

NHS BLOOD AND TRANSPLANT

CARDIOTHORACIC ADVISORY GROUP

REVIEW OF THE FIRST THREE MONTHS OF SUPER URGENT AND URGENT LUNG ALLOCATION SCHEME

SUMMARY

BACKGROUND

- 1 On 18 May 2017, the Super-Urgent and Urgent Lung Allocation Schemes were launched. This paper summarises activity and outcomes of patients listed in the first three months of the schemes.

DATA ANALYSIS

- 2 Data on 30 super-urgent and urgent lung registrations for 27 patients registered between 18 May 2017 and 18 August 2017 were obtained. Four of these registrations were super-urgent, all under category 91 (*Patient supported with VV-ECMO as a bridge to transplant and previously registered on the ULAS or the NULAS*). A range of categories were used for urgent patients with all centres making at least one registration.
- 3 By 22 August 2017, 17 of the 27 patients have been transplanted, with one death on the super-urgent list and none on the urgent list.
- 4 Fields required for correct offering are not always being filled in on the registration forms and no centre has submitted a monthly update form for patients listed longer than one month.

ACTIONS

- 5 Centres are reminded to complete all mandatory information for patients registered onto the super-urgent and urgent schemes. For patients active for more than one month on either of the two schemes a monthly update form should be completed and returned to NHSBT for every month they wait.
- 6 Members are asked to review previously agreed metrics and if members agree that these are all still relevant, a more detailed analysis will be presented at the next CTAG meeting.

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REVIEW OF THE FIRST THREE MONTHS OF SUPER URGENT AND URGENT LUNG ALLOCATION SCHEME

INTRODUCTION

- 1 Super-Urgent and Urgent Lung Allocation Schemes were introduced on 18 May 2017 for both adult and paediatric patients. This paper provides a first look at the usage of the new allocation schemes, including the number of patients registered onto the schemes and their outcomes. The time period analysed was the first three months, from 18 May 2017 to 18 August 2017, and data were extracted from the UK Transplant Registry on 22 August 2017.

RESULTS

- 2 In the first three months, there were a total of 30 registrations for 27 patients onto the two schemes. **Figure 1** shows number of patients registered onto the urgent scheme by month and centre. **Figure 2** shows the same information for patients registered onto the super-urgent scheme.
- 3 Overall, there have been 26 urgent registrations with all centres having between 1 and 8 registrations each. The majority of the registrations were made in the first month as patients previously on the non-urgent list were transferred to the urgent list. In the same period, there have been 4 super-urgent registrations, across three centres. Note that the super-urgent patient at Newcastle was listed at launch and suspended the same day due to deteriorating condition. The three super-urgent patients listed in Month 3 were all previously on the urgent list.

Figure 1 Number of registrations onto the urgent lung list, by month and transplant centre

