

**NHS BLOOD & TRANSPLANT  
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE  
PANCREAS ADVISORY GROUP**

**NATIONAL PANCREAS OFFERING SCHEME**

**6 MONTH REVIEW**

**11 SEPTEMBER 2019 TO 10 MARCH 2020**

**KEY POINTS**

1. Summary of changes implemented on 11<sup>th</sup> September 2019:
  - a. Top tier for patients who were 100% (calculated Reaction Frequency (cRF)) sensitised, or had matchability points score 10 or had more than three years of pancreas waiting time.
  - b. Donors with a BMI>31kg/m<sup>2</sup> donors are offered first to islet patients
  - c. Donors aged <25 years with a BMI<25kg/m<sup>2</sup> are offered first to whole patients.
  - d. Top tier within Kidney Offering Scheme (KOS) for simultaneous pancreas kidney (SPK) or simultaneous islet kidney (SIK) patients who were 100% sensitised or had matchability points score of 10 or had more than seven years of kidney waiting time.
2. The number of pancreas and islet transplants performed in the first six months of the new scheme was 102, 75 DBD and 27 DCD donors. 88 (86%) were whole pancreas transplants and 14 (14%) islet transplants.
3. Of the 102 transplants, 4% were patients in Tier A of KOS or POS compared to 7% (of 194) that would have been in these tiers in the previous year.
4. 237 patients were waiting for a pancreas or islet transplant at 1<sup>st</sup> March 2020. Of these 237, 9 (4%) were in Tier A of KOS and 14 (6%) were in Tier A of POS. A total of 23 (10%) patients who were either 100% sensitised, matchability score 10 or long waiting patients.
5. Of the 237 patients waiting, 209 (88%) patients were waiting for an SPK or pancreas alone and 28 (12%) an islet transplant, of which 12 were SIK patients. The overall median waiting time for those on the list on 1<sup>st</sup> March was comparable to those on the list on 1<sup>st</sup> September 2019: 229 days and 228 days respectively.
6. The overall proportion of pancreases retrieved from DBD donors that were transplanted, as either whole organ or islets, was 46% in the first 6-months of the scheme compared to 43% in the previous year.

## NATIONAL PANCREAS OFFERING SCHEME (2019)

**CONTENTS**

<b>PANCREAS TRANSPLANTATION</b>		<b>PAGE</b>
Table 1.1	Overview of transplant activity	4
Table 1.2	Centre-specific transplant activity	4
Table 1.3	Transplant demographics	5
Table 1.4	Blood group matching	6
Table 1.5	Donor BMI by transplant type	6
Table 1.6	Donor age by transplant type	6
<b>PANCREAS TRANSPLANT LIST &amp; WAITING TIMES</b>		
Table 2.1	Overview of the national & centre specific transplant list	8
Table 2.2	Transplant list demographics	9
Table 2.3	Median waiting time on the list	10
<b>OFFERING, RETRIEVAL &amp; ORGAN USE</b>		
Table 3.1	Use of pancreases from solid organ donors, overall	12
Table 3.2	Use of pancreases from solid organ donors, by organ type	12
Figure 3.1	Review of islet isolations performed	13

# PANCREAS TRANSPLANTATION

**Table 1.1 Overview of transplant activity, 11 September 2019 - 10 March 2020**

Transplant type		Donor type		Total
		DBD	DCD	
Vascularised pancreas	SPK	61	21	<b>82</b>
	PAK	4	2	<b>6</b>
	<b>Total</b>	<b>65</b>	<b>23</b>	<b>88</b>
Pancreatic islet	Routine	6	3	<b>9</b>
	Priority	3	1	<b>4</b>
	SIK	1	0	<b>1</b>
	<b>Islet total</b>	<b>10</b>	<b>4</b>	<b>14</b>
<b>TOTAL</b>		<b>75</b>	<b>27</b>	<b>102</b>

