

Canadian Critical Care Society Special Offer:

Implement Bedside Ultrasound
Training at Your Institution



» Executive Summary

An estimated 100,000 people die from preventable medical errors each year in US hospitals.¹

Increased pressure is appropriately being placed upon the healthcare system to prevent future errors. The development of a culture of safety with a focus on designing a safer healthcare system is urgently required². It is the responsibility of the healthcare system's governing bodies to provide and implement training and educational programs in medical institutions to reduce errors - especially programs supported by published medical evidence and endorsed by medical societies.

In recent years, there has been an increasing body of scientific literature supporting the use of bedside ultrasound in critical care, especially for central venous access (CVC), thoracentesis and paracentesis procedures. With proper training, critical care physicians can achieve a high level of competence in ultrasonography, reduce procedural times and avoid complications, which will ultimately result in better patient outcomes.

» Why Train for Ultrasound?

Results demonstrate significant improvement in preventive care, infection and complication reduction, and ultimately better patient outcomes with the use of ultrasound:

- Ultrasound-guided CVC decreases relative risk by 78%³
- Ultrasound-guided thoracentesis decreases the risk of pneumothorax from 18% to <1.1%⁴
- Ultrasound-guided paracentesis success rate is 95%⁵

Such practices can also help save millions of dollars for institutions and the health care system:

- Ultrasound-guided procedures reduce complication risks, and reduce costly malpractice suits⁶
- Up to \$7 million can be saved by reducing central catheter claims⁶
- Up to \$2.3 billion can be saved by reducing patient care infections⁶



Until recently, there was no standardized training in critical care ultrasonography. However a growing body of evidence has supported the adoption of dedicated ultrasound devices and training in both acute and non-acute care settings. The proper use of such devices have been shown to speed up and improve the management of a variety of patient conditions in the critical care setting, and can serve as an invaluable tool for numerous clinical specialties including critical care, emergency medicine, internal medicine, anesthesiology, trauma and other disciplines.

It's clear that point-of-care ultrasound is rapidly becoming a standard of care to decrease the risk of complications related to invasive procedures, to improve practitioner efficiency and to improve overall patient care. These improvements could lead to a decrease in morbidity and mortality, as well as a decrease in costs.

» Training Standards in Bedside Ultrasound

In 2009, a comprehensive list of competencies required by intensive care physicians utilizing ultrasonography was formulated and published in a competence statement emanating from two critical care societies, the American College of Chest Physicians (ACCP) and the Société de Réanimation de Langue Française (SRLF) ⁷. The purpose of the document was to describe the components of competence so that clinicians would have specific training goals while developing skills in both general ultrasound and focused echocardiography.

Following publication of this statement, a round table assembling experts from 5 continents was organized by the European Society of Intensive Care Medicine (ESICM) in Vienna in 2009, with the aim of elaborating guidelines on training standards in ultrasonography for ICU physicians. The resulting "International expert statement on training standards for critical care ultrasonography" has since been endorsed by 13 critical care societies from around the globe and was recently published in the Intensive Care Medicine Journal ⁸. All experts agreed that the foundation document for the statement would be the ACCP/SRLF competence statement that was published in CHEST in April 2009.

There was 100% agreement among the participants that general critical care ultrasound (including ultrasound-guided vascular access, thoracentesis, and paracentesis) and "basic" (focused) echocardiography should be mandatory in the curriculum of ICU physicians.

The statement indicated that **"...as ultrasound moves from an optional to an indispensable tool in the management of certain conditions in the critical care environment, practitioners have to ensure they have the required skills and experience to perform and interpret the studies competently"**. The statement also mentions that **"When the considerable benefits it confers are well known, not utilizing ultrasound in the management of patients could be considered inexcusable"** ⁸.



» The Canadian Critical Care Society Takes Action

The Canadian Critical Care Society was one of the 13 key critical care societies at the round table organized by the ESICM endorsing the Expert Statement described above.

The final conclusion of the expert statement was that “It is the role of each critical care society to support the implementation of training in general critical care ultrasound and focused echocardiography in its own country”⁸.

