Barts Health NHS
NHS Trust

Pan London Emergency Cardiac Surgery SOP (PLECS) COVID-19

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Purpose of this Document:

The purpose of this document is to provide a draft operation pathway for a Pan London Emergency Cardiac surgery service during the COVID-19 outbreak for feedback from participating centres.

1. Background.

Covid 19 has been declared a pandemic by the World Health Organisation and is having a major and increasing impact on the UK and London in particular.

This initiative is part of an approved NHSE response to the level 4 national emergency declared on Jan 30th 2020.

As London's Intensive care bed capacity is modified to allow for optimal treatment of COVID-19 patients with associated respiratory complications, the ability to provide cardiac surgery on all sites usually providing cardiac surgery will be reduced or curtailed.

NHSE and the cardiac surgery leads in London have proposed a 2 unit delivery model. The 2 delivery sites chosen are high volume cardiac surgery centres which do not have on site A & E services, namely Barts Heart Centre (Barts Health NHS Trust) and Harefield (Royal Brompton and Harefield NHS Foundation Trust) This is in the anticipation that they will be able to provide COVID-19 free areas to support cardiac surgery.

2. Aim of this document

This document aims to provide clear arrangements and guidance on how the Pan London Emergency Cardiac Surgery (PLECS) service is structured and its operation pathways.

3. Scope

This document will provide a pathway to encompass a pan London approach to providing emergency cardiac surgery services in 2 designated "delivery" cardiac surgery centres rather than the usual 7 centres.
It is not part of this SOP to consider details as to how each delivery site will provide this support but both sites are developing SOPs to that effect.

4. Terminology

For the purpose of this document:
PLECS – Pan London Emergency Cardiac Surgery
COVID-19: novel Coronavirus
SPOC: Single Point of Contact

5. Current cardiac surgery centres and current cardiac surgery provision status

NHS hospitals:
Barts Heart Centre
Brompton
Harefield
Imperial
Kings
St Georges
St Thomas

Independent sector hospitals:
London Bridge

Harley Street Clinic
Wellington
London Independent
St Anthony's Cheam

Cardiac Surgery current services

Due to the impact of COVID-19, as of a pan London conference call on 18/3/20, all units had stopped elective cardiac surgery, and were only operating on interhospital transfers for urgent surgery or emergency surgery. Some units had triaged "urgent from home" patients from the waiting list with life threatening anatomy to be offered surgery if capacity allowed.

From the details discussed in the conference call, it was estimated the capacity to provide urgent or emergency cardiac surgery would stop in all non-destination centres either within a few days (some units) or by the end of the next week (27th March).

There was complete agreement that the PLECS pathway was logical and sensible, and should be enabled to go live as soon as possible should a non-destination hospital receive a referral that they are unable to operate on. Until this PLECS pathway is validated, such referrals will go through the on call surgeon via switchboard at either Barts or Harefield depending on geographical location.

Once the PLECS SOP is validated, all referrals will follow the PLECS protocol and go via the designated Hub as detailed below.

6. Case definitions:

- Level 1 - Elective – patients who have indications for routine cardiac surgery who would normally be added to an elective waiting list. Such patients under the PLECS SOP would be treated by local centres as normal and be placed on waiting lists at the local centre, with the knowledge these waiting lists could be longer than usual. Level 1 patients will not receive surgery within the PLECS pathway.
- Level 2 - Urgent from home – such patients are on the existing waiting lists or in the process of referral – but have critical / life threatening anatomy with worsening symptoms or the need for urgent prognostic intervention. Such patients will be triaged by the local centres and if appropriate passed through to the hub command centre for consideration of surgical intervention should capacity allow.
- Level 3 - Urgent interhospital transfers – such patients are in hospital with prognostic / critical anatomy or physiology or with unstable symptoms. They require cardiac surgery within this hospital admission (but not on the same day), and no other options for treatment are possible. Such patients will be triaged by the local centres and passed through to the command centre at Barts
- Level 4 - Emergency (most commonly, but not exclusively, acute aortic dissections) - these patients have life threatening emergency cardiac conditions and require surgery within hours. Such patients can be referred either directly into one of the 2 delivery centres via the on call surgeons or via the local centre. Direct referral to the delivery centre would be preferred, but there must be an understanding that other hospitals may not be aware of the PLECS pathway, so non delivery centres may be required to help the flow of information if an emergency referral is made to a non-delivery centre initially.

