I am the difference between looking and seeing. Between hearing and understanding. I am part vision, part science. Above all, human. I am committed to you, to your profession and your mission. I am innovation. I am education. I am the way healthcare learns. I am CAE Healthcare.
CAE Healthcare delivers educational tools that help healthcare professionals provide safe, high quality patient care.

CAE Healthcare partners with organizations worldwide to offer realistic and relevant healthcare simulation training solutions. With a bold mission to improve patient safety and outcomes, we continuously strive to develop breakthrough products that advance learning and competency within risk-free settings.

Our end-to-end spectrum of simulation solutions includes patient, surgical and imaging simulation, audiovisual solutions and learning applications. With a broad array of products, we are able to offer targeted training solutions to hospitals, medical schools, emergency response teams, military branches and nursing, respiratory and allied health programs.

Each CAE Healthcare product is developed in partnership with clinicians and clinical educators whose aim is to ensure physiological accuracy and educational relevance.

The CAE Healthcare family of learners is highly interactive, innovative and eager to share ideas and experiences. Join us at HPSN World, where people from every level of healthcare gather to push the envelope of healthcare simulation to improve learning and ultimately, to save lives.

To learn more, visit caehealthcare.com or hpsn.com
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From passenger safety to patient safety

CAE is a global leader in modeling, simulation and training for aviation with a 65-year history of breakthrough innovation. Since CAE’s founding in 1947, the company has dedicated its talent and leadership to driving technological advancements that improve aviation training and safety.

Today, a majority of commercial pilots train on CAE simulation equipment or at CAE flight training centers. CAE is a world leading provider of flight simulation technology, commercial and business aviation training, ab initio pilot training and military virtual air training. With headquarters in Montreal, Canada, CAE is a global company with training centers and operations in more than 30 countries and customers in 190 countries. CAE employs 8,000 men and women worldwide.

In 2009, CAE founded CAE Healthcare, a medical simulation business with a mission to leverage CAE’s expertise to improve training and patient safety in healthcare. CAE Healthcare offers an unparalleled portfolio of simulation training solutions to medical schools, nursing schools, hospitals, defense forces and allied health programs. Today, approximately 9,000 CAE Healthcare simulators and audiovisual management systems are in use worldwide.

Pictured, a CAE aviation training center opens in Barcelona, Spain. Inset photos: CAE trains 100,000 crewmembers annually and is the world’s leading designer and manufacturer of civil full flight simulation equipment and training systems. CAE also supplies products and services to defense forces of more than 50 nations.
CAE HEALTHCARE > A COMMITMENT TO QUALITY

As medical technology advances, CAE Healthcare is committed to delivering relevant training solutions for today’s healthcare environment. Our commitment to quality, innovation and world-class service inspire loyalty and a sense of shared purpose.

The CAE Healthcare manufacturing plant in Sarasota, USA is a Six Sigma and lean manufacturing facility where employees are dedicated to quality, product innovation and world-class service.

Engineering solutions for today’s medical education and training environment

CAE Healthcare employs the world’s finest modellers of human physiology and an experienced core of medical simulation engineers. With the added resource of more than 2,000 engineers within CAE, we offer an unrivaled depth of engineering expertise. From streamlining circuitry to improving human factors, we are dedicated to advancing simulation technology and accelerating the pace of product innovation.

We are also committed to operational excellence. To ensure that we deliver the highest quality products and user experiences, we have adopted Six Sigma and Lean Management practices in our manufacturing plant, a 100-point Acceptance Test Procedure (ATP) before product delivery, and a goal to achieve ISO 9001 compliance by 2015.

Our customer service principles are simple: reliability, responsiveness and rapid resolution. With customers in more than 65 countries, we employ regionally based technicians worldwide for improved accessibility, personal service and faster response times. In 2013, we added regional customer service technicians in China, Latin America and India.

Our customer service pledge is unique in the industry.
- 0 percent defects in products that are shipped from our plant
- 5-day turnaround when products require repair
- 100 percent on-time delivery of our products

The CAE Healthcare manufacturing plant in Sarasota, USA is a Six Sigma and lean manufacturing facility where employees are dedicated to quality, product innovation and world-class service.
Setting the standard with state-of-the-art, modeled physiology

Ever since the introduction of CAE Healthcare’s first anesthesia patient simulator, the HPS, our patient simulation line has set the standard for realism, accuracy and life-like physiology.

CAE Healthcare delivers sophisticated physiological models that adapt to interventions based on the patient’s age, weight, underlying health conditions, and the accuracy of diagnosis and treatment.

For example, a patient’s blood pressure might be low due to hypovolemia or vasodilation. In both cases, fluid infusion or the administration of a vasoconstrictor drug will raise blood pressure, but the effect on cardiac output, pulmonary gas exchange and tissue oxygenation will be markedly different. CAE Healthcare patient simulators respond automatically and accurately based on validated physiology.

All of CAE Healthcare’s patient simulators are built upon that base of modeled physiology—the most accurate and advanced physiology available today. That’s why our patient simulators are in a majority of U.S. medical schools, and why they are the training products of choice within high-stakes, mission-critical environments.

CAE Healthcare patient simulators rise to meet today’s healthcare training challenges, from emergency medical training and nurse on-boarding to professional certification and competency assessment for physicians.
The Fidelis Maternal Fetal simulator delivers powerful fidelity with a new level of realism for practice of pre-partum emergencies and labor and delivery scenarios. With validated and integrated maternal-fetal physiology, the simulator responds automatically to clinical interventions.

Advanced birthing mechanism is reliable, stable and the quietest on the market

Tactile realism of mother and fetus allow learners to identify stages of labor, breech position and to perform more interventions, including vacuum extraction

Full articulation of waist, hips and thighs with visible pelvic tilt for practice of obstetric maneuvers, including the McRoberts maneuver

Advanced CPR performance analysis measures the quality and depth of chest compressions, ventilation rate and volume, cardiac output, and more

Post-partum hemorrhage reservoir holds blood for practice of a wider range of scenarios, including Class III hemorrhage

Placental extraction with detection of the appropriate amount of force for delivery

Signs of a healthy delivery include crying and one-minute/five-minute APGAR predictions

Fetus falls within World Health Organization (WHO) standards for a full-term newborn

Automatic detection, response and metrics for left lateral tilt, McRoberts maneuver, suprapubic pressure, Rubin II, Zavanelli maneuver and uterine massage

Maternal tactile realism includes appropriate cervical dilation and effacement

“We developed this simulator to achieve a level of realism that had not been seen before.”
CAE Healthcare’s Fidelis Maternal Fetal Simulator offers exceptional tactile realism, articulation and metrics for better learner preparation. Use Fidelis to prepare learners for delivery complications, maternal emergencies and patient transport.

Fidelis is a Latin word meaning trustworthy and true. In medical simulation, fidelity means accuracy and realism in reproducing patients, medical conditions and the effects of medical treatments.

The Fidelis Maternal Fetal Simulator is the first in our next generation of patient simulators, redesigned from head to toe to deliver the most realistic and relevant practice patient to healthcare learning environments. The Fidelis name also represents our pledge to provide the most reliable, timely service on the market and expert support.

In addition to a revolutionary birthing process, the Fidelis Maternal Fetal Simulator features an improved head, eyes, airway, lung, pulses and limbs. It was developed in partnership with leading maternal-fetal educators and biomedical engineers.

Emulated cardiotocograph (CTG) monitor displays maternal and fetal physiological data as well as an on-screen reproduction of the paper strip produced by real CTG printer.

Fidelity Redefined

— Dr. Diogo Ayres de Campos, Perinatal Obstetrician and Professor of Medicine at the University of Porto and lead developer of the Fidelis™ physiological models.

