An Engaging Learning Solution for Ultrasound
Hands-on Simulation, Multimedia Content, Group Seminars and a Collaborative Learning Community

The Stethoscope of the Future
Today’s point-of-care ultrasound devices are more advanced, more portable and more accessible to physicians and healthcare professionals around the world. A growing number of medical specialties have adopted ultrasound examinations into their standards of care. The value of point-of-care or bedside ultrasound is so widely recognized that it has been termed the stethoscope of the future.

- The European Society of Intensive Care Medicine and 11 additional critical care societies worldwide have agreed that critical care ultrasound should be mandatory in the curriculum of ICU physicians.
- In 2010, the American College of Emergency Physicians and American Society of Echocardiography released a consensus statement recommending the Focused Cardiac Ultrasound (FOCUS) exam in emergency care.
- Graduates of ACGME Emergency Medicine Training programs must now demonstrate competency in bedside ultrasound.
- National and international guidelines recommend ultrasound for central venous access procedures.

The Need for Accelerated Mastery
Point-of-care ultrasound can improve patient management and outcomes, but its effectiveness is highly dependent on the expertise of the practitioner performing the exam. With CAE Healthcare’s imaging simulation tools, learners engage in hours of risk-free, clinical practice before they ever assess real patients.
The CAE Healthcare Solution—ICCU E-Learning and the VIMEDIX Ultrasound Simulator

CAE Healthcare has developed the first blended training solution for accelerated mastery of ultrasonography of the thoracic, abdominal and pelvic cavities. ICCU E-Learning offers more than 30 hours of didactic content on ultrasound assessment of the heart, lungs, and central and peripheral vessels. The VIMEDIX ultrasound simulator accelerates learning with a realistic mannequin and a split screen monitor featuring both ultrasound and 3D anatomical images. The addition of hands-on seminars, a FOCUS reference guide and an online, collaborative community round out the solution with opportunities for continuing guidance and skills development.

LEARN—CAE ICCU e-learning comprises more than 30 hours of multimedia, interactive content and 1500 questions to help learners develop expertise.

PRACTICE—The CAE VIMEDIX ultrasound simulator offers a realistic mannequin, several imaging probes, a split-screen with ultrasound, 3D anatomical images and more than 50 pathologies.

PROGRESS—In our group seminars, experienced practitioners conduct hands-on, clinical training with the VIMEDIX simulator, task trainers and volunteer patients. CME credits available.

RETAIN—The affordable FOCUS Pocket Guide can be downloaded for the iPhone or iPad. It is also available in booklet form.

COLLABORATE—The CAE Learning Center is a new, free community portal featuring shared cases, ultrasound literature reviews and the opportunity to become a contributor.
CAE ICCU E-Learning
Multimedia Content Developed by Experts

C AE ICCU is endorsed by the American College of Chest Physicians (ACCP), the Canadian Critical Care Society (CCCS), the Critical Care Education Network, the Quebec Pulmonologist Association, and the University of Montreal. CAE ICCU is recognized for CME credits by the American Medical Association (AMA) and by the Royal College of Physicians and Surgeons of Canada (RCSPC).

Society-Endorsed E-Learning for Bedside Ultrasound
CAE ICCU e-learning covers components of the TEE, FAST and FOCUS exams, assessment of the central and peripheral vessels and assessment of the pleural space and lung. The curriculum is based on guidelines from the International Consensus Statement on Training Standards for Critical Care Ultrasonography, which was organized by the European Society of Intensive Care Medicine.

Focused Cardiac Ultrasound Study
Assessment, diagnosis and intervention in central and peripheral vessels
Assessment of the lung and pleural space
Ultrasound-guided procedures for peripheral vascular access
Focused Assessment with Sonography for Trauma (FAST) exam (Summer 2012)
Transesophageal (TEE) exam (Summer 2012)

1500+ multimedia testing questions
Accessibility on any mobile platform

An Interactive Learning Management System
CAE ICCU offers more than 30 hours of online, multimedia, didactic content, available by subscription to individuals or institutions. ICCU is accessible on any mobile platform. The institutional license format allows tailored learning solutions and immediate, online performance assessment.

