

# Intestinal Activity

## Key messages

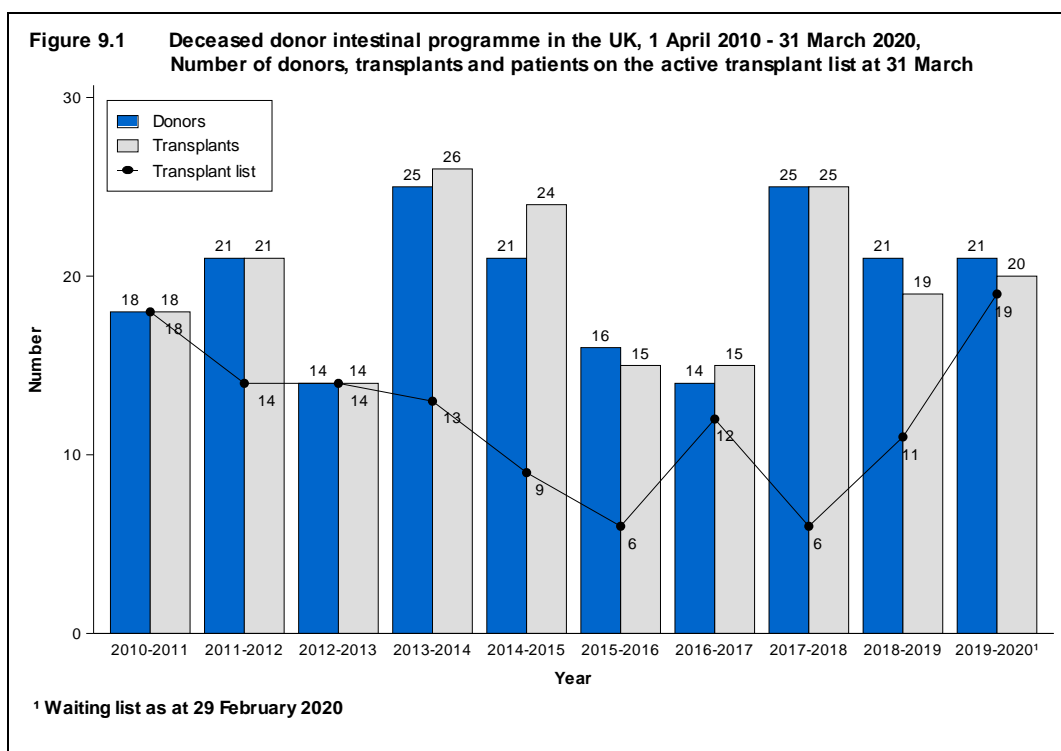
- There were 19 patients on the active intestinal transplant list at 29 February 2020 in total
- There were 32 registrations for an intestinal transplant in 2019-2020, corresponding to 32 patients (26 adult and 6 paediatric patients)
- 20 intestinal transplants were carried out in 2019-2020 (19 in the previous year)
- On average, patients wait around 3 months for a transplant

## 9.1 Overview

Note that the COVID-19 pandemic will have affected the number of offered, retrieved and transplanted organs in 2019-2020. To better reflect the number of patients waiting for a transplant at the end of this year, data as at 29 February 2020 have been used.

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 increased since 2019 by 73% to 19. In the last financial year, the number of intestinal transplants increased slightly from the previous year.



## 9.2 Transplant list

In 2019-2020, there were 32 registrations for an intestinal transplant corresponding to 32 patients. The outcome of these registrations for paediatric (aged <18 years) and adult patients, as at 31 March 2020, broken down by transplant centre, can be found in **Table 9.1**. Overall, 15 (47%) remained active/suspended, 13 (41%) resulted in a transplant, 1 (3%) died on the transplant list, and 3 (9%) were removed.

