

# NHS BLOOD AND TRANSPLANT

## MULTI-VISCERAL AND COMPOSITE TISSUE ADVISORY GROUP

### PERFORMANCE REPORT ON THE NATIONAL BOWEL ALLOCATION SCHEME: JANUARY 2023 – JUNE 2023

#### INTRODUCTION

- 1 The National Bowel Allocation Scheme (NBAS) was introduced in 2013 with the agreement that it would be monitored regularly and reviewed if there were signs of inappropriate or unfair offering. Full details of the scheme are available online here: <https://www.odt.nhs.uk/transplantation/tools-policies-and-guidance/policies-and-guidance/>
- 2 This is a brief report showing the recent performance of the NBAS, detailing patients active on the transplant list between 1 January 2023 and 30 June 2023, a comparison of 1 year post-registration outcomes over time, median time to transplant, and prolonged registrations.
- 3 The COVID-19 pandemic has led to unprecedented challenges for UK transplantation. There have been concerns about the ability to care for transplant recipients, lack of access to resource because it is being used for patients in the pandemic, and the risk versus benefit for immunosuppressed transplant recipients.

#### DATA ANALYSIS

- 4 In the first half of 2023, there were a total of 28 patients on the active intestinal transplant list at any time, corresponding to 28 registrations; 19 were adult and 9 were paediatric. Details of these patients are shown in **Table 1**. Nine registrations had ended in a transplant by October 2023. Of the 15 patients who remained on the list at 26 October 2023, 9 are active on the list, 6 are blood group O, 1 has sensitisation points and 2 have in-hospital urgency points.
- 5 Since the NBAS was implemented, in the first two years compared with the two years prior, we observed a non-significant increase in the proportion of patients transplanted within 1 year of listing ( $p=0.2$ ) and a decrease in the number of deaths (including removals due to deteriorating condition) within 1 year of listing (7 compared with 2) (**Figure 1**), for both adult and paediatric patients. However, in the most recent period, the number of deaths has increased (14 deaths on the list), but overall the proportion of deaths pre-NBAS compared to the whole period after is not significantly different ( $p=0.07$ ). When looking at median waiting time for first registrations in the period, we have seen an initial reduction in waiting time for both liver requiring patients and non-liver requiring patients, but this has increased in the more recent period (**Table 2**). **Table 3** shows both adult and paediatric waiting times initially reduced following the introduction of the NBAS but have increased in the most recent period.
- 6 Prolonged intestinal registrations are defined as active registrations for an intestinal transplant for longer than six months. Prolonged suspensions are defined as suspensions for longer than three months. **Table 4** presents the number of prolonged registrations and suspensions as at 1 October 2023. Across centres, nine patients have been active for more than six months (ranging from 0.6 years to 3.1 years) and eight patients have been suspended for more than three months (ranging from 0.3 years to 2.2 years).

**ACTION**

- 7 This report is presented for members' information. Members are asked to review it and comment. Members are also reminded to notify NHSBT (via ODT Online) of any data amendments, e.g. deaths, removals.

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**Table 1** Details of the 28 intestinal transplant registrations for 28 patients which were active on the elective intestinal transplant list at any time between 1 January 2023 and 30 June 2023

