

Paediatric Intensive Care Unit

Point of Care Ultrasound Training & Credentialing Handbook

BLADDER ULTRASOUND



A collaborative program of Monash Children's Paediatric Intensive Care Unit
& Monash Imaging supporting excellence in clinician performed ultrasound

Overview

Introduction

- Overview of collaborative PoCUS training program
- Process for Monash Health Bladder module accreditation
- Booking one-to-one training sessions

Ultrasound System

- Knobology
- Infection control
- Equipment care

Scanning

- Scan module protocol & imaging
- Practical scan skills

Scan Results

- Documenting findings on EMR

Other matters

- PACS upload of images
- Quality auditing & clinician feedback
- Clinician logbooks

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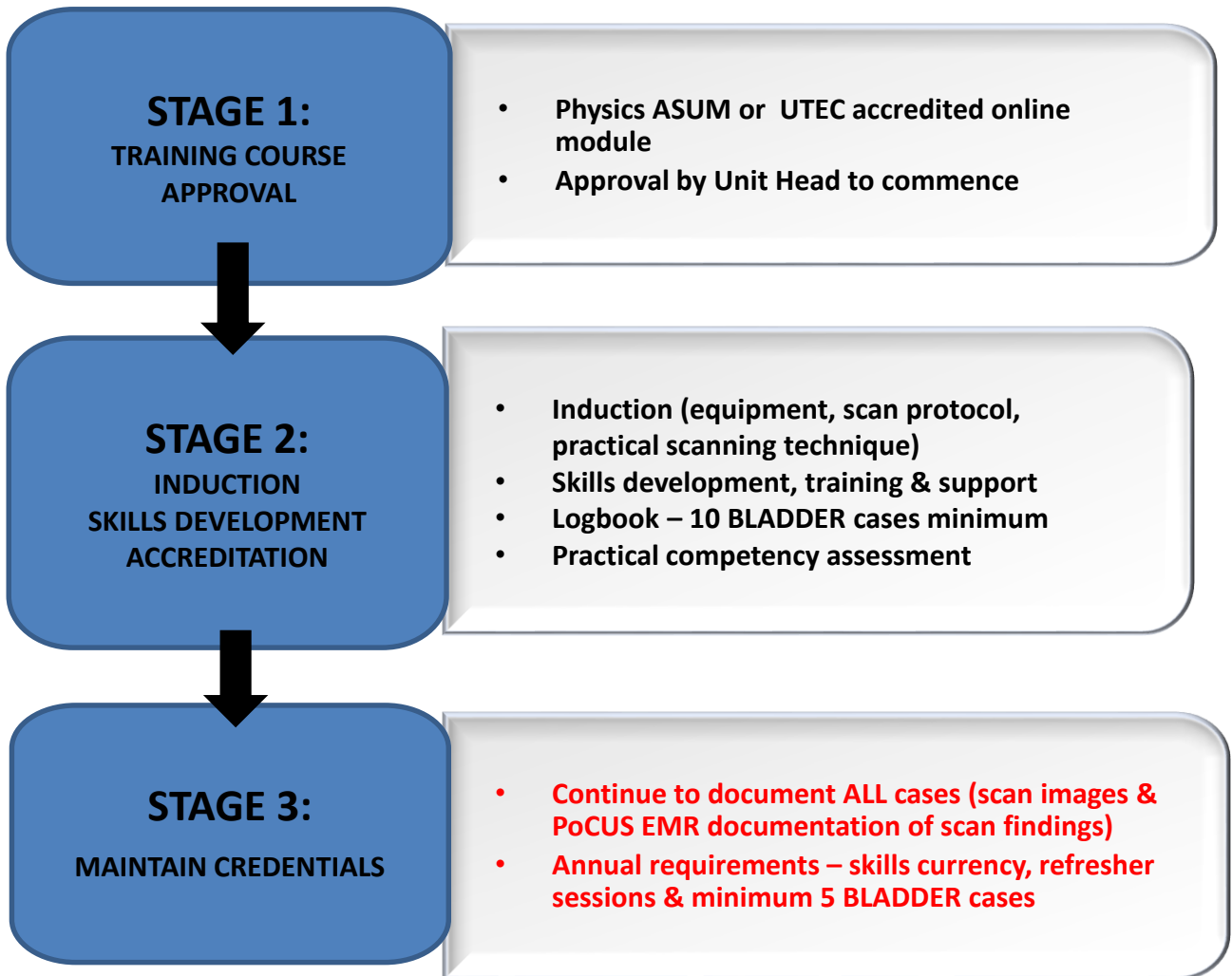
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Monash Paediatric Intensive Care Unit Bladder Ultrasound Credentialing



Document all findings on EMR

Physics Module UTEC

This is a free resource and will take around 2 hours. POCUS MH require a copy of your certificate once you have finished the program in order to accredit you.

