

1. Introduction and Who Guideline applies to

This guideline applies to Cardiac Physiologists performing transthoracic echo's to BSE standard

2. Guideline Standards and Procedures

2.1 Procedure For Performing An Adult Echo Using The Digital System

- Plug in the Echo machine power and Network cables. Switch on.
- The patient's I.D. must be checked as per trust policy i.e. date of birth, address.
- The member of staff will introduce themselves to the patient.
- A full explanation of the procedure will be given in a clear and reassuring manner, thereby gaining verbal consent.
- The patients will be asked to undress to the waist and to lie upright on the couch on their left hand side, a gown should be offered to all female patients.
- Patient's privacy, religious/cultural beliefs will be respected at all times.
- Ensure the patient is comfortable.
- Ensure you are comfortable by adjusting the height of the couch/your position or chair
- Patients I.D. must be entered onto the echo machine – press patient I.D. enter the unit number including the prefix letter, i.e., S and the patient name, DOB and Gender. Press patient ID to enter or create patient and start the scan.
- A good ECG signal must be obtained for every echo. Failure to do so is poor practice. The QRS complex is required for triggering during an image acquisition. In certain instances, e.g., AF you may need at least 2 beats. This can be altered on echo individual echomachine.
- An echo will be performed according to the protocol. (see Appendix A)
- If performed by a member of staff who is not BSE accredited, the images must be checked by a qualified BSE member of staff prior to ending the study.
- At the end of the study press "end study", if the network cable is connected, the files will be transferred and stored on the digital system.
- Detach the ECG and wipe off gel off the patient or give couch roll/tissue for the patient to remove gel.
- The patient can dress.
- Ensure ECG leads and probe are cleaned with Distel wipes and stowed safely between each patient.
- Explain that the results of the echo go back to their referring clinician who will discuss them with the patient. At no time discuss the results of the test.
- Show the patient the way out.
- Report the echo according to the British Society of Echocardiography (BSE) guidelines

2.2 Procedure for Reporting An Echo using the Xcelerasystem

- Select the correct UHL site at the top of the screen
- Fill in the relevant Information & Comments sections – history, class, location, reason for study, referrer, performer & reviewer.
- Click on the first image and perform appropriate measurements.
- Right click to perform measurements, Doppler and Mmode.
- For other measurements select the measure box on the top right of the screen and click on the appropriate measurement e.g. (AI p1/2t) (EF MOD-Sp4)
- Select comments from drop downs or type a description in each of the relevant interpret boxes.
- Formulate a summary in the comments boxes
- Finalise the report.
- Highlight the report. Copy and paste to the CRIS system

2.3 Protocol for Reporting an Echocardiogram

- Reports may be finalised by a BSE accredited member of staff only. Provisional reports may be written by suitably trained staff but checked by accredited staff.
- All reports to be written as per the latest BSE minimum dataset with the BSE reference values used. For complex disease states, further views and measurements may need to be performed. Protocols and guidelines can be found at www.bsecho.org.
- The summary of the report should be reflective of the request details. Trivial findings need not be repeated in the summary. The summary must be written in such a way that the reader will understand it.

3. Education and Training

Weekly echo education/case review meetings led by Clinical Echo lead or other cardiac imaging specialist.
All BSE staff allocated study time monthly to enable BSE re-accreditation – currently 20 points + >500 scans per year every 5 years. Attendance at BSE events also mandatory during this time period.

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Auditing of reports	To be performed by BSE accredited personnel only.	Pooja Pattani	Monthly	Any discrepancies will be reported via Datix if there is patient harm

5. Supporting References (maximum of 3)

British Society of Echocardiography minimum dataset;
<https://echo.biomedcentral.com/articles/10.1530/ERP-19-0050>

6. Key Words

None

CONTACT AND REVIEW DETAILS	
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APPENDIX A

ECHO PROTOCOL (IN BRIEF)

Parasternal Long Axis View

2D – To assess

- AV – aortic root,
- MV,
- LV,
- TV and
- PV.

M-Mode – To assess

- AV LAB and, aortic root,
- MV leaflets
- LV (if possible)

Doppler – To assess

- AV,
- MV,
- LVOT,
- TV,
- VSD, and
- PV

Parasternal Short Axis View

2D – To assess:

- LV at papillary muscle level
- LV at MV level
- AV level

M-Mode – *as parasternal long axis if not already obtained.*

Doppler -

- PV,
- AV,
- TV,
- Atrial septum
- Ventricular septum
- MV

Apical 4/5 And 2 Chamber Views

2D – To assess

- LV,
- MV,
- AV,
- TV,
- RV,
- LA and

- RA.

M-Mode – MAPSE/TAPSE

Doppler – To assess

- MV,
- TV,
- AV,
- Atrial septum and
- Ventricular septum

Subcostal

2D – To assess

- IVC
- Atrial septum
- Ventricular septum
- RVOT if necessary
- Right-sided haemodynamics.

Aortic Arch

Will be performed in the following circumstances:

- Young person/innocent murmur
- Significant AR
- LVH with no apparent cause
- Dilated ascending aorta

Continuous Wave Doppler Using 1.9 Mhz Pencil Probe

To assess-

- MV,
- AV,
- TV,
- ASD,
- VSD,
- Ascending and descending Aorta.

NON STANDARD VIEWS MAY BE OBTAINED IN ORDER TO AID DIAGNOSIS