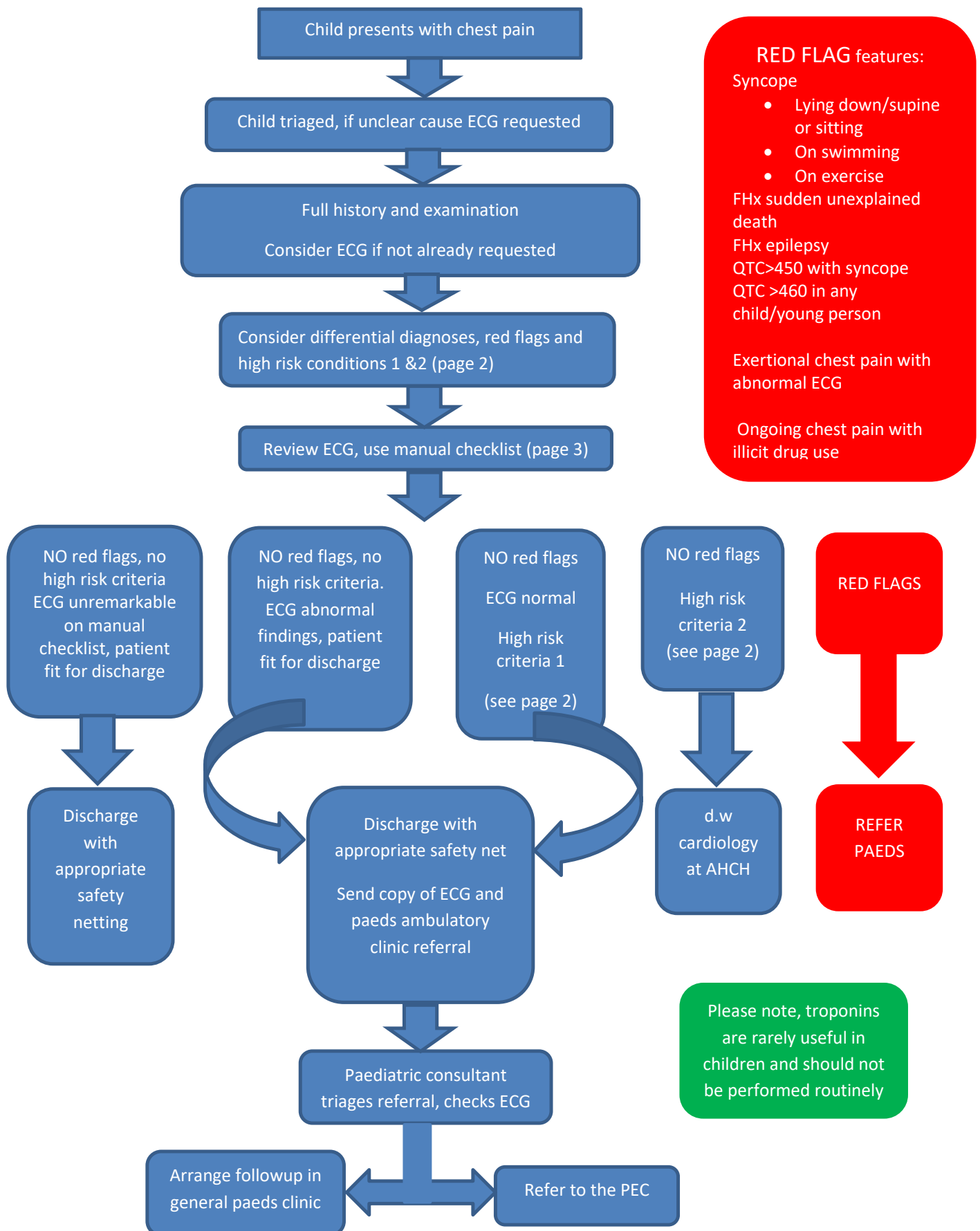


## Paediatric Emergency Department: Chest pain guidance



**High risk 1: patient requiring paediatric referral and review by PEC:**

Signs and symptoms	Reasons for concern
Chest pain with exercise	Consider left heart obstruction or myocardial ischaemia
Radiation to jaw or left arm	Consider coronary ischaemia
Radiation to left shoulder tip	Consider pericarditis
Associated with palpitations	Consider pathological arrhythmia
Associated with syncope	Consider left heart obstruction or arrhythmia
Associated with murmur	Consider structural heart disease
Family history of cardiomyopathy or conduction disorders	Risk factor for sudden death