**Table 1.2 Centre-specific transplant activity, 11 September 2018 - 10 March 2020**

Transplant centre	Previous year		NPOS 2019 (6 months)				Donor type		
	N	(% )	N	(% )	Transplant type			DBD	DCD
					SPK	PAK	PTA		
<b>Vascularised pancreas</b>									
Cambridge	20	(12)	9	(10)	9	0	0	5	4
Cardiff	8	(5)	7	(8)	7	0	0	5	2
Edinburgh	16	(10)	12	(14)	12	0	0	11	1
Guy's	27	(16)	14	(16)	14	0	0	12	2
Manchester	34	(21)	10	(11)	8	2	0	5	5
Newcastle	7	(4)	2	(2)	2	0	0	2	0
Oxford	46	(28)	29	(33)	25	4	0	20	9
WLRTC	7	(4)	5	(6)	5	0	0	5	0
<b>Total</b>	<b>165</b>	<b>(100)</b>	<b>88</b>	<b>(100)</b>	<b>82</b>	<b>6</b>	<b>0</b>	<b>65</b>	<b>23</b>
<b>Pancreatic islet</b>	<b>N</b>	<b>(% )</b>	<b>N</b>	<b>(% )</b>	<b>Routine</b>	<b>Priority</b>	<b>SIK</b>	<b>DBD</b>	<b>DCD</b>
Bristol	0	-	0	-	0	0	0	0	0
Edinburgh	11	(38)	7	(50)	4	3	0	4	3
King's College	2	(7)	2	(14)	2	0	0	1	1
Manchester	9	(31)	1	(7)	0	0	1	1	0
Newcastle	4	(14)	2	(14)	2	0	0	2	0
Oxford	3	(10)	2	(14)	1	1	0	2	0
Royal Free	0	-	0	-	0	0	0	0	0
<b>Total</b>	<b>29</b>	<b>(100)</b>	<b>14</b>	<b>(100)</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>4</b>

<b>Factor</b>		Previous Year		NPOS 2019 (6 mths)	
		N	(%)	N	(%)
Number of transplants		194	(100)	102	(100)
Waiting time (months)	0 to <3	34	(18)	17	(17)
	3 to <6	22	(11)	12	(12)
	6 to <12	39	(20)	17	(17)
	12 to <24	73	(38)	46	(45)
	24 to <36	17	(9)	7	(7)
	36 or more	9	(5)	3	(3)
Sensitisation (cRF%)	0 to <10	122	(63)	58	(57)
	10 to <30	17	(9)	10	(10)
	30 to <75	34	(18)	24	(24)
	75 to <95	17	(9)	9	(9)
	95 to <100	3	(2)	1	(1)
	100	1	(1)	0	(-)
Matchability Score	1-3	40	(21)	50	(49)
	4-7	111	(57)	48	(47)
	8-9	40	(21)	3	(3)
	10	3	(2)	1	(1)
Total HLA mismatch (A, B, DR)	0 to 4	162	(84)	84	(82)
	5 or 6	32	(16)	18	(18)
Centre location	Closest three	128	(66)	59	(58)
	Other	66	(34)	43	(42)
On dialysis	No	79	(41)	62	(61)
	Yes	115	(59)	40	(39)
Transplant type	SPK	150	(77)	82	(80)
	PAK, PTA	15	(8)	6	(6)
	Routine islet	8	(4)	9	(9)
	Priority islet	12	(6)	4	(4)
	SIK	9	(5)	1	(1)
Recipient sex	Male	116	(60)	48	(47)
	Female	78	(40)	54	(53)
Recipient blood group	O	87	(45)	40	(39)
	A	81	(42)	40	(39)
	B	18	(9)	18	(18)
	AB	8	(4)	4	(4)
Recipient age (years)	Less than 30	13	(7)	5	(5)
	30 to <40	51	(26)	39	(38)
	40 to <50	68	(35)	30	(29)
	50 to <60	56	(29)	22	(22)
	60 or older	6	(3)	6	(6)
Recipient ethnicity	White	165	(85)	84	(82)
	Non-white	28	(14)	18	(18)
	Not known	1	(1)	0	(-)
Offer Tier	New KOS Tier A	3	(2)	1	(1)
	New POS Tier A	10	(5)	3	(3)
	New POS Tier B	193	(93)	96	(94)
	Other	1	(<1)	2	(2)

