

The Royal College of
Emergency Medicine

Emergency Medicine Ultrasound

Core (level 1) Competency

This document outlines the expectations for Level 1 sign off for ultrasound in the KSS deanery.

Trainees are expected to have completed a suitable theory course or series of modules and received hands on instruction prior to beginning to complete this logbook of assessments.

Prior to attempting their triggered assessments in Ultrasound, trainees should have completed ten supervised learning events for each of assessment of the Abdominal Aorta, Echo in life support and Focused Assessment with Sonography in Trauma (FAST) and five for ultrasound assisted vascular access. For each of these assessments trainees should complete a reflection and receive feedback from their trainer.

Triggered assessments should be completed on the ePortfolio by the assessing trainers. Copies of these assessments are given for review.

Pathway for training in Point-of-Care Ultrasound PoCUS

Induction Phase

via Approved course *or* Modular programme

This is an important introduction to the applications (i.e. type of scan) and should include practical exposure

Knowledge – *learn the principles of PoCUS, including physics and governance*

Skills – *introduction to skills required*

Behaviour – *introduction to the application of PoCUS to patient care*



Experiential Phase

via Simulation *or* Supervised practice *or* Non-contributory practice

Knowledge – *consolidate knowledge learned in Induction Phase*

Skills – *develop skills through practice*

Behaviour – *learn how to apply PoCUS to clinical practice*



Competency Phase

via Local Assessment *or* OSCE *or* Approved Finishing School

Knowledge – *demonstrate knowledge learned in Induction Phase*

Skills – *demonstrate PoCUS*

Behaviour – *demonstrate how to apply PoCUS to clinical practice*



Final Sign-off Phase for CORE level

via Regional CEM Ultrasound Lead *or* deputy

Trainee information, theory training and log summary

Trainee's Name:	Year EMUS training started:	Trainer:
CT / HST / Non-training / Post CCT (circle)	School or Deanery:	Regional EMUS Co-ordinator:

Theoretical and hands-on training

To cover basic theory

- All 6 Enlightenme sessions completed (Indications, Physics, Image acquisition, FAST, Aortic assessment and Vascular access)

And/Or to cover basic practice

- CEM approved course, **OR** local modular training

Certified as complete by _____ (signed by above named Trainer)

Date completed _____

Logged Experience

Evidence provided of scans carried out. Follow up notes and reflective writing on 10 case studies.

Certified as complete by _____ (signed by above named Trainer)

Date completed _____



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
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Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Size
Transverse (upper)		
Transverse (middle)		
Transverse (lower)		
Aortic division		
Longitudinal		

Aortic Aneurysm present:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
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LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Positive
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

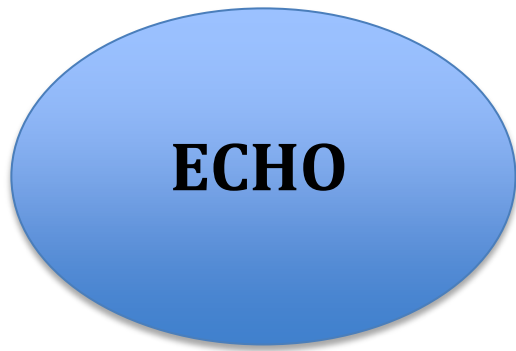
Date performed:

View	Visible	Size
RUQ		
LUQ		
Bladder		
Cardiac		
Pleura		

Positive scan:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

LV function:

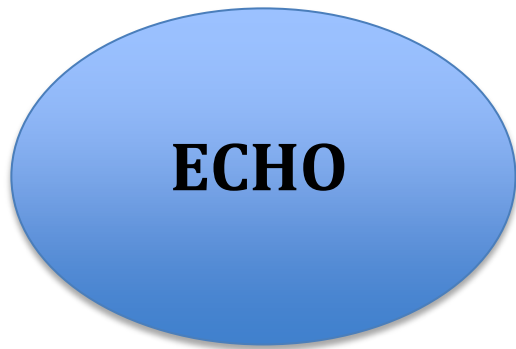
LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

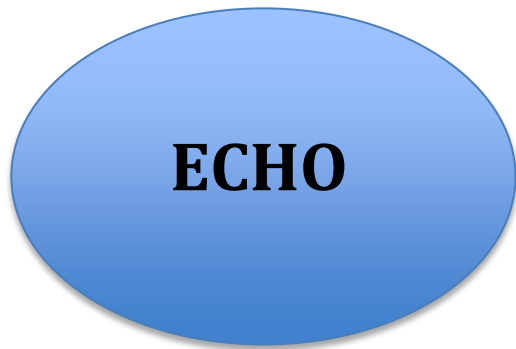
LV function:

LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

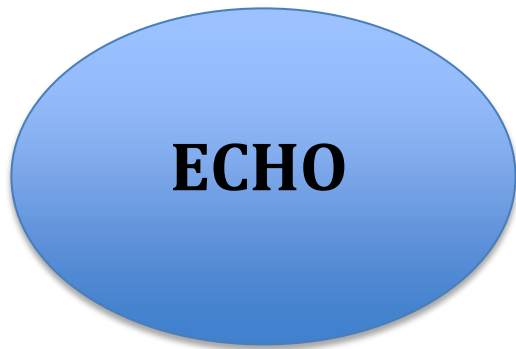
LV function:

LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



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Date performed:

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Parasternal long axis		
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IVC		Size Collapsible

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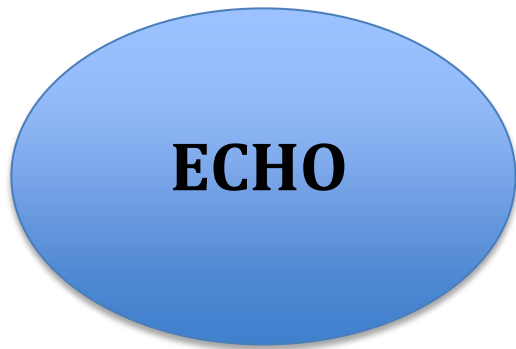
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RV size:

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Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

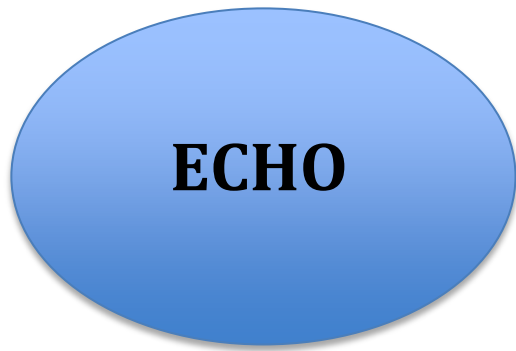
LV function:

LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

LV function:

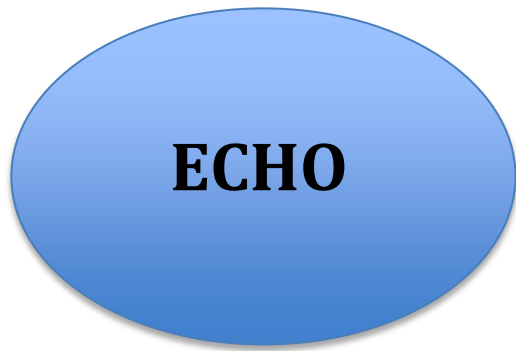
LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

LV function:

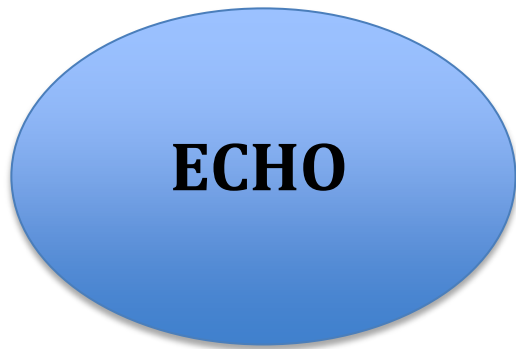
LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

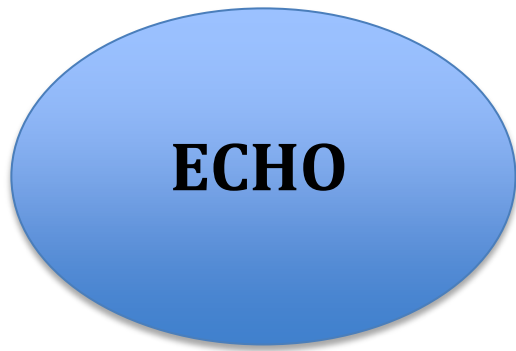
LV function:

LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

LV function:

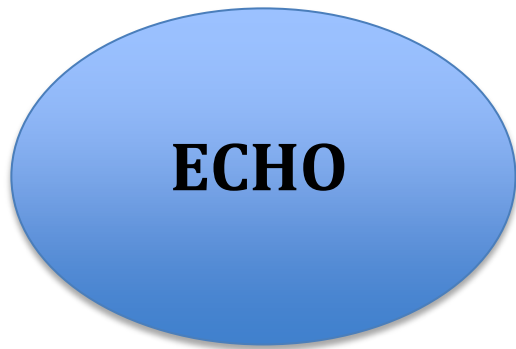
LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection

Trainer feedback



Patient details

Date performed:

View	Visible	Findings
Subxiphoid		
Parasternal long axis		
Parasternal short axis		
Apical		
IVC		Size Collapsible

Pericardial effusion/tamponade:

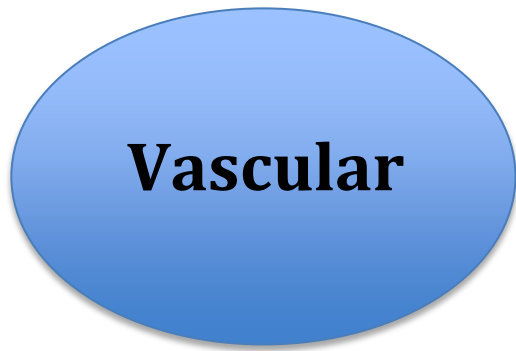
LV function:

LV wall motion abnormality present:

RV size:

Confirmed by further imaging:

Trainee reflection
Trainer feedback



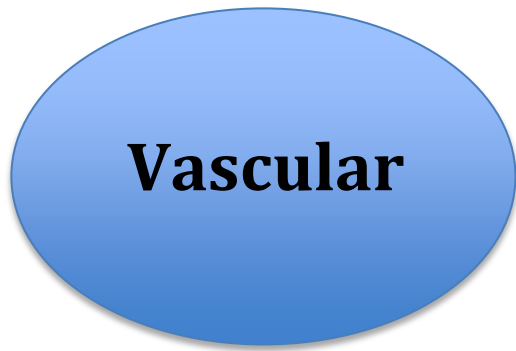
Patient details

Date performed:

Aseptic technique	
Image obtained	

Successful:

Trainee reflection
Trainer feedback



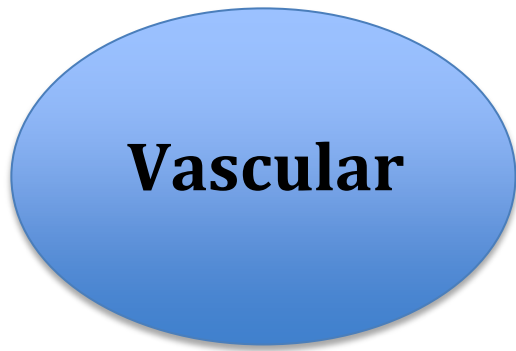
Patient details

Date performed:

Aseptic technique	
Image obtained	

Successful:

Trainee reflection
Trainer feedback



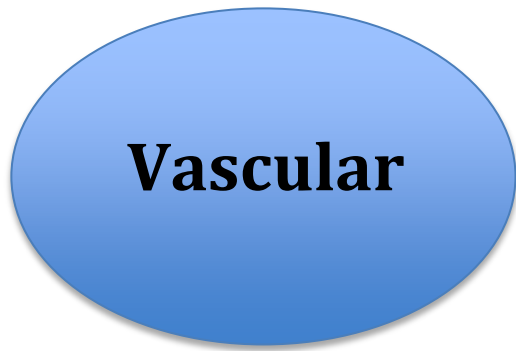
Patient details

Date performed:

Aseptic technique	
Image obtained	

Successful:

Trainee reflection
Trainer feedback



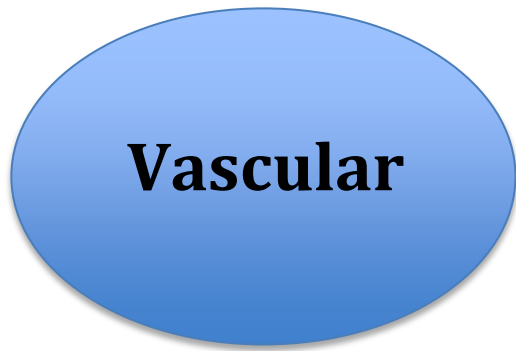
Patient details

Date performed:

Aseptic technique	
Image obtained	

Successful:

Trainee reflection
Trainer feedback



Patient details

Date performed:

Aseptic technique	
Image obtained	

Successful:

