

Transplant Activity in the UK



2007-2008

Cover pictures:

14-year-old cystic fibrosis sufferer Patrick Hayes after he received a life-saving double-lung transplant.

Mary Younie with John Ward reading a tissue typing tray.

Bolton Mela Asian campaign balloons marquee.

My life My gift - Millwall FC.

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PREFACE

This transplant activity report for the financial year 2007-2008 relates throughout to the UK. All figures quoted are as reported to UK Transplant by 4 June 2008 for the National Transplant Database, maintained on behalf of the transplant community and National Health Service (NHS), or for the NHS Organ Donor Register, maintained on behalf of the UK Health Departments.

The information provided in the tables and figures given in Chapters 2-6 does not always distinguish between adult and paediatric transplantation. The data also do not distinguish between patients entitled to NHS treatment (Group 1 patients) and those who are not (Group 2 patients). It should also be noted that not all cornea donors or cornea grafts are necessarily reported to UK Transplant.

The UK definition of a solid organ donor is any donor from whom at least one solid organ has been retrieved with the intention to transplant. Organs retrieved solely for research purposes have not been counted in this Activity Report. Organ donation has been recorded to reflect the number of organs retrieved. For example, if both lungs were retrieved, two lungs are recorded even if they were both used in one transplant. Similarly, if one liver is donated, one liver is recorded even if it results in two or more transplants. All pancreatic transplants refer to the whole organ.

Information from the Office for National Statistics (ONS) *2001 Census* is quoted in this report.

The number of heartbeating (HB) and non-heartbeating (NHB) donors by hospital are documented in **Appendices IA** and **IB**, respectively. Donation and transplant rates in this report are presented per million population (pmp): population figures used throughout this report are mid-2005 estimates based on ONS *2001 Census* figures and are given in **Appendices IIIA** and **IIIB**.

Graphics from this publication are available from the Statistics and Audit Directorate, UK Transplant. Please email enquiries@uktransplant.nhs.uk for further details.

This report is available on the UK Transplant website:
<http://www.uktransplant.org.uk/ukt/statistics/statistics.jsp>

1 SUMMARY OF ACTIVITY

During 2007-2008, the number of patients who had their lives saved or improved by an organ transplant was 3,235. Of these, 2,381 received an organ from a deceased donor, and a further 854 received an organ from a living donor. In addition, 2,488 patients had their sight restored through a cornea transplant. There were 809 deceased donors of solid organs and 2,062 donors of ocular tissue. Compared to last year, these figures represent a rise of 5% in the number of solid organ transplants and an increase of 4% in the number of cornea transplants. There was an increase of 22% in the number of living donors and an increase of 2% in the number of deceased donors. The total number of solid organ donors increased by 11%, and the number of donors of ocular tissue remained constant.

The number of patients registered for a transplant continues to increase, so that at 31 March 2008 there were 7,655 on the active transplant lists and a further 2,092 patients were on the temporarily suspended transplant lists. This represents an increase of 6% and 10% respectively on the corresponding figures at the end of the previous year. Sadly, 506 patients died in 2007-2008 while waiting for their transplant.

Deceased solid organ donation rates continue to vary across the UK, with 10.6 per million population (pmp) in Scotland, 12.8 in Northern Ireland, 13.6 pmp in England, and 15.2 in Wales. The corresponding rate in the Republic of Ireland is 20.0 pmp.

Although the total annual number of deceased solid organ donors in the UK has changed little over the last few years, the number of non-heartbeating donors rose from 159 in 2006-2007 to 200 in 2007-2008, an increase of 26%, while the number of deceased heartbeating donors fell from 634 to 609, a decrease of 4%. In addition, the number of living donors rose from 702 to 856, an increase of 22%.

In regard to renal transplantation, the number of kidney only transplants rose by 7% and the number of kidney and pancreas transplants increased to 188, an increase of 15% on last year. This led to an overall increase of 7% in the total number of kidney transplants. The number of pancreas only transplants more than doubled, from 27 to 58. Of the heartbeating kidney donors, 96% were white, while 84% of the transplant recipients were white. The greatest percentage of heartbeating donors and recipients were in the 35-49 year age group, and 59% of recipients were male.

Cardiothoracic transplantation decreased by 14% in 2007-2008, with decreases of 18% in the number of heart transplants and 10% in the number of lung transplants. The number of cardiothoracic donors decreased from 236 to 207 and of these donors, 94% were white, as were 94% of recipients. The greatest percentage of donors was in the 35-49 year age group, while the largest percentage of recipients was in the 50-59 year age group, and 64% of recipients were male.

The total number of liver transplants was very similar to last year, with a decrease of 11 in the number of deceased liver donor transplants being balanced by an increase of 12 in the number of living liver donor transplants. Of the liver donors, 95% were white, while 83% of the recipients were white. The greatest percentage of donors came from the 35-49 year age group while the largest percentage of recipients came from the 50-59 year age group, and 59% of recipients were male.

