

NHS BLOOD AND TRANSPLANT**BOWEL ADVISORY GROUP****SUMMARY OF REGISTRATIONS AND TRANSPLANT ACTIVITY****SUMMARY****INTRODUCTION**

- 1 This paper provides information on recent registrations for an intestinal failure transplant and a summary of recent transplant activity in the UK. Median waiting time to transplant is also provided.

DATA ANALYSIS

- 2 Data on 33 registrations for an intestinal failure transplant between 1 February 2013 and 31 January 2014 were analysed. Of these registrations, 19 (58%) resulted in a transplant, 3 (9%) resulted in removal, 1 (3%) resulted in suspension and 10 (30%) remained active as at 9 March 2014.
- 3 Median waiting time to intestinal failure transplant was approximately 6 months for elective registrations between 1 April 2008 and 30 September 2013, calculated as at 9 March 2014. Median waiting time was comparable for patients requiring a bowel only, patients requiring a liver, bowel and pancreas and patients requiring a bowel and pancreas but no liver (log-rank test, $p=0.5$).
- 4 Nineteen patients were awaiting an intestinal failure transplant on 9 March 2014; ten paediatric and nine adult. Three patients had some degree of sensitisation, as indicated by the reporting of unacceptable HLA specificities. Six of these patients have been on the transplant list for more than two years; however they have all spent some of this time suspended from the list. There were no patients active or suspended on the super-urgent intestinal failure transplant list as at 9 March 2014.
- 5 Twenty six intestinal failure transplants were performed between 1 February 2013 and 31 January 2014, ten more than the number performed in the previous year, 1 February 2012 to 31 January 2013. Only 3 (12%) transplants were performed in a paediatric patient in the recent time period, compared with 5 (31%) in the previous year.

ACTIONS

- 6 Through recent communication with Addenbroke's Hospital it has become apparent that some transplants at Cambridge in the last decade have been classed by NHSBT as intestinal failure transplants but have not been classed as such locally. Cambridge has classed these transplants as liver & pancreas or liver, kidney & pancreas because the small bowel was used only for operative purposes and not because the patients needed any bowel or had intestinal failure. Transplants like these, which use the small bowel but the patient does not have intestinal failure, have been included in the reports and analyses of intestinal transplants by NHSBT. Members are requested to clarify whether this type of patients should be considered as a separate group in NHSBT reports and whether the BAG is interested in them or not.
- 7 The data and analyses presented in this paper are for information and to identify issues that warrant more detailed investigation or discussion.

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BOWEL ADVISORY GROUP

SUMMARY OF REGISTRATIONS AND TRANSPLANT ACTIVITY

INTRODUCTION

- 1 This paper provides information on recent registrations for an intestinal failure transplant and a summary of recent transplant activity in the UK. Median waiting time to transplant is also provided.
- 2 When considering the data presented in this paper it should be borne in mind that the time period presented covers a change in the rules by which donor bowels are allocated to patients with intestinal failure who require a transplant.

DATA AND METHODS

- 3 Data on elective and super-urgent registrations for an intestinal failure transplant between 1 February 2013 and 31 January 2014 are provided as well as a summary of the intestinal failure transplant activity between 1 February 2012 and 31 January 2014.
- 4 The Kaplan-Meier estimation method was used to estimate median waiting time to intestinal failure transplantation for elective registrations between 1 April 2008 and 30 September 2013. Any periods of suspension from the transplant list were included in the calculation of a patient's waiting time.

RESULTS

REGISTRATION ACTIVITY

- 5 In the period between 1 February 2013 and 31 January 2014, there were 33 registrations for an intestinal failure transplant. The outcome of these registrations for paediatric and adult patients, as at 9 March 2014, broken down by transplant centre, is shown in **Table 1**. Note that none of the patients registered in this time period had died on the list at time of analysis.
- 6 Cambridge had four super-urgent intestinal failure registrations in the time period, all ending in a transplant. Two of these registrations correspond to the same patient, thus there were three super-urgent patients in total in the time period. All three were initially registered on the elective list but were shortly after deemed super-urgent. The corresponding elective registrations are shown in **Table 1** under the removal column.
- 7 Of the 33 registrations for an intestinal failure transplant between 1 February 2013 and 31 January 2014, 19 (58%) resulted in a transplant as at 9 March 2014. A breakdown of these transplants by transplant centre and type is shown in **Table 2** for paediatric and adult recipients. Note that none of the registrations at King's College resulted in a transplant by 9 March 2014.

Table 1 Outcome of intestinal failure transplant registrations in the UK between 1 February 2013 and 31 January 2014, by patient age group and transplant centre

Transplant centre	Outcome of registrations as at 9 March 2014								No. regns N
	Transplanted		Suspended		Removed		Active		
	N	%	N	%	N	%	N	%	
Paediatric recipients									
Birmingham	3	60	0	0	0	0	2	40	5
King's College	0	0	0	0	0	0	6	100	6
Total	3	27	0	0	0	0	8	73	11
Adult recipients									
Cambridge	13 ¹	76	1	6	3	18	0	0	17
Oxford	3	60	0	0	0	0	2	40	5
Total	16	73	1	4	3	14	2	9	22
TOTAL	19	58	1	3	3	9	10	30	33

¹ Includes four super-urgent intestinal failure registrations

Note: None of the patients registered in this time period had died at time of analysis.

