

# Intestinal Activity

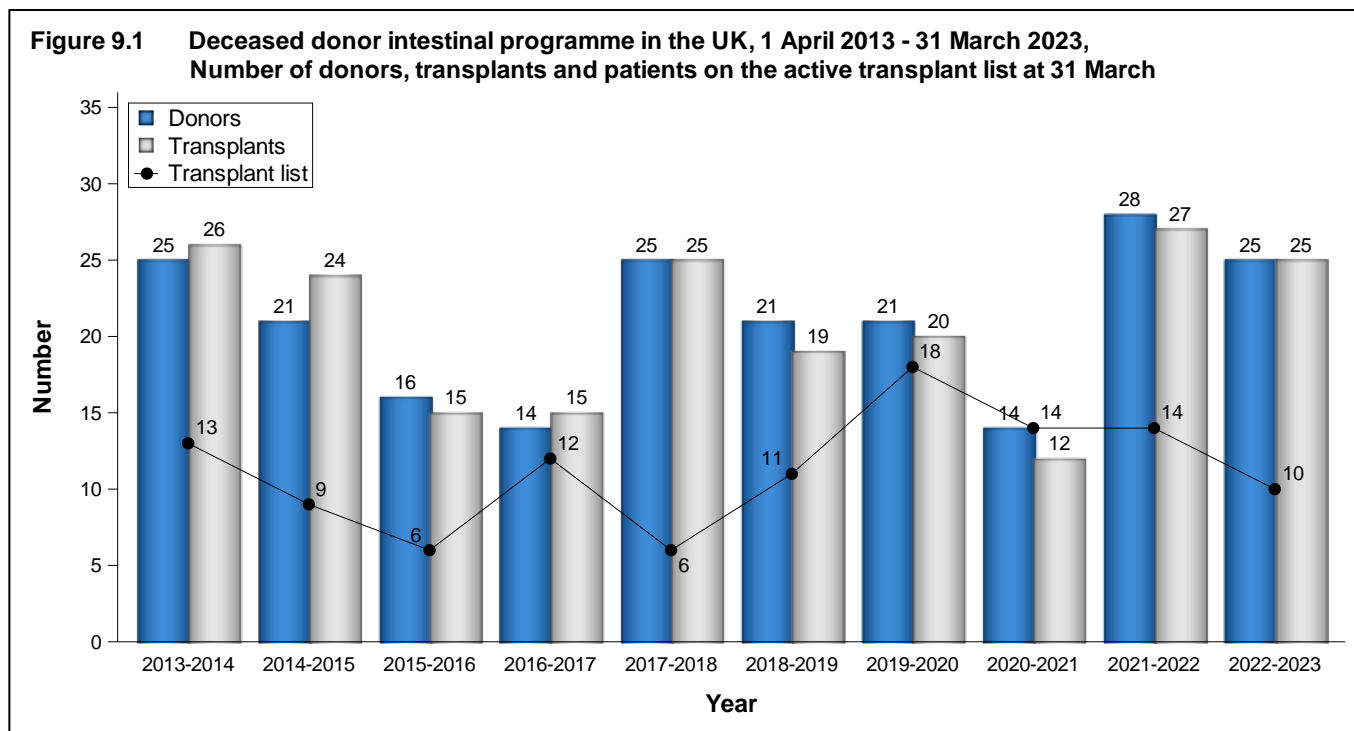
## Key messages

- There were 10 patients on the active intestinal transplant list at 31 March 2023 in total
- There were 29 registrations for an intestinal transplant during 2022-2023
- 25 intestinal transplants were carried out in 2022-2023 (27 in the previous year)
- On average, patients wait 5 months for a transplant

## 9.1 Overview

A national Intestinal Allocation Scheme has been in place since 2013. Patients are prioritised according to a points system based on a range of clinical factors including donor-recipient age matching, loss of intravenous line access, liver failure, diagnosis of malignancy, in-hospital status, additional organs required, sensitisation and waiting time. A score is calculated for every potentially suitable patient on the national active transplant list and donor organs are allocated preferentially to the patient with the most points.

A summary of activity for deceased donor intestinal transplants and the transplant list at year end for the last ten years is shown in **Figure 9.1**. The number of patients registered on the active transplant list for an intestinal transplant has fallen to 10. In the last financial year, the number of intestinal transplants fell to 25.



## 9.2 Transplant list

In 2022-2023, there were 29 registrations for an intestinal transplant corresponding to 29 patients. The outcome of these registrations for paediatric (aged <18 years) and adult patients, as at 31 March 2023, broken down by transplant centre, can be found in **Table 9.1**. Overall, 13 (45%) remained active/suspended, 12 (41%) resulted in a transplant, and 4 (14%) were removed.