<b>Table 9.1 Outcome of intestinal registrations in the UK, 1 April 2019 and 31 March 2020</b>									
<b>Transplant centre</b>	<b>Transplanted</b>		<b>Outcome of registrations as at 31 March 2020</b>				<b>Active/Susp</b>		<b>TOTAL</b>
	<b>N</b>	<b>%</b>	<b>Died</b>	<b>Removed</b>	<b>Active/Susp</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>Adult</b>									
Cambridge	9	53	0	0	0	0	8	47	17
Oxford	4	44	0	0	2	22	3	33	9
<b>TOTAL</b>	<b>13</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>42</b>	<b>26</b>
<b>Paediatric</b>									
Birmingham	0	0	1	33	0	0	2	67	3
King's College	0	0	0	0	1	33	2	67	3
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>17</b>	<b>4</b>	<b>67</b>	<b>6</b>

**Table 9.2** shows the active intestinal transplant list in the UK at 29 February 2020 and 31 March 2019 by country/NHS region of patient's residence. At 29 February 2020, the overall transplant list rate was 0.3 pmp and ranged from 0.2 to 0.6 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>2020<sup>1</sup></b>		<b>2019</b>	
North East and Yorkshire	2	(0.2)	0	(0.0)
North West	2	(0.3)	0	(0.0)
Midlands	3	(0.3)	1	(0.1)
East of England	4	(0.6)	4	(0.6)
London	3	(0.3)	2	(0.2)
South East	2	(0.2)	2	(0.2)
South West	1	(0.2)	1	(0.2)
<b>England</b>	<b>17</b>	<b>(0.3)</b>	<b>10</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>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>Northern Ireland</b>	<b>0</b>	<b>(0.0)</b>	<b>0</b>	<b>(0.0)</b>
<b>TOTAL<sup>2</sup></b>	<b>19</b>	<b>(0.3)</b>	<b>11</b>	<b>(0.2)</b>

<sup>1</sup>As at 29 February 2020  
<sup>2</sup>Includes patients in 2020 (2019) resident Overseas 2 (1)

**Table 9.3** shows median waiting time to elective intestinal transplant by registration type. On average, patients wait 100 days for a transplant, but those requiring a liver wait significantly longer.

<b>Table 9.3 Median waiting time to intestinal transplant in the UK, for patients registered 1 April 2015 - 31 March 2019, by registration type</b>			
Registration type	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Bowel only <sup>1</sup>	14	59	25 – 93
Liver, bowel and pancreas <sup>1</sup>	51	178	131 – 225
Bowel and pancreas <sup>1</sup>	30	46	31 – 61
<b>TOTAL</b>	<b>95</b>	<b>100</b>	<b>59 – 141</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 0.3 pmp and ranged from 0.2 to 0.4 pmp across NHS regions. Of the 946 DBD solid organ donors, 21 (2%) 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.

<b>Table 9.4 Intestinal donation rates for deceased donors after brain death in the UK, 1 April 2019 - 31 March 2020, by country/NHS region</b>						
<b>Country/NHS region of residence</b>	<b>Solid organ donors (pmp)</b>		<b>Intestinal donors (pmp)</b>		<b>% of solid organ donors</b>	<b>Organs used</b>
North East and Yorkshire	135	(15.8)	3	(0.4)	2.2	3
North West	92	(13.1)	2	(0.3)	2.2	2
Midlands	130	(12.3)	2	(0.2)	1.5	2
East of England	82	(12.6)	2	(0.3)	2.4	2
London	120	(13.5)	3	(0.3)	2.5	3
South East	133	(15.0)	3	(0.3)	2.3	3
South West	76	(13.5)	2	(0.4)	2.6	2
<b>England</b>	<b>768</b>	<b>(13.7)</b>	<b>17</b>	<b>(0.3)</b>	<b>2.2</b>	<b>17</b>
<b>Isle of Man</b>	<b>2</b>	<b>(25.0)</b>	<b>0</b>	<b>(0.0)</b>	<b>-</b>	<b>-</b>
<b>Channel Islands</b>	<b>3</b>	<b>(18.8)</b>	<b>0</b>	<b>(0.0)</b>	<b>-</b>	<b>-</b>
<b>Wales</b>	<b>57</b>	<b>(18.2)</b>	<b>0</b>	<b>(0.0)</b>	<b>-</b>	<b>-</b>
<b>Scotland</b>	<b>65</b>	<b>(11.9)</b>	<b>4</b>	<b>(0.7)</b>	<b>6.2</b>	<b>3</b>
<b>Northern Ireland</b>	<b>30</b>	<b>(16.0)</b>	<b>0</b>	<b>(0.0)</b>	<b>-</b>	<b>-</b>
<b>TOTAL<sup>1</sup></b>	<b>939</b>	<b>(14.1)</b>	<b>21</b>	<b>(0.3)</b>	<b>2.2</b>	<b>20</b>

