
6 PANCREAS ACTIVITY

Key messages

- A new National Pancreas Allocation Scheme was introduced on 1 December 2010
- The number of patients waiting on the pancreas transplant list fell by 4% to 322 at 31 March 2011
- The number of pancreas donors and transplants increased by 5% to 210
- 13 islet transplants were made possible by the pancreas islet transplant programme

6.1 Overview

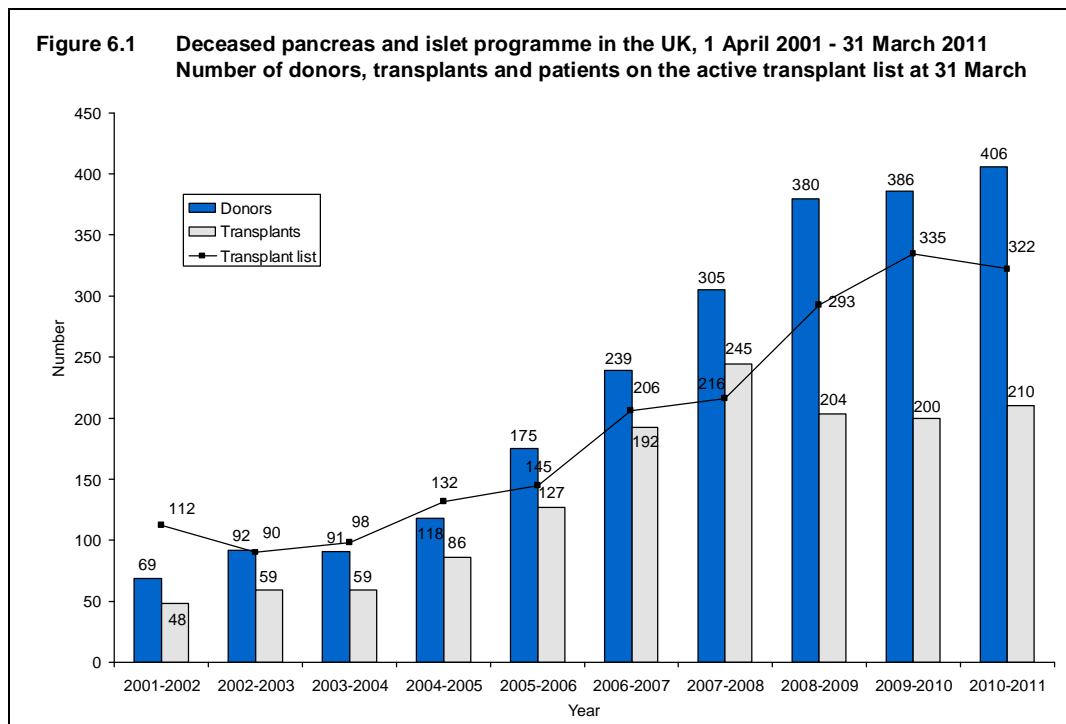
A new National Pancreas Allocation Scheme was introduced on 1 December 2010. Patients are now prioritised according to a points system based on a range of clinical factors. A computer program calculates a score for every potentially suitable patient on the national active transplant list and the pancreas is allocated preferentially to the patient with the most points. This differs from the previous system in which donor organs were allocated to transplant centres to select recipients rather than identifying specific patients directly.

Pancreases from donors after brain death and donors after circulatory death are allocated through this scheme. Patients listed for a vascularised pancreas or islet transplant are prioritised through one combined national transplant list. The new scheme aims to reduce the incidence of long waiting patients and to improve equity in access to transplant irrespective of where in the UK each patient resides. The effectiveness of the new scheme will be monitored closely and adjusted as required.

The number of patients registered on the active transplant list at 31 March for a pancreas only or simultaneous pancreas/kidney (SPK) transplant has increased substantially over the last ten years from 112 patients in 2002 to 322 patients in 2011. The number of pancreas donors and transplants has also increased steadily from 69 donors resulting in 48 transplants in 2001-2002, to 406 donors and 210 transplants in 2010-2011, although the actual number of transplants is less than in 2007-2008. A summary of activity for deceased donor pancreas transplants and the transplant list for 1 April 2001 - 31 March 2011 is shown in **Figure 6.1**.