1. Go to ECI

UTEC <http://aci.moodlesite.pukunui.net/?redirect=0>

and create an account, then activate when you get an email

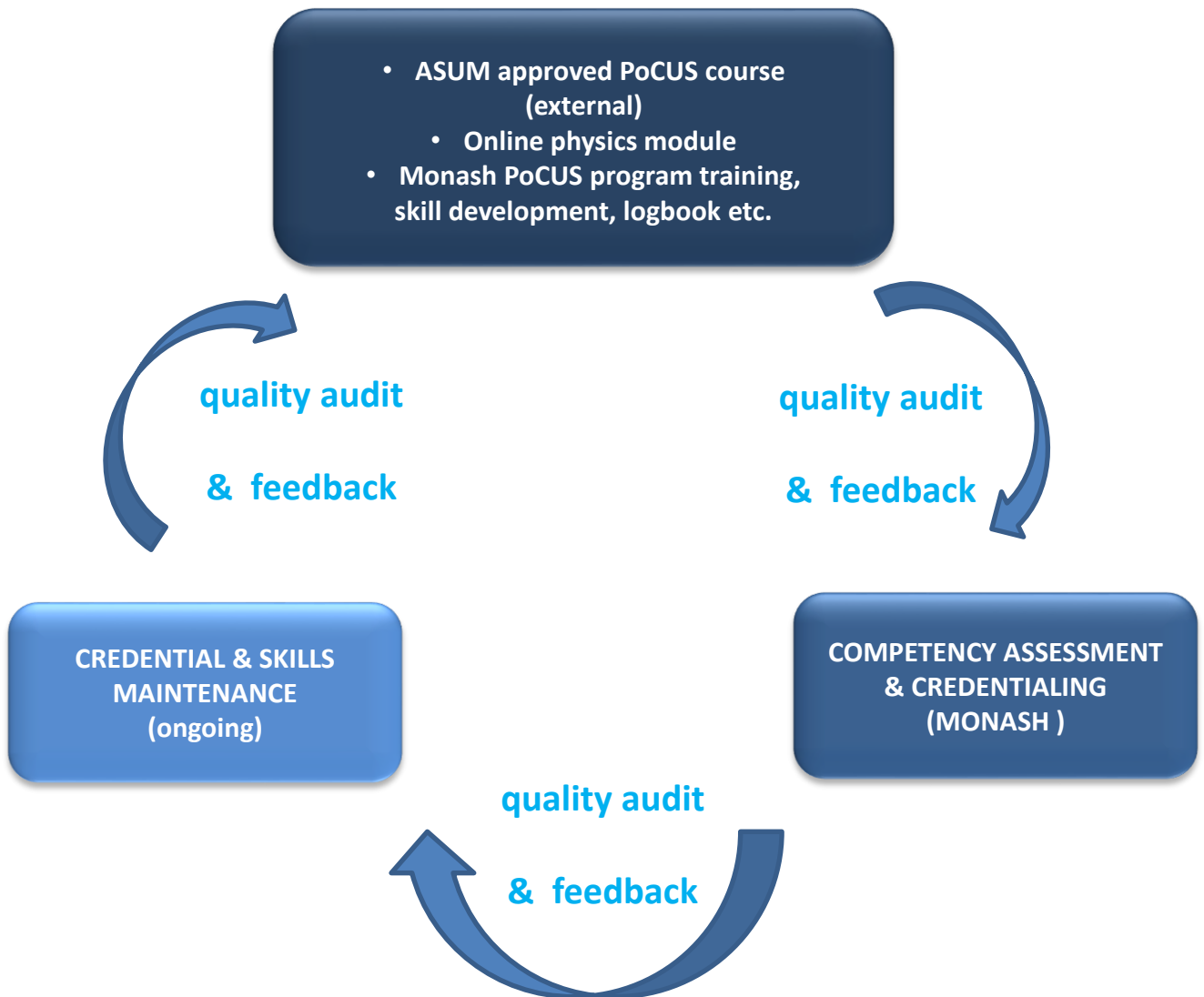
2. Then go here

<http://aci.moodlesite.pukunui.net/course/view.php?id=55>

3. To access the module simply scroll down the screen, click on the left hand PHYSICS icon button and put in the key **Monash** when asked

NOTE you are ONLY required to complete the PHYSICS module- a certificate will be sent to you on completion.