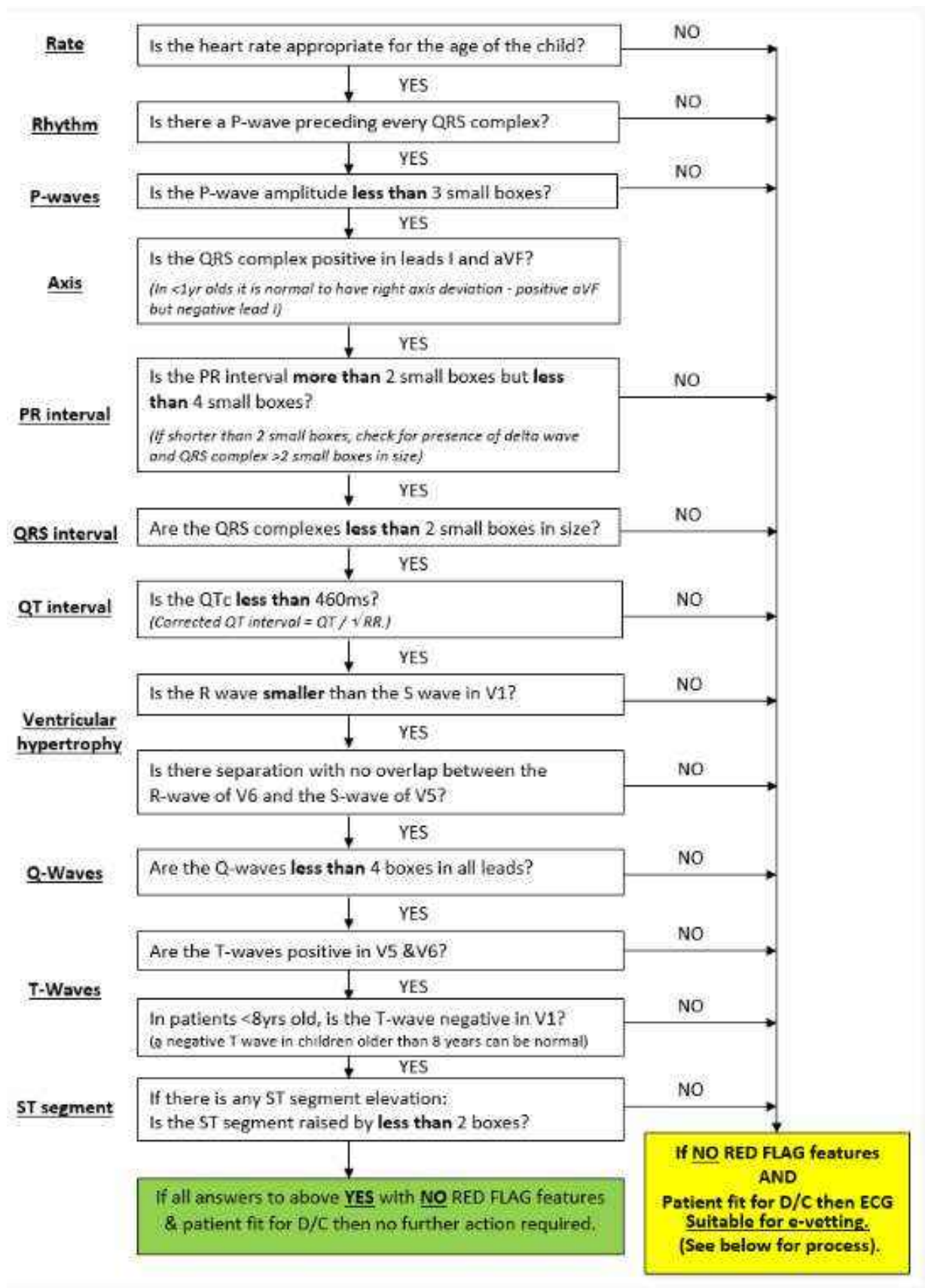
**High risk 2: patients requiring early discussion with AHCH cardiology team**

Chest pain associated with:	Reasons for concern:
Post cardiac surgery <2 weeks	Pericarditis/post pericardotomy syndrome Pericardial or pleural effusion Repair site complications Infection/endocarditis pneumothorax
Connective tissue disorder eg Marfans	Aortic dissection Mitral valve prolapse
Known Kawasaki patients with known coronary pathology	Coronary artery thrombus Coronary artery dissection
Heart transplant	Discuss with heart transplant team