Development partners include:

Diogo Ayres de Campos, M.D., Ph.D., Perinatal Obstetrician and Professor of Medicine at the University of Porto

Willem Van Meurs, Ph.D., University of Porto, biomedical engineer and co-developer of the Human Patient Simulator (HPS) for anesthesiology

Carla Sá Couto, Ph.D., Coordinator of the Biomedical Simulation Center of Faculty of Medicine of University of Porto and researcher at the Center for Research in Health Technologies and Information Systems

Pedro Sá Couto, Ph.D., University of Aveiro, Portugal and member in Probability and Statistics Group of the Center of Research and Development in Mathematics and Applications (CIDMA), University of Aveiro, Portugal

Luísa Ferreira Bastos, Ph.D., Assistant Investigator at the Institute of Biomedical Engineering in Porto, Portugal.
The Adult HPS and Pediatric HPS are the only human patient simulators on the market today that provide true respiratory gas exchange. The HPS interfaces with real clinical monitors and ventilators, and automatically responds to the administration of real anesthetic gases, oxygen therapy and medications.

Reactive pupils
Uptake and distribution of nitrous oxide and volatile anesthetics
True gas exchange, with self-regulated rate and tidal volume to maintain a target arterial carbon dioxide partial pressure
Variable airway resistance, lung compliance, and chest wall compliance, with independent control of the left and right lungs
Oxygen therapy and ventilation register on real monitoring equipment, such as a capnograph or respiratory gas analyzer. The respiratory system is capable of triggering a ventilator
Mechanical ventilation fully supported with automatic responses to CPAP, PSV, SIMV, assist control modes and weaning protocols
Drug Recognition System identifies drug concentration and volume with pharmacokinetic modeling for more than 60 intravenous drugs
Thumb twitch linked to neuromuscular blocking agent response

“The HPS is the Cadillac of patient simulators.”
Anthony Guerne, B.A., NREMT-P, Patient Simulation Specialist, NYIT-College of Osteopathic Medicine

www.caehealthcare.com
At the Mount Sinai School of Medicine in New York City, Dr. Adam Levine directs simulation training for medical students, residents and physicians at all levels of practice in the Department of Anesthesiology’s HELPS (Human Emulation, Education and Evaluation Lab for Patient Safety) Center. An early adopter of human patient simulation, the Department of Anesthesiology founded the lab in the spring of 1994 with the first commercial HPS.

“We’ve always been a very early adopter of technology,” says Levine. “We’re proud of our innovation.” Today, the HELPS Center is known for its leading-edge simulations for professional licensing, retraining and competency assessment. In addition to offering regular Maintenance of Certification in Anesthesiology (MOCA) courses, the HELPS Center has conducted high stakes competency assessment for medical licensing bodies based in Vermont, New Jersey and New York.

Using HPS simulation, the staff has remediated physicians who have been remanded by the New York Office of Professional Medical Conduct due to poor outcomes.

The center also retrains individual anesthesiologists who have been on prolonged hiatus or who want to expand their practices. The clinical staff creates the training and assessment scenarios on the HPS.

“There is no alternative for us,” says Dr. Levine. “With the types of simulation we do at Sinai, we would not feel comfortable or be capable of creating them with any simulator other than an HPS. It immediately lends the fidelity that we need.”
Caesar™
Trauma patient simulator for point-of-injury care

Environmental conditions in combat or “point of injury” situations can be hostile and make emergency care demanding. Rugged, durable and water-resistant, Caesar is a trauma patient simulator that can be used in different types of terrain, climates and other challenging elements. Caesar is wireless and can be operated remotely with the easy-to-use Müse interface.

Durable airway supports most adjuncts for intubation, bagging and cricothyrotomy

Water-resistant for hazardous material and decontamination exercises

Vocalizations have a 400-foot range

Ruggedized for outdoors (4C–40C/40F–14F) with resistance to heat, humidity, sand, dirt, impact and rough handling

High-pressure arterial or venous bleeding with 1.4 liters of blood on board and four tourniquet locations with sensors

Six-hour battery with true hot-swap capability

Fully posable in sitting or recovery positions

10 military or civilian Simulated Clinical Experiences (SCEs) included

“Caesar superbly facilitated near realistic practice of procedures that were previously effectiveness of the training.”
Lieutenant Colonel Rob Meijering (RNLAF), Deputy Chief Training Branch, NATO Centre of Excellence for Military Medicine in Budapest, Hungary

www.caehealthcare.com
The Caesar trauma patient simulator passes through the decontamination line at the Center for Domestic Preparedness.

**Center for Domestic Preparedness**  
U.S. Department of Homeland Security  
Anniston, USA

Over the course of a month, the 100-bed hospital in Anniston, Alabama, might overflow with victims of smallpox, mustard gas, dirty bomb explosions, chemical poisoning, mass shootings or natural disasters—all simulated and dropped into a routine hospital setting. As part of the Center for Domestic Preparedness, the Noble Training Facility (NTF) is the only fully operational hospital in the U.S. dedicated to preparing all disciplines of healthcare for mass casualty events caused by weapons of mass destruction and natural disasters.

“When they come to us, they already have the skills, and we throw them into the midst of a catastrophic disaster,” says patient simulator specialist Robi Mobley. The Noble Training Facility has an emergency room, medical and pediatric ICUs, a pediatric unit, three operating rooms, labor and delivery rooms, a nursery and a collection of patient simulators that includes 12 METIman simulators, five Caesars, five adult HPS and four pediatric HPS simulators.

The scenarios are complex and challenging, intended to impact experienced clinicians on many levels. For example, the hospital might discover that a chicken pox outbreak is actually smallpox. Students may have to lock down or isolate the patients. Add a botulism scare, a hooting, an abducted baby and a couple of drunks, and you have a normal day in an emergency room,” says Mobley. “We throw in these distractors to help break the stress level.”

Often, a facility or region will send a team of physicians, nurses, EMTs and medics to run through a scenario. “In a mass casualty situation, people could be pulled from all aspects of the hospital setting,” Mobley says. “We’ve even had CEOs and CFOs come in.”

Educator: Innovator

**taught in a classroom, which increased the**
iStan®

Fully mobile with unlimited patient states and scenarios

iStan is the most advanced wireless patient simulator on the market, with excellent articulation and full mobile capabilities. iStan’s modeled, integrated physiology allows instructors to launch a simulation with two clicks, or to program an unlimited number of patient states and scenarios for advanced practice.

- Air-worthiness certified by U.S. Army and U.S. Air Force
- Fully wireless and tetherless with blood, fluids and power on board
- SpO2 finger probe is integrated with patient monitor display
- Advanced physiology with the capacity to create an unlimited number of patient profiles and scenarios
- Realistic airway, modeled from a patient CT scan, interacts with most airway management devices
- Trauma features include flail chest, cyanosis, capillary refill, trismus, and sternal and tibial IO access

“I love my iStan.” Andrew Gross, Medical Simulation Manager, Case Western Reserve School of Medicine
The Faulkner State Community College nursing faculty presents its dramatic “Texting While Driving” simulation to more than 1,000 high school and college students.

Faulkner State Community College
Fairhope, USA

In a dark auditorium packed with more than 1,000 high school and college students, all eyes are transfixed on an emergency room reenactment. A medical team has been working to resuscitate a 17-year-old driver who has suffered multiple injuries in an auto accident. According to the 911 call, the young driver had been witnessed swerving and texting while driving. As the teen’s sister stands by his side and the mother wails for her son, the emergency room nurse delivers devastating news. In the final scene, the team zips the teenager into a body bag and wheels him away.

Faulkner State Community College in Alabama uses patient simulation to teach nursing and health sciences students to respond to patient trauma. The faculty has also created a simulation to raise community awareness about the dangers of texting while driving.

The scenario was conceived by two of the college’s adjunct faculty: ER Nurse Carman Godfrey and Flight Nurse Valarie Rumbley. “Both of them see traumatic events on a regular basis, and they had seen numerous texting while driving injuries,” said Faulkner State Nursing Instructor Katrina Allen-Thomas. “It was their vision, and they had a really strong conviction about it.”