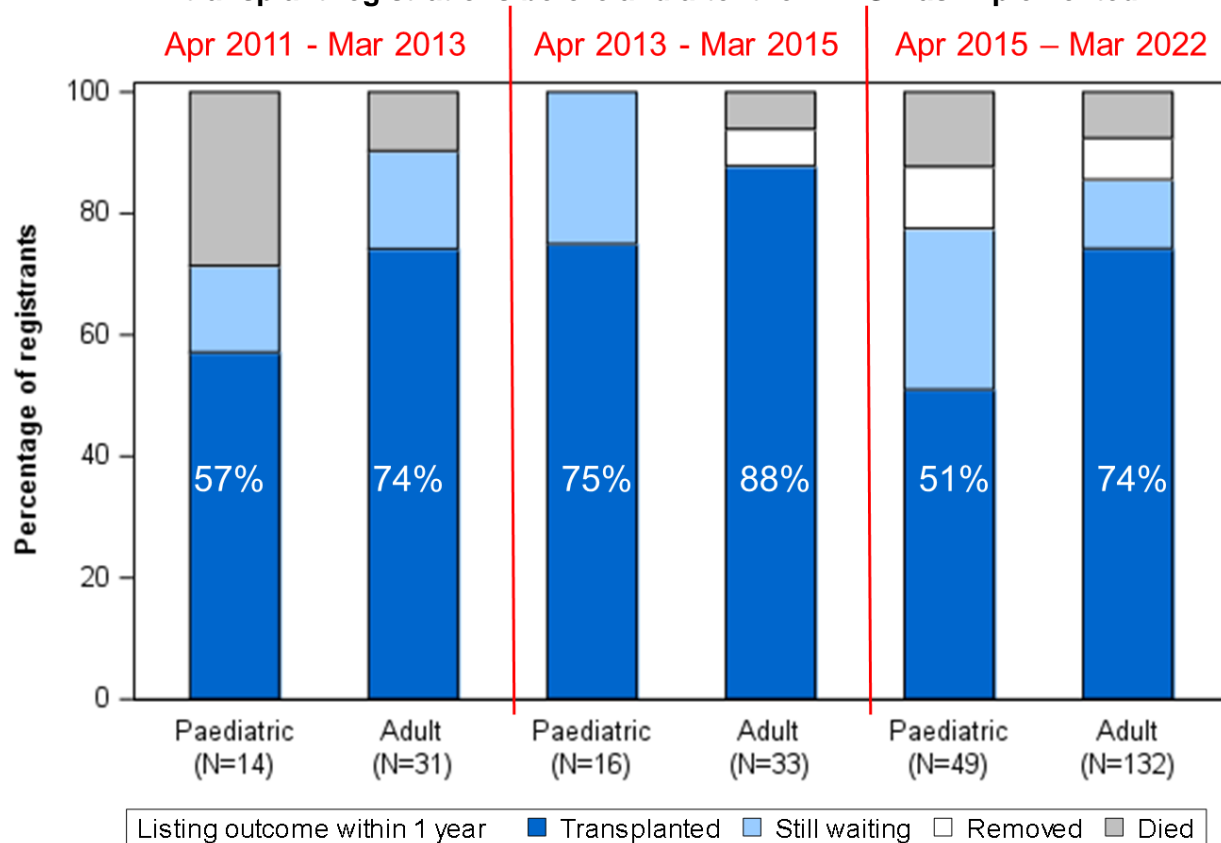
Patient	Reg No	Transplant Unit	Age Group	Patient Blood Group	Transplant Required	Outcome (as at 26 October 2023)	Waiting time as at outcome (days)	Loss of intravenous line access urgency points?	Liver failure urgency points?	Diagnosis of malignancy urgency points?	In-hospital status urgency points?	Sensitisation points?	Rank if transplanted
1	2	Oxford	Adult	O	BO	Active	119	No	No	No	No	Yes	
2	1	Oxford	Adult	A	MMV	Removed	62	No	No	No	No	Yes	
3	1	Oxford	Adult	O	MMV	Removed	125	No	No	No	No	Yes	
4	1	Oxford	Adult	A	MMV	Removed	157	No	No	No	No	No	
5	1	Oxford	Adult	O	MMV	Transplanted	75	No	No	No	No	Yes	9
6	1	Oxford	Adult	O	MMV	Transplanted	107	No	No	No	No	Yes	5
7	1	King's College	Paediatric	O	LBP	Active	706	No	No	No	No	No	
8	1	King's College	Paediatric	B	MV	Suspended	454	No	Yes	No	No	No	
9	1	King's College	Paediatric	B	MV	Active	391	No	Yes	No	No	No	
10	1	King's College	Paediatric	A	BO	Active	345	No	No	No	No	No	
11	1	King's College	Paediatric	A	BO	Removed	139	No	No	No	Yes	No	
12	1	Cambridge	Adult	O	MV	Suspended	1660	No	No	No	No	No	
13 <sup>1</sup>	1	Cambridge	Adult	O	MV	Transplanted	31	No	No	No	No	No	
14	1	Cambridge	Adult	O	MV	Active	546	No	No	No	No	No	
15	1	Cambridge	Adult	B	MMV	Suspended	506	No	No	Yes	No	No	
16	1	Cambridge	Adult	A	MMV	Suspended	504	No	No	No	No	No	
17	1	Cambridge	Adult	A	MV	Suspended	465	No	No	No	No	No	
18	1	Cambridge	Adult	O	MMV	Transplanted	133	No	No	No	No	No	9
19	1	Cambridge	Adult	A	MMV	Transplanted	160	No	No	No	No	Yes	8
20	1	Cambridge	Adult	O	MV	Transplanted	34	No	No	No	No	No	4
21	1	Cambridge	Adult	O	MV	Suspended	321	Yes	No	No	Yes	No	
22	1	Cambridge	Adult	B	MV	Transplanted	183	No	No	No	Yes	No	1
23	1	Cambridge	Adult	O	MMV	Transplanted	45	No	No	No	No	No	2
24	1	Cambridge	Adult	AB	MMV	Active	127	No	No	No	Yes	No	
25	1	Birmingham	Paediatric	A	MV	Active	1161	No	No	No	No	No	
26	1	Birmingham	Paediatric	AB	MV	Active	226	No	Yes	No	No	No	
27	1	Birmingham	Paediatric	O	MV	Active	136	No	No	No	No	No	
28	1	Birmingham	Paediatric	O	MMV	Transplanted	46	No	No	No	No	No	6