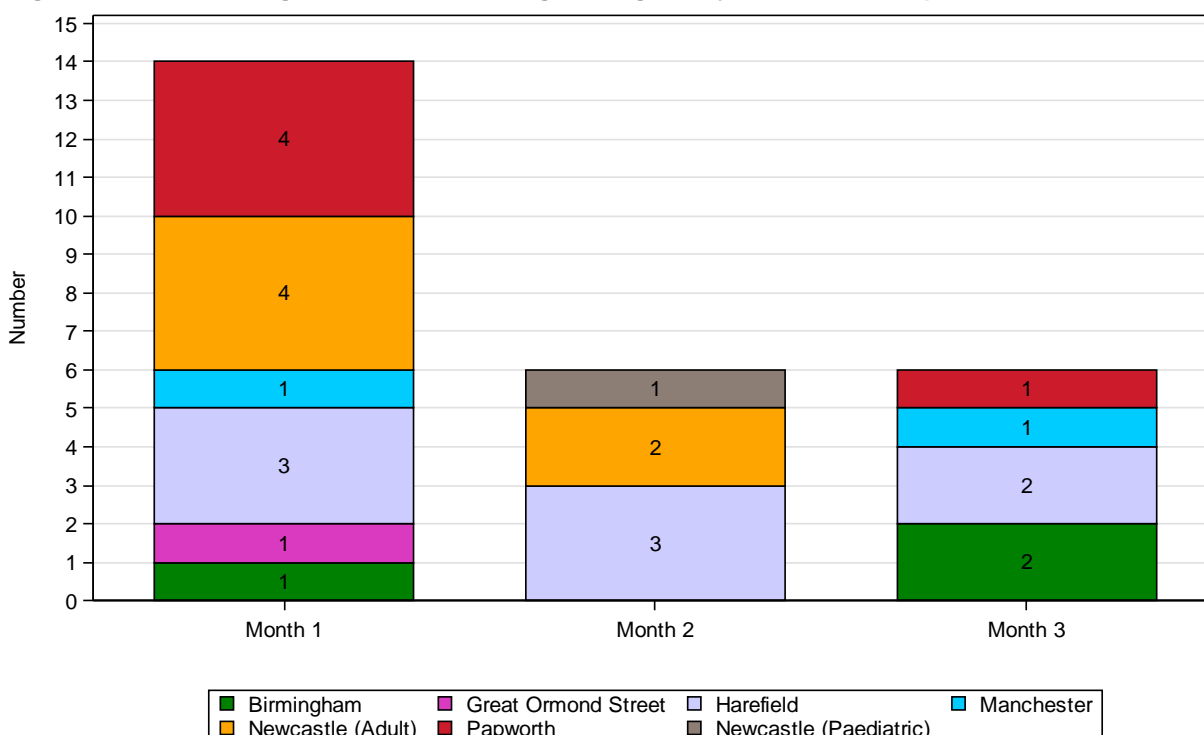
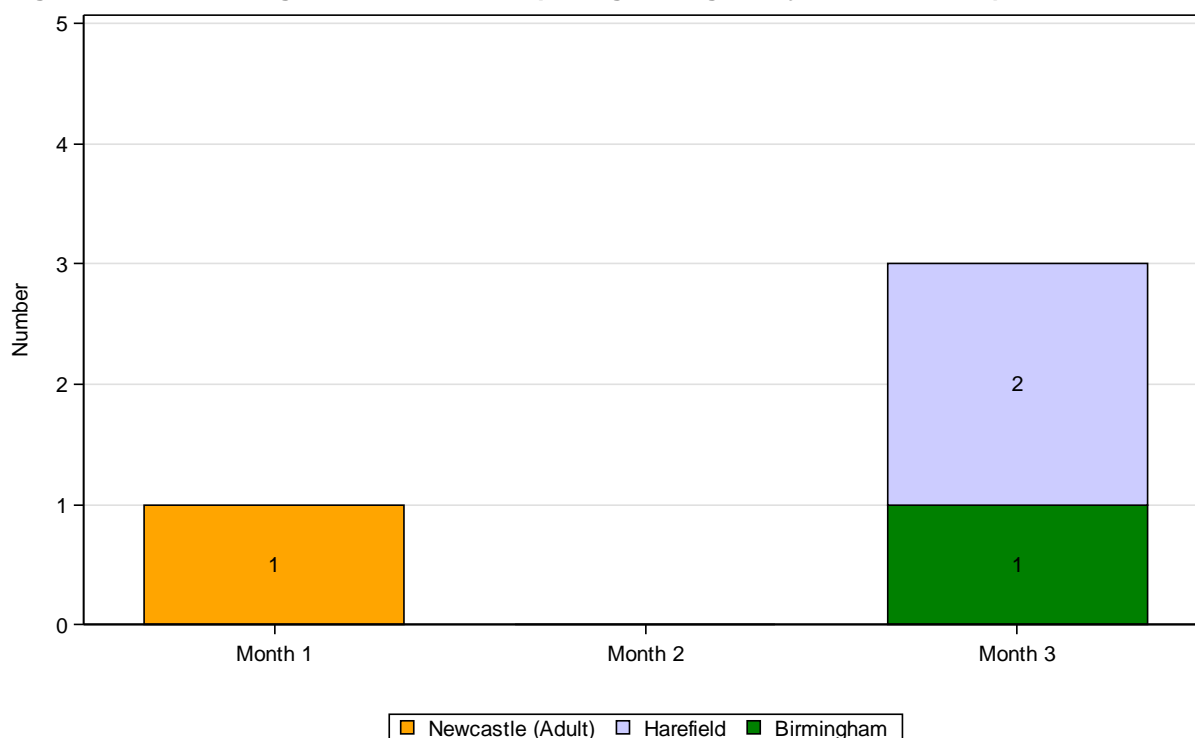


Figure 2 Number of registrations onto the super-urgent lung list, by month and transplant centre



- 4 **Table 1** shows the outcomes of the 27 patients who have been registered onto the urgent and super-urgent lung schemes. For the patients who were listed onto the urgent list before being moved to the super-urgent list, their outcomes in the table are for their most recent registration so are counted under the super-urgent column. The majority of patients had received a transplant by 22 August 2017: 75% of super-urgent patients and 61% of urgent patients. One super-urgent patient had died on the list with an unknown cause of death. Three urgent patients had been moved to the non-urgent list and two had been removed due to deteriorating condition.