<b>Table 9.1 Outcome of intestinal registrations in the UK, 1 April 2022 and 31 March 2023</b>									
<b>Transplant centre</b>	<b>Transplanted</b>		<b>Outcome of registrations as at 31 March 2023</b>				<b>Active/Susp</b>		<b>TOTAL</b>
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>Adult</b>									
Cambridge	7	44	0	0	1	6	8	50	16
Oxford	3	50	0	0	2	33	1	17	6
<b>TOTAL</b>	<b>10</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>14</b>	<b>9</b>	<b>41</b>	<b>22</b>
<b>Paediatric</b>									
Birmingham	1	50	0	0	0	0	1	50	2
King's College	1	20	0	0	1	20	3	60	5
<b>TOTAL</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>14</b>	<b>4</b>	<b>57</b>	<b>7</b>

**Table 9.2** shows the active intestinal transplant list in the UK at 31 March 2023 and 2022 by country/NHS region of patient's residence. At 31 March 2023, the overall transplant list rate was 0.1 pmp and ranged from 0.0 to 0.4 pmp across NHS regions, although these numbers are very small, so these are not meaningful differences.

<b>Table 9.2 Active intestinal transplant list at 31 March by Country/NHS region of patient residence</b>				
<b>Country/ NHS region of residence</b>	<b>Intestinal transplant list (pmp)</b>			
	<b>2023</b>		<b>2022</b>	
North East and Yorkshire	3	(0.4)	4	(0.5)
North West	0	(0.0)	0	(0.0)
Midlands	1	(0.1)	0	(0.0)
East of England	1	(0.2)	1	(0.2)
London	1	(0.1)	2	(0.2)
South East	2	(0.2)	2	(0.2)
South West	0	(0.0)	2	(0.4)
<b>England</b>	<b>8</b>	<b>(0.1)</b>	<b>11</b>	<b>(0.2)</b>
<b>Isle of Man</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>Channel Islands</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>Wales</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>Scotland</b>	<b>2</b>	<b>(0.4)</b>	<b>3</b>	<b>(0.5)</b>
<b>Northern Ireland</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>TOTAL</b>	<b>10</b>	<b>(0.1)</b>	<b>14</b>	<b>(0.2)</b>

**Table 9.3** shows median waiting time to elective intestinal transplant by registration type. On average, patients wait 158 days for a transplant, but those requiring a liver wait longer.

<b>Table 9.3 Median waiting time to intestinal transplant in the UK, for patients registered 1 April 2018 - 31 March 2022, by registration type</b>			
Registration type	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Bowel only <sup>1</sup>	20	176	85 - 267
Liver, bowel and pancreas <sup>1</sup>	54	179	123 - 235
Bowel and pancreas <sup>1</sup>	39	116	79 - 153
<b>TOTAL</b>	<b>113</b>	<b>158</b>	<b>104 - 212</b>

<sup>1</sup> May also include any of: stomach, spleen, abdominal wall, kidney

### 9.3 Donor and organ supply

The rates per million population (pmp) for intestinal donors are shown in **Table 9.4** by donor country/NHS region of residence. The overall DBD intestinal donor rate was 0.4 pmp and ranged from 0.0 to 0.8 pmp across NHS regions. Of the 772 DBD solid organ donors, 25 (3%) donated their small bowel. A large majority of DBD solid organ donors are lost because they are outside of the age and weight criteria for bowel donation. The next most common reason for losing donors is lack of consent for bowel donation. Of those donors with consent for bowel donation, the most common reason for not offering them is no suitable recipient on the transplant list followed by donor history. Of those donors that are offered, a large number are not accepted, most commonly, due to donor virology, donor history and unsuitable size.

**Table 9.4 Intestinal donation rates for deceased donors after brain death, in the UK, 1 April 2022 - 31 March 2023, by Country/ NHS region**