**Table 1.4 Blood group matching, 11 September 2019 - 10 March 2020**

Donor blood group	Recipient blood group								TOTAL	
	O		A		B		AB		N	(%)
O	40	(89)	1	(2)	4	(9)	-	-	45	(44)
A	-	-	39	(100)	-	-	-	-	39	(38)
B	-	-	-	-	14	(100)	-	-	14	(14)
AB	-	-	-	-	-	-	4	(100)	4	(4)
<b>TOTAL</b>	<b>40</b>	<b>(39)</b>	<b>40</b>	<b>(39)</b>	<b>18</b>	<b>(18)</b>	<b>4</b>	<b>(4)</b>	<b>102</b>	<b>(100)</b>

**Table 1.5 Donor BMI by transplant type, 11 September 2019 - 10 March 2020**

Donor BMI (kg/m <sup>2</sup> )	Transplant type				TOTAL
	Vascularised pancreas		Pancreatic islet		N
22 or less	40	(45)	1	(7)	41
23 to 25	30	(34)	2	(14)	32
26 to 28	12	(14)	5	(36)	17
29 to 30	6	(7)	1	(7)	7
31 or over	0	(0)	5	(36)	5
<b>TOTAL</b>	<b>88</b>	<b>(100)</b>	<b>14</b>	<b>(100)</b>	<b>102</b>

**Table 1.6 Donor age by transplant type, 11 September 2019 - 10 March 2020**

Donor age (years)	Transplant type				TOTAL
	Vascularised pancreas		Pancreatic islet		N
Less than 25	38	(43)	1	(7)	39
25 to <30	10	(11)	1	(7)	11
30 to <40	13	(15)	4	(29)	17
40 to <50	18	(20)	0	(0)	18
50 to <60	8	(9)	8	(57)	16
60 or older	1	(1)	0	(0)	1
<b>TOTAL</b>	<b>88</b>	<b>(100)</b>	<b>14</b>	<b>(100)</b>	<b>102</b>

# **PANCREAS TRANSPLANT LIST & WAITING TIMES**



**Table 2.1 Overview of the national and centre specific transplant list, as at 1 September 2019 and 1 March 2020**

Transplant centre	1 Sep 2019		1 Mar 2020		Transplant type		
	N	(%)	N	(%)	SPK	PAK	PTA
<b>Vascularised pancreas</b>							
Cambridge	12	(6)	10	(5)	9	1	0
Cardiff	13	(6)	13	(6)	13	0	0
Edinburgh	33	(15)	29	(14)	29	0	0
Guy's	25	(12)	27	(13)	27	0	0
Manchester	29	(13)	42	(20)	40	1	1
Newcastle	6	(3)	8	(4)	6	1	1
Oxford	86	(40)	68	(33)	62	0	6
WLRTC	12	(6)	12	(6)	12	0	0
<b>Total</b>	<b>216</b>	<b>(100)</b>	<b>209</b>	<b>(100)</b>	<b>198</b>	<b>3</b>	<b>8</b>
<b>Pancreatic islet</b>	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>	<b>Routine</b>	<b>Priority</b>	<b>SIK</b>
Bristol	0	-	0	-	0	0	0
Edinburgh	9	(21)	5	(18)	2	2	1
King's College	3	(7)	1	(4)	0	1	0
Manchester	19	(44)	11	(39)	1	0	10
Newcastle	6	(14)	7	(25)	6	1	0
Oxford	4	(9)	3	(11)	2	0	1
Royal Free	2	(5)	1	(4)	1	0	0
<b>Total</b>	<b>43</b>	<b>(100)</b>	<b>28</b>	<b>(100)</b>	<b>12</b>	<b>4</b>	<b>12</b>