During the hour-long reenactment, a moulaged iStan rapidly transitions to bradycardia and asystole.

The vision of FSCC is to encourage others to use their simulation to reach their communities regarding the hazards of texting and driving. “I know this is going to take us places because it already has,” Allen-Thomas said. “Every day, I get 15 to 20 e-mails that say, ‘thank you so much.’ I know we’ve saved a life along the way.”
METIman®
The best value in high-fidelity patient simulation for nursing and prehospital education

METIman is the best value in high-fidelity patient simulation — affordable, wireless, reliable and durable for training in the field. With integrated CAE Healthcare physiology, METIman allows instructors to easily launch scenarios so they can focus on teaching. The nursing and prehospital models offer scenarios and features that are tailored to each discipline.

Our most affordable wireless patient simulator for nursing and prehospital education

Choice of two models — Prehospital with advanced airway management features or nursing with tracheal suctioning, subclavian catheter, gastric lavage/gavage

True scenario mobility allows instructor to switch from remote tablet to classroom workstation within a scenario

Realistic airway, modeled from a patient CT scan, interacts with most airway management devices

Fully wireless and tetherless with blood on board

Two standard patients and four preprogrammed Simulated Clinical Experiences (SCEs) included

“We really like the physiologically based models. near-real clinical situation.” Carol Durham, Clinical Professor, University of North Carolina at Chapel Hill School of Nursing
Paramedic students extract an injured METIman from debris at Victor Valley College Public Safety Center.

Educator: Innovator

Victor Valley College
Victorville, USA

A 9-acre public safety training center at Victor Valley College in Apple Valley, California provides endless opportunities for healthcare simulation scenarios. The center is outfitted with a wide range of props including a collapsed building, a fire tower, an apartment building, and an overturned tanker truck.

During training exercises, paramedic students will find one of the college’s three METIman Prehospital patient simulators in nearly any situation at the Victor Valley College Public Safety Center, including an underground tunnel for a confined space rescue.

“We have a dynamic environment here and we're really trying to get the students immersed in what they're doing,” said Brian Hendrickson, a paramedic instructor at Victor Valley College. “The physiology of the mannequins challenges the students, I loved it,” Hendrickson said.

Nearly every simulation event is captured on the college’s audiovisual recording system, allowing instructors to debrief with students and review key moments during their scenarios.

“By videotaping our scenarios, students have been able to see subtle things such as how they communicate with the patient, their body language, things they should or should not do during an incident,” Hendrickson said. “It helps close the communication gap and we always try to make debriefings a positive learning experience. We want our students to walk out of here with a positive outlook that makes them better prepared for their futures.”

Simulation allows us to immerse a student in a
PediaSIM®
Realistic physiology for risk-free practice of pediatric care

PediaSIM represents a six-year-old patient with a realistic airway, thorax and anatomical features to support a wide range of clinical interventions. PediaSIM is available on the HPS platform, which is designed for anesthesia, respiratory and critical care, or the ECS platform, for medicine, nursing and health sciences.

Realistic modeling of pediatric cardiovascular, respiratory and neurological physiology

Advanced airway trauma features allow practice of esophageal, nasal and oral intubation and needle cricothyrotomy

Choice of two models — ECS for standard and emergency care or HPS with true gas exchange for anesthesia simulation and respiratory care

PediaSIM HPS supports mechanical ventilation and oxygen therapy with monitoring on real clinical equipment

PediaSIM HPS Drug Recognition System identifies drug concentration and volume with pediatric parameters for more than 60 intravenous drugs

“The physiology of the pediatric simulator plays a definitive part in the students’ for them to critically think in providing the care needed for their pediatric client.”
The physiology of the pediatric simulator plays a definitive part in the students’ dissemination of the physiological changes in order for them to critically think in providing the care needed for their pediatric client.

A respiratory therapist at the WakeMed Center for Innovative Learning, which provides simulation training for all the clinicians within its pediatric program.

WakeMed Health and Hospitals
Raleigh, USA

It’s a Thursday morning in the Emergency Department at WakeMed Raleigh Campus. An experienced pediatric trauma physician is trying to help a young boy who appears to be experiencing serious respiratory distress and is not responding to medication. Looking on anxiously, the frantic mother is bombarding the doctor with questions, when all of a sudden, the boy’s father bursts through the door, demanding to know what’s happening to his son and challenging the physician’s competence. The commotion is interrupting the physician, adding to the difficulty of identifying the patient’s problem. Unfortunately, the young boy arrests and dies in spite of a valiant effort by the trauma team to save him.

Fortunately, the boy is a PediaSIM patient simulator, designed and built to present the physiology of a six-year-old child, and the mother and father are actors hired to add to the realism and stress to the simulation scenario being conducted by a multidisciplinary team in WakeMed’s Center for Innovative Learning.

Pediatric medicine and critical care is a world of low-volume, high-risk events, and as a result, resident physicians, for example, have less opportunity to acquire the deep knowledge and experience required to handle life-threatening situations.

Simulation provides the ideal remedy for this, according to Dr. Mark Piehl, medical director, WakeMed Children’s Hospital and director of the Pediatric Division of WakeMed Physician Practices.

“Because a critically ill child is much more intimidating and anxiety-provoking to clinicians the extra emotion and stress can cloud a provider’s effectiveness, but simulation gets them used to treating children and dealing with both positive and negative outcomes including death,” contends Piehl, who goes on to say that all clinicians in the pediatrics program at WakeMed must go through simulation training. “Nurses routinely tell us they are glad they went through the simulation rotation because when the real code occurred, they knew what to do and were more confident about their role, where they needed to be and where the equipment and meds were.”

Educator: Innovator

Joy Thomason, RN, MSN, Assistant Professor at the Union University School of Nursing in Jackson, Tennessee
BabySIM®
Infant patient simulator for life-saving critical care

Driven by validated models of infant cardiovascular, pulmonary and neurological systems, BabySIM generates automatic responses to clinical interventions to prepare healthcare professionals for critical events relating to infants.

ExamSIM®
Risk-free practice for ob/gyn pelvic examinations

The ExamSIM offers learners unlimited opportunities to practice pelvic examination skills before they touch a real patient.

- Bulging fontanel capability
- Advanced trauma features allow practice of esophageal, nasal and oral intubation, transthoracic pacing, needle decompression and chest tube insertion
- Intraosseous insertion
- Realistic modeling of infant cardiovascular, respiratory and neurological physiology
- Two standard patients and four Simulated Clinical Experiences (SCEs) included
- Learning mode allows self-paced practice to learn proper palpation sites and pressures
- Assessment mode records learner’s results
- After Action Review compares learner’s results to a database of both experienced clinicians and novice users
Simulator Accessories

Full Function Monitor Interface
The Full Function Monitor Interface allows the simulator to connect with standard patient monitors, providing the trainee the ability to use and interact with the actual equipment used in the clinical setting. The physiological models within the simulator generate the appropriate signals, which drive patient monitoring equipment in a realistic way via the standard transducer inputs. Available for HPS and PediaSIM HPS only.

Instructor’s Wireless Remote Laptop
The instructor’s wireless remote laptop allows for complete simulator operation by a single instructor from any location within the simulation lab setting. The screens and control structure of the remote are identical to the instructor’s workstation.

Hands-Free Defibrillator Cables
- Hands-Free Cable Kit – Zoll
- Hands-Free Cable Kit – Physio Quick Combo
- Hands-Free Cable Kit – Philips

Wall Air Kit
The Wall Air Kit includes hoses and regulators that allow any simulator to be hooked to any in-wall compressed air supply, bypassing the compressor. Not available for Caesar.

