

High Stakes Patient Simulation at Mount Sinai School of Medicine HELPS Center



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The confrontational surgeon, the harried nurse and the headstrong resident are not part of most formal simulation scenarios. Yet one or all of them participate in mission-critical simulations at the Mount Sinai School of Medicine HELPS (Human Emulation, Education and Evaluation Lab for Patient Safety) Center in New York City. Dr. Adam Levine, director of the HELPS center, says the beauty of these improvised characters is they can enter the scenario at the most inopportune moment to unnerve the participants, distract with a question or disrupt with a potentially fatal error.

"We ramp up the emotional content of the simulations even at the junior level," said Dr. Levine, who is also a professor of Anesthesiology, Structural and Chemical Biology, and Otolaryngology. "There is no sense being in that simulation if it's not going to be high-stakes and have a lot of impact."

An early adopter of simulation, the Department of Anesthesiology at Mount Sinai School of Medicine purchased the first commercial METI Human Patient Simulator (HPS) in 1994. Levine led initial simulations for anesthesia residents while helping to beta test the HPS. Eighteen years later, he and a core team of anesthesiologists use the HPS for high stakes simulation events for professional retraining, re-certification and remediation as well as resident training and undergraduate education.

A proponent of high-stakes simulation for both education and assessment, Levine admits that the HELPS center model is unique. "I know we are doing things very, very differently," Dr. Levine said. "We're proud of the way we have created our program. We don't use technicians or ancillary teachers. We use MDs to educate all of our students. We've been very prolific with only three or four core faculty and a team of dynamic anesthesiology resident educators."



"In the past few years healthcare simulation has made an exponential transformation from a "Best Secret" to becoming a bona fide "Best Practice." Few involved in its past could have imagined the speed, extent, and creative ways in which simulation has been applied. It's apparent that our only limitations are our imaginations."

An excerpt from the final chapter of *The Comprehensive Textbook of Healthcare Simulation* by Drs. Adam Levine, Samuel DeMaria, Jr., Andrew Schwartz and Alan Sim, to be published in early 2013.

The center's two simulation rooms are frequently booked solid daily, delivering thousands of simulation experiences a year and generating a self-sustaining revenue stream for the program. In addition to offering regular American Society of Anesthesiologists (ASA)-endorsed Maintenance of Certification in Anesthesia (MOCA) courses, the center conducts competency assessment for medical licensing bodies and retraining for anesthesiologists who have been on clinical hiatus.





Dr. Adam Levine leads anesthesia residents through simulation with the CAE Healthcare HPS at the Mount Sinai School of Medicine Human Emulation, Education and Evaluation Lab for Patient Safety (HELPS) Center in New York City.

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The center has also become a distinguished site for remediating professionals after poor outcomes and evaluating teamwork and clinical teaching skills.

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With expertise developed through years of resident and faculty training, the HELPS center is poised to see exponential growth in its simulation training for professionals. The HELPS center has previously trained adult critical care teams from New York Presbyterian Hospital and Memorial Sloan-Kettering Cancer Center (MSKCC), and most recently hosted MSKCC nurse practitioners and critical care fellows for a two-day simulation seminar on crisis management for pediatric patients. The training focused on keeping pediatric intensive care patients in-house to reduce hospital transfers.

Levine would like to see medical associations create simulation-based standards for professional assessment, re-entry or retraining.

"It's talked about but not available," Dr. Levine said. "People are aware simulation exists, and licensing and credentialing bodies have heightened awareness of patient safety and the desire to make medicine safer. I would like to see them promote high-stakes education and assessment instead of teaching with checklists and tasks."

Levine and Drs. Samuel DeMaria, Jr., Andrew Schwartz and Alan Sim have co-edited *The Comprehensive Textbook of Healthcare Simulation*, which will be available in early 2013. The textbook is a 50-chapter reference guide that contains contributions from simulation leaders worldwide who represent more than 20 healthcare disciplines and center management.

"The textbook is a resource for everyone that is already in the game or being challenged to get in the game — educators, technicians, administrators," Dr. Levine said. In the final chapter, Levine, DeMaria, Schwartz and Sim offer their predictions about how simulation will grow over the next century.

"Simulation is here to stay," Dr. Levine says. "It will be embedded in all educational activities from student through post-graduate, and it will be used for education, assessment and maintenance for all healthcare providers. I hope the book will invoke others to get into simulation."