Factor		1 Sep 2019		Current (1 Mar 2020)		New Registrations	
		N	(%)	N	(%)	N	(%)
Time listed (months)	0 to <3	66	(25)	58	(24)	92	(65)
	3 to <6	37	(14)	37	(16)	44	(31)
	6 to <12	74	(29)	65	(27)	5	(4)
	12 to <24	58	(22)	56	(24)	0	(0)
	24 to <36	12	(5)	7	(3)	0	(0)
	36 or more	12	(5)	14	(6)	0	(0)
Sensitisation (cRF%)	0 to <10	133	(51)	122	(51)	111	(79)
	10 to <30	27	(10)	29	(12)	13	(9)
	30 to <75	43	(17)	39	(16)	12	(9)
	75 to <95	22	(8)	14	(6)	4	(3)
	95 to <100	17	(7)	15	(6)	0	(0)
	100	17	(7)	18	(8)	1	(1)
Matchability Score	1-3	39	(15)	92	(39)	64	(45)
	4-7	133	(51)	106	(45)	65	(46)
	8-9	72	(28)	24	(10)	8	(6)
	10	15	(6)	15	(6)	1	(1)
	Not known <sup>1</sup>	0	(0)	0	(0)	3	(2)
On dialysis	Yes	95	(37)	100	(42)	58	(41)
	No	164	(63)	137	(58)	83	(59)
Transplant type	SPK	201	(78)	198	(84)	115	(82)
	PAK, PTA	15	(6)	11	(5)	8	(6)
	Routine islet	23	(9)	12	(5)	5	(4)
	Priority islet	3	(1)	4	(2)	7	(5)
	SIK	17	(7)	12	(5)	6	(4)
Recipient sex	Female	132	(51)	114	(48)	58	(41)
	Male	127	(49)	123	(52)	83	(59)
Recipient blood group	O	130	(50)	123	(52)	63	(45)
	A	75	(29)	69	(29)	56	(40)
	B	45	(17)	41	(17)	18	(13)
	AB	9	(3)	4	(2)	4	(3)
Recipient age (years)	Less than 30	18	(7)	21	(9)	13	(9)
	30 to <40	71	(27)	72	(30)	53	(38)
	40 to <50	77	(30)	76	(32)	47	(33)
	50 to <60	76	(29)	60	(25)	21	(15)
	60 or older	17	(7)	8	(3)	7	(5)
Recipient ethnicity	White	221	(85)	202	(85)	120	(85)
	Non-white	38	(15)	34	(14)	20	(14)
	Not known	0	(0)	1	(0)	1	(1)
Offering Tier	New KOS Tier A	11	(4)	9	(4)	1	(1)
	New POS Tier A	11	(4)	14	(6)	0	(0)
	Other	237	(92)	214	(90)	140	(99)

<sup>1</sup> Matchability score not calculated as patients were active for less than a day.

**Table 2.3 Median waiting time on the list by demographics, as at 1 September 2019 and 1 March 2020**

Factor	N	1 Sep 2019		N	1 Mar 2020		
		Median	IQ Range		Median	IQ Range	
<b>All patients</b>	<b>259</b>	<b>228</b>	<b>89 - 416</b>	<b>237</b>	<b>229</b>	<b>99 - 452</b>	
Sensitisation (cRF%)	0 to <10	133	201	79 - 346	122	184	68 - 348
	10 to <30	27	211	71 - 407	29	218	79 - 393
	30 to <75	43	198	89 - 436	39	234	86 - 376
	75 to <95	22	272	106 - 474	14	245	143 - 404
	95 to <100	17	359	264 - 527	15	541	446 - 1265
	100	17	820	389 - 1557	18	1027	394 - 1795
Matchability Score	1-3	39	201	73 - 368	92	193	65 - 389
	4-7	133	207	79 - 402	106	212	86 - 361
	8-9	72	273	133 - 486	24	477	233 - 838
	10	15	820	228 - 1613	15	1052	410 - 1865
On dialysis	Yes	95	277	107 - 472	100	245	109 - 459
	No	164	203	79 - 371	137	218	86 - 415
Transplant type	SPK	201	220	82 - 402	198	218	92 - 410
	PAK, PTA	15	233	30 - 585	11	186	68 - 767
	Routine islet	23	474	176 - 726	12	603	277 - 1318
	Priority islet	3	-	-	4	-	-
	SIK	17	267	107 - 549	12	241	158 - 457
Recipient sex	Female	132	287	136 - 486	114	321	137 - 535
	Male	127	198	61 - 387	123	200	80 - 338
Recipient blood group	O	130	231	94 - 411	123	240	106 - 459
	A	75	212	73 - 409	69	178	60 - 346
	B	45	289	144 - 528	41	365	165 - 541
	AB	9	-	-	4	-	-
Recipient age (years)	Less than 30	18	166	68 - 311	21	157	78 - 393
	30 to <40	71	221	50 - 416	72	185	73 - 389
	40 to <50	77	205	75 - 359	76	263	104 - 418
	50 to <60	76	273	100 - 486	60	283	196 - 515
	60 or older	17	340	115 - 520	8	-	-
Recipient ethnicity	White	221	222	80 - 416	202	218	99 - 459
	Non-white	38	270	179 - 393	34	313	92 - 452
	Not known	0	-	-	1	-	-
Centre	Bristol	0	-	-	0	-	-
	Cambridge	12	122	40 - 253	10	110	30 - 425
	Cardiff	13	416	201 - 449	13	327	141 - 598
	Edinburgh	42	314	99 - 520	34	310	155 - 505
	Guy's	25	106	47 - 372	27	222	68 - 493
	King's College	3	-	-	1	-	-
	Manchester	48	126	58 - 339	53	191	86 - 318
	Newcastle	12	359	180 - 1136	15	446	80 - 908
	Oxford	90	225	89 - 407	71	213	136 - 404
	Royal Free	2	-	-	1	-	-
WLRTC	12	270	183 - 418	12	215	42 - 410	
Offering Tier	New KOS Tier A	11	365	212 - 619	9	-	-
	New POS Tier A	11	1250	585 - 1683	14	1378	1125 - 1865
	Other	237	213	80 - 394	214	212	84 - 383