In regard to ocular tissue transplantation, compared to last year, the number of corneas donated remained constant but there was an increase of 3% in the number grafted. However, both the donor and recipient rates continue to vary considerably across the UK, with donation rates ranging between 5.2 pmp and 90.1 pmp, and transplant rates between 27.9 pmp and 61.1 pmp (73.3 pmp in the Channel Islands).

The figures given for graft and patient survival rates in adult recipients in this report demonstrate that the one, two and five year survival rates following deceased heartbeating donor kidney transplantation continue to rise and rates for non-heartbeating and living donor kidney transplantation maintained. For transplants during the most recent years, in adult recipients the five year kidney graft survival rates are 83%, 76% and 88% for living, deceased heartbeating and deceased non-heartbeating donation, respectively. For cardiac transplantation, patient survival is 81% at one year and 72% at five years. The corresponding figures for lung transplantation are 75% at one year and 54% at five years. The one and five year patient survival rates following deceased heartbeating donor liver transplantation are 89% and 75%, respectively. The one year graft survival rates for pancreas and simultaneous kidney and pancreas transplants are 69% and 88%, respectively. The one and five year corneal graft survival rates following a penetrating keratoplasty are 93% and 69%, respectively.

The number of individuals who have pledged to donate their organs after death by registering on the NHS Organ Donation Register (ODR) has increased to 15.1 million. The majority of new registrants continue to come from driving licence applications and reminders through the DVLA, General Practitioner registration and through applications for a Boots Advantage Card. The percentage of the population registered ranges from 21% in the West Midlands and London to 31% in the South West.

As a result of continuing increases in the number of living donor transplants and the number of non-heartbeating donors, the number of transplants in the last financial year was over 3200. However, the number of deceased heartbeating donors is slowly decreasing, and the percentage of relatives who consent to organ donation remains at around 60%. Both of these factors continue to limit the supply of organs available for transplantation.

Dave Collett
Director of Statistics and Audit

2 OVERVIEW

This overview relates to solid organ transplantation. Corresponding information on corneal transplantation is given in Chapter 7.

2.1 Summary of activity

Deceased donor numbers, transplant activity and numbers on the transplant lists at 31 March, for 1 April 1998 to 31 March 2008, are shown in **Figure 2.1**. The total number of transplants in 2007-2008 was 4 lower than that in the previous year.

