

## Appendix 1. Echocardiographic Screening Protocol

Pathologies identified requiring further evaluation or treatment will be referred to the MTRH CDU.

1. **Parasternal long axis**
  - a. 2D showing Left Atrium (LA), Left Ventricle (LV), Mitral Valve (MV), Aortic Valve (AoV), Right Ventricle (RV) and pericardium
  - b. Color Doppler (CD) of MV
  - c. CD of AoV
2. **Parasternal short axis**
  - a. 2D at Papillary muscle(s) level
  - b. 2D at MV level
  - c. 2D at Great vessels level
  - d. CD of Right ventricular outflow tract/Pulmonary valve(PV)
  - e. CD of Interatrial septum
  - f. 2 CD sweeps of Ventricular septum
3. **Apical 4 chamber view**
  - a. 2D showing LV, LA, RV, RA
  - b. CD of TV
  - c. CD of MV
4. **Apical 5 chamber view**
  - a. CD of AoV
5. **Subcostal view**
  - a. Inferior Vena Cava size during respiratory cycle
6. **Suprasternal Notch**
  - a. 2D long axis of Aortic arch
  - b. CD of descending part of Aortic arch

Additional images may be acquired to further assess suspected pathology.

### RHD case-definition<sup>1</sup>

Echocardiographic criteria for definite RHD (at least one of A, B, C, or D):

- A) Pathological MR and at least two morphological features of RHD of the MV
- B) MS mean gradient  $\geq 4$  mmHg
- C) Pathological AR and at least two morphological features of RHD of the AV
- D) Pathological AR and at least two morphological features of RHD of the MV

Mitral valve morphological features of RHD:

- Anterior mitral valve leaflet thickening  $\geq 3$  mm
- Chordal thickening
- Restricted leaflet motion
- Excessive leaflet tip motion during systole

Aortic valve morphological features of RHD:

- Irregular or focal thickening
- Coaptation defect
- Restricted leaflet motion
- Prolapse

<sup>1</sup>Adapted from Reményi et al. World Heart Federation criteria for echocardiographic diagnosis of rheumatic heart disease—an evidence-based guideline. Nat. Rev. Cardiol. 2012; 9, 297–309