7. Structure of the PLECS pathway.

- Command and Co-ordination centre of Hub at Barts Heart Centre – this will form the main referral SPOC (single point of contact) for referrals Pan London.
  Phone number for the command centre will be 0203465606, back up 02034655572
- Co-ordination centre at Harefield – this will form the SPOC at Harefield, and will be in close contact with the command centre at Barts daily to assess Bed capacity, and arrange patient transfers and scheduling
  Phone number for the co-ordination centre at Harefield will be 01895 828 913, back up 07854002712 and 01895 823737.
- Each non destination centre will continue to take calls and referrals as per normal referral pathways, these referrals will be assessed and triaged in the normal manner, and once validated, and confirmed that in patient cardiac surgery is required, passed through to the hub command centre at Barts for logging and processing.

8. Minimum dataset

All usual pre cardiac surgery investigations will be unlikely to be able to take place – eg carotid dopplers and lung function tests etc.
Therefore detailed histories and clinical examination will be essential in documenting physiological reserve and suitability for cardiac surgery.
In borderline cases with significant co-morbidity, alternative treatment options should be utilised where appropriate.
Alternative treatments eg targeted PCI and TAVI may need to be considered due to capacity constraints.
The data fields on the interhospital transfer system will be used as a template for referrals into the command centre.
The website for the interhospital transfer system which is available to all London NHS Centres is https://nww.ihtl.nhs.uk/container/default.asp
A common interhospital transfer form with more patient detail can be provided electronically by SPOC at SBH
Image transfer will need to be via the IEP system to the delivery hospital. The command centre will need to have staff trained to use this system and request urgent images transfer.

NOTE – Patients will not be transferred to a delivery centre unless imaging is available on the delivery centre system. This means all referral centres will need to ensure their IEP system is set up to transfer to Barts and Harefield.

IMPORTANT – as the local cardiac surgery centre is triaging referrals into the command centre for level 3 patients, it is important to have a named consultant surgeon responsible for the referral at the local cardiac surgery centre. This will allow the command centre surgical consultant to talk to the responsible consultant surgeon at the local centre to discuss the referral and other treatment options.

9. Data records.

Each centre should keep records of patients referred through the PLECS pathway so further analysis can be carried out at the end of the COVID-19 outbreak.
The command centre will keep records of all patients referred and treated through the PLECS pathway.
The two delivery centres will generate operation notes and discharge summaries which in addition to normal distribution will also be provided to the referral centres by whom outpatient follow up will be organised.
Mortality on actively managed waiting lists is normally 2% and our aim would be for this not to increase.

10. The decision to operate

It is possible that new information becomes available when a patient arrives at the delivery centre. This situation will try to be avoided, but the decision to transfer to a delivery centre does not compel the designated operating surgeon to perform the operation.
As part of good practice, it is expected that a mini MDT occurs in the delivery centre with representation from cardiac surgery, cardiology and anaesthesia before undertaking surgery to ensure we are making optimal use of precious resources.

11. COVID-19 status and cardiac surgery

It is expected that patients with respiratory complications of COVID 19 will not be referred for cardiac surgery, as this would represent significant co-morbidity and risk.
However, for patients found to be incidentally COVID positive, or those with very mild symptoms, as the expectation would be that such patients make a full recovery, being positive would not rule out emergency cardiac surgery, and in such cases, the decision to operate would be made on a case by case basis by the command centre in discussion with the delivery centre and mini MDT.
For all level 2 and 3 cases a COVID-19 test should be undertaken before transfer for surgery can take place.
For level 4 cases (eg aortic dissection) cases will be screened by questionnaire, temperature and local policy.
As soon as a rapid test for COVID-19 is available, a rapid test is likely to be required.

If COVID status is not known, a CT of the lungs has been shown to be a useful screening test. So level 4 patients being referred should have had a CT chest if COVID status unknown. This will invariably be the case in aortic dissections.