Throughout this chapter, intestinal transplants involving a pancreas are not included in the pancreas transplant activity reported. Any pancreases retrieved and used for such transplants are however included in the pancreas donor activity. In 2010/2011 there were 7 intestinal transplants.

Data on pancreatic islet activity are only available for 1 July 2009 to 31 March 2011.



6.2 Transplant list

Table 6.1 shows the number of patients on the active transplant lists at 31 March 2011 by centre. The number of patients registered on the pancreas transplant list decreased by 4% in the year: on 31 March 2011, 322 patients were registered active, compared with 335 at the end of March 2010.

Of the 322 patients on the active transplant list at 31 March 2011, 250 (78%) required SPK transplantation (275 at 31 March 2010), 48 (15%) patients required a pancreas only transplant (43 at 31 March 2010) and 24 (7%) were registered for a pancreas islet transplant (17 at 31 March 2010).

The outcome of patients registered on the UK pancreas transplant list at 1 April 2010, or subsequently registered during the financial year, is shown in **Table 6.2**. 80 patients joined the pancreas transplant list while 198 joined the list for kidney and pancreas.

Patients listed for a routine islet transplant are generally waiting for their first islet graft. The majority of islet transplant recipients are likely to require more than one graft to complete their treatment. To optimise transplant outcomes the follow-up graft should be performed within six to twelve months of the first. Patients requiring follow-up grafts are priority listed.

Table 6.1 Patients on the pancreas transplant lists at 31 March 2011 (2010) in the UK, by centre

Centre	Active transplant lists								TOTAL	
	Kidney/pancreas		Pancreas only		Islet		Priority			
					Routine					
Cambridge	11	(11)	0	(0)	-	(-)	-	(-)	11	(11)
Cardiff	6	(7)	1	(3)	-	(-)	-	(-)	7	(10)
Edinburgh	35	(29)	0	(1)	2	(0)	1	(0)	38	(30)
Guys	22	(18)	3	(4)	-	(-)	-	(-)	25	(22)
King's College	-	(-)	-	(-)	0	(0)	0	(1)	0	(1)
Manchester	56	(62)	2	(6)	2	(1)	0	(1)	60	(70)
Newcastle	6	(6)	3	(2)	6	(4)	2	(1)	17	(13)
Oxford	101	(132)	21	(12)	8	(6)	0	(1)	130	(151)
Royal Free	-	(-)	-	(-)	3	(1)	0	(1)	3	(2)
WLRTC	13	(10)	18	(15)	-	(-)	-	(-)	31	(25)
TOTAL	250	(275)	48	(43)	21	(12)	3	(5)	322	(335)

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Table 6.2 Pancreas transplant list and new registrations in the UK, 1 April 2010 - 31 March 2011

Outcome of patient at 31 March 2011	Active and suspended patients at 1 April 2010		New registrations in 2010-2011 ¹		TOTAL	
	N	%	N	%	N	%
	Pancreas transplant list					
Remained active/suspended	94	69	47	59	141	65
Transplanted	26	19	21	26	47	22
Removed	15 ²	11	10	13	25	12
Died	1	1	2	3	3	1
TOTAL	136		80		216	
Kidney/pancreas transplant list						
Remained active/suspended	216	55	157	79	373	63
Transplanted	129	33	33	17	162	28
Removed	24	6	5	3	29	5
Died	21	5	3	2	24	4
TOTAL	390		198		588	

¹ Includes re-registrations for second or subsequent transplants

² Includes 1 registrations removed from pancreas list but active on kidney/pancreas list

An indication of longer term outcomes for patients listed for a pancreas or kidney/pancreas transplant are summarised in **Figure 6.2**. This shows the proportion of patients transplanted or still waiting six months, one year, two years and three years after joining the list. It also shows the proportion removed from the transplant list (typically because they become too unwell for transplant) and those dying while on the transplant list. 56% of patients are transplanted within one year, while three years after listing 82% of patients have received a transplant. The median (average) waiting time for a pancreas transplant is 236 days and is shown by blood group in **Table 6.3**.