In keeping with our mission to promote and enhance critical care medicine in Canada by implementing best practices, we have undertaken to take a leadership position to help implementing critical care ultrasound in all Canadian ICU's.

» Educational Collaboration with CAE Healthcare

The CCCS is pleased to collaborate with Montreal-based CAE Healthcare to help offer a solid framework for ultrasound education to residents, fellows and attendees from across Canada.

CAE Healthcare is a well established company specializing in various aspects of medical simulation, benefiting from CAE's 60 years of leadership experience in providing education, simulation and training solutions for the aviation industry around the globe.

With contributions from international opinion leaders and society endorsements, CAE Healthcare has led the field of critical care ultrasound education with training solution including a full online e-learning curriculum on bedside ultrasound and a high-fidelity ultrasound simulator. For the past 5 years, CAE ICCU has been providing ultrasound seminars at the Critical Care Canada Forum meetings, helping to train hundreds of intensivists from across Canada and abroad. In total, more than 3000 physicians from around the world have been trained through the CAE ICCU bedside ultrasound programs.

CAE Healthcare's web-based ICCU curriculum is quickly becoming the global leader in online bedside ultrasound training, and has already been successfully implemented in many medical centers and universities across the world including University of Montreal, University of Winnipeg, Columbia University, University of Alberta, Massachussets General Hospital, and many more. The CAE ICCU curriculum is already a required component of the American College of Chest Physicians' (ACCP) certification process in critical care ultrasonography.

Developments in e-learning and simulation technologies are laying the groundwork for a revolution in bedside ultrasound education, coinciding with a growing need for training in this discipline. One significant benefit of CAE ICCU training solutions is the flexibility that they provide to both individuals and institutions, placing an emphasis on learning at 'any time, any place, any pace'. These educational solutions enable healthcare professionals to use bedside ultrasound to quickly identify and interpret the presence of critical pathologies, apply critical thinking to diagnoses and optimize treatment, ultimately leading to better patient care and outcomes.



» Our Ultimate Goal

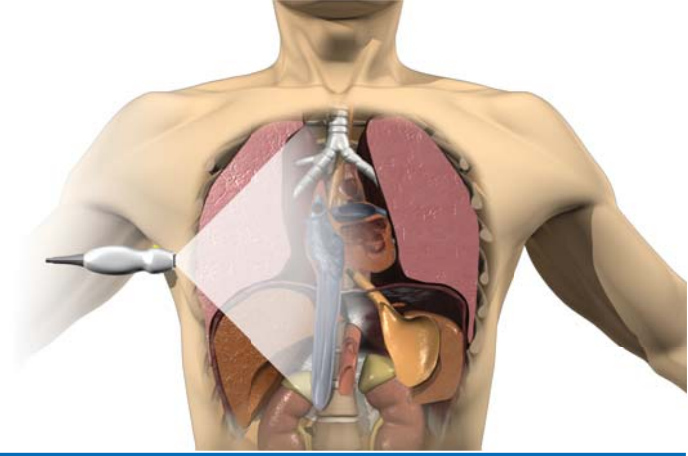
Through a strong collaboration with CAE HC, our goal is to help medical centers from across Canada implement a standardized, society-endorsed training on bedside ultrasound that can be adapted to the local conditions of each institution. Institutional, turn-key solutions allow local champions to implement a solid training path with the help of a full Learning Management System that allows supervisors to follow the progress of their participants, assess their performance, schedule hands-on and e-learning sessions, compare to benchmark, etc.

» Why Train With the CAE ICCU Curriculum

Developed by front line intensivists, the CAE-ICCU Learning Management System and e-learning curriculum is the first scientifically relevant, interactive e-learning solution to help bring healthcare practitioners from different fields (e.g. intensivists, emergency physicians, anesthesiologists, internists, surgeons, cardiologists, etc.) to competence in critical care ultrasonography. The CAE ICCU curriculum content fulfills the ACCP/SRLF competence requirements as determined in the foundation document of the ESICM international consensus statement. Here are some of the CAE ICCU curriculum benefits (for both individuals and institutions):