12. Staffing the command centres

The command centre at the hub in SBH will be staffed out of hours (8pm to 8am) overnight by:

Cardiac surgery registrar in discussion with the consultant oncall

In main working hours (8am – 8pm) the staffing will be:

2 members of the cardiac surgery scheduling team
Cardiac surgery registrar to provide clinical input and check data available
Advanced nurse practitioner
Consultant surgeon designated from a rota to be supporting the hub. (these do not HAVE to be SBH surgeons)

Harefield co-ordination centre staffing:

2 members of the cardiac surgery scheduling team
Cardiac surgery registrar to provide clinical input and check data available
Bed manager
Consultant surgeon as on the oncall rota at Harefield

13. Operation meetings

Close co-ordination between the command centre and the co-ordination centre will be essential.
We expect continued dialogue through the working day, however, 2 operational calls will be scheduled:

8am – check theatre and bed availability and plans for the current day / review any emergency referrals overnight.

4pm – co-ordination of triaged referrals and scheduling for the next working day.

It is anticipated there will be a weekly telephone conference with representation (clinical and managerial) from all participating sites.

Daily feedback from the command centre to the consultants on call at the delivery site will be expected to document number of referrals and bed availability.

14. Staff movement and contracts

As part of the COVID-19 situation, it is envisaged that PLECS will be able to draw on a pan London pool of cardiac surgical staff including surgeons, nurses and technical staff. Each hospital may be also redeploying staff from cardiac surgery services to help other essential services dealing with the outbreak.
However, to be able to provide some emergency lifesaving cardiac surgery in the capital there could be a need for staff movement between units, especially if staff in the delivery centres become unwell or need to self-isolate.

Each unit should start to consider which staff would be suitable for redeployment to a delivery centre if this is practical. Staff groups such as perfusionists, if not working in an ECMO delivery centre would be an example.
The 2 delivery centres will be working on a fast-tracking honorary contract and induction arrangements to allow staff flow where needed.

15. Discharge and repatriation

Flow through the delivery centres will be paramount to allow the pathway to function. Wherever possible, a pre-plan to discharge patients home from the delivery centre will be followed. However, in the event of the need for prolonged hospitalisation following surgery, repatriation to the local cardiac surgery unit may be required. This would be decided on a case by case basis. All options for ongoing care for patients not able to be discharged will be explored, including step down to the private sector.

16. Independent Sector support

The Independent Sector cardiac surgery providers are in discussion with NHSE about how they can support urgent cardiac surgery provision in the capital incorporating an appropriate governance structure.
It is likely that the independent sector will be asked to support patient flow and ongoing hospital treatment for patients after cardiac surgery who cannot be discharged from a delivery centre.
It is also possible that independent hospitals could deliver some level 3 and level 2 operations where capacity allows. These patients would be triaged and processed through the command centre, to ensure the most urgent in hospital patients are treated quickly and that capacity is optimised.

The Independent Sector support will be coordinated through HCA who will have representatives on the weekly interhospital meeting.