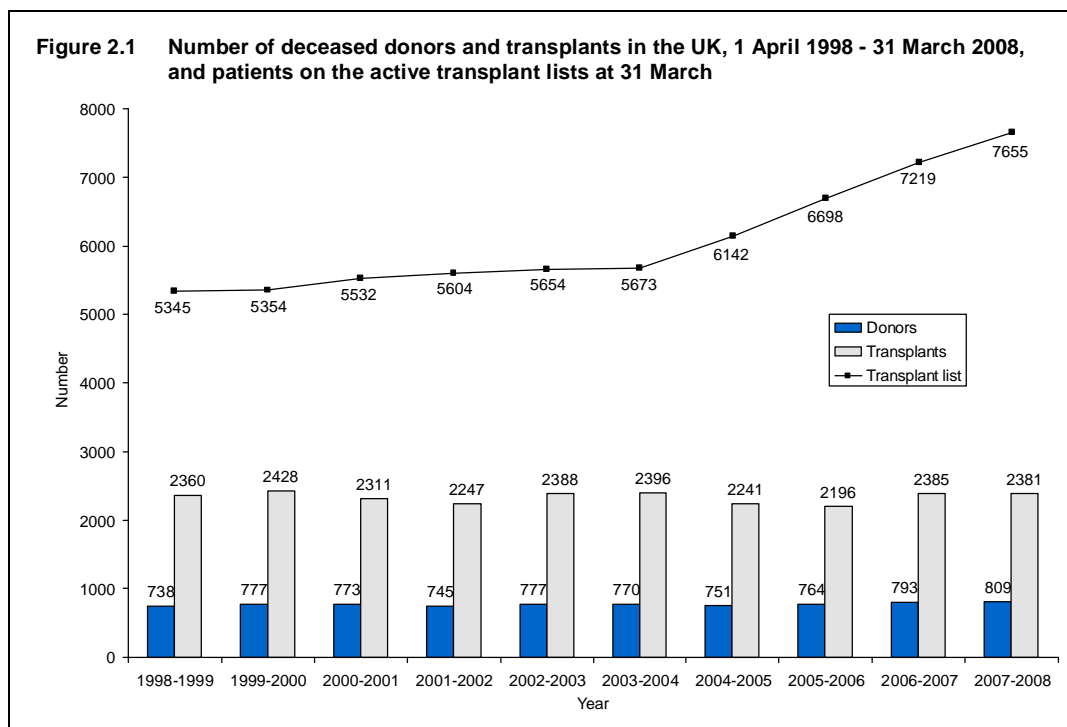
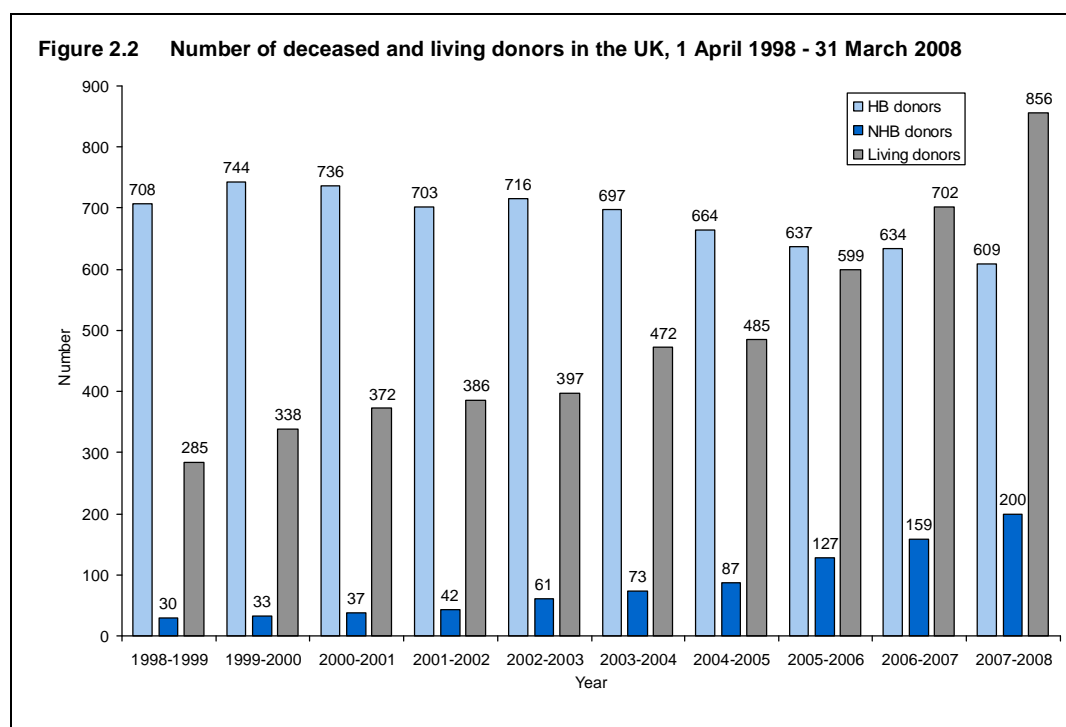


Figure 2.2 shows the number of deceased and living donors for 1998-2008. The number of heartbeating donors was 609 in 2007-2008 compared with 634 in 2006-2007. The number of both living and non-heartbeating donors in 2007-2008 was the highest ever recorded.



There were 809 deceased solid organ donors reported from the UK in 2007-2008, 16 more than in the previous financial year. A breakdown of the number of donors by organ is given in **Table 2.1**. Of the 809 deceased donors, 200 were non-heartbeating donors: 100 kidney only, 40 kidney and liver, 13 kidney and pancreas, 35 kidney, liver and pancreas, 2 kidney, lung and liver, 5 kidney, lung, liver and pancreas and 5 liver only donors. Among living organ donors there were 6 altruistic living kidney donor transplants, 4 paired living donor kidney transplants, 20 living liver lobe donor transplants, 4 domino liver donor transplants and 1 living lung donor transplant (which required two donors).

Table 2.1 UK activity summary for 1 April 2007 - 31 March 2008

	Kidney	Pancreas	Heart	Heart/ lung	Lung	Liver	TOTAL
Deceased donors	789	358	127	-	135	632	809
Deceased organs donated	1564	358	127	-	246	632	2927
Deceased donor transplants	1453	249	128	7	115	636	2381¹
Living donor transplants	829	0	0	-	1	24	854

¹ Includes combined transplants: 188 kidney and pancreas, 14 kidney and liver, 1 kidney and heart and 3 liver, pancreas and small bowel/multivisceral transplants (1 including kidney)