Ruggedized Tablet PC
The instructor’s tablet PC is built to survive harsh work environments, with integrated WiFi, MIL-STD-810G protection against drops and an IP52 rating against dust and moisture.

Drug Recognition System
The enhanced Drug Recognition System utilizes barcode technology to identify the drug administered and its concentration and quantifies the dosage given by the trainee. Available for HPS and PediaSIM HPS only.

Pharmacology Editor
The Pharmacology Editor takes learning to the next level by allowing users to customize the drug responses on their patient simulator. With the Pharmacology Editor, users can add new drugs to the library, modify pre-programmed drug responses and adapt the pharmacokinetic and pharmacodynamic parameters of a specific drug or set of drugs for a specific patient or patient population.

FX™ Simulated Wound Kit
Developed with the assistance of the U.S. Army, FX is a moulage simulation solution that comes in a convenient flight case with organized product compartments. Standard equipment includes head wound, compound fracture, burns, lacerations, bullet wounds, simulated blood and more. Optional components include amputations, degloving of the hand and impalement.
operate your patient simulator with ease

Operating a patient simulator is quick, easy and intuitive with Müse. With three levels of control of CAE Healthcare’s modeled physiology, Müse allows instructors to run scenarios, modify patient parameters or operate the simulator on-the-fly. Enjoy the freedom and versatility to write and edit scenarios away from the simulation lab with four additional licenses for any Mac or PC.

Simulated Clinical Experiences (SCEs) bundle ready-to-go patient, scenarios, educational content and setup preferences to automatically load together when you run an SCE.

Upload images of patient records, lab reports, X-rays and audio and video files to view during simulations for enhanced realism.

Patient status display can be customized to show vital signs, cardiac output, respiratory status and more, including SpO₂, ECG and capnogram.

Recent event logs on the run screen keep you updated, while complete event and physiological data is logged in the SCE history.

Scenarios automatically load as part of the SCE. Scenario states and progression can be controlled directly from the run screen.

Parameter controls allow you to operate on-the-fly by adjusting model parameters and using overrides.

New Event Recorder button allows users to save parameter settings for use later in building scenarios.
TouchPro Simulated Patient Monitoring Software

Muse includes TouchPro patient monitoring software, which can display four numeric vitals and up to six waveform traces, including 12-lead ECG and capnography. TouchPro is web browser based for Mac or PC, and can be run on a TouchPro touchscreen computer or tablet.

Patient reset button allows you to quickly save and return to the patient’s original baseline physiology without restarting the SCE.

Medication Monitor shows current concentration of any administered medication in the patient. Administered drugs can be “reset,” immediately removing all effects of the medication from the patient for learning purposes.

Password protected multi-user system allows institutions to set privileges of users and operators.

Navigate controls by clicking the patient diagram.

Quick links allow an instructor to change a patient’s physiology instantly. Run the same scenario with a stable or unstable patient to challenge learners’ critical thinking skills.

Layer conditions, administer medications and record interventions directly from the customizable quick link menus.

Content in 10 languages — French, English, Japanese, Korean, Russian, Polish, Spanish, Traditional Chinese, Simplified Chinese and German.

SCE timeline provides the ability to place bookmarks throughout an SCE and to return to the patient’s bookmarked physiology at any point.
# Which Patient Simulator is Right for You?

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<th>iStan</th>
<th>METIman Prehospital</th>
<th>METIman Nursing</th>
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<th>PediaSIM HPS</th>
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[www.caehealthcare.com](http://www.caehealthcare.com)
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The promise of better patient outcomes

The rise of medical ultrasound technology for bedside assessment, diagnosis and guided needle procedures has improved patient outcomes and reduced the rate of errors and complications. The value of point-of-care ultrasound is so widely recognized that it has been termed the stethoscope of the future.

Point-of-care ultrasound can improve patient management and outcomes, but its effectiveness is highly dependent on the skill of the practitioner. With CAE Healthcare’s imaging simulation tools, both traditional and non-traditional users can engage in hours of risk-free clinical practice before they ever assess real patients.

CAE Healthcare’s VIMEDIX platform offers an unparalleled training environment for cardiac, abdominal and Ob/Gyn ultrasound that allows learners to quickly visualize anatomy and achieve desired views. The patented Blue Phantom models help learners develop accuracy, proficiency and confidence in performing assessments and needle-guided procedures that improve patient safety. With ICCU multimedia e-learning, hands-on seminars, a FOCUS exam mobile application and a community forum, CAE Healthcare offers a fully rounded suite of solutions for accelerated learning.

The Blue Phantom Focused Assessment with Sonography for Trauma (FAST) exam simulator is designed for practice with the user’s ultrasound system.
VIMEDIX™

The most realistic, comprehensive and versatile ultrasound training patient simulator available

CAE Healthcare’s VIMEDIX ultrasound training simulator allows users to gain experience when they want, where they want with 24/7 availability. Designed for learners with no ultrasound experience to those with advanced skill sets, VIMEDIX offers a broad range of normal and pathology cases and a variety of body imaging types. VIMEDIX is the most validated ultrasound simulator within scientific publications and peer-reviewed journals.
“We use VIMEDIX as part of a standardized TEE curriculum. The learners benefit from a risk and stress-free environment to practice. We benefit by providing a learning environment that requires minimal supervision and manpower. It also enables us to objectively test learners on their progress.”

J. Daniel Muehlschlegel, MD MMSc Assistant Professor of Anesthesia, Department of Anesthesiology, Perioperative and Pain, Brigham and Women’s Hospital, Harvard Medical School
The VIMEDIX Ob/Gyn ultrasound simulator accelerates training for physicians and sonographers who perform prenatal ultrasound to assess fetal health and diagnose fetal anomalies. The superb image quality and definition of both ultrasound and anatomical images improves training, allowing learners more rapid comprehension and a shorter time to competency.
**Ob/Gyn ultrasound simulation**

Obtain high resolution, real-time ultrasound images of a 20-week fetus while simultaneously viewing 3-D anatomical images that improve understanding of anatomical structural relationships.

Practice with a broad range of normal and pathological imaging scenarios without the inconvenience or risk associated with scanning live patients.

Gain proficiency in image acquisition and optimization, and in assessment of gestational age, maternal adnexal anatomy and fetal anatomy.

Instantly view comprehensive learner metrics at-a-glance, including a side-by-side comparison of the targeted versus captured ultrasound images.

Excellent for proctored training or to supplement instructor-led training through self-directed learning.

Transvaginal module and first trimester training, pathologies and library of cases coming in 2014!

---

Extensive portfolio of 20 fetal anomalies with clear, vivid ultrasound and anatomical images plus an option to choose fetal gender.

**NEW!**

Omphalocele  
Fetal cranial anatomy
A One-Stop Solution
CAE Healthcare delivers cutting-edge ultrasound education that blends leading simulation technology with world-class instruction and methodologies. Our effective and efficient solutions shorten the path to imaging competency, save institutions time and money, and increase learner retention through the use of innovative techniques and technology.

ICCU Ultrasound e-Learning
Designed to efficiently and effectively assist users in the adoption of ultrasound, ICCU is an interactive, e-learning curriculum for ultrasound exams and procedures, including the Focused Cardiac Ultrasound Exam (FOCUS), ultrasound-guided central venous access, thoracentesis, paracentesis, and the assessment of blood vessels, pleural spaces and lungs. In addition to web-based curriculum, ICCU offers an online collaborative learning center, onsite training seminars and a FOCUS exam pocket guide for the iPhone or iPad.

The ICCU e-learning curriculum is designed to conform to international ultrasound training guidelines. It is endorsed by the American College of Chest Physicians (ACCP) and the Canadian Critical Care Society (CCCS).