17. Contacts

Barts Heart Centre switchboard - 02073777000

Barts cardiac surgery registrar on call - 07900051070

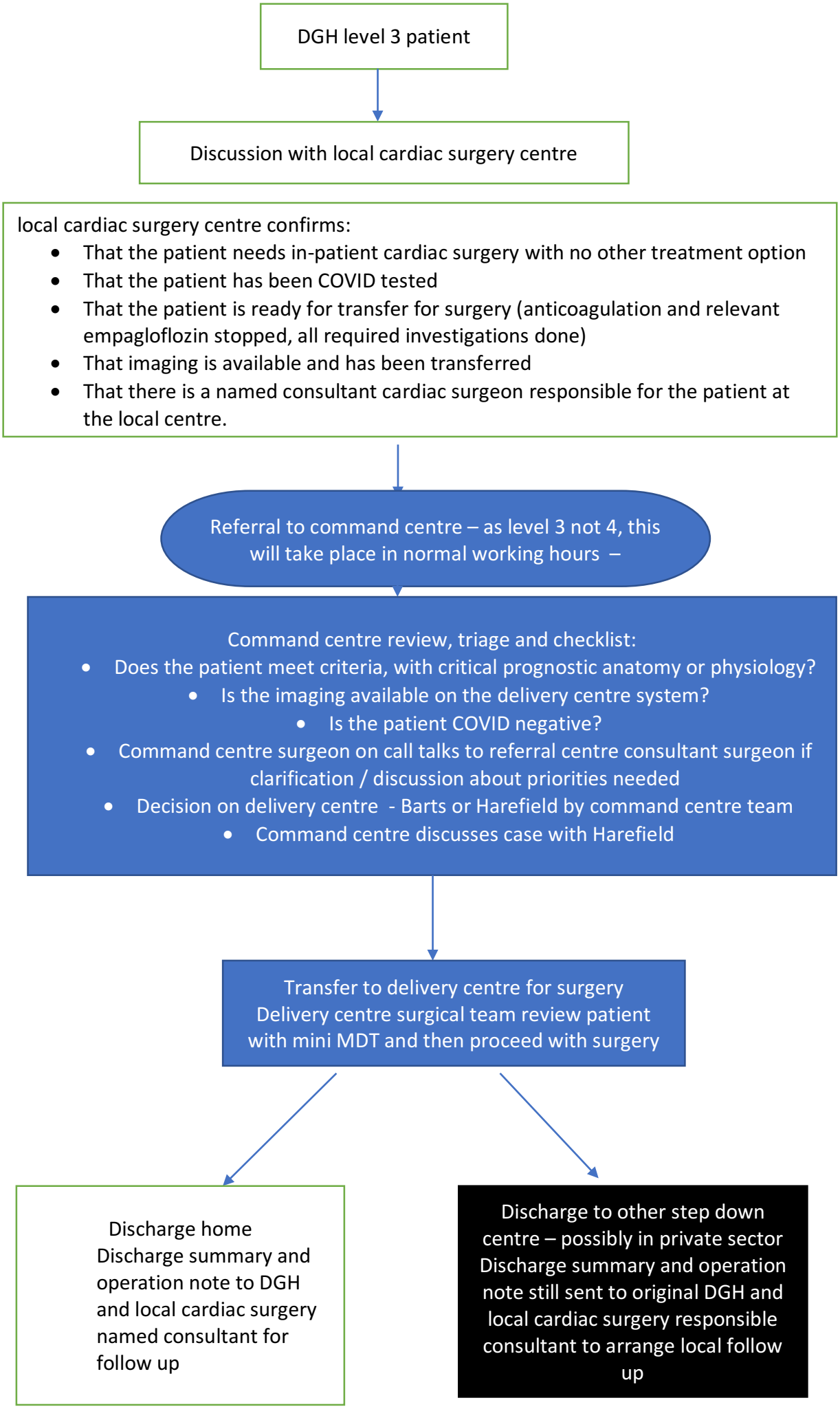
PLECS Command centre Hub (Barts) - 02034656069, 02034655572