Table 1 Number of patients registered onto the Super-Urgent and Urgent Lung Allocation Schemes by centre and registration outcome, 18 May 2017 - 18 August 2017, as at 22 August 2017

Transplant Centre		Super-Urgent registration outcome		Urgent registration outcome				Total
		Died	Transplanted	Still active on list	Suspended	Removed	Transplanted	
Adult	Birmingham	0	1	0	0	0	2	3
	Harefield	0	2	3	0	1	2	8
	Manchester	0	0	0	0	0	2	2
	Newcastle	1	0	1	0	1	4	7
	Papworth	0	0	2	0	0	3	5
Paediatric	GOSH	0	0	0	1	0	0	1
	Newcastle	0	0	0	0	0	1	1
TOTAL		1	3	6*	1	2	14	27

* Note that three patients still active on the list (1 Harefield, 1 Newcastle, 1 Papworth) have been removed from the urgent list and are active on the non-urgent list

- 5 The categories for all 30 registrations are seen in **Table 2**. All 4 registrations onto the super-urgent scheme were under *category 91: Patient supported with VV-ECMO as a bridge to transplant and previously registered on the ULAS or the NULAS*.
- 6 Out of the urgent categories, the most common urgent disease group was CF, with 11 of the 26 registrations using one of the four CF categories. Details of all urgent categories are shown in **Appendix A1**. Four patients were registered under the two 'Other' categories and in all cases email evidence of agreement from the CTAG Adjudication Panel was received. Clinical details of these patients, as submitted to the Adjudication Panel, can be found in **Appendix A2 (removed as patient identifiable)**. Note that the 'Other' patient registered by Papworth was put on the urgent list on the 18 May at launch, and after this date, the Adjudication Panel declined the urgent request and the patient was subsequently moved to the non-urgent list on 23 May.

Transplant Centre		Super-Urgent patients 91	Urgent patients							Total	
			COPD 10	21	CF 22	24	IPF 31	PAH 43	Other Adult 59		Other Paediatric 69
Adult	Birmingham	1	0	1	1	0	1	0	0	0	4
	Harefield	2	1	3	1	2	0	0	1	0	10
	Manchester	0	0	1	0	1	0	0	0	0	2
	Newcastle	1	0	1	0	0	4	1	0	0	7
	Papworth	0	0	0	0	0	3	1	1	0	5
Paediatric	GOSH	0	0	0	0	0	0	0	0	1	1
	Newcastle	0	0	0	0	0	0	0	0	1	1
TOTAL		4	1	6	2	3	8	2	2	2	30

- 7 There are several fields on the registration form which are to be completed before a patient should be registered onto the super-urgent or urgent lung scheme. However, some patients have been registered with incomplete information, as shown in **Table 3**. Three patients were registered without specifying if an ABO identical or compatible transplant was required and one patient at Papworth was registered without minimum and maximum acceptable donor heights.

Transplant Centre		Number of registrations	Number missing donor ABO criteria	Number missing donor height criteria	Total missing a mandatory field
Adult	Birmingham	4	0	0	0
	Harefield	10	0	0	0
	Manchester	2	0	0	0
	Newcastle	7	2	0	2
	Papworth	5	0	1	1
Paediatric	GOSH	1	0	0	0
	Newcastle	1	1	0	1
TOTAL		30	3	1	4

- 8 For patients who have been active on the urgent or super-urgent lists for more than one month, a Super-Urgent/Urgent Lung Recipient Monthly Update form should be completed and returned to NHSBT. As at 22 August 2017, it was calculated that 15 forms should have been submitted for 11 patients. None of these forms have been submitted. **Table 4** shows the number of forms expected by centre.