Data not presented where less than 10 patients included

# **OFFERING, RETRIEVAL AND ORGAN USE**

**Table 3.1 Use of pancreases from solid organ donors, 11 September 2018 to 10 March 2020 overall**

	Solid organ donors	SPC <sup>1</sup> donors	Offered		Accepted		Pancreas Retrieved		Transplanted		Conversion % <sup>2</sup>
			N	(%)	N	(%)	N	(%)	N	(%)	
<b>DBD</b>											
NPOS 6 mths	511	396	337	(85)	200	(59)	166	(83)	76	(46)	<b>23</b>
Previous year	909	696	598	(86)	389	(65)	332	(85)	144	(43)	<b>24</b>
<b>DCD</b>											
NPOS 6 mths	336	172	141	(82)	86	(61)	62	(72)	27	(44)	<b>19</b>
Previous year	664	297	249	(84)	146	(59)	108	(74)	50	(46)	<b>20</b>

<sup>1</sup> Standard pancreas criteria (SPC) donors have been defined as those aged 65 years or less for DBD and 55 years or less for DCD

<sup>2</sup> Percentage transplanted of those offered.

**Table 3.2 Use of pancreases from solid organ donors, 11 September 2018 to 10 March 2020 by organ type**

	Solid organ donors	SPC <sup>1</sup> donors	Offered		Vascularised Pancreas Accepted		Retrieved		Transplanted	
			N	(%)	N	(%)	N	(%)	N	(%)
<b>DBD</b>										
NPOS 6 mths	511	396	301	(76)	158	(52)	130	(82)	66	(51)
Previous year	909	696	518	(74)	280	(54)	241	(86)	118	(49)
<b>DCD</b>										
NPOS 6 mths	336	172	129	(75)	69	(53)	51	(74)	23	(45)
Previous year	664	297	226	(76)	119	(53)	94	(79)	47	(50)
	Solid organ donors	SPIC <sup>2</sup> donors	Offered		Pancreatic Islets Accepted		Retrieved		Transplanted	
			N	(%)	N	(%)	N	(%)	N	(%)
<b>DBD</b>										
NPOS 6 mths	511	344	161	(47)	58	(36)	36	(62)	10	(28)
Previous year	909	613	274	(45)	129	(47)	91	(71)	26	(29)
<b>DCD</b>										
NPOS 6 mths	336	126	57	(45)	19	(33)	11	(58)	4	(36)
Previous year	664	220	98	(45)	28	(29)	14	(50)	3	(21)

<sup>1</sup> Standard pancreas criteria (SPC) donors have been defined as those aged 65 years or less for DBD and 55 years or less for DCD

<sup>2</sup> Standard pancreas islet criteria (SPIC) donors have been defined as those aged 60 years or less for DBD and 50 years or less for DCD

Figure 3.3 Review of islet isolations performed  
11 September 2019 – 10 March 2020