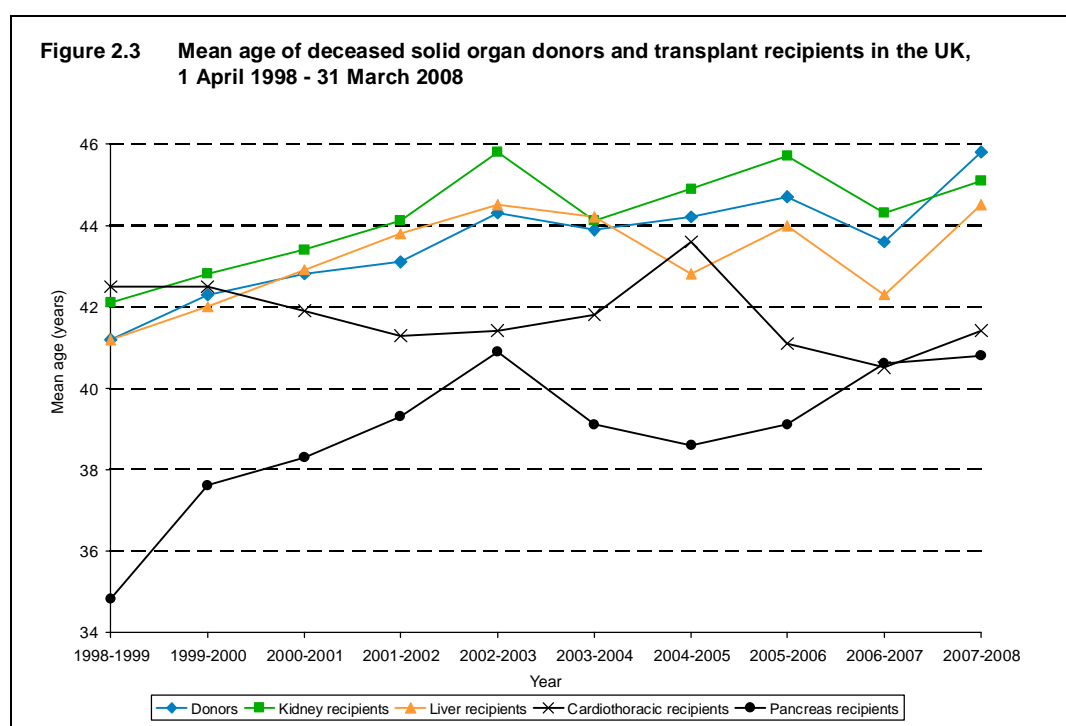
The total number of solid organ transplants in 2007-2008 was 3,235. Of these, 2,381 (74%) transplants were made possible by deceased donations. There were 854 transplants through living donations, 152 (22%) more than in 2006-2007.

Nearly all deceased donors (98%) gave a kidney and of these the majority (81%) also donated at least one other organ. Only 10% of heartbeating donors were single organ donors, the majority of which were kidney only donors.

Of the 200 non-heartbeating donors, 195 (98%) gave a kidney while 87 (44%) donated their livers. **Table 2.2** shows solid organ donors by organ types donated.

	Heartbeating	Non-heartbeating	Living donor	TOTAL
Kidney only	49	100	829	978
Kidney & thoracic	9	-	-	9
Kidney & liver	181	40	-	221
Kidney & pancreas	4	13	-	17
Kidney, thoracic & liver	50	2	-	52
Kidney, liver & pancreas	164	35	-	199
Kidney, thoracic, liver & pancreas	137	5	-	142
Thoracic only	2	-	2	4
Liver only	13	5	25	43
TOTAL	609	200	856	1665

Figure 2.3 shows the mean age of deceased solid organ donors and transplant recipients for the last ten years. The mean age of deceased donors has gradually increased over the ten years from 41.2 in 1998-1999 to 45.8 in 2007-2008. Pancreas recipients are younger on average than other solid organ transplant recipients.



2.2 Transplant list

At 31 March 2008, 9,747 patients were registered on a solid organ transplant list in the UK. Of these 2,092 (21%) patients were temporarily suspended from the active national transplant list. Details of numbers on the transplant lists for each organ type are given in **Table 2.3**.

Table 2.3 shows the numbers of patients on the active list waiting for a transplant at 31 March 2007 and 2008. The total number rose by 436 patients (6%) due to increases in kidney and combined kidney/pancreas transplant lists.

Table 2.3 Active transplant lists in the UK at 31 March 2007 and 2008			
	2007	2008	% Change
Kidney & pancreas patients	6526	7006	+7
Kidney	6320	6790	+7
Kidney & pancreas	146	178	+22
Pancreas	60	38	-37
Cardiothoracic patients	376	377	-
Heart	85	91	+7
Heart/lung	25	18	-28
Lung(s)	266	268	+1
Liver patients¹	301	259	-14
Other multi-organ patients²	16	13	-19
ALL PATIENTS	7219	7655	+6
¹ Includes patients waiting for a liver, pancreas & small bowel/ multivisceral transplant (2 in 2007, 5 in 2008)			
² Includes patients waiting for kidney & liver transplant (12 in 2007, 8 in 2008), kidney & heart transplant (3 in 2007, 4 in 2008), liver and lung transplant (1 in 2008) and liver, heart and lung transplant (1 in 2007)			

2.3 Organ donors

In 2007-2008, 809 deceased solid organ donors gave 2,927 solid organs in the UK compared with 793 donors and 2,814 organs in 2006-2007. On average in the UK, 3.6 organs were retrieved per deceased solid organ donor in 2007-2008. Overall, 79% of deceased solid organ donors gave a kidney and at least one other solid organ.

