PECSIG ADVICE FOR PECs in LEVEL-3 PAEDIATRIC CARDIOLOGY SERVICES (DGH) DURING COVID-19 PANDEMIC

This guidance has been formulated by the executive committee of PECSIG and aims to address concerns expressed by members related to the current unprecedented Covid19 pandemic. The document has been approved by both BCCA and Congenital Heart Disease CRG. We recommend following additional frequently updated guidance issued by the Public Health England and the BCCA Guidance. Individual Trusts have also put in place emergency packages to deal with the current situation. Lastly, it is of vital importance to work in close liaison with the Level 1 cardiology unit in the network, and to exercise a low threshold for contacting the Level 1 centre for advice where required.

These measures are only temporary with the expectation that normal services will resume within next 3 to 6 months. They aim is to help guide decision-making as COVID-19 circumstances have forced the hospitals and Trusts to reduce PECs services.

General suggestions:

We need to practice and encourage colleagues as well as patients and their families to follow strictly the government guidance on social isolation and patients to come for face to face consultation only if instructed by the hospital to do so.

- As far as possible, referrals should be dealt with by telephonic or video consultation (telehealth).
- Direct face to face consultation should be reserved only for a small group of urgent cases needing assessment in person and it should involve a detailed history and a physical examination.
- All non-urgent direct face to face consultations should be deferred unless deemed necessary by the clinician, even when requested by the family.

Echocardiographic assessments need to be limited only to those situations where it is critical to perform the procedure for immediate management decisions to be taken that may affect the outcome.

We may have to face with compassion and explanation the expectations from our colleagues and families related to echocardiograms, which can be offered at a later date in situations that do not warrant an immediate heart scan on the day (in 3-6 months as per the indication). It is worth remembering that most of the heart scans that we perform do not reveal any significant cardiac pathology and serve more for reassurance.

Majority of Trusts have already cancelled all routine outpatient clinics and made alternate arrangements to triage patients on the above lines.

Triage Guidance:

As PECs we are in charge of triaging all existing clinic appointments and incoming new referrals. An initial telephonic consultation may facilitate triaging patients into three groups, but this will vary with the Trust policy in place from time to time.

Please review the up to date guidance from the BCCA for at risk groups to minimise patient contact:
https://www.bcca-uk.org/pages/news_box.asp?NewsID=19495710

Reviewing the referral and / or case notes patients can be triaged into 3 categories of consultations: Face to Face (F2F), delay consultation and telephone consultation. F2F consultation should be offered only for urgent case (see below).

When triage is done via telephone discussion with parents, it can be possible to triage patients into 3 categories (essential to take a good history)

- Urgent – Need to be seen within a few days or as soon as possible depending upon PEC availability and logistics to arrange a face to face review. Note: In some trusts it will be difficult to bring in urgent cases for assessment while in other situations PEC may be deployed to other responsibilities. This face to face session may just involve a detailed history and physical examination. Echocardiogram reserved for situations when you suspect critical heart disease.

- Priority – To be seen as a priority when routine clinics start (3-6).

- Defer to routine clinic in 6 months

Referral to level 1 cardiac centres: Once triaged, all urgent cases should be discussed with level 1 cardiac centres within the local networks. Similarly, when PEC is not available locally, due to sickness or re-deployment for other responsibilities, urgent cases should be discussed with level 1 cardiac centres by the acute paediatrician or neonatologist.

Specific suggestions:

A) High risk patients awaiting cardiac surgery and single ventricular physiology – may consider making a list of these high-risk patients and agree in an individualised plan with level 1 centre paediatric cardiologists. Discuss with level 1 centres, can they be regularly monitored by the cardiac nurse specialists from level 1 centres and when they need seeing face to face.

B) Patients in joint clinics – discuss with your visiting paediatric cardiologist to agree on arrangements within the operation delivery network; clearly establish who will do telephone consultation and who will see patients face to face patients if required

C) Heart Murmur

Murmur detected on first day baby check* or detected by GP on 6 to 8 week check or infant < 6 months.