- **Learn how to perform** critical care echocardiography and general critical care ultrasonography as per the latest scientific statements of major professional critical care societies.
- **Acquire the problem solving skills and knowledge** about key aspects of focused clinical ultrasound: general principles, anatomy, orientation, image interpretation, clinical applications, and scanning technique.
- **Develop expertise in decision making** on clinical management, based on image interpretation in clinical scenarios.
- **Manage your own training schedule** - the modular training material allows participants to go through the course content at their own pace, in an organized way.
- **Validate your knowledge** - each module offers a pre-test and post-test as well as a global test incorporated at the end of each course as a tool to guide your progress. Questions are clinically oriented to test the multiple dimensions of critical care ultrasound.
- **Obtain CME credits** after having completed each course.





» Special Introductory Offer

- **For institutions**, every group order for 30 participants received within 2 months of this offer will receive 5 additional free licenses.
- Groups or departments with at least one user being a CCCS member will obtain a 5% discount on the total cost of their CAE ICCU group license.
- Individual CCCS members will obtain a 10% discount on any single license and a 15% discount on any curriculum package.
- Upon registration to the CAE ICCU e-learning curriculum, trainees or graduates who have graduated since one (1) year from an accredited RCPSC institution will receive a free CCCS membership for one (1) year.
- Physicians who have completed training for more than one (1) year and have not been CCCS members within the past 2 calendar years, will receive a discount of 25% on a CCCS 1-year membership

» Act Now

- Learn more about how you could implement a bedside ultrasound curriculum (CAE ICCU) in your university / hospital / department
- Receive a copy of our "Implementation of Bedside Ultrasound Training for Higher Quality Care and Improved Patient Outcomes" to help you build your internal business case
- Free 30-day trial CAE ICCU (**complete** access) for program directors
- Free 30-day CAE ICCU trial (limited access) available online for all users



Available now:

Focused Cardiac Ultrasound (FOCUS) TransThoracic Echo (TTE): The Focused Cardiac Ultrasound Study curriculum covers the principles and applications of the basic Critical Care Echocardiography (CCE) examination in detail. CCE is performed and interpreted at bedside by intensivists in order to establish diagnosis and to guide therapy of patients with cardiopulmonary failure. The courses allow the participant to learn the elements of echocardiography that are required to achieve competence in CCE in a systematic, organized way. The 8 hours of content is divided into 6 courses and 36 modules.

Assessment of Central and Peripheral Vessels: The curriculum on Assessment of Central and Peripheral Vessels covers the principles and applications of the vascular exam as performed in the acute care setting in detail. The courses allow the participant to learn the elements of the Focused Vascular Exam that are required to achieve competence in the Assessment of Central and Peripheral Vessels in a systematic, organized way. The learner will review the pertinent Ultrasound Vascular Access literature, see demonstrations on how to perform an ultrasonographic examination of the main vessels, including internal jugular, subclavian, femoral and peripheral veins, learn how to recognize anatomical variants such as thrombus, artifacts and other anomalies of the vascular system, and learn how to perform lower extremity Deep Vein Thrombosis (DVT) screening and ultrasound-guided line placement. The 5.5 hours of content is divided into 3 courses and 26 modules.

Assessment of Pleural Space and Lung: The curriculum on Assessment of Pleural Space and Lung covers the principles and applications of lung and pleural ultrasound in detail. Course 1 reviews the literature, training guidelines, anatomy and the assessment of the pleural space for fluid. It describes the various types of simple and complex effusions and covers pleural effusion quantification as well as ultrasound-guided thoracentesis. The 2.5 hours of content is divided into 7 modules and contains 135 interactive multimedia questions.

Also Available in 2012:

- The Focused TransEsophageal Echocardiography (TEE)
- FAST: The Focused Assessment with Sonography in Trauma
- Ultrasound-Guided Peripheral Vascular Access:

- Try a free 30-day trial online on any portion of the published curriculum! -



» CAE ICCU Imaging – Live Seminars:

CAE ICCU imaging offers a choice of various Bedside Ultrasound training seminars designed to teach basic principles of the sonographic exam as an extension to the physical examination. All seminars are provided by highly trained critical care physicians and certified sonographers and are recognized for CME credits. The curriculum is taught in a seminar format and is addressed to intensivists, ER physicians, anesthesiologists, surgeons, cardiologists, nurse practitioners, etc. The content of the course can be tailored to your institutions' needs. About half of the curriculum is practical "hands-on" training, while the other half consists of pre-seminar completion of CAE ICCU eLearning modules. The practical part is given using portable ultrasound devices with a small attendee-to-machine ratio.