Solid organ donor rates per million population (pmp) for 2006-2007 and 2007-2008 are given by country in **Table 2.4**. Wales achieved the highest rate in 2007-2008. Northern Ireland is the only country not to have a non-heartbeating donation programme.

Table 2.4 Deceased solid organ donor rates per million population (pmp) in the UK, 1 April 2006 - 31 March 2008, by country of donation

Country of Donation	2006-2007				2007-2008			
	HB	NHB	TOTAL	(pmp)	HB	NHB	TOTAL	(pmp)
England	513	144	657	(13.0)	507	181	688	(13.6)
Wales	42	9	51	(17.2)	39	6	45	(15.2)
Scotland	44	6	50	(9.8)	41	13	54	(10.6)
Northern Ireland	35	0	35	(20.3)	22	0	22	(12.8)
TOTAL	634	159	793	(13.2)	609	200	809	(13.4)

The ethnicity of deceased solid organ donors in 2006-2007 and 2007-2008 is shown in **Table 2.5**. In 2007-2008, 4.0% of donors were from ethnic minorities compared with 2.3% in the previous year.

Table 2.5 Ethnicity of deceased solid organ donors in the UK, 1 April 2006 - 31 March 2008

Ethnicity	2006-2007		2007-2008	
	N	%	N	%
White	775	97.7	777	96.0
Asian	9	1.1	13	1.6
Black	3	0.4	11	1.4
Chinese	1	0.1	1	0.1
Other	5	0.6	7	0.9
TOTAL	793		809	

2.4 Transplants

Table 2.6 shows that a total of 3,235 transplants were performed in 2007-2008 compared with 3,087 in 2006-2007, an increase of 5%. All multi-organ transplants are identified separately and include 188 kidney and pancreas, 7 heart/lung and 14 kidney and liver transplants.

The deceased heartbeating donor kidney transplants include four en bloc kidneys in 2007-2008 (five in 2006-2007). One non-heartbeating donor single lung and four non-heartbeating donor double lung transplants are reported under single and double lung transplants, respectively, in 2007-2008 (one and two in 2006-2007).

The total number of kidney transplants increased in 2007-2008 despite a fall of 6% in the number of heartbeating donor kidney transplants; living and non-heartbeating donor transplants increased by 20% and 17%, respectively. The total number of cardiothoracic organ transplants fell by 14%, the number of liver transplants

remained constant and the number of pancreas transplants (including pancreas only and kidney/pancreas) increased by 26%.

Table 2.6 Transplants performed in the UK, 1 April 2006 - 31 March 2008

Transplant	2006-2007	2007-2008	% Change
Deceased heartbeating kidney	984	929	-6
Deceased non-heartbeating kidney	273	320	+17
Living donor kidney	690	829	+20
Kidney & pancreas ¹	164	188	+15
Pancreas	27	58	+115
Deceased heart	155	127	-18
Heart/lung	6	7	-
Living donor partial lung	0	1	-
Single lung	34	33	-3
Double lung	94	82	-13
Deceased heartbeating liver	473	453	-4
Deceased non-heartbeating liver	35	67	+91
Domino liver	4	4	-
Deceased liver lobe ²	112	99	-12
Living donor liver lobe	8	20	-
Kidney & heart	1	1	-
Kidney & liver	18	14	-22
Liver & pancreas	7	2	-
Liver, kidney & pancreas	0	1	-
Liver & lung	2	0	-
TOTAL TRANSPLANTS (SOLID ORGANS)	3087	3235	+5
Total kidney transplants³	2130	2282	+7
Total pancreas transplants³	198	249	+26
Total cardiothoracic transplants	292	251	-14
Total liver transplants³	659	660	+0

Percentage not reported when fewer than 10 transplants in either year

¹ Includes non-heartbeating kidney and pancreas transplants, 3 in 2006-2007 and 15 in 2007-2008

² Includes non-heartbeating liver lobe transplant, 1 in 2007-2008

³ Includes liver, pancreas & small bowel/multivisceral transplants/modified multivisceral, 7 in 2006-2007 and 4 in 2007-2008 (1 including kidney)

3 KIDNEY ACTIVITY

3.1 Overview

A summary of activity for deceased heartbeating and non-heartbeating donor kidney transplants and the transplant list at year end for the last ten years is shown in **Figure 3.1**. The number of patients registered on the active transplant list at 31 March 2008 for a kidney or kidney and pancreas transplant continues to increase, and has risen by 51% since 1999.