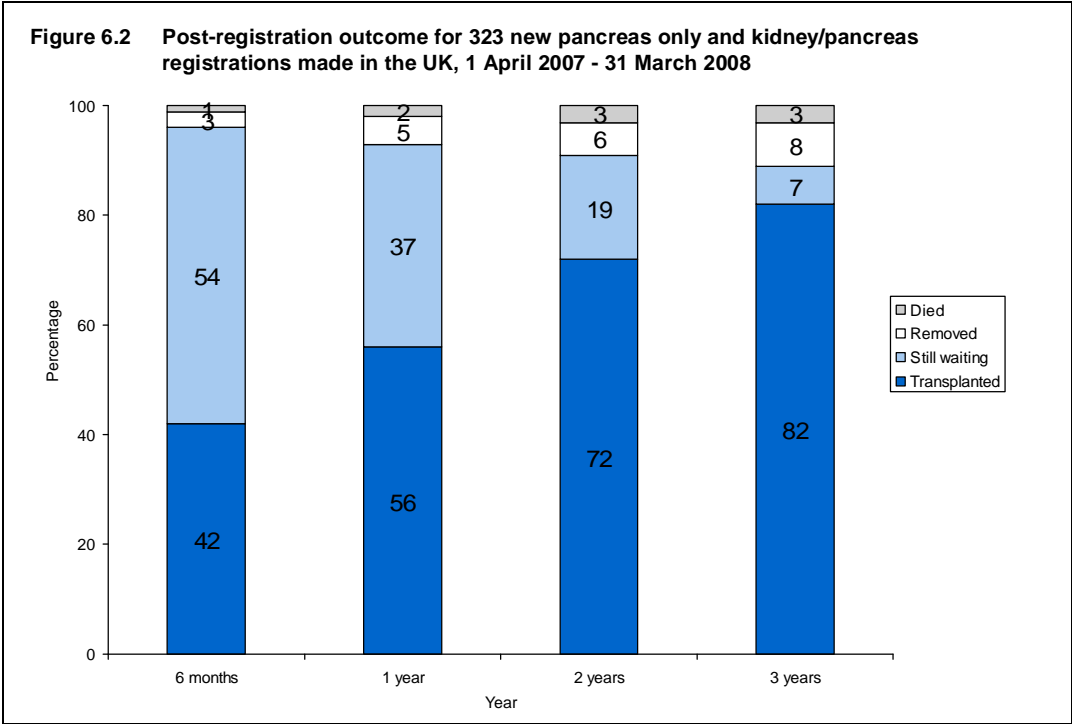


Table 6.3 Median waiting time to pancreas only and kidney/pancreas transplant in the UK, for patients registered 1 April 2005 - 31 March 2009

Blood group	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult			
O	545	296	255 - 337
A	462	177	133 - 221
B	104	217	119 - 315
AB	31	97	58 - 136
TOTAL	1142	236	212 - 260

6.3 Donor and organ supply

Of the 637 organ donors after brain death in the UK in 2010-2011, 336 (53%) donated a pancreas. There were 70 pancreas donors after circulatory death in 2010-2011. **Table 6.4** shows this activity by country/ Strategic Health Authority of the donor's residence. No adjustments have been made for potential demographic differences in populations.

The overall rate for number of pancreas donors after brain death is 5.4 pmp, with rates ranging from 3.4 to 8.0 pmp across the Strategic Health Authorities and for donors after circulatory death is 1.1 pmp, with rates ranging from 0 to 2.7 pmp across the Strategic Health Authorities.