Trainee reflection
Trainer feedback

Section A -Triggered Assessment in Focused Assessment of the Aorta

Date

Location

Within each of the following three sections, the learner must:	Medical assessor's comments recorded during the assessment	Competent?
<u>1. Preparation for the scan</u> Greet the patient appropriately and identifies the patient with the notes		
Confirms that the indication for the procedure is within own competency		
Positions the patient correctly		
Demonstrates appropriate attitude and professional manner		
<u>2. The scan</u> Sets up the equipment acceptably <ul style="list-style-type: none"> ○ Patient details ○ Body marker insertion 		
Probe selection, handling and scanning technique		
Acquisition of the best possible image Identifies IVC and Aorta in LS and TS Identifies SMA Measures AP diameter of aorta accurately		
Timelines <ul style="list-style-type: none"> ○ Knows when to scan ○ Speed of scan 		
Saves/prints		
<u>3. Post scan</u> Informs the patient appropriately		
Makes a record of the findings		
Knows if a repeat scan would be useful		

Section B -Triggered Assessment in FAST

Date

Location

Within each of the following three sections, the learner must:	Medical assessor's comments recorded during the assessment	Competent?
<u>1. Preparation for the scan</u> Greet the patient appropriately and identify the patient with the notes		
Confirm that the indication for the procedure is within own competency		
Position the patient correctly		
Demonstrate appropriate attitude and professional manner		
<u>2. The scan</u> Set up the equipment acceptably <ul style="list-style-type: none"> ○ Patient details ○ Body marker insertion 		
Probe selection, handling and scanning technique		
Acquisition of the best possible image: Demonstrate Morison's pouch Demonstrate the spleno-renal interface Demonstrate potential fluid in the pelvis Demonstrate pericardial views Demonstrate the pleural space and can identify fluid		
Timelines <ul style="list-style-type: none"> ○ Knows when to scan ○ Speed of scan 		
Saves/prints		
<u>3. Post scan</u> Inform the patient appropriately		
Make a record of the findings		
Interpret and report findings appropriately		
Know if a repeat scan would be useful		

Section C -Triggered Assessment in Vascular Access

Date

Location

Within each of the following three sections, the learner must:	Medical assessor's comments recorded during the assessment	Competent?
<u>1. Preparation for the scan</u> Greet the patient appropriately and identifies the patient with the notes		
Confirms that the indication for the procedure is within own competency		
Positions the patient correctly		
Demonstrates appropriate attitude and professional manner		
<u>2. The scan</u> Sets up the equipment acceptably <ul style="list-style-type: none"> ○ Patient details ○ Body marker insertion 		
Probe selection, handling and scanning technique		
Acquisition of the best possible image Demonstrates the internal jugular vein Demonstrates a peripheral vein Indicates the technique to cannulate (may be ultrasound assisted or guided if peripheral)		
Timelines <ul style="list-style-type: none"> ○ Speed of scan 		
Saves/prints		
<u>3. Post scan</u> Informs the patient appropriately		
Makes a record of the findings		
Interprets and reports findings appropriately		
Indicates if a CXR is needed (ie in CV access)		

Section D - Echo in Life Support

Date

Location

Within each of the following three sections, the learner must:	Medical assessors' comments recorded during the assessment	Competent?
<u>1. Preparation for the scan</u> Greet the patient appropriately and identifies the patient with the notes		
Confirms that the indication for the procedure is within own competency		
Positions the patient correctly		
Demonstrates appropriate attitude and professional manner		
<u>2. The scan</u> Sets up the equipment acceptably <ul style="list-style-type: none"> ○ Patient details ○ Body marker insertion 		
Probe selection, handling and scanning technique		
Acquisition of the best possible image: Demonstrates subxiphoid view plus one other cardiac view (eg long axis parasternal) Identifies pericardial space and any fluid that is present. Identifies presence / absence of ventricular wall motion, globally and focal. Comments appropriately on right and left ventricular size and can decide if RV dilated. Identifies IVC in LS. Assesses IVC diameter and collapsibility.		
Timelines <ul style="list-style-type: none"> ○ Speed of scan 		
Saves/prints		
<u>3. Post scan</u> Informs the patient appropriately		
Makes a record of the findings		
Interprets and reports findings appropriately		
Indicates if a CXR is needed (ie in CV access)		

Summary

	(a) Competent to scan and interpret findings independently	(b) Needs Supervision. If scanning alone cannot rely on findings	(c) Not competent at this stage	Signed and dated
Assessment of the abdominal aorta				
FAST				
Vascular access				
Echo in Life Support				

Once (a) has been achieved in all four areas, final sign –off can occur. If not, advice from trainer:

FINAL SIGN-OFF

Trainee name in print _____

This doctor is certified as competent in Level 1 Emergency Medicine Ultrasound, as defined by the College of Emergency Medicine, having undergone theoretical and practical training and demonstrated competency in all required areas.

Signed by:

Regional Ultrasound Co-ordinator (print name/ sign) _____

Date _____ Further advice _____
