3 April 2020

TO: South London cardiologists

From: Mr Vassilios Avlonitis, Clinical Lead, Cardiac Surgery, Guy's and St Thomas' Hospital

Mr Max Baghai, Clinical Lead, Cardiac Surgery, King's College Hospital

Mr Steve Livesey, Associate Medical Director, Cardiac Surgery, St George's University Hospital

RE: Pan London emergency cardiac surgery (PLECS) during COVID-19 pandemic

Dear colleagues,

Due to the coronavirus (COVID-19) pandemic, it is essential to make dramatic and evolving changes to the way we deliver care to cardiac patients. As London's intensive care bed capacity is modified to allow for optimal treatment of COVID-19 patients with associated respiratory complications, the ability of sites usually offering cardiac surgery has been curtailed. The below is to inform you of the current plans for treatment of cardiac surgery patients at south London tertiary centres – King's College (KCH), St Thomas' (GSTT), and St George's (SGUH) hospitals – particularly those presenting as emergencies.

1. **Current cardiac surgery services –** All cardiac surgery centres in London[1], with the exception of Barts Heart Centre (Barts Health NHS Trust) and Harefield (Royal Brompton and Harefield NHS Foundation Trust), have stopped all elective cardiac surgery. These two delivery sites were chosen as high volume cardiac surgery centres, as they do not have co-located A&E services. This is in anticipation that they will be able to ring fence beds to support cardiac surgery.

2. **Triage –** A pan-London triage system has been developed.

Level	Case definition	Referral process
Level 1	**Elective –** Patients who have indications for routine cardiac surgery who would normally be added to an elective waiting list.	Such patients would be referred to the usual local centres as normal for assessment, 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 –** Patients who are on 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 usual local centres and, if appropriate, passed through to the PLECS hub command centre for consideration of surgical intervention, should capacity allow.
Level 3	**Urgent inter-hospital transfers (IHT) –** Patients who are in hospital with	Such patients will be referred to the usual local centre via the IHT system (Teleologic). Referrals

[1] Royal Brompton Hospital, Hammersmith Hospital, King's College Hospital, St Thomas Hospital, St George's University Hospital

	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.	will be triaged by the local centres and passed through to the PLECS command centre for surgical intervention.
Level 4	**Emergency (most commonly, but not exclusively, acute aortic dissections) -** Patients who have life threatening emergency cardiac conditions and require surgery within hours.	Such patients should be referred directly into one of the two delivery centres (Barts or Harefield) via the on call surgeons[2] or via the local centre.

3. **Referral pathways –** With the exception of emergency cases (eg acute aortic dissection), which should be referred direct to Barts or Harefield, please continue to refer to your usual cardiac surgery centre. Your local cardiac surgery centre will continue to take calls, provide advice and receive referrals per normal referral pathways. Your referrals will be assessed and triaged in the normal manner. Once validated and the decision to operate has been confirmed, they will be passed through to the hub command centre at Barts for processing.

4. **Minimum dataset –** It is unlikely that all pre-operative investigations will take place (eg carotid dopplers, lung function tests etc.). Therefore detailed histories and clinical examination will be essential in documenting physiological reserve and suitability for cardiac surgery. The data fields on the Teleologic[3] IHT system will provide a template for this and we ask that referrers complete all sections in detail. All images will need to be transferred via the Image Exchange Portal (IEP) system.

5. **Decision to operate –** It is expected that multidisciplinary team meetings (MDTs) will occur for all patients undergoing cardiac surgery. All centres will continue to run MDTs in the usual fashion, and a second mini MDT will take place at the delivery centre (Bart's or Harefield) between the surgeon, anaesthetist and cardiologist prior to surgery.

6. **Transfer policy –** For all level 2 and 3 cases, a COVID-19 test must be undertaken before transfer to surgery can take place. Level 4 cases (eg acute aortic dissection) will be screened by questionnaire, temperature, and local policy. As soon as a rapid test for COVID-19 is available, it is likely to be required. If COVID-19 status is not known, a CT of the lungs has been shown to be a useful screening test. Therefore, level 4 patients being referred should also have a chest CT if COVID-19 status is unknown. This will invariably be the case in aortic dissections.

7. **Discharge and repatriation –** Patient flow through the delivery centres (Barts and Harefield) is paramount to the successful function of the pathway. Where possible, a pre-plan to discharge patients home from the delivery centre will be followed. However, should the need arise for prolonged hospitalisation following surgery, repatriation may be required.

8. **Alternative treatments –** Over this period, significant pressures on cardiac surgery as expected will likely significantly reduce capacity. Careful consideration should be given to urgent/emergent patients as to whether or not they can be treated percutaneously (PCI, TAVI,

[2] Barts: 07 900 051 070 or Harefield: Switchboard 01 895 823 737 and bleep 6103.
[3] https://nww.ihtl.nhs.uk/lscn/

etc) to avoid prolonged inpatient stays. This will be necessary to reduce the inpatient exposure of these patients who are at higher risk from COVID-19, and to release beds as quickly as

9. practical for the expected surge in illness secondary to the coronavirus.

10. **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, it is expected that patients found incidentally COVID-19 positive, or those with very mild symptoms, would make a full recovery and this positive status would not rule out emergency cardiac surgery. Decision to operate will be made on a case by case basis.

For reference, we attach the standard operating procedure (SOP) for the PLECS programme, as well as functional flow charts for Level 3 and 4 patients requiring surgery during this time.

Please do not hesitate to contact us directly if you have any specific queries.

Sincerely,

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