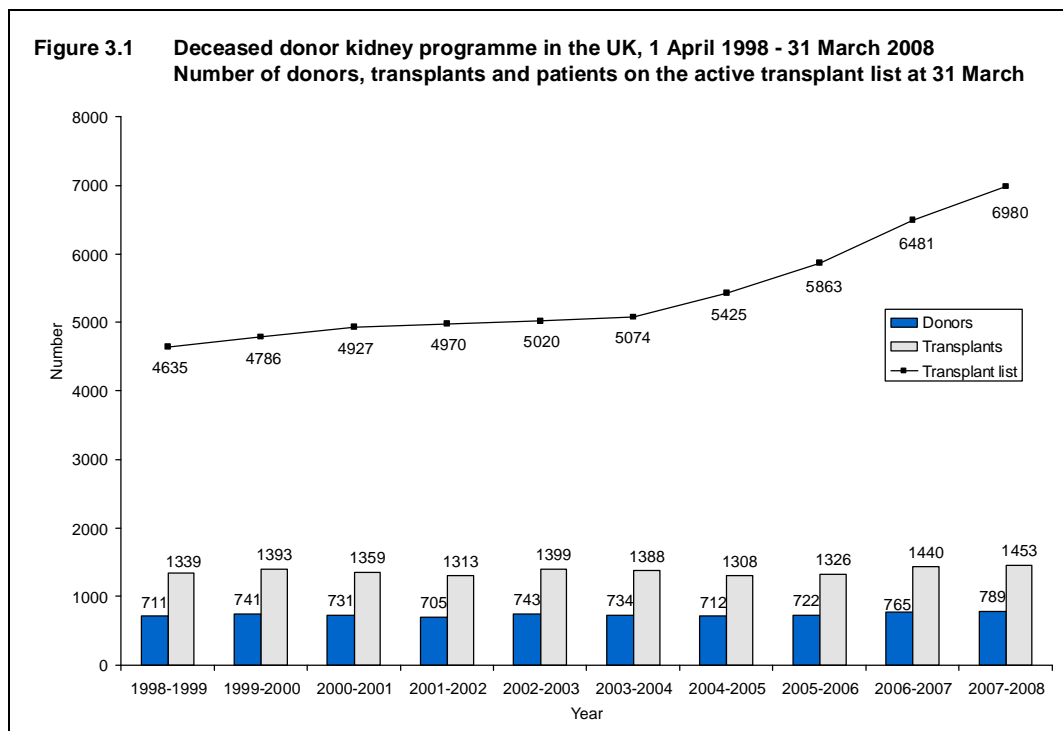


Table 3.1 shows the number of deceased and living donor kidney transplants carried out in 2007-2008 at each centre/alliance. The majority of centres/alliances performed non-heartbeating donor kidney transplants. The number of patients registered on the active kidney or kidney and pancreas transplant list increased to 6,980 at 31 March 2008. Donation and retrieval figures for centres in North and South Thames alliances are not reported individually as they have shared, rather than discrete, retrieval areas and donor populations.

The total number of deceased kidney donors rose slightly to 789 in 2007-2008 from 765 in 2006-2007 and the number of transplants increased from 1,440 to 1,453. The number of non-heartbeating kidney donors increased to 195 from 156 in 2006-2007 and the number of transplants from such donors increased by 21% to 335.

Table 3.1 Kidney donors and transplants, 1 April 2007 - 31 March 2008 (2006-2007) and transplant list at 31 March 2008 (2007) in the UK, by centre/alliance

