



# Simulator Program

[simpeds.org](http://simpeds.org)

The Simulator Program at Boston Children's Hospital—the first “on-site” hospital-based simulator program at a teaching hospital in New England—opened in 2002 to pair excellence in training with excellence in care by interweaving readily accessible experiential training opportunities for clinical professionals throughout the hospital.

## EXPERIENTIAL LEARNING at the point of care

The Simulator Program is designed and staffed as a centralized resource comprised of robust curriculum, scenario and technology development arms, and delivered via a distributed footprint of simulator environments strategically located throughout the hospital.

- **ICU-based Simulator Suite:** Fully equipped replica of ICU bedside stocked with variety of patient simulators, allowing for the full range of clinical scenarios from neonatology through adolescence with adjoining control and debriefing space.
- **Mobile Simulation Units:** Self-contained mobile carts with all necessary audio-visual and simulator equipment to deliver full-scale simulation training directly to point of care—all within a low-cost, low-space package.
- **Simulation-Engineering Lab:** On-site simulator production lab tailors unique trainers to enhance scenario authenticity for subspecialists.

- **Unit-based Simulator Suite:** Fully equipped recreation of unit-based patient care space with embedded debriefing area and full range of audio/video capture systems.
- **Operating Room Procedural Skills Training Center:** On-site skills training laboratory located within the operating room environment to facilitate training of surgical team members of all levels of expertise.

More than 20 Boston Children's departments form the Simulator Program Users Group and utilize the program's facilities on a regular basis, including:

- » Anesthesia
- » Cardiac Surgery
- » Cardiology
- » Critical Care
- » Emergency Medicine
- » Neurosurgery
- » Newborn Medicine
- » Orthopedics
- » Otolaryngology
- » Surgery
- » Urology
- » Gastroenterology
- » General Pediatrics
- » Gynecology
- » Neurology
- » Plastic Surgery
- » Pulmonary Medicine
- » Radiology
- » Robotics
- » Nursing Staff Development
- » BCRP Residency Program
- » Harvard Medical School



### Simulation by the numbers\*

81 courses offered

23 simulators available

1,600 simulation participants at Boston Children's in 2012

26 number of Boston Children's departments and divisions that have worked with the program to develop courses

1,000 practitioners from beyond Boston Children's trained in the art and science of simulation

1 the first pediatric center accredited by the American Society of Anesthesiologists

### Advancing the science of simulation

Computer-controlled, high-fidelity, whole-body simulators, as well as virtual reality and partial task trainers for specific skill sets, form the core of the program's trainings.

In concert with bioengineers at Harvard, the Massachusetts Institute of Technology and in industry, the program adapts both “plug and play” pediatric trainers and develops next-generation simulators and training devices to allow structured practice of pediatric medicine and surgery far from patient harm.

\*As of 12/31/12

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## Global faculty and center development in pediatric simulation



The Simulator Program—built on the framework of a “professional organization within a professional organization”—focuses on faculty development at its core of growth, quality and sustainability.

The program trains individuals from BCH, nationally and internationally, in the art and science of simulation and debriefing as applied to pediatric and perinatal medicine.

To date, more than 1,000 international clinicians and educators have participat-

ed in the program’s multi-day pediatric simulation instructor and refresher courses. Workshops occur at Boston Children’s throughout the year and are delivered directly to institutions around the globe on a regular basis.

The program has built ongoing partnerships with many pediatric teaching hospitals around the world, focused on the rapid launch of high-quality simulation centers.

### Process-driven Simulator Program based on an eight-piece tool box.

More than 20 time-tested processes drive a robust, safe and structured engine of organizational learning formed on the following core principles:

- » applicable
- » high-quality
- » structured
- » realistic
- » accessible
- » relevant
- » collaborative
- » innovative

### Major activity categories

- » standardized team training (crisis resource management) applied to pediatrics
- » human factors
- » competency-based training across disciplines and expertise
- » professional staff development
- » safe implementation of institutional policy and technology
- » system quality improvement/organizational learning/latent safety threat analysis

“Despite the fact that we were all experienced care providers, we all learned a great deal from our participation and the debriefing afterwards. Every medical care provider should have this experience.”

Donna Brezinski, MD, Boston Children’s Neonatal Intensive Care Unit

For more information, visit [simpeds.org](http://simpeds.org)



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