Symptomatic** – arrange urgent review (clinical assessment with or without echocardiography). Pre- and post-ductal oxygen saturation (Pulse oximetry screening) should be performed where facilities are available.
Asymptomatic – see as priority when clinics restart.

Murmur in a child of > 6 months old

Most of these children will have either innocent heart murmur or an insignificant CHD. Significant CHD usually presents before this age.

Symptomatic** – arrange urgent review (clinical assessment with or without echocardiography)
Asymptomatic – Clinic in 6 months.

**All patients noted to have a heart murmur and referred for PEC consultation should have a detailed assessment (including detailed history, examination and pre-& post-ductal*

oxygen saturation measurement) by a senior paediatrician or neonatologist to establish urgency:
- If murmur considered pathological by consultant paediatrician / neonatologist, they should discuss with PEC for considering performing echocardiography before discharge if feasible.
- If they suspect it to be a critical CHD then infant should be assessed urgently by the PEC and when PEC not available case should be urgently discussed with level 1 paediatric cardiology team in the network.

***symptoms and signs of heart failure or cyanosis, growth and feeding on telephone consultation*

D) Chest Pain
Remember - Cardiac cause of chest pain in only 0 to 1% cases.

Red flags in children with chest pain
Post cardiac surgery < 2 weeks
Kawasaki with previously known coronary pathology
First degree relative with cardiomyopathy or conduction disorder
Associated with exercise
Nature of the chest pain or radiation to jaw, left arm or shoulder tip.
Associated with palpitations or syncope

If red flag – arrange urgent review (clinical assessment with or without echocardiography)

No red flag – Clinic in 6 months.

E) Palpitations

Red flags in patients in palpitations
ECG showing worrying arrhythmia – WPW, prolonged QT, Brugada, Frequent VE, second or third degree heart block etc.
Associated with syncope or pre-syncope or significant pathological sounding chest pain
Family history of sudden cardiac death or inheritable cardiac conditions.
Onset during exercise
Known cardiac disease
History consistent with paroxysmal SVT.

If red flag – arrange urgent review (clinical assessment with or without echocardiography)
No red flag – Clinic in 6 months.

F) Syncope: Whilst the majority of children with syncope are benign, and the diagnosis can be made from a detailed history, a minority of the cases need to be examined and investigated.

Red flags in patients with syncope
- Syncope in response to loud noise, fright or emotional stress
- Syncope during exercise
- Syncope when supine or during sleep
- Syncope in a child with strong history of sudden death, cardiomyopathy or significant arrhythmias e.g long QT, or Brugada

If red flag – arrange urgent review (clinical assessment with or without echocardiography)
No red flag – Clinic in 6 months.

G) First degree relative with significant CHD and antenatal echocardiogram not done (referral for screening echocardiography and assessment)

If first day baby check including pulse oximetry is normal these will be at low risk – defer for 6 months.

H) First degree relative with cardiomyopathy (referral for screening echocardiography, ECG and assessment)

Symptomatic – arrange urgent review (clinical assessment with or without echocardiography)
Asymptomatic – Clinic in 6 months.

I) Confirmed or suspected Kawasaki

Only confirmed or highly suspected cases of Kawasaki disease, those treated with IVIG, should be seen as urgent.

J) Child with confirmed and suspected syndrome

Symptomatic* – arrange urgent review (clinical assessment with or without echocardiography)
Asymptomatic – Clinic in 6 months except for Trisomy 21 and 22q deletion syndromes**

**symptoms and signs of heart failure or cyanosis on telephone consultation*

*** Infants with new diagnosis of Trisomy 21 and 22q deletion syndromes should be prioritised to be seen soon (as soon as possible)*

Investigations

If having to do ECG, ECHO for a confirmed or suspected COVID 19 patient take advice from your infection control team.

Exercise tolerance testing (ETT) and 24 hour ambulatory ECG monitoring may be deferred for 3 to 6 months.

Drafted by Dr S Kapoor, Dr Yogen Singh and Dr P Venugopalan; Reviewed and endorsed by PECSIG Executive Committee members, BCCA and CRG