Visit www.caeiccu.com for more information

Canadian Critical Care Society

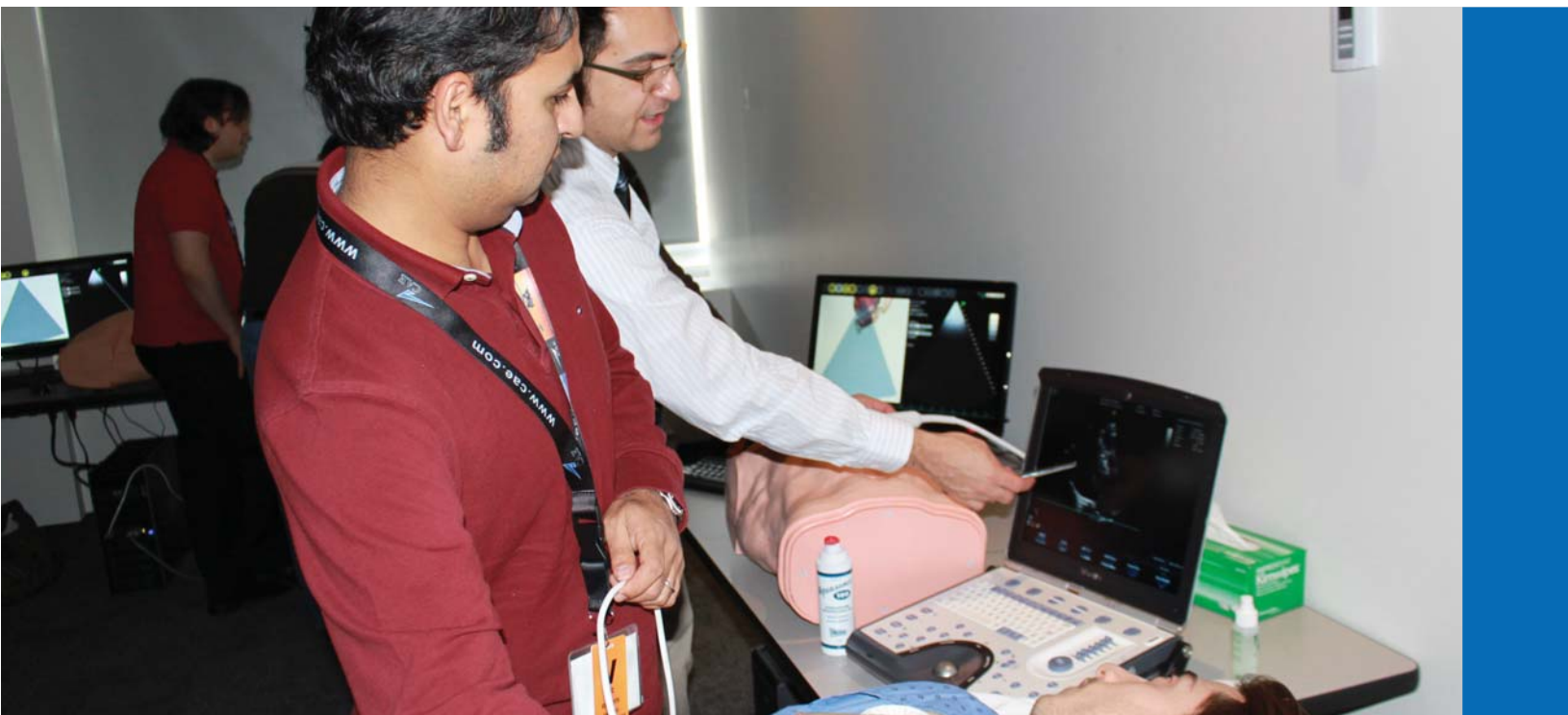
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