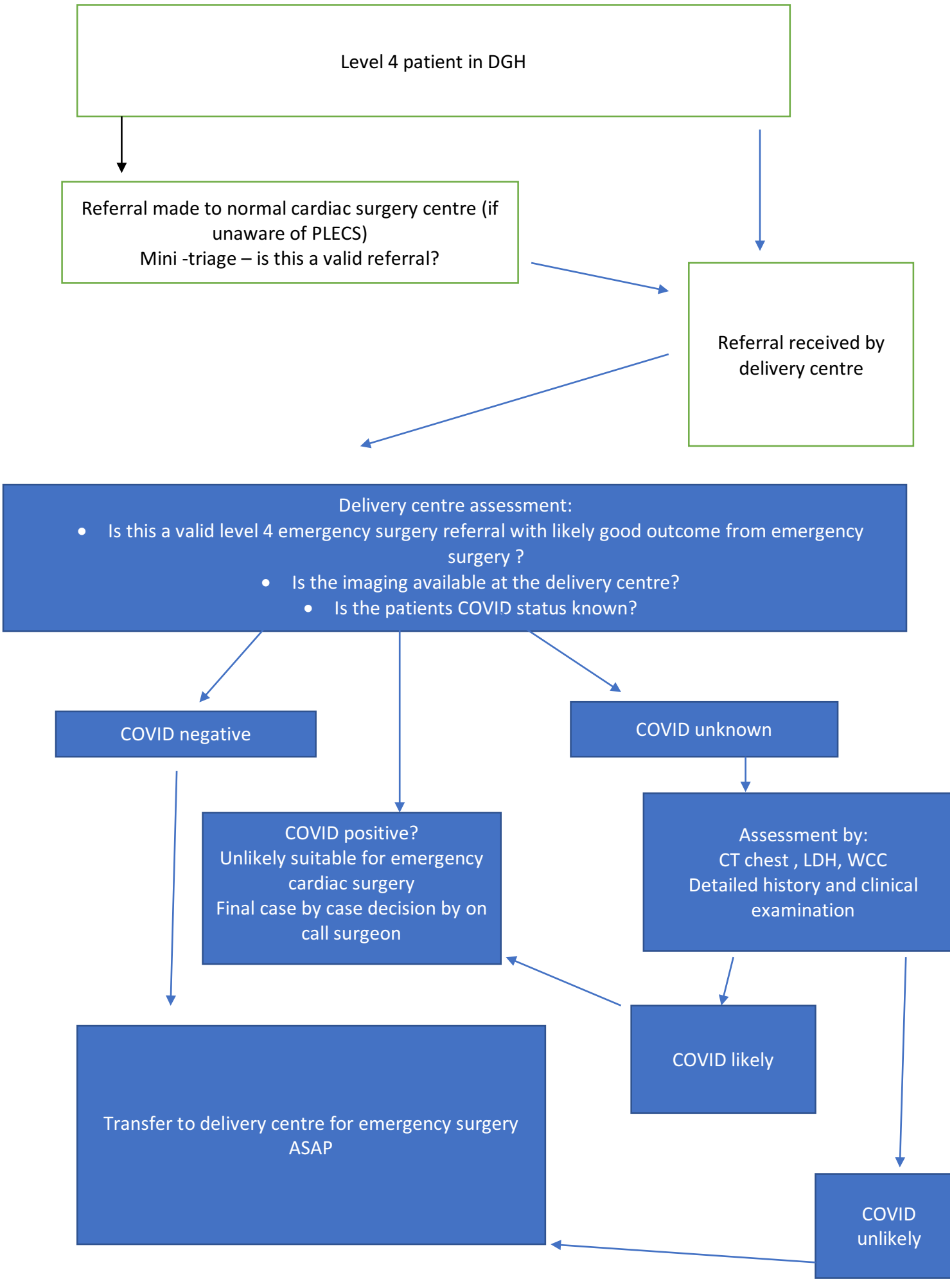
PLECS command centre email – bartshealth.plecs@nhs.net

Harefield switchboard – 01895 823737

Harefield cardiac surgery registrar on call - via switchboard (01895 823737) or 07946185817

Harefield Coordination Centre - 01895 828913 or 07854002712


DGH level 3 patient
Discussion with local cardiac surgery centre
local cardiac surgery centre confirms:
That the patient needs in-patient cardiac surgery with no other treatment option
That the patient has been COVID tested
That the patient is ready for transfer for surgery (anticoagulation and relevant empagloflozin stopped, all required investigations done)
That imaging is available and has been transferred
That there is a named consultant cardiac surgeon responsible for the patient at the local centre.
Referral to command centre – as level 3 not 4, this will take place in normal working hours –
Command centre review, triage and checklist:
Does the patient meet criteria, with critical prognostic anatomy or physiology?
Is the imaging available on the delivery centre system?
Is the patient COVID negative?
Command centre surgeon on call talks to referral centre consultant surgeon if clarification / discussion about priorities needed
Decision on delivery centre - Barts or Harefield by command centre team
Command centre discusses case with Harefield
Transfer to delivery centre for surgery
Delivery centre surgical team review patient with mini MDT and then proceed with surgery
Discharge home
Discharge summary and operation note to DGH and local cardiac surgery named consultant for follow up
Discharge to other step down centre – possibly in private sector
Discharge summary and operation note still sent to original DGH and local cardiac surgery responsible consultant to arrange local follow up


Level 4 patient in DGH
Referral made to normal cardiac surgery centre (if unaware of PLECS)
Mini -triage – is this a valid referral?
Referral received by delivery centre
Delivery centre assessment:
Is this a valid level 4 emergency surgery referral with likely good outcome from emergency surgery ?
Is the imaging available at the delivery centre?
Is the patients COVID status known?
COVID negative
COVID unknown
COVID positive?
Unlikely suitable for emergency cardiac surgery
Final case by case decision by on call surgeon
Assessment by:
CT chest , LDH, WCC
Detailed history and clinical examination
COVID likely
Transfer to delivery centre for emergency surgery ASAP
COVID unlikely