Monash PoCUS Training & Credentialing Cycle



Online training bookings

<https://pocusprogram.simplybook.me>

MINDRAY TE7 KNOBOLOGY



TE7



INFECTION CONTROL

- Only use detergent or water based cleaning wipes to clean ultrasound transducers, cords & consoles (NOT alcohol)
- Wipe off excess gel from transducers BEFORE using cleaning wipes to clean thoroughly
- Wipe machine console and probes over with a dampened microfiber cloth to remove residue of detergent wipe
- ALWAYS use dedicated transducer covers for procedures or when in contact with fluids/blood/exposed body tissues (NOT Tegaderm)

EQUIPMENT CARE

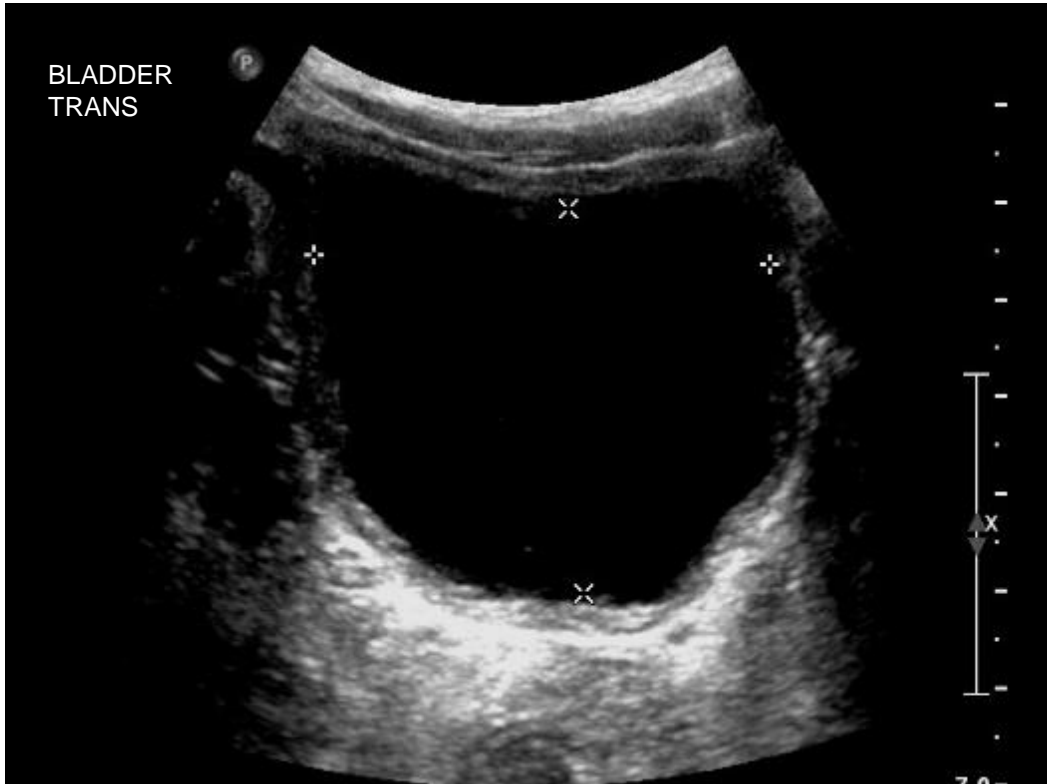
- Store transducers correctly in holders
- Do not drop or knock transducers
- Keep cords and cables tangle free & off the floor
- Do not run over cords!
- **Ensure machine is returned to parking area with POWER CORD PLUGGED IN**



PLEASE REPORT ALL FAULTS/DAMAGE IMMEDIATELY

Bladder Image Series

Plane 1 – MIDLINE TRANSVERSE BLADDER



- Transverse view midline pelvis using curvi-linear transducer
- Place probe just above symphysis pubis
- Fan to find largest dimension
- Demonstrate the bladder wall completely
- Identify nature of fluid in bladder (simple vs. complex)
- Labelled BLADDER TRANS

Bladder Image Series

Plane 2 – MIDLINE LONGITUDINAL BLADDER



- Rotate probe 90 degrees
- Longitudinal view of midline pelvis using curvi-linear transducer
- Demonstrate the bladder wall completely
- Identify nature of fluid in bladder (simple vs. complex)
- Identify prostate (male) or uterus (female)
- Distinguish peritoneal fluid from intravesical fluid
- Labelled BLADDER LONG