<sup>1</sup> UK includes 14 donors with unknown UK postcode and excludes 7 donors with overseas postcode

## 9.4 Transplants

**Table 9.5** shows intestinal transplant activity by transplant centre and transplant type for financial years 2018-2019 and 2019-2020. In 2019-2020, there were a total of 20 transplants, 17 adult and 3 paediatric transplants.

At 31 March 2020 there were approximately 150 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 2019 - 31 March 2020 (2018-2019)</b>												
<b>Transplant centre</b>	<b>Transplant type</b>										<b>TOTAL</b>	
	<b>BO</b>		<b>LBP</b>		<b>MV</b>		<b>MMV</b>		<b>LB</b>			
<b>Adult</b>												
Cambridge	0	(0)	0	(0)	6	(5)	6	(3)	0	(0)	12	(8)
Oxford	5	(7)	0	(0)	0	(0)	0	(1)	0	(0)	5	(8)
<b>TOTAL</b>	<b>5</b>	<b>(7)</b>	<b>0</b>	<b>(0)</b>	<b>6</b>	<b>(5)</b>	<b>6</b>	<b>(4)</b>	<b>0</b>	<b>(0)</b>	<b>17</b>	<b>(16)</b>
<b>Paediatric</b>												
Birmingham	0	(1)	0	(0)	0	(0)	0	(0)	0	(0)	0	(1)
King's College	1	(0)	0	(1)	2	(1)	0	(0)	0	(0)	3	(2)
<b>TOTAL</b>	<b>1</b>	<b>(1)</b>	<b>0</b>	<b>(1)</b>	<b>2</b>	<b>(1)</b>	<b>0</b>	<b>(0)</b>	<b>0</b>	<b>(0)</b>	<b>3</b>	<b>(3)</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**.

<b>Table 9.6 Demographic characteristics of deceased intestinal donors and transplant recipients 1 April 2019 - 31 March 2020, and transplant list patients at 29 February in the UK</b>						
<b>Age group (years)</b>	<b>Donors</b>		<b>Transplant recipients</b>		<b>Active transplant list patients</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
0 - 17	6	(29)	3	(15)	10	(53)
18 - 34	5	(24)	6	(30)	2	(11)
35 - 49	8	(38)	4	(20)	5	(26)
50 - 59	2	(10)	3	(15)	2	(11)
60 - 69	0	(0)	4	(20)	0	(0)
70+	0	(0)	0	(0)	0	(0)
Mean (SD)	30	(17)	38	(19)	22	(20)
Male	11	(52)	7	(35)	10	(53)
Female	10	(48)	13	(65)	9	(47)
White	18	(90)	16	(80)	14	(74)
Asian	0	(0)	3	(15)	2	(11)
Black	1	(5)	0	(0)	0	(0)
Chinese	0	(0)	0	(0)	1	(5)
Other	1	(5)	1	(5)	2	(11)
Not reported	1		0		0	
O	11	(52)	8	(40)	11	(58)
A	9	(43)	8	(40)	6	(32)
B	1	(5)	3	(15)	2	(11)
AB	0	(0)	1	(5)	0	(0)
First graft			17	(85)	17	(89)
Re-graft			3	(15)	2	(11)
<b>TOTAL</b>	<b>21</b>	<b>(100)</b>	<b>20</b>	<b>(100)</b>	<b>19</b>	<b>(100)</b>