Country/ NHS region of residence	Solid organ donors (pmp)		Intestinal donors (pmp)		% of solid organ donors	Organs used
North East and Yorkshire	105	(12.9)	6	(0.7)	5.7	5
North West	78	(10.5)	1	(0.1)	1.3	1
Midlands	92	(8.5)	4	(0.4)	4.3	4
East of England	67	(10.6)	5	(0.8)	7.5	5
London	85	(9.7)	2	(0.2)	2.4	2
South East	105	(11.3)	0	(0.0)	0.0	0
South West	70	(12.3)	2	(0.4)	2.9	2
<b>England</b>	<b>602</b>	<b>(10.6)</b>	<b>20</b>	<b>(0.4)</b>	<b>3.3</b>	<b>19</b>
<b>Isle of Man</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>0</b>
<b>Channel Islands</b>	<b>1</b>	<b>(5.9)</b>	<b>0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>0</b>
<b>Wales</b>	<b>44</b>	<b>(14.1)</b>	<b>1</b>	<b>(0.3)</b>	<b>2.3</b>	<b>1</b>
<b>Scotland</b>	<b>49</b>	<b>(8.9)</b>	<b>3</b>	<b>(0.5)</b>	<b>6.1</b>	<b>3</b>
<b>Northern Ireland</b>	<b>35</b>	<b>(18.4)</b>	<b>1</b>	<b>(0.5)</b>	<b>2.9</b>	<b>1</b>
<b>TOTAL<sup>1</sup></b>	<b>772</b>	<b>(11.5)</b>	<b>25</b>	<b>(0.4)</b>	<b>3.2</b>	<b>24</b>

<sup>1</sup> Includes 41 donors with unknown UK postcode

## 9.4 Transplants

**Table 9.5** shows intestinal transplant activity by transplant centre and transplant type for financial years 2021-2022 and 2022-2023. In 2022-2023, there were a total of 25 transplants, 21 adult and 4 paediatric transplants.

At 31 March 2023 there were approximately 170 recipients with a functioning intestinal transplant (or multi-organ including intestine) being followed-up as reported to the UK Transplant Registry.

<b>Table 9.5 Intestinal transplants in the UK, by age group, centre and type, 1 April 2022 - 31 March 2023 (2021 - 2022)</b>												
Transplant centre	BO		LBP		Transplant type				LB		TOTAL	
					MV	MMV						
<b>Adult</b>												
Cambridge	1	(1)	1	(0)	9	(9)	7	(4)	0	(0)	<b>18</b>	<b>(14)</b>
Oxford	3	(5)	0	(0)	0	(0)	0	(1)	0	(0)	<b>3</b>	<b>(6)</b>
<b>TOTAL</b>	<b>4</b>	<b>(6)</b>	<b>1</b>	<b>(0)</b>	<b>9</b>	<b>(9)</b>	<b>7</b>	<b>(5)</b>	<b>0</b>	<b>(0)</b>	<b>21</b>	<b>(20)</b>
<b>Paediatric</b>												
Birmingham	0	(1)	0	(1)	2	(0)	0	(2)	0	(0)	<b>2</b>	<b>(4)</b>
King's College	1	(2)	0	(0)	1	(1)	0	(0)	0	(0)	<b>2</b>	<b>(3)</b>
<b>TOTAL</b>	<b>1</b>	<b>(3)</b>	<b>0</b>	<b>(1)</b>	<b>3</b>	<b>(1)</b>	<b>0</b>	<b>(2)</b>	<b>0</b>	<b>(0)</b>	<b>4</b>	<b>(7)</b>
BO = Bowel only (may also include stomach/spleen/abdominal wall/kidney/colon)												
BP = Bowel and pancreas												
LBP = Liver, bowel and pancreas												
MV = Multivisceral – liver, bowel and pancreas plus stomach/spleen/abdominal wall/kidney/colon												
MMV = Modified multivisceral – bowel and pancreas plus stomach/spleen/abdominal wall/kidney/colon												
LB = Liver and bowel												

## 9.5 Demographic characteristics

The age group, sex, ethnicity and blood group of intestinal donors, transplant recipients and transplant list patients are shown in **Table 9.6**.

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	7	(28)	4	(16)	4	(40)
	18-34	9	(36)	3	(12)	0	(0)
	35-49	9	(36)	6	(24)	2	(20)
	50-59	0	(0)	10	(40)	3	(30)
	60-69	0	(0)	2	(8)	1	(10)
	mean (SD)	29	(13)	41	(19)	33	(25)
Sex	Male	11	(44)	16	(64)	2	(20)
	Female	14	(56)	9	(36)	8	(80)
Ethnicity	White	21	(91)	20	(80)	9	(90)
	Asian	1	(4)	2	(8)	1	(10)
	Black	0	(0)	1	(4)	0	(0)
	Other	1	(4)	2	(8)	0	(0)
	Unknown	2	-	0	-	0	-
Blood group	O	15	(60)	9	(36)	4	(40)
	A	8	(32)	10	(40)	4	(40)
	B	2	(8)	3	(12)	1	(10)
	AB	0	(0)	3	(12)	1	(10)
Graft number	First graft	-	-	22	(88)	8	(80)
	Re-graft	-	-	3	(12)	2	(20)
<b>TOTAL</b>		<b>25</b>	<b>(100)</b>	<b>25</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>