Country/ Strategic Health Authority of residence	Pancreas donors (pmp)				TOTAL	
	DBD		DCD			
North East	16	(6.2)	0	(0.0)	16	(6.2)
North West	25	(3.6)	6	(0.9)	31	(4.5)
Yorkshire and The Humber	18	(3.4)	2	(0.4)	20	(3.8)
East Midlands	18	(4.0)	10	(2.2)	28	(6.3)
West Midlands	29	(5.3)	7	(1.3)	36	(6.6)
East of England	30	(5.2)	8	(1.4)	38	(6.6)
London	37	(4.8)	10	(1.3)	47	(6.1)
South East Coast	33	(7.6)	4	(0.9)	37	(8.5)
South Central	33	(8.0)	2	(0.5)	35	(8.5)
South West	23	(4.4)	14	(2.7)	37	(7.1)
England	262	(5.1)	63	(1.2)	325	(6.3)
Isle of Man	1	(12.5)	0	(0.0)	1	(12.5)
Channel Islands	1	(6.7)	0	(0.0)	1	(6.7)
Wales	25	(8.3)	3	(1.0)	28	(9.3)
Scotland	28	(5.4)	3	(0.6)	31	(6.0)
Northern Ireland	19	(10.6)	1	(0.6)	20	(11.2)
TOTAL	336	(5.4)	70	(1.1)	406	(6.5)

¹ Includes 6 donors where the hospital postcode was used in place of an unknown donor postcode

6.4 Transplants

The number of pancreas transplants by recipient country of residence/ Strategic Health Authority is shown in **Table 6.5**. No adjustments have been made for potential demographic differences in populations. The transplant rate ranged from 1.2 to 6.5 pmp across Strategic Health Authorities and overall was 2.8 pmp for donors after brain death and for donors after circulatory death is 0.6 pmp and ranged from 0.2 to 1.9 pmp across Strategic Health Authorities. There were no pancreas transplants in the UK for patients from Northern Ireland this year although patients may have been referred to the Republic of Ireland for transplant.

Table 6.5 Pancreas transplant rates per million population (pmp), in the UK, 1 April 2010 - 31 March 2011, by country and English Strategic Health Authority

Country/ Strategic Health Authority of residence	DBD		DCD		TOTAL	
	N	(pmp)	N	(pmp)	N	(pmp)
North East	3	(1.2)	1	(0.4)	4	(1.6)
North West	12	(1.7)	2	(0.3)	14	(2.0)
Yorkshire and The Humber	9	(1.7)	1	(0.2)	10	(1.9)
East Midlands	16	(3.6)	2	(0.4)	18	(4.0)
West Midlands	13	(2.4)	5	(0.9)	18	(3.3)
East of England	15	(2.6)	7	(1.2)	22	(3.8)
London	22	(2.8)	6	(0.8)	28	(3.6)
South East Coast	8	(1.8)	1	(0.2)	9	(2.1)
South Central	15	(3.7)	1	(0.2)	16	(3.9)
South West	34	(6.5)	10	(1.9)	44	(8.4)
England	147	(2.8)	36	(0.7)	183	(3.5)
Isle of Man	1	(12.5)	0	(0.0)	1	(12.5)
Channel Islands	1	(6.7)	0	(0.0)	1	(6.7)
Wales	17	(5.7)	0	(0.0)	17	(5.7)
Scotland	8	(1.5)	0	(0.0)	8	(1.5)
Northern Ireland	0	(0.0)	0	(0.0)	0	(0.0)
TOTAL	174	(2.8)	36	(0.6)	210	(3.4)

There were 210 deceased donor pancreas transplants in 2010-2011 representing an increase of 5% on the 200 transplants performed in 2009-2010. Of these 210, 155 (74%) were SPK transplants, 42 (20%) were pancreas only transplants (pancreas transplants alone (PTA) or pancreas after kidney (PAK)) and 13 (6%) were islet transplants. The number of transplants performed at each centre is shown in **Table 6.6** by transplant type and **Table 6.7** by donor type.