<sup>1</sup> Accepted for donor outside of recipient maximum weight criteria

BO = bowel only (may require stomach/colon/abdominal wall/spleen/kidney), BP= bowel, pancreas only, LBP = liver, bowel, pancreas only,

MV=multivisceral (liver, bowel, pancreas plus stomach/colon/abdominal wall/spleen/kidney), MMV = modified multivisceral (liver, bowel plus stomach/colon/abdominal wall/spleen/kidney)

**Figure 1 Comparison of 1 year registration outcomes for elective intestinal transplant registrations before and after the NBAS was implemented**



**Table 2 Median waiting time to elective intestine transplant in the UK, for first registrations between 1 April 2011 – 31 March 2022, by era and registration type**

Registration era	Registration type	Number of patients registered	Waiting time (days)	
			Median	95% Confidence interval
Apr 2011-Mar 2013	Liver required	21	272	105 – 439
	No liver required	22	154	18 – 290
	<b>Total in era</b>	<b>43</b>	<b>168</b>	<b>84 – 252</b>
Apr 2013-Mar 2015	Liver required	27	85	50 – 120
	No liver required	19	65	28 – 102
	<b>Total in era</b>	<b>46</b>	<b>65</b>	<b>53 – 77</b>
Apr 2015-Mar 2021	Liver required	88	190	131 – 249
	No liver required	85	98	60 – 136
	<b>Total in era</b>	<b>173</b>	<b>139</b>	<b>91 – 187</b>

Note: any periods of suspension from the list are included in the calculation of median waiting times

<b>Table 3</b>		<b>Median waiting time to elective intestine transplant in the UK, for first registrations between 1 April 2011 – 31 March 2022, by era and age group</b>		
<b>Registration era</b>	<b>Age group</b>	<b>Number of patients registered</b>	<b>Waiting time (days)</b>	
			<b>Median</b>	<b>95% Confidence interval</b>
Apr 2011-Mar 2013	Paediatric	14	188	129 – 247
	Adult	29	66	0 – 133
	<b>Total in era</b>	<b>43</b>	<b>168</b>	<b>84 – 252</b>
Apr 2013-Mar 2015	Paediatric	15	179	50 – 308
	Adult	31	49	24 – 74
	<b>Total in era</b>	<b>46</b>	<b>65</b>	<b>53 – 77</b>
Apr 2015-Mar 2021	Paediatric	43	252	113 – 391
	Adult	130	104	81 – 127
	<b>Total in era</b>	<b>173</b>	<b>139</b>	<b>91 – 187</b>

Note: any periods of suspension from the list are included in the calculation of median waiting times

<b>Table 4</b>		<b>Prolonged registrations on the UK intestinal transplant list, as at 1 October 2023</b>	
<b>Listing status</b>	<b>Transplant centre</b>	<b>Number of patients</b>	<b>Number of years</b>
<b>Active</b>	Birmingham	2	3.1, 0.6
	Cambridge	3	1.4, 1.2, 0.9
	King's College	4	1.9, 1.2, 1.0, 0.9
<b>Suspended</b>	Cambridge	6	2.2, 0.8, 0.6, 0.6, 0.6, 0.3
	Oxford	2	1.5, 1.5