

## **NHS BLOOD AND TRANSPLANT**

### **TPRC MEETING**

#### **PROPOSED LISTING CRITERIA FOR SUPER-URGENT AND URGENT LUNG PATIENTS**

##### **BACKGROUND**

1. The current Lung Allocation system involves offering of donor lungs via a centre rota: there is no national allocation.
2. The Cardiothoracic Advisory Group (CTAG) Lung Allocation Working Group have put together a proposal for national super-urgent and urgent listing of lung patients. Patients who do not fall in to either of these categories will follow the non-urgent process which is currently used.
3. TPRC are asked to review and agree the proposed criteria.

##### **PROPOSAL**

4. Rationale for adult and paediatric urgent lung allocation scheme

Urgent and super-urgent patients will be suitable transplant candidates in whom survival without transplantation is likely to be less than 90 days.

The objective of the urgent/super-urgent lung allocation scheme is to allow such candidates priority access to the national donor organ pool, irrespective of current zonal arrangements.

Prompt allocation of donor organs will be aimed at reducing the high waiting list mortality amongst these critically ill patients, and in those receiving extracorporeal membrane oxygenation (ECMO) or Novalung (iLA), it will minimise the duration of extracorporeal support and the risk of developing complications. However, this should be balanced against maintaining the standard of good post-transplant outcomes. It is imperative, therefore, to carefully consider every individual case in the local MDT: if a consensus on futility is reached, access to appropriate palliative and end of life care should be facilitated instead.

Patients requiring re-transplantation will not have access to the super-urgent/urgent allocation scheme.

5. Adult urgent lung allocation criteria

A patient who is suitable for acceptance on the transplant waiting list and displays or develops any one of the following characteristics:

## 1) COPD Patient

- Worsening hypoxia ( $\text{PaO}_2 < 7.5 \text{ kPa}$ ) and hypercapnia ( $\text{PaCO}_2 > 6.5 \text{ kPa}$ ) requiring increasing oxygen demand of  $> 10 \text{ L/min}$  despite continuous NIV
- pH persistently  $< 7.30$  despite optimal continuous NIV
- Refractory right heart failure despite all pharmacological interventions to support the right ventricle

## 2) CF patient

- Worsening hypoxia ( $\text{PaO}_2 < 7.5 \text{ kPa}$ ) and hypercapnia ( $\text{PaCO}_2 > 6.5 \text{ kPa}$ ) requiring increasing oxygen demand of  $> 10 \text{ L/min}$  despite continuous NIV
- pH persistently  $< 7.30$  despite optimal continuous NIV
- Refractory right heart failure despite all pharmacological interventions to support the right ventricle
- Ongoing episodes of Massive haemoptysis despite bronchial embolisation

## 3) IPF Patient

- Persisting hypoxia ( $\text{PO}_2 < 8 \text{ kPa}$ ) despite continuous  $\text{O}_2$  at  $10 \text{ L/min}$
- Refractory right heart failure despite all pharmacological interventions to support the right ventricle

## 4) PAH patient

- Worsening refractory right heart failure as defined by increasing fluid retention despite optimal medical management with disease modifying therapy and diuretics
- Requirement for continuous IV inotropic support
- Recent RHC  $\text{RAP} > 20 \text{ mmHg}$  and  $\text{CI} < 2.0 \text{ l/min/m}^2$  despite optimisation of therapy. RHC data need to be recent, within 3 months of request to add to super urgent list

Many transplant candidates fulfilling the urgency criteria listed above will likely require ongoing inpatient treatment. In principle, Urgent candidates may remain ambulant at home but will require close monitoring as deemed necessary by the local transplant team.

6) Adult super-urgent lung allocation criteria

Super urgent listing may be considered in patients who are deemed suitable for (veno-venous) ECMO or iLA support as a bridge to transplant.

- Only patients assessed by the local transplant team and accepted onto their waiting list PRIOR to their deterioration will be considered for bridging to lung transplantation. No centre is adequately resourced for importing very sick patients on a ventilator with the purpose of assessment for transplantation, a practice which had previously lead to very poor outcomes and is not a treatment that is recommended.
- Patients dependent on IPPV will not be included in the super-urgent scheme. Patients admitted to an ITU who are subsequently referred for lung transplantation need to complete treatment and undergo full rehabilitation before further consideration by the local transplant team.
- Only consider patients for bridging to lung transplantation with a good rehabilitation potential which usually means a relatively short duration of severe illness to minimise the risks of prolonged ITU stay and post-operative complications.
- ALL super urgent candidates will be receiving in-patient treatment and will continue to fulfil current transplant acceptance criteria; in particular, they must remain free of major sepsis. The daily review process will also allow consideration of de-listing a patient who has deteriorated to a clinical status out with these guidelines.
- The decision in one centre to place a rapidly deteriorating patient on a short term device (iLA or ECMO) will be on a case by case basis, at the discretion of the individual centre who will have to consider their own finances and impact on cardiothoracic ITU activity in the absence of national commissioning.

7 Paediatric patients can be listed on the super-urgent and urgent scheme under the same criteria. Prognostication in children is more difficult and we recognise limitations of the adult urgent criteria in the paediatric population. Therefore any exceptions can be referred to the CTAG Adjudication Panel.

8 MDT decision

- The local transplant MDT should assign every new waiting list registration a priority status (super-urgent vs urgent vs non-urgent). The MDT decision must be clearly documented and the patient registered accordingly with NHSBT (see item 3.4.5 below). The criteria for urgent and super-urgent category listing will be captured and validated real time by NHSBT at initial registration and this category will be subject to regular audit.

- Patients who are initially assigned non-urgent status can be upgraded onto the urgent list at subsequent reviews should they deteriorate to meet the above criteria and the reverse is true.
- Patients should be removed from the super-urgent or urgent list when the local MDT concludes the patient does not have a reasonable chance of intermediate survival; for example, 50% probability of surviving 3-5 years post-transplant.

## 9 Adjudication panel

In addition, a centre can make a request for urgent listing of a patient outside the above criteria to an Urgent Lung Allocation Scheme (ULAS) Adjudication Panel consisting of the CTAG chair and one representative/deputy from each centre.

- Representatives need to be available and responsive.
- Each lung transplant unit Clinical Director will need to provide CTAG chair with names and contact details for their nominated representative and deputy. In the event that both centre representatives are simultaneously absent, the role should be delegated internally and the unit Clinical Director should notify CTAG chair of contact details for this person.
- CTAG chair or deputy will email the Adjudication Panel members with details of the urgent listing request with an instruction to feedback within 24 hours.
- CTAG Chair or deputy will make the final decision based on the majority opinion. The decision does not need to be unanimous.
- Patients will not be placed on the super-urgent waiting list until the Adjudication Panel has approved the request.
- NHSBT will log all cases referred to the Adjudication Panel. The registering centre should fax a letter to the Duty Office indicating they have had confirmation of acceptance from the adjudication panel and a summary of the patient's characteristics which led the adjudication panel to reach this decision. The Duty Office will then store this electronically.

## 10 Offering Process

The two flow diagrams attached with this paper illustrate the offering process for paediatric and adult donors separately.