At 31 March 2011, there were approximately 1,300 recipients with a functioning pancreas transplant (including multi-organ transplants) being followed-up, as reported to the UK Transplant Registry.

Table 6.6 Pancreas transplants, 1 April 2010 - 31 March 2011 (2009-2010) by centre

Centre	SPK		PTA		Transplant type PAK		Islet ¹		Priority	
							Routine			
Cambridge	24	(24)	1	(0)	1	(0)	-	(-)	-	(-)
Cardiff	10	(5)	1	(2)	3	(0)	-	(-)	-	(-)
Edinburgh	6	(12)	1	(0)	0	(0)	1	(0)	0	(0)
Guy's	19	(20)	1	(0)	4	(1)	-	(-)	-	(-)
King's College	-	(-)	-	(-)	-	(-)	1	(1)	1	(0)
Manchester	20	(20)	1	(3)	4	(4)	0	(1)	1	(0)
Newcastle	4	(12)	2	(0)	0	(0)	2	(0)	0	(0)
Oxford	63	(54)	16	(13)	4	(6)	2	(4)	2	(1)
Royal Free	-	(-)	-	(-)	-	(-)	2	(1)	1	(1)
WLRTC	9	(12)	0	(1)	3	(2)	-	(-)	-	(-)
TOTAL	155	(159)	23	(19)	19	(13)	8	(7)	5	(2)

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¹ Islet transplants reported since 1 July 2009

Table 6.7 Pancreas transplants, 1 April 2010 - 31 March 2011 by centre

Centre	SPK		PTA		Islet		TOTAL	
	DBD	DCD	DBD	DCD	DBD	DCD	DBD	DCD
Cambridge	15	9	2	0	-	-	17	9
Cardiff	10	0	4	0	-	-	14	0
Edinburgh	6	0	1	0	1	0	8	0
Guys	15	4	3	1	-	-	19	5
King's College	-	-	-	-	2	0	2	0
Manchester	19	1	3	2	1	0	23	3
Newcastle	3	1	2	0	2	0	7	1
Oxford	54	9	13	7	4	0	71	16
Royal Free	-	-	-	-	3	0	3	0
WLRTC	8	1	2	1	-	-	10	2
TOTAL	130	25	30	11	13	0	174	36

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6.5 Demographic characteristics

The ethnicity of deceased donors, transplant recipients and patients on the transplant list is shown in **Table 6.8**. Patients from ethnic minority groups represent 9% of the transplant list, 6% of transplants and 5% of donors.

Ethnicity	Donors		Transplant recipients				Active transplant list patients					
	2009-2010		2010-2011		2009-2010		2010-2011		2010		2011	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
White	368	(95.3)	386	(95.1)	184	(92.0)	198	(94.3)	295	(92.8)	292	(90.7)
Asian	3	(0.8)	5	(1.2)	9	(4.5)	7	(3.3)	18	(5.7)	20	(6.2)
Black	8	(2.1)	4	(1.0)	5	(2.5)	3	(1.4)	3	(0.9)	7	(2.2)
Chinese	2	(0.5)	1	(0.2)	0	(0.0)	1	(0.5)	0	(0.0)	0	(0.0)
Other	5	(1.3)	10	(2.5)	2	(1.0)	1	(0.5)	2	(0.6)	3	(0.9)
TOTAL	386		406		200		210		318		322	

Table 6.9 shows the age group and sex of deceased pancreas donors, transplant recipients and patients waiting for a pancreas transplant.

Age group (years)	Donors		Transplant recipients		Active transplant list patients	
	N	(%)	N	(%)	N	(%)
0 - 17	23	(6)	2	(1)	0	(0)
18 - 34	108	(27)	34	(16)	57	(18)
35 - 49	157	(39)	118	(56)	192	(60)
50 - 59	107	(26)	47	(22)	64	(20)
60 - 69	11	(3)	9	(4)	8	(2)
70+	0	(0)	0	(0)	1	(<1)
TOTAL	406	(100)	210	(100)	322	(100)
% Male		(53)		(55)		(56)