Alternate Bladder Views

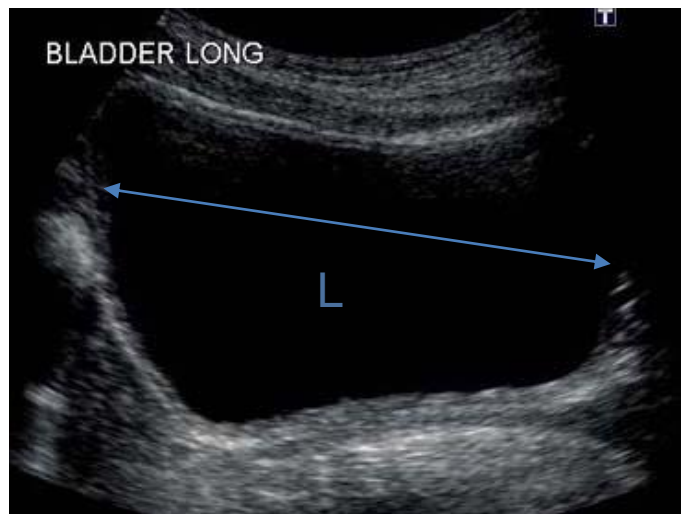
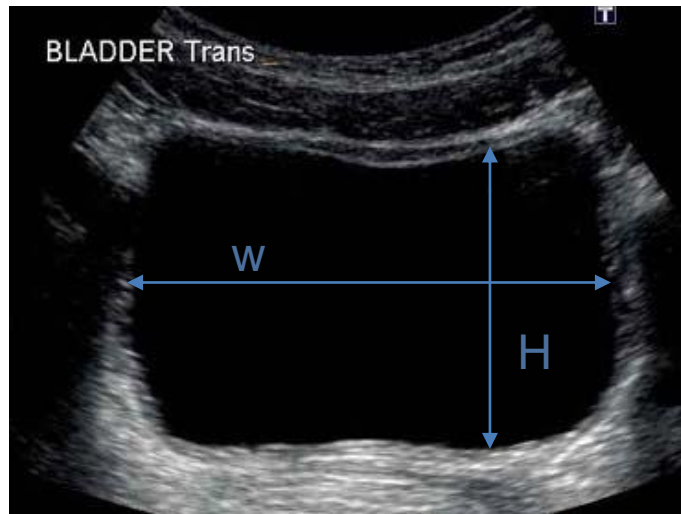
- If pathology is found use depth, gain, TGC & focal zone to improve image detail for the region of interest
- Document all pathology in two planes i.e. transverse and sagittal
- Annotate images with RIGHT/LEFT



Measurement of Bladder Volume

Two methods:

- Machine calculated- three distance volume
- Human calculated- prolate ellipsoid method:
Volume = length x width x height x .52



Recording Findings

All PoCUS examinations **must** be documented with images and clinician record of scan findings.

Record your examination on EMR under the AdHoc tool in the top left of the screen, select PoCUS and then BLADDER under the PICU heading.

The screenshot displays the EMR interface for recording PoCUS findings. The top left shows the 'AdHoc' tool selected. The 'PoCUS Form' is open, showing a list of examination options categorized by unit. The 'PAEDIATRIC INTENSIVE CARE' section is highlighted, and the 'BLADDER' option is selected.

PoCUS Form

Which Examination?

EMERGENCY DEPARTMENT	INTENSIVE CARE UNIT	RESPIRATORY UNIT
<input type="radio"/> eFAST/AAA	<input type="radio"/> PLEURAL/LUNG	<input type="radio"/> PLEURAL/LUNG
<input type="radio"/> RENAL/RUG	<input type="radio"/> FoCUS ECHO	<input type="radio"/> PLEURAL/LUNG
<input type="radio"/> LIMITED DVT	<input checked="" type="radio"/> PAEDIATRIC INTENSIVE CARE	<input type="radio"/> PLEURAL/LUNG
<input type="radio"/> BELS/HEART FAILURE	<input type="radio"/> BLADDER	<input type="radio"/> LIMITED ABDO
<input type="radio"/> PLEURAL/LUNG	<input type="radio"/> PLEURAL/LUNG	<input type="radio"/> LIMITED ABDO

PAEDIATRIC INTENSIVE CARE

☒ BLADDER

NEONATAL INTENSIVE CARE

☐ LIMITED CRANIAL

Recording Findings

PoCUS BLADDER

Examination Date and Time: 15/10/2020 1457 **Scan Supervised by:**

Clinical Reason for Performing Scan:

BLADDER

BLADDER

☐ Empty
☐ Urine present

Urine:

☐ Simple
☐ Complex

IDC:

☐ No
☐ Yes

BLADDER - Volume (cc):

mL

Other Pathology:

Image Quality:

☐ Good
☐ Suboptimal
☐ Non Diagnostic

Formal Imaging indicated:

☐ No
☐ Yes

Note: No clinical management decisions or interventional procedures should be based on PoCUS findings without engagement of a PoCUS accredited PICU Consultant and/or formal imaging confirmation

PoCUS Program Processes



Perform scan

[illegible]

Document scan (EMR)



PACS upload

[illegible]

Clinician eelogbook



Quality audit



Feedback