SDEC/AEC Echo Reference Guide

Echocardiography is a limited and labour-intensive resource. Please carefully consider whether the investigation is truly required. If the patient has had an echo within the last 12 months, please discuss with a consultant prior to requesting.

In general, please ensure the following aspects of the request form are filled out correctly:

1. **Examination priority**: Urgent = within 1 week, Soon = within 6 weeks, Routine = within 3 months.
    - N.B All urgent requests should have a follow up in SDEC scheduled
2. Please select **inpatient** scan for **urgent** echos and **outpatient** scan for **soon/routine** echos.
3. Please record on the request form that the patient is from **SDEC** and detail their **follow-up plan** (whether they are returning to SDEC + the date of review or if being followed up in virtual clinic).
4. If a cardiology consultant or SpR has advised requesting the echo, please ensure this is mentioned on the request.
5. Please be explicit how the patient's management would be altered with the results of the echo. This allows the request to be vetted more easily.
6. Please also **CONSULT THE BELOW SUMMARY TABLE** (adapted from the British Society of Echocardiography Clinical Indications and Triage of Echocardiography Outpatient Requests Guidelines) to ensure the request indication, timescale and follow-up plan are clear.

URGENT echo requests that **REQUIRE SDEC FOLLOW-UP AND REVIEW**:

Indication	Additional Notes	Optimal timescale
Pericarditis with clinical suspicion of tamponade	Needs admission Focused scan	24hrs as IP
Ambulatory investigation of pyrexia/infection of unknown origin where IE is suspected (e.g. presence of a murmur, known valve disease, embolic phenomena or typical organisms on BCs)	Please ensure heart sounds carefully documented. Ensure 3 sets of blood cultures sent. Patients with a high clinical suspicion or high-risk features* should be managed as an IP (please discuss with cardiology if unsure)	Within 24 – 48 hours
Assessment for structural heart disease and function in the context of VT or high degree heart block	Please ensure CXR done Manage as IP	Within 24-48hrs
Malignant hypertension (>180/120mmHg) with clinical concern of acute left ventricular dysfunction.	Please ensure CXR done Manage as IP	Within 48hrs
Assessment of LV function in the context of suspected ACS	Please only as an IP or early OP	Within 72hrs
Pericarditis with suspicion of pericardial effusion but patient haemodynamically stable	Ensure CXR done Focused scan	Within 72hrs
Myopericarditis but considered suitable for ambulatory pathway	Serial troponins < 50 Will need regular review in SDEC to ensure treatment response. Admit if troponins rising or Sx worsening.	Within 72hrs
Suspected heart failure needing ambulatory IV diuretics/with NYHA class III or IV heart failure symptoms** / BNP >2000	Ensure CXR and BNP have been done prior to request Referral to heart failure team after echo	1 week
Murmur in the presence of NYHA class III or IV heart failure symptoms** or syncope	Please ensure CXR done Please ensure heart sounds carefully documented	1 week
Suspected cardiomyopathy of pregnancy	Please ensure BNP is done prior to echo request	1 week

NON-URGENT echo requests:

Indication	Additional Notes	Optimal timescale
Clinical signs & symptoms of HF with elevated NT-proBNP ≥400ng/l but <2000ng/l Unexplained shortness of breath with abnormal ECG and/or radiographic signs of HF and elevated NT-proBNP (>400ng/l)	Up to date BNP must be done prior to echo request If BNP <400ng/l, echo is not indicated and alternative cause for symptoms should be considered If in AF and rate not controlled, then needs targeted rate control therapy + reconsider need for echo when rate <100bpm	6 weeks
Pre-existing heart failure/cardiomyopathy	Repeat echo where the result may change management or following procedures to improve cardiac function (e.g. guideline directed medical therapy, device therapy, cardioversion, or coronary revascularisation) Repeat echo where there has been a change in clinical status (e.g. worsening NYHA class)	6 weeks
Hypertension and suspected left ventricular hypertrophy		6 weeks
Pericarditis without suspicion of effusion	Ensure CXR done Could be a focused scan **Not required if no effusion on CT scan**	6 weeks
Suspected valvular disease without high-risk clinical features***	Please ensure CXR done Please ensure heart sounds carefully documented	6 weeks
Assessment for structural heart disease in the context of suspected SVT / AF / Flutter/ high ventricular ectopic burden >10%	Please ensure CXR done Only request if this will change the patient's management such as referral for DCCV or ablation	6 weeks
Suspicion of aortopathy in a patient with susceptible genetic condition (e.g Marfan's)		6 weeks
Pulmonary disease (e.g. COPD/ OSA/fibrosis) with suspected right ventricular failure	Please ensure a BNP is done	6 weeks

First presentation of symptomatic AF (in the absence of significant frailty) with suspicion of underlying structural cardiac abnormalities	**Asymptomatic newly identified AF does not require an echo.**	6 weeks
Incidental radiological finding prompting suspicion of underlying structural cardiac abnormalities		3 months
Abnormal ECG when ACS is not suspected prompting suspicion of underlying structural cardiac abnormalities		3 months
Following large PE when clinical concern for right ventricular impairment and/or presence of developing pulmonary hypertension	Not an indication for OP echo in acute setting Ensure they have been referred to PE clinic (through resp or acute medicine) for consideration of echo in 3 months to assess for pulmonary hypertension	N/A
Transient loss of consciousness with normal ECG and clinical examination	Please first request an extended period of OP cardiac monitoring and once complete, review if an echo is indicated. If it is felt an echo is required at that point then the this would be routine within 3 months	N/A

***** High risk features of infective endocarditis: prosthetic/metallic valve, Hx of IVDU, pre-existing valve disease, evidence of heart failure, HACEK organism, previous IE, poor response to antibiotic therapy

** NYHA classification for heart failure:

NYHA Class	Level of Clinical Impairment
I	No limitation of physical activity. Ordinary physical activity does not cause undue breathlessness, fatigue, or palpitations.
II	Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in undue breathlessness, fatigue, or palpitations.
III	Marked limitation of physical activity. Comfortable at rest, but less than ordinary physical activity results in undue breathlessness, fatigue, or palpitations.
IV	Unable to carry on any physical activity without discomfort. Symptoms at rest can be present. If any physical activity is undertaken, discomfort is increased.

*** High risk clinical features in the context of suspected valvular disease include: syncope, recurring cardiac chest pain, clinical evidence of heart failure.