

Auckland Region ED Ultrasound Credentialing

Competence Assessment

ECHO Ultrasound

Candidate: _____

Assessor: _____

Date: _____

Assessment type: Formative (feedback & teaching given)
 Summative (prompts allowed, no teaching)

To pass the summative assessment, the candidate must pass all components listed

	Performed	Prompted	Fail
Prepare patient			
Informed consent			
Positioning			
Prepare environment			
Lights dimmed if possible			
Data entry			
Enter patient details			
Probe & pre-set selection			
Can change transducer			
Selects appropriate transducer			
Selects appropriate pre-set			
Image acquisition			
Optimisation (depth, gain)			
PARASTERNAL LONG AXIS			
<i>Technique</i> Aligns on long axis			
<i>Identifies:</i> Cardiac chambers			
Cardiac valves			
Aortic root			
Interventricular septum			
Pericardium			
Descending aorta			

PARASTERNAL SHORT AXIS

Technique: Aligns on short axis
Scans or uses papillary level

Performed Prompted Fail

Identifies: Aortic valve
Mitral valve
Left ventricle
Papillary muscles
Right ventricle
Interventricular septum

APICAL 4 CHAMBER

Technique: Appropriate image acquisition

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Identifies: Cardiac chambers
Valves (which is more apical?)
Interventricular septum
Moderator band* (if visible)

SUBCOSTAL VIEW

Technique: Optimises view

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Identifies: Liver
Pericardium
Cardiac chambers
Cardiac valves

INFERIOR VENA CAVA

Identifies: Right atrium
Inferior Vena Cava

ARTIFACTS

Identifies & explains common artefacts

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PATHOLOGY – Needs to be able to describe:

Assessment of LVEF

- Wall thickening/movement
- Fractional shortening (visual est. ok)
- Mitral valve movement (visual est. ok)
- Limitations/pitfalls
(accuracy/regional wall motion/MS)

Competent Prompted Fail

Hypovolaemia

- Hyperdynamic chambers
- IVC collapse

Raised RV pressure

- Relative LV:RV size
- Interventricular septum changes
- McConnell’s sign
- Limitations/pitfalls
(Doesn’t exclude PE/Acute vs Chronic/cardiac arrest)

Pericardial effusion

- Best views
- Differentiation from pleural effusion

Tamponade

- Diastolic collapse of RA>RV
- Distended IVC

Aortic root

- Measured in end diastole
- >4cm abnormal

Valve dysfunction

- Describes grossly abnormal valve Fn
- Regurgitation
- Stenosis
- Limitations – poor sensitivity

Record keeping

- Labels and stores appropriate images
- Completes worksheet
- Documents findings in patient notes
 - Focused/limited scan
 - Adequacy of views
 - Findings
 - Interpretation in clinical context

Maintenance

- Cleans/disinfects ultrasound probe
- Stores machine and probes correctly

For Formative Assessment Only:

Positive feedback: _____

Agreed actions for development: _____

Examiner Name: _____ Candidate Name: _____

Examiner Signature: _____ Candidate Signature: _____

Date: _____

ECHO Credentialing Requirements

- Complete basic ECHO workshop including physics component
- 5 Formative scans
- 25 accurate ECHO scans logged and submitted (5 positive scans, at least 5 must be clinically indicated, 50% can be done in non-clinical environment)
- 25 reviewed cases with ED sonographer which include pathology
- 1 Summative assessment (once formative and logbook completed)

Ongoing Maintenance Requirements (over a 2 year cycle)

- 3 hours of ultrasound training per year
- 25 ECHO scans