360° perspective  4-chamber view with tricuspid regurgitation  ICCU circumferential effusion

www.caehealthcare.com
Faculty-Led Ultrasound Training Seminars

CAE Healthcare partners with renowned educational and healthcare institutions around the world to deliver ultrasound training seminars. The didactic and hands-on seminars are designed for physicians, advanced practitioners, nurses and technologists in multiple disciplines, including intensivists, emergency medicine, anesthesiology, surgery and cardiology. The highly interactive seminars are preceded by immersion in our ICCU e-learning program to prepare for the hands-on sessions led by a world-class faculty. The seminars are recognized for CME credits by the University of Montreal, the Royal College of Physicians and Surgeons of Canada and the American Medical Association. All seminars include practice with phantoms, live models and VIMEDIX ultrasound simulators.

Blue Phantom Self-Directed Education Packages

Blue Phantom’s award winning ultrasound education packages are designed as highly effective education packages to guide users with little or no experience in ultrasound-guided procedures to a high level of understanding. Each education package includes a curriculum book, a DVD and a hands-on Blue Phantom training model.

Learn more about “Understanding Ultrasound for Guiding Central Catheter Insertions” and “Understanding Ultrasound for Guiding Peripherally Inserted Central Lines” at bluephantom.com.
CAE Healthcare Ultrasound Training Models

Blue Phantom™, the leader in ultrasound training models for more than 20 medical specialties, is now part of CAE Healthcare. Blue Phantom provides users with the highest quality training models for diagnostic imaging training and ultrasound-guided procedures. The broad portfolio of products includes central venous access, ob/gyn, regional anesthesia, lumbar puncture and spinal epidural, scrotal, paracentesis, thoracentesis, and pediatric trainers. Constructed with patented SimulexUS™ tissue, the hands-on training models are highly durable and accurately replicate human tissue imaging characteristics. Utilize your own ultrasound system for simulation and risk-free training.

Ultrasound Central Line Training Model

This ultra-durable ultrasound simulator incorporates all of the anatomy required to teach, learn and practice the skills associated with central line placement and was designed for both ultrasound guided and blind insertion procedural training. The self-healing tissue withstands repeated use, minimizing the need for replacement parts.

- Superb image quality from real ultrasound machines
- Anatomically correct; constructed from a digital human file
- Simulated superior vena cava, right atrium and right ventricle offers users the ability to fully thread guidewires and catheters without resistance
- Also available with brachial plexus option for regional anesthesia training

“I would definitely recommend this product to anyone interested in improving patient safety and decreasing complications and infection rates.”

Paul Hudson, MD
Division of Cardiology
University of Colorado Health Sciences Center

Find the full line of CAE Healthcare Blue Phantom ultrasound trainers at bluephantom.com
Developed with the goal of helping clinicians to bridge the learning gap by allowing them to see the internal anatomical structures with their eyes as well as with ultrasound imaging.

This model offers training with superb image quality. The simulated tissue matches the acoustic properties of real human tissue.

Self-healing SimulexUS tissue guarantees low cost of ownership.

“The durability of the device is remarkable. It has had many thousands of needle insertions. . . . After a heavy training session, there will be scores of faintly visible needle tracks. These promptly fade away, as the insert repairs itself.”

Dr. Paul Mayo, Beth Israel Deaconess, NY

Internal Jugular Central Line Training Model

The most durable and low-cost per use central line simulator available anywhere.

Extremely realistic anatomy; contains internal jugular vein, carotid artery suprasternal notch.

Users can simulate arterial pulsation manually via the included hand bulb.
Midscapular Thoracentesis Ultrasound Training Model

This hands-on training model for ultrasound-guided thoracentesis procedures allows users to gain experience and confidence identifying and guiding needle and small gauge catheter insertions in patients with pleural effusions. The ultra-durable, self-healing tissue offers a long life, providing a low cost of ownership.

Excellent imaging characteristics using any ultrasound imaging system

Extremely realistic: model contains structures including the chest wall superficial tissue, 6th, 7th, 8th, and 9th ribs and intercostal spaces, pleural cavity with lung and atelectatic lung, diaphragm, and superior aspect of the spleen

Users learn to avoid accessory structures such as the spleen, diaphragm and lung

Positive fluid flow offers users immediate feedback when pleural effusion fluid is accurately accessed

“I am impressed with the durability of the task trainers. We bought a thoracentesis model about eighteen months ago, have taught about four trainees every four weeks, resulting in multiple attempts, and have yet to even replace the fluid. Compounded by the company’s sincere interest in improving their products, we will be a repeat customer.”

Joshua D. Lenchus, DO, RPh, FACP
Assistant Professor of Clinical Medicine Div. of Hospital Medicine,
Dept. of Medicine, University of Miami Miller School of Medicine

Find the full line of CAE Healthcare Blue Phantom ultrasound trainers at bluephantom.com
FAST Exam Ultrasound Training Model

This extremely life-like training mannequin interacts with real ultrasound systems for practice of the Focused Assessment with Sonography for Trauma (FAST) exam as well as Trans-thoracic Echocardiography (TTE) and pericardiocentesis procedures. The FAST model accurately mimics the imaging characteristics of human tissue, allowing users to encounter the imaging challenges found in a real patient.

Adjustable internal bleeding states around the liver, spleen, heart, and bladder simulate a wide range of pathological scenarios.

Fully imageable upper and lower torso contains the liver, gallbladder, kidneys, spleen, heart, pericardial fluid, lungs, ribs, bowel, bladder, stomach, and skeleton.

Users experience imaging challenges found in a human patient, such as applying adequate transducer pressure to obtain images, bowel gas and intercostal access.
Transvaginal Ultrasound Training Model

The transvaginal ultrasound training phantom offers users an excellent training platform for learning endovaginal ultrasound procedures using their own ultrasound systems. Practice image acquisition, interpretation, and the psychomotor skills necessary to perform transvaginal ultrasound exams while learning to identify normal pelvic structures and pathologies.

Accurately mimics the feel and imaging characteristics of an actual endovaginal ultrasound exam

Train where you want, when you want without risks associated with using live patients

Excellent for validating clinical competency

“We have three endovaginal phantoms, all with different findings. The first benefit that we see for our students is just taking the fear away from doing this procedure. Since the image orientation is different when performing endovaginal sonograms, the use of the phantoms initially is not only beneficial for the students, but also the patients.”

Charlotte Henningsen, MS, RT(R), RDMS, RVT, FSOMS
Chair & Professor - Sonography Department
Florida Hospital College of Health Sciences

Breast Biopsy Ultrasound Training Model

The breast biopsy model allows users to develop the imaging and procedural skills needed to perform ultrasound-guided fine needle biopsy. The patented SimulexUS™ tissue is extremely durable for repeated practice of needle procedures. Developed for use with real ultrasound systems, the model images like a real tissue with exceptional image quality.

Models self-seal and will not decompose or dehydrate over time

Contains a variety of masses that are hyperechoic, hypoechoic, and echo-lucent allowing users to gain experience utilizing a wide range of lesions

14 masses of varying sizes (4mm to 11mm) allow users to develop their skills starting with larger lesions and target smaller masses as their skills progress

Masses present in both the central breast tissue as well as the Tail of Spence

Fluid can be injected into the model to verify needle tip location (automatically expelled)

Elastography Ultrasound Breast Exam trainer also available

Find the full line of CAE Healthcare Blue Phantom ultrasound trainers at bluephantom.com
Amniocentesis Ultrasound Training Model

The amniocentesis training model offers clinicians an exceptional platform for developing and validating skills associated with ultrasound-guided amniocentesis procedures. With realistic anatomy and adjustable fluid levels, this model allows users to practice image acquisition, interpretation and psychomotor skills. Also available in fetal umbilical cord sampling configuration.

- Realistic pelvic anatomy including a gravid uterus with an 18-week fetus, umbilical cord with both fetal and placental cord insertions, placenta, cervix and a variety of fluid pockets
- Externally accurate fetal anatomy allowing for 3-D ultrasound training
- Superb ultrasound imaging characteristics
- Ultra-durable design ensures repeatable results over thousands of uses

CAE Healthcare’s Blue Phantom line offers additional training models. Visit bluephantom.com for details.