CAE Learning Center—ICCU’s free online, collaborative community
Interactive web-based learning portal dedicated to providing the most-up-to-date information on bedside ultrasound
Features include clinical case studies, Journal Club, clips and images from an atlas of cases, blogs and much more.
Additional Imaging Learning Solutions

Comprehensive on-site Ultrasound Training Seminars
Clinical programs composed primarily of hands-on sessions
Includes scanning of various acute care cardiac pathologies using the CAE VIMEDIX high-fidelity ultrasound simulators
Conducted by experienced critical care physicians and certified sonographers
Seminars and e-learning pre-work are recognized for CME credits

FOCUS Pocket Guide application for iPhone and iPad
An essential reference tool for focused bedside echocardiography
Summarizes key concepts of the Focused Cardiac Ultrasound exam (FOCUS) with 3D animations of echocardiographic views
Features video, animation, a cardiac output calculator and special sections on assessment of ventricular function, pericardial fluid, fluid status, and more
Addressed to medical students, residents, nurse practitioners
Available in English, French, Japanese, Portuguese, Spanish, German and Russian
CAE VIMEDIX is the only ultrasound simulator to offer the TEE, TTE and abdominal-pelvic exams on one platform.
Dr. Georges Desjardins, anesthesiologist and clinical professor at the University of Utah School of Medicine, saw positive results after training a new anesthesiologist on the CAE VIMEDIX ultrasound simulator. “I spent about 20 hours with him with the simulator and about 10 hours on human patients doing TEEs. He recently saved his first life with echo.”

A 32-year-old female patient was delivered to the emergency room after a motor vehicle accident. After a negative FAST exam, she was sent for additional evaluation. “She became severely hypotensive and unresponsive,” said Dr. Desjardins. “My colleague was called to help the resuscitation and secure the airway. He placed the TEE probe emergently and diagnosed cardiac tamponade in about 30 seconds. The surgical team opened the pericardium to repair an injury to the right atrium. This training has real impact. This is how it can change people’s lives!

George Desjardins, MD, FRCPC, FASE
Associate Clinical Professor in Anesthesiology and Internal Medicine (Cardiology), University of Utah School of Medicine

Clinical Features
The VIMEDIX mannequin has realistic tactile features, including a depressible abdomen, palpable ribs and sternum and depressible interspaces
Split screen right side display shows an ultrasound view with depth of field, contrast, gain, m-mode capability and color Doppler
Split screen left side display shows a 3D anatomical depiction of the organ being scanned, its physiology, motion, and 360-degree view. The images of surrounding anatomical structures (liver, lungs, sternum artifacts) may be toggled on and off depending on the learner’s level of comfort.
The anatomical image can show the ultrasound beam plane to help the learner generate an accurate ultrasound image.

Standard Equipment
VIMEDIX mannequin
Computer with display, including keyboard, mouse, cable and monitor. Monitor shows split screen display with ultrasound view and corresponding 3D anatomical image
Mock TTE probe

Standard software:
One normal heart
Three pathologies
Transthoracic Echocardiography Module (TTE)

Add-on systems:
Transeosophageal Echocardiography Module (TEE)
Abdominal-Pelvic Module(includes FAST)

A Library of Pathologies
VIMEDIX offers an extensive library of more than 40 cardiac and 10 abdominal and pleural pathologies, which can be purchased and downloaded in packages of 10 pathologies. The online library is expanding, with more cases being added regularly. Find a complete list of pathologies at caehealthcare.com
CAE Healthcare offers advanced patient, imaging, surgical and learning simulation-based solutions to improve patient safety and outcomes. Our leading-edge products and learning applications provide risk-free practice and professional development to physicians, nurses, EMS responders, military medics, students and allied health professionals around the world.

caehealthcare.com

For more information about CAE Healthcare products, contact your regional sales manager, the CAE Healthcare distributor in your country, or visit caehealthcare.com.
Tel +1 941-377-5562
Toll-free in North America 866-233-6384