	Centre	Number of patients active for >1 month	Number of expected forms	Number of submitted forms	Number of outstanding forms
Adult	Harefield	5	7	0	7
	Manchester	1	1	0	1
	Newcastle	3	4	0	4
Paediatric	GOSH	1	2	0	2
	Newcastle	1	1	0	1
TOTAL		11	15	0	15

ACTION

- 9 Centres are reminded to complete all mandatory information for patients registered onto the super-urgent and urgent schemes. These include donor ABO criteria and acceptable donor height ranges for male and female donors which will ensure unsuitable offers are not made to patients on the list. For patients active for more than one month on either of the two schemes a monthly update form should be completed and returned to NHSBT for every month they wait.
- 10 In November 2014 Jenny Mehew, with the Lung Allocation Working Group, wrote a detailed analysis plan for monitoring these new schemes post their implementation. This included the following performance metrics:
- Reduction in waiting list mortality
 - Preservation of current post-transplant survival rates
 - Increased utilisation through adopting a national allocation scheme (i.e. offering on a named individual basis)
 - Length of offering times (e.g. total offering time from consent/offer to start of retrieval operation)
 - Length of ITU/hospital stay (from time of transplant to discharge)
 - Refusal rates and reasons for decline
 - Waiting time from registration to transplant
 - Transport time
 - Impact on non-urgent patients
 - Comparison of characteristics of those transplanted with a similar cohort prior to scheme implementation
 - Changes in centre activity
- 11 If members agree that these are all still relevant, the stats team will seek to provide a more detailed analysis at the next CTAG meeting.

APPENDIX**A1 INDICATION FOR SUPER-URGENT/URGENT LUNG REGISTRATION****SUPER-URGENT PATIENTS**

- Category 91 – Patient supported with VV-ECMO as a bridge to transplant and previously registered on the ULAS or NULAS
- Category 92 – Patient supported with iLA as a bridge to transplant and previously registered on the ULAS or NULAS

URGENT ADULT PATIENTS

- 1) COPD Patient
 - Category 10 - Worsening hypoxia ($\text{PaO}_2 < 7.5$ kPa) and hypercapnia ($\text{PaCO}_2 > 6.5$ kPa) requiring increasing oxygen demand of > 10 L/min despite continuous NIV
 - Category 11 - pH persistently < 7.30 despite optimal continuous NIV
 - Category 12 - Refractory right heart failure despite all pharmacological interventions to support the right ventricle
- 2) CF patient
 - Category 21 - Worsening hypoxia ($\text{PaO}_2 < 7.5$ kPa) and hypercapnia ($\text{PaCO}_2 > 6.5$ kPa) requiring increasing oxygen demand of > 10 L/min despite continuous NIV
 - Category 22 - pH persistently < 7.30 despite optimal continuous NIV
 - Category 23 - Refractory right heart failure despite all pharmacological interventions to support the right ventricle
 - Category 24 - Ongoing episodes of massive haemoptysis despite bronchial embolisation
- 3) IPF patient
 - Category 31 - Persisting hypoxia ($\text{PO}_2 < 8$ kPa) despite continuous O_2 at 10 L/min
 - Category 32 - Refractory right heart failure despite all pharmacological interventions to support the right ventricle
- 4) PAH patient
 - Category 41 - Worsening refractory right heart failure as defined by increasing fluid retention despite optimal medical management with disease modifying therapy and diuretics
 - Category 42 - Requirement for continuous IV inotropic support
 - Category 43 - Recent RHC RAP > 20 mmHg and CI < 2.0 L/min/m² despite optimisation of therapy. RHC data need to be recent, within 3 months of request to add to urgent list
- 5) Other adult patient
 - Category 59 - Adult, Other: Adult patients outside the criteria listed above, but for whom the patient's transplant physicians believe urgent listing is justified using acceptable medical criteria not included above. Documentation of the reasons justifying assigning urgent status should be detailed and agreed by the Chair of the Cardiothoracic Advisory Group (CTAG).

URGENT PAEDIATRIC PATIENTS

For any urgent listing there must be agreement between the two paediatric centres. This should involve the clinical leads or in their absence an appointed deputy. If there is disagreement this should be noted at the time of discussion with the Chair of CTAG.

- Category 69 - Paediatric, Other: Paediatric patients outside the criteria listed above, but for whom the patient's transplant physicians believe urgent listing is justified using acceptable medical criteria not included above.