- Abdominal aortic ultrasound
- Breast elastography
- Femoral regional anesthesia and vascular access
- Foreign body identification
- Internal jugular central line
- Paracentesis
- Pediatric 4 vessel training block
- Peripheral Doppler
- PICC vascular access
- Regional anesthesia
- Renal biopsy
- Scrotal ultrasound
- TAP block
- Thoracentesis and thoracostomy
- Thyroid biopsy
- Transesophageal echocardiography
- Transthoracic echocardiography
- Transvaginal with IUP or ectopic pregnancy
- Transvaginal sonohysterography and sonoalphingography
Virtual training promotes confidence

Surgical simulation has become an essential part of training for laparoscopic, endovascular and ob/gyn procedures as it offers measurable improvement in skills. CAE Healthcare’s surgical simulators allow learners to assimilate didactic content while practicing psychomotor skills associated with laparoscopic procedures. The haptic technology provides accurate visual, audio and tactile force feedback responses. The user-friendly interface is easy to configure and saves time for instructors.
LapVR™

Perform basic to complex laparoscopic procedures while developing surgical decision-making skills

The LapVR simulator realistically reproduces laparoscopic procedures with accurate haptic technology for practice of suturing, knot-tying and loop ligation as well as general surgery and ob/gyn procedures. With real patient training cases, LapVR offers ease-of-use for instructors and detailed performance metrics for evaluation.

Modules
Essential Skills Module
Lap Cholecystectomy Module
Running the Bowel Module
Ob/Gyn Module
Suturing and Knot-Tying Module
Optional Appendectomy Module

“The essential skills and procedures in the LapVR system provide valuable training for surgical students and help prepare them for laparoscopic surgery.” — Dr. Aurora D. Pryor, Professor and Chief of General Surgery, Stony Brook Medicine
EndoVR™

Realistic tactile and physiological feedback for gastrointestinal and bronchial endoscopy

With realistic haptic technology, EndoVR allows learners to “get a feel” for both gastrointestinal and bronchial assessment. The system exposes learners to a wide range of anatomies and pathologies so they can quickly increase confidence and comfort. EndoVR supports three learning environments on one platform, including bronchoscopic, upper gastrointestinal tract (GI) and lower gastrointestinal tract (GI) procedures. Faculty can upload their own multimedia didactic content and learners are debriefed after each case with evidence-based performance metrics.

Modules
Bronchoscopy Package
EBUS-TBNA Package
GI Package

reddot design award winner 2013

“The design of these surgical simulators has impressively succeeded in expressing robustness, simplicity and durability.”
— Red Dot Design Award Jury
CathLabVR™

Risk-free practice of cardiac and peripheral vascular procedures

CathLabVR offers best-in-class and true-to-life tactile sensations of the forces encountered when manipulating wires, catheters, balloons and stents within a patient. Learners are able to practice accessing and navigating diverse anatomies with cardiac and vascular abnormalities. The repetitive practice and challenging cases allow learners to develop skills and confidence in a risk-free environment.

Standard Software Modules
Basic and Advanced Percutaneous Coronary Interventions (PCI)
Carotids
Transcatheter Aortic Valve Implantation (TAVI)
Cardiac Rhythm Management
Essential solutions for improving healthcare learning and patient safety

A high-quality debriefing session following a simulated emergency scenario or clinical event is known to improve learning and retention. In any high-stakes scenario, participants may not remember all of their behaviors, decisions and interactions. Today, most simulation centers record scenarios to enhance debriefing and improve performance assessment. The use of audiovisual (AV) solutions is growing in clinical settings as well.

LearningSpace is an audiovisual recording system that is accessible via the Internet. The system captures physiological data including event logs, trend charts, waveform displays and annotations. In a debriefing session, participants can view an instant replay with the benefit of rich patient data and an instructor’s play-by-play critique.

LearningSpace provides powerful scheduling, reporting and assessment tools. The web-based system is secure and protects the privacy of learners and users. A new Resource Manager feature allows simulation center managers to track all of their assets, standardized patient hours and usage for real-time reporting.

LearningSpace offers mobility, for in situ or remote learning, and also scalability, allowing institutions to standardize training across multiple centers. The LearningSpace support team members are trusted partners who offer free consultation and expertise from initial center design through full integration of a LearningSpace system.

The LearningSpace development team is committed to continuous improvement of the end-user experience. Driven by the community of LearningSpace users, the development team releases new features and free updates several times each year.
The U.S. Air Force has adopted LearningSpace in all of its Tier 1 and Tier 2 medical simulation centers in the United States, the United Kingdom, South Korea and Japan. More than 160 medical centers within the U.S. Veterans Health Administration Simulation Learning, Education and Research Network (SimLEARN) use a custom LearningSpace portable audio-visual system to manage clinical training activities and deliver immediate feedback to learners.
LearningSpace™

Audiovisual solutions to manage healthcare learning and improve patient safety

LearningSpace is CAE Healthcare’s comprehensive audiovisual and management platform, designed to capture clinical and learning events for review, debrief and assessment. LearningSpace is web-based, accessible from anywhere, and scalable from one-room environments to multiple linked locations.

Capture and Review

Digital SD or HD cameras provide superior video quality and pan-tilt-zoom options. High-quality audio capture with dedicated, in-room microphone and digital and audio encoders. Captures patient data and monitoring for integrated review. Access up to 25 room views on one screen. Observe and annotate live recording in any room from any computer. Advanced search capability of recording library.
Manage and Control

Secure data entry and user authentication ensures privacy
Intelligent automated scheduling and comprehensive case management tools
More than 25 exportable reports for faculty and learners
Nightly metadata backup

Debrief and Assess

Integrated simulator data and patient monitor stream
Integration with CAE Healthcare and other simulators
Recorded events review with patient data for debrief
Real-time feedback

“For our standardized patient program, we use LearningSpace to create cases, schedule our learners, schedule our standardized patients, capture the audiovisual recording and data. We’re able to generate really robust reporting.”

— Jacqueline Jordan Spiegel, MS, PA-C, Director of Clinical Skills and Simulation, Midwestern University, Glendale, Arizona, USA
LearningSpace™

Choose the right audiovisual solution for your learning environment

LearningSpace One — our mobile audiovisual solution on wheels for one-room or one-patient events. LearningSpace One offers the full LearningSpace platform in an affordable package that can easily be scaled up as your learning environment grows.

LearningSpace Pro — our original LearningSpace solution, with audiovisual capture, debrief, assessment and management features for busy simulation centers. Includes two standard definition cameras with support up to ten cameras, remote monitoring by the technical team, and nightly database backup services.

LearningSpace Enterprise — our LearningSpace solution scaled up for multi-room or multi-site simulation centers. Enterprise supports more cameras, more video storage, and includes free design consultation, installation and on-site training from the LearningSpace team.

LearningSpace Go — for Pro and Enterprise systems, LearningSpace Go allows you to capture in situ simulation and upload the information from anywhere.

CAE Healthcare guided us through the installation process and advised where cameras, microphones, and servers would best be placed. Their support has been very responsive. As a user, I get what I need and quickly.”

— Jacqueline Jordan Spiegel, MS, PA-C, Director of Clinical Skills and Simulation, Midwestern University, Glendale, Arizona, USA
“LearningSpace is being deployed throughout our institution. It ensures standardization and is a vital element of educational quality control. The availability of a mobile unit that uploads the saved events and videos to the central server is a must for any facility that does in situ simulation and training on remote sites. Technical support is top notch, and CAE Healthcare has moved diligently to incorporate requested features in the system.”