Percentages have been rounded to the nearest whole number and are based on small numbers.

Table 2 Number of intestinal failure transplants in the UK, by recipient age group, transplant centre and type, that resulted from registrations between 1 February 2013 and 31 January 2014

Transplant centre	Transplant type					Total
	BO	LO	MV	MMV	LBP	
Paediatric recipients						
Birmingham	1	1	1	0	0	3
Total	1	1	1	0	0	3
Adult recipients						
Cambridge	3	0	8 ¹	1	1	13
Oxford	2	0	0	1	0	3
Total	5	0	8	2	1	16
TOTAL	6	1	9	2	1	19

¹ Includes four super-urgent intestinal failure transplants

Note: BO=Bowel only, LO=Liver only, MV=Multivisceral, MMV=Modified multivisceral, LBP=Liver, bowel and pancreas

BO comprises all intestinal failure transplants that did not include a liver or pancreas

- 8 **Table 3** shows the median waiting time to intestinal failure transplantation by registration type for elective patients registered between 1 April 2008 and 30 September 2013, calculated as at 9 March 2014. The overall median waiting time was 177 days (95% CI: 131 - 223 days). There was not a statistically significant difference between the median waiting times of the different types of registration (log-rank test, $p=0.5$).
- 9 For comparison, the median waiting time to elective liver only transplantation, as reported in the 2012/13 Organ Donation and Transplantation Activity Report, is 147 days for adults (95% CI: 137 - 157 days) and 72 days for paediatric patients (95% CI: 53 - 91 days) (registrations between 1 April 2008 and 31 March 2011).

Table 3 Median waiting time to intestinal failure transplant for elective patients registered between 1 April 2008 and 30 September 2013 in the UK, as at 9 March 2014

Registration type	No. regns	Waiting time (days)	
		Median	95% Confidence interval
Bowel only ¹	42	142	66 – 218
Liver, bowel and pancreas ¹	61	181	33 – 329
Bowel and pancreas ¹	34	195	0 – 400
Total	137	177	131 - 223

¹ May also include any of: stomach, spleen, abdominal wall, colon, kidney

Note: Any periods of suspension are included in the calculation of a patient's waiting time

TRANSPLANT LIST

- 10 As at 9 March 2014, there were 19 patients who were active or suspended on the elective intestinal failure transplant list. Unacceptable HLA specificities were reported via the intestinal failure transplant recipient registration form in three cases.
- 11 There were no patients active or suspended on the super-urgent intestinal failure transplant list as at 9 March 2014.

TRANSPLANT ACTIVITY

- 13 Between 1 February 2013 and 31 January 2014 26 intestinal failure transplants were performed compared with 16 transplants in the previous year, 1 February 2012 to 31 January 2013.
- 14 A summary of these transplants for paediatric and adult patients, broken down by transplant centre and type is shown in **Table 5**, for each of the two time periods. Only 3 (12%) transplants were performed in a paediatric patient between 1 February 2013 and 31 January 2014, compared with 5 (31%) in the previous year.

Table 5 Intestinal failure transplants in the UK between 1 February 2013 and 31 January 2014 (1 February 2012 and 31 January 2013), by recipient age group, transplant centre and type

Transplant centre	Transplant type											
	BO		LO		LBP		MV		MMV		Total	
	N	N	N	N	N	N	N	N	N	N	N	N
Paediatric recipients												
Birmingham	1	(2)	1	(0)	0	(1)	1	(0)	0	(0)	3	(3)
King's College	0	(1)	0	(0)	0	(1)	0	(0)	0	(0)	0	(2)
Total	1	(3)	1	(0)	0	(2)	1	(0)	0	(0)	3	(5)
Adult recipients												
Cambridge	5	(0)	0	(0)	1	(1)	9	(5)	2	(0)	17	(6)
Oxford	4	(5)	0	(0)	0	(0)	0	(0)	2	(0)	6	(5)
Total	9	(5)	0	(0)	1	(1)	9	(5)	4	(0)	23	(11)
TOTAL	10	(8)	1	(0)	1	(3)	10	(5)	4	(0)	26	(16)

Note: BO=Bowel only, LO= Liver only, LBP=Liver, bowel and pancreas, MV=Multivisceral, MMV=Modified multivisceral, BO comprises all transplants not including a liver or a pancreas

ACTIONS

- 15 Members are requested to indicate whether patients who require a small bowel because of operative purposes and not because of intestinal failure should be considered as a separate group in NHSBT reports and analyses of intestinal transplants, and whether the BAG is interested in them or not.
- 16 The data and analyses presented in this paper are for information and to identify issues that warrant more detailed investigation or discussion.

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March 2014