

AACES Paediatrics Emergency and Critical Care Ultrasound Course

31 May 2019



Course Description

Specifically designed for healthcare providers who are exploring point of care ultrasound to enhance management of the injured and critically paediatric patient. Adopting the familiar "A-B-C-D" format used in the major trauma and medical life support curriculums, the course presents a systematic and comprehensive assessment with ultrasound in infants and children. This focused and targeted evaluation aims to enable a rapid and effective decision making, and improve triage, diagnostic, therapeutic and monitoring capabilities.

The morning session focuses on emergency and critical care evaluation; and the afternoon is dedicated to emergency applications and procedures. Participants can register for one or both sessions.

Lectures are condensed and delivered in an interactive format. The **Hands-on Training** is the cornerstone of the program. During these sessions, trainees will be guided to perform bedside scans on infant and children volunteers. With 5 hours set aside for practical and keeping the trainer to trainee ratio at maximum of **1:5**, participants will have ample opportunities to practise during the Hands-on Training sessions. This course will lay the foundation required of the healthcare provider in using point-of-care ultrasound in the evaluation and resuscitation of the injured and critically ill paediatric patients.

Learning Objective

Upon completion of the Paediatric Ultrasound Life Support Care Session, participants will learn how to use ultrasound to:

- Systematic focused ultrasound of the injured and critically ill paediatric patient.
- Assessment of the paediatric airway using point-of-care ultrasound to locate cricothyroid membrane and cervical esophagus
- Perform chest ultrasound for the diagnosis of pneumothorax, pleural effusion and interstitial syndrome.
- Perform point-of-care cardiac and inferior vena cava ultrasound for the evaluation of paediatric hypotension and cardiac arrest.
- Perform extended-FAST exam for the diagnosis of free intra-peritoneal, pleural and pericardial fluid.
- Perform basic cranial ultrasound in infants in the evaluation of suspected raised intracranial pressure
- Perform ocular ultrasound to assess pupil reactivity and assess for raised intracranial pressure

Upon completion of the Paediatric Emergency and Critical Procedure Session, participants will learn how to use ultrasound to:

- Perform thoracocentesis, central venous catheterization of the internal jugular, subclavian and femoral vein
- Perform peripheral venous and arterial catheterization
- Perform ultrasound the spine, knee, hip, elbow and shoulder
- Detect and remove foreign bodies
- Assist in assessing adequacy of fracture reduction

Who should attend

Critical care physicians, emergency physicians, physicians, surgeons, anaesthetist, residents, medical officers and healthcare workers who are involved in managing injured or critically paediatric patients. Participants should already have a basic understanding and appreciation of point-of-care ultrasound, ultrasound physics and knobology.

ACGME-I Competencies

This course is designed to meet one or more of the following ACGME competencies:

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement

ALEXANDRA ACADEMY FOR CLINICAL AND EMERGENCY SONOGRAPHY

AACES Paediatrics Emergency and Critical Care Ultrasound Course Khoo Teck Puat Hospital, Singapore • 31 May 2019

PROGRAM

Paediatric Ultrasound Life Support Care	
7:45	Registration & Welcome
8:00	Paediatric Airway and Breathing 30min Dr Chor Yek Kee - Standard airway windows. Identification of cricothyroid membrane & cervical esophagus. Pathology: Esophageal intubation, tracheal lesions. Pitfalls - Standard lung windows. Assessment of pleural effusion, lung sliding and B lines. Pathology: pleural effusion, interstitial syndrome, pneumothorax. Pitfalls
8:30	Approach to Paediatric Shock and Cardiac Arrest 30min Dr Chen Kuo-Chih - Standard cardiac & IVC windows. Assessment of pericardial effusion, LV systolic function, RV function. Pathology: pericardial effusion, systolic heart failure, RV dysfunction. Pitfalls - Standard E-FAST/HIPP windows. Assessment of intrapericardial, intrapleural & intraperitoneal fluid. Pathology: Hemoperitoneum, hemo-pneumothorax, haemopericardium. Pitfalls
9:00	Approach to Paediatric Disability 35min Dr Gene Ong - Transorbital ultrasound 10min Dr Poon Woei Bing - Cranial ultrasound 25min
9:35	BREAK
9:50	Hands-on training 1
11:50	Debriefing 10min
12:00	Lunch

Paediatric Emergency and Critical Procedure	
12:45	Use of POCUS in paediatric resuscitation and emergency medicine (abdomen): pearls and pitfalls 25min Dr Chen Kuo-Chih - Use of point-of-care ultrasound in the evaluation paediatric abdomen. PEARLS and pitfalls - Limitations in the use of FAST in stable blunt abdominal trauma
13:10	Paediatric Soft tissue, Musculoskeletal and Spine 25min Dr Vigil James - Approach to the Paediatric Fractures, Joints and Spine
14:35	Paediatric Ultrasound-guided Procedures 25min Dr Chor Yek Kee -Drains, Taps and Lines
15:00	Hands-on training 2a
15:30	BREAK
15:45	Hands-on Training 2b
16:45	Admin
17:00	Course Closure ~~~ AACES Online Lectures* Vascular Access: peripheral 15min Approach to vascular access. Peripheral venous and arterial access. <i>* Please review the lectures before the course date.</i> Admin Course material, meals and parking coupons will be provided. Online lectures will be made available 2 weeks prior to course date. Venue: Khoo Teck Puat Hospital, 90 Yishun Central, S768828. Visit www.AACES.sg to learn more about AACES and other educational resources.