— Gilles Chiniara, MD, MHPE, Scientific Director, Centre Apprentiss (simulation center), Laval University, Quebec City, Canada
<table>
<thead>
<tr>
<th>Size of Simulation Space</th>
<th>1 Room Simulation Center</th>
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<tbody>
<tr>
<td><strong>Simulation Space</strong></td>
<td></td>
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<tr>
<td>Number of cameras or capture devices supported</td>
<td>1-5</td>
</tr>
<tr>
<td>Number of simulators* supported - standard package</td>
<td>1</td>
</tr>
<tr>
<td>Number of simulators* supported - extended package</td>
<td>not available</td>
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<tr>
<td>Multiple location (multi-campus)</td>
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<tr>
<td><strong>System Configuration</strong></td>
<td>Cart option</td>
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<tr>
<td>Mobile solution with computer</td>
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<tr>
<td>Compact rolling bag</td>
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<tr>
<td>LearningSpace desktop</td>
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<tr>
<td>Server-based</td>
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<tr>
<td><strong>Camera Options</strong></td>
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<tr>
<td>Standard definition digital, pan-tilt-zoom wall &amp; ceiling cameras</td>
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<tr>
<td>High definition digital, pan-tilt-zoom cameras</td>
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<tr>
<td><strong>Microphone</strong></td>
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<td>Digital audio kit with omni-directional microphone</td>
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<tr>
<td><strong>Storage Size</strong></td>
<td>Recording capacity</td>
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<td><strong>Functionality</strong></td>
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<tr>
<td>View live</td>
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<td>Capture &amp; review</td>
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<td>Debrief &amp; assess</td>
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<tr>
<td>Simulator integration</td>
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<tr>
<td><strong>Services</strong></td>
<td>Simulation center consultation service (evaluation and annotation of floor plans)</td>
</tr>
<tr>
<td>Expert installation performed by CAE Healthcare system integration technicians</td>
<td>available for purchase</td>
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<tr>
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<tr>
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<tr>
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<td>Pro</td>
<td>Enterprise</td>
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<td>Large Simulation Centers</td>
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<td>2-10</td>
<td>11-80</td>
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*number of simulators simultaneously connected

Accessory to Pro and Enterprise Systems
Peer-to-peer mentoring for success in healthcare simulation

From Montreal to Mainz and cities in between, CAE Healthcare’s Academy delivers peer-to-peer education, training and on-call support. Each member of the Academy is dedicated to the successful integration of simulation into your educational or professional environment.

Our Academy is comprised of registered nurses, surgeons, general practitioners, anesthesiologists, emergency physicians, paramedics, cardiologists and sonographers. A physician who trains surgical residents can expect to be guided by an Academy surgeon, and a nurse educator will learn from a master’s prepared nurse.

With diverse experiences and cultural backgrounds, our Academy members are able to adapt training to local customs and needs, and they can converse in English, French, German, Dutch, Hungarian, Spanish, Hindi or Arabic. They are on-call to answer questions about simulator physiology, how to program and facilitate a simulation, how to debrief, and how to incorporate best practices in simulation.

The Academy has developed more than 500 Simulated Clinical Experiences (SCEs) in collaboration with subject matter experts and professional societies. The SCEs for emergency medicine, nursing, pediatrics, disaster medical readiness and more are programmed into Müse and validated, so they can be easily integrated into any curriculum.
With educators based around the world, the CAE Healthcare Academy delivers education at customer sites and in training centers in Canada, the United States, the United Kingdom and Germany.
Hospital Services

Helping hospitals improve patient safety and outcomes

CAE Healthcare offers healthcare organizations evidence-based, customizable, clinical education solutions to help improve patient safety and outcomes. Our simulation training helps hospitals assess, develop and validate the competency of clinical personnel and interdisciplinary teams.

Better retention, results and quality
Speed up on-boarding, train nurses for new units and reduce turnover with a standardized nurse training approach that can also help hospitals effectively address staffing shortages, fluctuating patient census and changes in patient acuity.

Risk-free practice in a safe environment
Efficiently assess teams, train staff on new procedures or tools, such as electronic medical record systems, and perform trial runs of new techniques such as bar-coded medication administration.

Improved performance and compliance
Ensure that staff master clinical procedures, improve performance and reinforce compliance to hospital procedures, especially those designed to prevent hospital acquired conditions and never events.

Effective and affordable programs tailored to any healthcare system
CAE Healthcare’s subscription training programs for hospitals include a combination of e-learning programs, high-fidelity simulators, simulated clinical experiences, coaching and on-site consultation delivered by experienced educators.

Benefits of CAE Healthcare Hospital Services Programs
- Reduce costs by eliminating unnecessary examinations and optimizing competency assessment and validation
- Improve productivity by helping staff quickly learn what they need to know — from new skills to new specialties
- Engage, develop and motivate staff by providing them with continuous personal development
“CAE Healthcare simulation gave us the structure and support we needed to radically change how we deliver education. It changed our view of everything. Our focus has been on the new nurse graduate transition to practice. The level of confidence in our residents has dramatically improved. We’ve done some data analysis during the time that we have had simulation, and our nurse-sensitive outcomes have improved.”

Donna Strand RN MN CNE-BC, Director, Clinical Education and Practice, Swedish Medical Center in Seattle, Washington

**Study: Nurse Residency Program at Dartmouth-Hitchcock Medical Center**

CAE Healthcare's Nurse Residency Program is based on a three-year study of the Dartmouth-Hitchcock Medical Center’s Nurse Residency Program, which proved to be effective in reducing the time for new nurse orientation, increasing the ability to recruit nurses, educating nurses to specific organizational policies and procedures, increasing retention and increasing clinical productivity and efficacy.

**Study Citations**

Learning Applications

CAE Healthcare Academy Learning Applications provide an effective solution for quickly and easily integrating human patient simulation in specific curriculums. Each application provides carefully defined Simulated Clinical Experiences (SCEs) designed to immerse learners in the clinical environment and develop critical skills to provide the highest quality of care.

Each evidence-based practice SCE includes: documentation, appropriate corresponding intervention scenarios, descriptions and references, scenario scenes and background, learning objectives, facilitator’s notes, equipment and supply list, and software application.

Adult Nursing

Acute Coronary Syndrome and Acute Myocardial Infarction
Acute Respiratory Distress Secondary to Trauma and Post-Anesthesia Pneumonia
Anaphylactic Reaction to Blood Administration
Asthma Adult Home Care
Basic Assessment of the Adult Patient with Asthma
Basic Assessment of the Post-operative Gastrectomy
Bioterrorism
Cardiopulmonary Arrest
Cerebral Vascular Accident
Chest Pain Management of the Medical Surgical Patient
Chest Tube Insertion and General Ongoing Care
Chronic Diabetic
COPD Exacerbation with Respiratory Failure
Diabetic Ketoacidosis
Hypnotic Overdose
Motor Vehicle Collision with Abdominal Injury, Internal Bleeding and Hypovolemic Shock
Postoperative Care of the Patient with a Ruptured Diverticulum
Postoperative Pulmonary Embolism
Pregnant Patient in First Trimester with Electrolyte Imbalance Secondary to Hyperemesis Gravidarum
Preoperative Care of the Patient Scheduled for a Cholecystectomy

Infant Nursing

Abandoned Healthy Newborn
Care of Baby with RSV Bronchiolitis
Congenital Cardiac Abnormalities
Myelomeningocele
Newborn with Respiratory Distress
Septic Baby Secondary to Prolonged Rupture of Membranes
Shaken Baby Syndrome
Substance Exposed Neonate

Respiratory Education Simulation Program (RESP)

Module I
Basic Assessment of Asthma
Basic Assessment of Emphysema
Basic Mechanical Ventilation
Chronic Obstructive Pulmonary Disease (COPD)
Drug Overdose
Guillain-Barré with Mechanical Ventilation
Home Health Ventilated Patient with Tracheotomy
Myocardial Infarction
Palliative Care
Sleep Apnea