**Differential diagnoses to consider (this list is not exhaustive):**

Soft tissue injury/ fracture	Trauma
Pneumothorax	Trauma Previous spontaneous pneumothorax Underlying lung disease Young person tall and thin
Costochondritis	Recent viral illness, localised tenderness over costal cartilage
Pleurisy	Recent/concurrent viral URTI/LRTI symptoms
Asthma	Known asthma or viral induced wheeze, concurrent exacerbation
Pneumonia/pleural effusion/empyema	Unwell child with symptoms consistent with infection, crackles may be present on auscultation
Pulmonary Embolism	FHx VTE/coagulation disorder Pleuritic chest pain, no other cause apparent
GORD/constipation	History of reflux, bad taste in mouth, worse lying flat, nausea History of constipation
Pericarditis	Recent viral illness, pain worse on deep inspiration or lying flat
Herpes zoster	Associated with rash
Sickle cell	Known sickle cell or high risk patient
Psychological	Hyperventilation, feelings of anxiety/stress/depression

## Paediatric ECG manual checklist



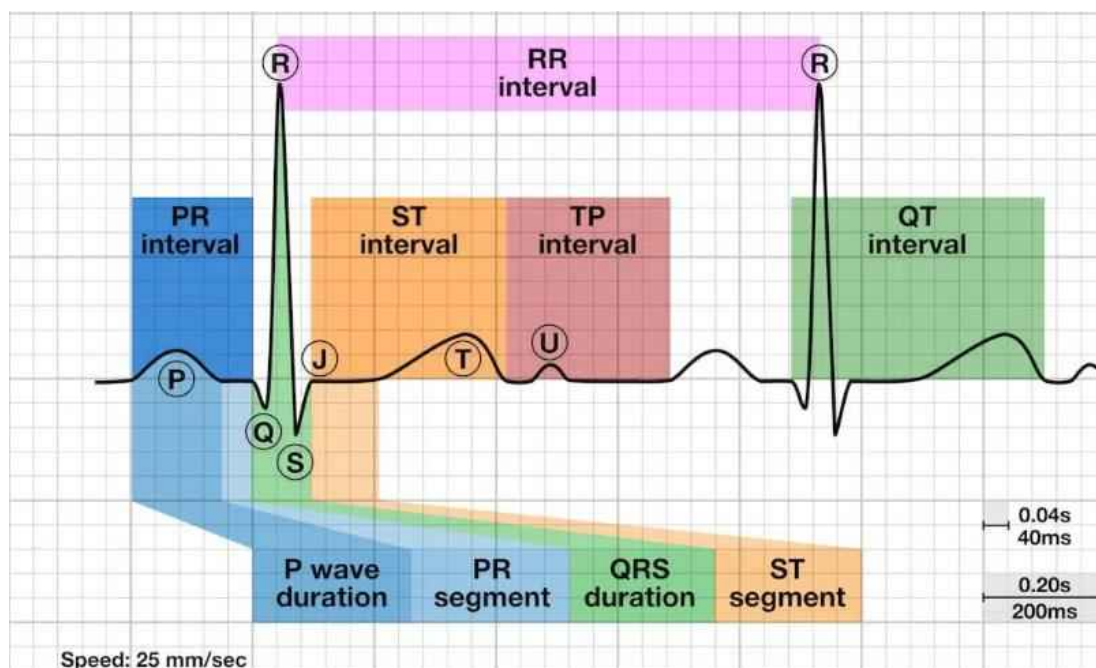
## ECG vetting process

Complete, paediatric ambulatory referral

Send copy of ECG with ambulatory referral to paediatric secretaries

ECG and notes will be reviewed by paediatric Consultant and appropriate follow up arranged

## Calculating the QTc



**QT interval varies with heart rate:**

[Bazett formula](#) is used to correct the QT for HR:

- $QTc = QT \div \sqrt{(R-R \text{ interval})}$

QT highlighted in green above

Use the preceding R-R interval, highlighted above in purple

REF:

[Glasgow Emergency Paediatric ECG Guideline \(GEPEG\) \(scot.nhs.uk\)](#)

[Clinical Guidelines and Useful information - Northwest, North Wales, Isle of Man Congenital Heart Network \(northwestchdnetwork.nhs.uk\)](#)

[Paediatric ECG: Stepwise approach • LITFL • ECG Library Diagnosis](#)