Centre/alliance	Deceased kidney donors				Deceased donor transplants				Living donor transplants		Active transplant list	
	HB		NHB		HB		NHB					
Belfast	21	(35)	0	(0)	35	(38)	0	(0)	11	(7)	241	(228)
Birmingham	48	(39)	11	(7)	85	(65)	19	(9)	64	(51)	535	(565)
Bristol	21	(15)	14	(16)	47	(45)	24	(29)	38	(37)	300	(304)
Cambridge	27	(27)	19	(26)	47	(59)	34	(50)	24	(26)	280	(244)
Cardiff	31	(30)	6	(9)	73	(49)	13	(17)	30	(23)	267	(225)
Coventry	9	(7)	3	(0)	12	(13)	1	(0)	24	(28)	138	(113)
Edinburgh	27	(23)	7	(2)	61	(44)	11	(3)	29	(14)	319	(311)
Glasgow	13	(21)	6	(4)	46	(55)	9	(6)	40	(12)	315	(290)
Great Ormond Street	0	(0)	0	(0)	10	(18)	0	(0)	10	(12)	22	(21)
Leeds	29	(34)	14	(8)	82	(68)	25	(16)	40	(39)	418	(385)
Leicester	4	(11)	0	(0)	19	(20)	1	(1)	43	(32)	386	(331)
Liverpool	39	(47)	1	(0)	39	(46)	0	(1)	24	(13)	234	(213)
Manchester	39	(39)	15	(11)	69	(135)	26	(19)	55	(38)	547	(479)
Newcastle	45	(39)	15	(22)	63	(40)	25	(32)	36	(30)	233	(231)
North Thames ¹	76	(85)	24	(15)	-	-	-	-	-	-	-	-
Royal Free	-	-	-	-	32	(49)	22	(14)	28	(15)	245	(236)
Royal London	-	-	-	-	36	(37)	7	(9)	25	(26)	294	(301)
WLRTC	-	-	-	-	39	(74)	15	(5)	79	(91)	451	(401)
Nottingham	9	(13)	0	(0)	36	(33)	0	(0)	19	(18)	205	(187)
Oxford	25	(24)	10	(5)	99	(75)	21	(10)	31	(22)	402	(346)
Plymouth	27	(20)	14	(11)	23	(15)	21	(20)	19	(19)	110	(121)
Portsmouth	17	(14)	16	(9)	21	(25)	24	(15)	18	(17)	191	(171)
Sheffield	22	(23)	2	(0)	46	(30)	2	(0)	17	(16)	219	(209)
South Thames ¹	65	(63)	18	(11)	-	-	-	-	-	-	-	-
Guy's	-	-	-	-	74	(81)	17	(12)	79	(69)	333	(304)
St George's	-	-	-	-	24	(50)	18	(8)	46	(35)	295	(265)
TOTAL	594	(609)	195	(156)	1118	(1164)	335	(276)	829	(690)	6980	(6481)

¹ Donor figures in this area cannot be linked to individual transplant centres due to shared retrieval area.

3.2 Transplant list

The number of patients registered on the kidney or kidney and pancreas transplant list increased by 8% in the year: on 31 March 2008, 6,980 patients were registered as active, compared with 6,481 at the end of March 2007. The number of patients waiting for a kidney transplant represents 116 patients per million population (pmp).

Of the 6,980 patients on the active transplant list at 31 March 2008, 178 required a kidney and pancreas transplant (146 at 31 March 2007). Additionally, 38 patients were registered for a pancreas only transplant (60 at 31 March 2007).

The outcome of patients registered on the UK kidney and kidney/pancreas transplant lists at 1 April 2007, or subsequently registered during the financial year, is shown in **Table 3.2**. Overall, 17% and 39% of patients waiting on the kidney transplant list and kidney/pancreas transplant list, respectively, during 2007-2008, had received a transplant by 31 March 2008.

Table 3.2 Kidney transplant list and new registrations in the UK, 1 April 2007 - 31 March 2008

Outcome of patient at 31 March 2008	Active and suspended patients at 1 April 2007		New registrations in 2007-2008 ¹		TOTAL	
	N	%	N	%	N	%
Kidney transplant list						
Remained active/suspended	5868	73	2876	88	8744	77
Transplanted	1548	19	354	11	1902	17
Removed	368 ²	5	30 ³	1	398	4
Died	277	3	23	1	300	3
TOTAL	8061		3283		11344	
Kidney/pancreas transplant list						
Remained active/suspended	91	42	183	64	274	54
Transplanted	102	47	93	32	195	39
Removed	14	6	7	2	21	4
Died	9	4	5	2	14	3
TOTAL	216		288		504	

¹ Includes re-registrations for second or subsequent transplants

² Includes 37 patients removed from kidney list and made active on kidney/pancreas list

³ Includes 10 patients removed from kidney list and made active on kidney/pancreas list

3.3 Donor and organ supply

Of the 609 deceased heartbeating solid organ donors in the UK in 2007-2008, 594 (98%) donated kidney(s). From these donors, 1,178 kidneys were retrieved, 1,123 (95%) of which were transplanted. **Table 3.3** shows this activity by centre/alliance.

The overall heartbeating kidney donor rate is 9.9 pmp, with retrieval centre/alliance rates ranging from 1.8 to 15.6 pmp. The kidney retrieval rate for the UK is 19.6 pmp and varies from 3.7 to 31.1 pmp. Organ usage rates of at least 95% were observed for 14 of the 20 retrieval centres.

