teacher* 2005; 27(1):10-28.

The efficacy of procedural simulation in surgery has been actively studied, and the regulatory implications of such technology were nicely summarized in:

- Gallagher AG, Cates CU. Approval of virtual reality training for carotid stenting: what this means for procedural-based medicine. *JAMA*. 2004; 292(24):3024-6.

Recent work by EM investigators in the field has appeared not only in EM journals, but in other diverse venues such as *Academic Medicine* (the journal of the Association of American Medical Colleges [AAMC]) and *Quality and Safety in Healthcare* (a British Medical Journal [BMJ] publication). EM-specific topics have ranged from curricular design and evaluation methods, to teamwork and disaster training, to human cognition and performance. While simulation comprised a component of the 2004 *Academic Emergency Medicine* (AEM) Consensus Conference and Special Issue on “Using Information Technology to Improve Patient Care,” there is now sufficient interest in EM and simulation to propose an entire AEM Consensus Conference and Issue dedicated to the topic.

One way to foster experimentation and research in medical simulation is by providing a venue for faculty to share their experience in the field, and to receive academic credit for their contributions. To this end, SAEM and the AAMC are collaborating to peer-review and publish a collection of simulator-based case materials on-line. This effort will link the “case bank” developed by the Simulation Interest Group over the past few years (<http://www.emedu.org/sim>, guided and hosted by Interest Group Chair John Vozenilek at Evanston Northwestern Healthcare/Northwestern University) with the AAMC’s new on-line publication venue for educational material, MedEdPORTAL (www.aamc.org/mededportal; see accompanying article by the MedEdPORTAL editor). For this special collection, SAEM will provide faculty experts to serve as MedEdPORTAL Associate Editors, and Simulation Task Force members will comprise the peer-review panel. Material can be submitted purely for dissemination and informal commentary (preliminary posting), or for formal peer review. Materials will be dually posted on the SAEM website and on AAMC’s site, where they will be indexed and published as material in an electronic journal. Here’s the process:

1. If you are interested in submitting a simulator case for review, please go to: <http://www.emedu.org/SimGroup/library.asp>.
2. Here you will upload the case description and any supporting materials.
3. You will then indicate whether you wish preliminary review and posting, or formal peer review for publication (you can also ask to receive usage/download statistics as a measure of others’ use and interest in your work).
4. After successful submission to the SAEM site, you will be e-mailed a URL with a link to your work. You will then be prompted to register as an author with the AAMC’s MedEdPORTAL at www.aamc.org/mededportal (go to “publish resources” to create a password).
5. Once inside the AAMC/MedEdPORTAL submission website, you will use the SAEM URL to identify your submission for the AAMC process.
6. An SAEM-based editor for the AAMC collection will then be assigned to review your work, and peer-review will proceed (if requested) just like a manuscript—with dissemination to at least two SAEM Simulator Task Force members/experts for review.
7. The process will then proceed with discussion and revision of the material—as with any journal submission—culminating either in a preliminary posting (as appropriate), or formal acceptance for peer-reviewed designation and publication on the AAMC/MedEdPORTAL website.