Module II
ACLS
ARDS
Conscious Sedation
Hemodynamics and Re-intubation of Ventilated Patient
Mechanics of BiPAP
Transportation of Ventilated Patient
Treatment of Advanced Asthma
Treatment of Chest Trauma
Treatment of COPD Exacerbation
Treatment of Isolated Patient

Module III
Amyotrophic Lateral Sclerosis - ALS (Lou Gehrig Disease)
Carbon Monoxide Poisoning
Care of Tracheotomy Patient
Chest Physiotherapy
Cystic Fibrosis
Heliox Asthmatic Treatment
Near Drowning
Obstructed Airway
Treatment of Burn Patient
Ventilator Weaning
Developed in Partnership with the American College of Chest Physicians

www.caehealthcare.com
Emergency Medical Services

EMS I Module
- Adult Asthma
- Altered Mental Status/Cardiac Arrest
- Cerebrovascular Accident
- Brain Attack
- Introduction to Sounds of the Body

EMS II Module
- Agents for Rapid Sequence Intubation
- Asystole
- Epidural Hematoma
- Fluid and Electrolyte Imbalance

EMS III Module
- Acute Coronary Syndrome
- Acute Myocardial Infarction with Hypotension
- Airway Management Intubation
- Altered Mental Status
- Cardiac Arrest
- Diabetic Ketoacidosis

EMS IV Module
- Abdominal Aortic Aneurysm
- Alcohol Gastritis/Bleeding Ulcer/Esophageal Varices
- Chlorine Poisoning
- Cold Water Drowning and Hypothermia
- Motorcycle Crash with Traumatic Evisceration

EMS V Module (Pediatric)
- Abdominal Pain
- Basic Assessment
- Closed Head Injury
- Epiglottitis
- Femur Fracture
- Multi Trauma

EMS VI Module (Critical Care)
- Asthma Attack with Rapid Sequence Intubation
- Calcium Channel Blocker Overdose
- Congestive Heart Failure and Intra-Aortic Balloon Pump
- Diabetes Insipidus with Traumatic Brain Injury
- Disseminated Intravascular Coagulation

Pediatric Nursing
- Abnormal Variations in Heart Rate in a Six-Year-Old Patient
- Acetaminophen Poisoning
- Amputation Secondary to Osteosarcoma
- Asthma Attack in the Pediatric Patient
- Care of a Young Child with Meningitis
- Cystic Fibrosis
- Diabetic Ketoacidosis and Pneumonia
- Fluid and Electrolyte Imbalance

Rapid Assessment and Intervention
- Acute Ischemic CVA
- Anaphylactic Reaction to Blood Administration
- Cardiopulmonary Arrest
- Care of the Seizure Patient
- Deep Vein Thrombosis, Pulmonary Embolism
- Myocardial Infarction
- Postoperative Diabetic Patient

Foundations of Nursing Practice
- Basic Assessment of the Adult Patient with Asthma
- Basic Assessment of the Cardiac Patient
- Basic Assessment of the Hip Replacement Patient
- Basic Assessment of the Teenage Athlete with Fluid and Electrolyte Imbalance
- Chest Tube Insertion and General Ongoing Care
- Postoperative Care of the Patient with Complications: Ileus
- Postoperative Care of the Patient with Deep Vein Thrombosis
- Preoperative Care of the Patient Scheduled for a Cholecystectomy
- Skill Validation
- Suctioning and Trachea Care with Hypoxia
Patient-Centered Acute Care Training (PACT)
Acute Myocardial Infarction
Acute Renal Failure
Acute Respiratory Distress Syndrome
Airway Management
Altered Level of Consciousness
Asthma
Brain Stem
Chronic Obstructive Pulmonary Disease
Hypertension
Hypotension
Intoxication 1
Intoxication 2
Neuromuscular Disease 1
Neuromuscular Disease 2
Peritonitis
Sepsis 1
Sepsis 2
Transport
Traumatic Brain Injury 1
Traumatic Brain Injury 2
Developed in partnership with ESICM.

Advanced Cardiac Life Support (ACLS)
In accordance with AHA 2010 guidelines
Acute Coronary Syndrome
Acute Stroke
Asystole
Bradyarrhythmia and Cardiovascular Shock
COPD Exacerbation
Gastrointestinal Hemorrhage
Hypotension
Intoxication 1
Intoxication 2
Neuromuscular Disease 1
Neuromuscular Disease 2
Peritonitis
Sepsis 1
Sepsis 2
Transport
Traumatic Brain Injury 1
Traumatic Brain Injury 2
Developed in partnership with Baystate Medical Center.

Pediatric Advanced Life Support (PALS)
In accordance with AHA 2010 guidelines
Asthma Attack
Asystole
Bradycardia
Ingestion
Motor Vehicle Crash
PEA
Septic Shock
Shock
Supraventricular and Ventricular Tachycardia
Ventricular Fibrillation

Pediatric Emergencies
Burn Injury
Electrocution
Envenomation
Gunshot Wound
Meningitis
Methamphetamine Exposure
Submersion Injury
Traumatic Brain Injury

Perioperative Management
Anaphylaxis and Anaphylactic Shock
Blunt Trauma Patient Care
Bradyarrhythmia and Cardiogenic Shock
COPD Exacerbation
Gastrointestinal Hemorrhage
Hypotension
Intoxication 1
Intoxication 2
Neuromuscular Disease 1
Neuromuscular Disease 2
Peritonitis
Sepsis 1
Sepsis 2
Transport
Traumatic Brain Injury 1
Traumatic Brain Injury 2
Developed in partnership with Baystate Medical Center.

Disaster Medical Readiness (DMR)
Anthrax
Botulism
BZ
CHI with Chest Trauma-Earthquake
CHI with Chest Trauma-IED
Chlorine
Cyanide
Dehydration-Hurricane
Laceration to Arm-Earthquake
Laceration to Arm-Hurricane
Multiple Injuries with Amputation-Earthquake
Multiple Injuries with Amputation-IED
Mustard Lewisite
Pandemic Flu
Phosgene
Pneumonic Plague
Pneumothorax-IED
Radiation Criticality
Radiation Trauma
Sarin

Pediatric Emergencies
Burn Injury
Electrocution
Envenomation
Gunshot Wound
Meningitis
Methamphetamine Exposure
Submersion Injury
Traumatic Brain Injury

Tactical Medical Care (TMC)
Allergic Reaction
Amputation, TBI and Abdominal Injury
Arm Laceration
Barotrauma/Decompression Sickness
Blast Injury
Burns and Spinal Shock
Cardiac Arrest
Cervical Injury
Closed Head Injury, Chest and Abdominal Trauma
Closed Head Injury and Blunt Trauma to Chest
Cold Water Near Drowning
Dehydrated Sniper
Diabetic with Altered Mental Status
Exposure to Chemical Nerve Agent
Fatality From Fall
Flail Chest and Spinal Cord Injury
Gun Shot Wound
Head Injury and Femur Fracture
Hip, Pelvis and Sternal Trauma
Leg Amputations and Burns
Multiple Gun Shot Wounds
Multiple Trauma from Hand to Hand Combat
Pelvic Trauma and Pneumothorax
Pelvis and Leg Injuries
Poisoning/Overdose
Respiratory Distress
Seizures
Tension Pneumothorax
Trauma with Hypoglycemia
Unconscious after Explosion

Infant Emergencies
Burn Injury
Electrocution
Envenomation
Gunshot Wound
Meningitis
Methamphetamine Exposure
Submersion Injury
Traumatic Brain Injury

Cardiopulmonary Critical Situations (CCS)
Acute Allergic Reaction
Acute Asthma
Burns with Airway Compromise
Heroin Overdose
Inferior-Posterior Myocardial Infarction
Ludwig’s Angina
Stab Wound to the Upper Neck
Tricyclic Antidepressant Overdose
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