Table 3.3 Kidney donation and retrieval rates for heartbeating donors in the UK, 1 April 2007 - 31 March 2008, by centre/alliance

Centre/alliance	Heartbeating kidney donors (pmp)		Kidneys retrieved (pmp)		Kidneys used (%)	
Belfast	21	(12.2)	42	(24.4)	37	(88)
Birmingham	48	(10.5)	96	(21.1)	93	(97)
Bristol	21	(10.4)	42	(20.9)	42	(100)
Cambridge	27	(10.5)	53	(20.7)	47	(89)
Cardiff	31	(13.5)	61	(26.6)	57	(93)
Coventry	9	(10.8)	18	(21.7)	16	(89)
Edinburgh	27	(11.2)	53	(22.0)	53	(100)
Glasgow	13	(4.9)	26	(9.7)	26	(100)
Leeds	29	(7.7)	57	(15.1)	56	(98)
Leicester	4	(1.8)	8	(3.7)	8	(100)
Liverpool	39	(11.8)	78	(23.6)	76	(97)
Manchester	39	(9.7)	77	(19.1)	71	(92)
Newcastle	45	(15.6)	90	(31.1)	88	(98)
North Thames	76	(10.2)	149	(19.9)	141	(95)
Nottingham	9	(6.4)	18	(12.8)	18	(100)
Oxford	25	(8.1)	50	(16.3)	48	(96)
Plymouth	27	(14.8)	53	(29.1)	53	(100)
Portsmouth	17	(7.0)	34	(13.9)	34	(100)
Sheffield	22	(11.8)	44	(23.5)	43	(98)
South Thames	65	(9.4)	129	(18.8)	116	(90)
TOTAL	594	(9.9)	1178	(19.6)	1123	(95)

There were 195 non-heartbeating kidney donors in 2007-2008. From these donors, 386 kidneys were retrieved, 341 (88%) of which were transplanted. **Table 3.4** shows this activity by centre/alliance.

The overall non-heartbeating kidney donor rate is 3.2 pmp, with centre/alliance rates ranging from 0.3 to 7.7 pmp. The non-heartbeating donor kidney retrieval rate is 6.4 pmp and varies from 0.6 to 15.4 pmp. Organ usage rates of at least 95% were observed for 5 of the 17 retrieval centres. Three centres have no non-heartbeating donor retrieval schemes.

Table 3.4 Kidney donation and retrieval rates for non-heartbeating donors in the UK, 1 April 2007 - 31 March 2008, by centre/alliance

Centre/alliance	Non-heartbeating kidney donors (pmp)		Kidneys retrieved (pmp)		Kidneys used (%)	
Birmingham	11	(2.4)	22	(4.8)	19	(86)
Bristol	14	(7.0)	28	(13.9)	28	(100)
Cambridge	19	(7.4)	38	(14.8)	34	(89)
Cardiff	6	(2.6)	12	(5.2)	12	(100)
Coventry	3	(3.6)	6	(7.2)	4	(67)
Edinburgh	7	(2.9)	13	(5.4)	12	(92)
Glasgow	6	(2.2)	12	(4.5)	9	(75)
Leeds	14	(3.7)	28	(7.4)	26	(93)
Liverpool	1	(0.3)	2	(0.6)	2	(100)
Manchester	15	(3.7)	29	(7.2)	25	(86)
Newcastle	15	(5.2)	30	(10.4)	28	(93)
North Thames	24	(3.2)	47	(6.3)	45	(96)
Oxford	10	(3.3)	20	(6.5)	15	(75)
Plymouth	14	(7.7)	28	(15.4)	21	(75)
Portsmouth	16	(6.6)	31	(12.7)	25	(81)
Sheffield	2	(1.1)	4	(2.1)	4	(100)
South Thames	18	(2.6)	36	(5.2)	32	(89)
TOTAL	195	(3.2)	386	(6.4)	341	(88)

3.4 Transplants

The number of deceased heartbeating donor kidney transplants per million population at each transplant centre is shown in **Table 3.5** for adult patients only. This table includes multi-organ transplants: one kidney and heart, one liver, kidney and pancreas, 11 kidney and liver and 172 kidney and pancreas. The transplant rate ranged from 8.6 to 31.9 pmp across centres and overall was 17.5 pmp.

Table 3.5 Deceased heartbeating donor adult kidney transplants in the UK, 1 April 2006 - 31 March 2008, by transplant centre/alliance

Transplant centre/alliance	2006-2007		2007-2008	
	Transplants	pmp	Transplants	pmp
Belfast	36	20.9	33	19.2
Birmingham	53	11.6	73	16.0
Bristol	38	18.9	44	21.9
Cambridge	59	23.0	46	18.0
Cardiff	49	21.4	72	31.4
Coventry	13	15.7	12	14.5
Edinburgh	44	18.3	60	24.9
Glasgow	49	18.3	44	16.4
Leeds	58	15.3	74	19.6
Leicester	20	9.2	19	8.8
Liverpool	46	13.9	39	11.8
Manchester	123	30.4	65	16.1
Newcastle	37	12.8	60	20.8
North Thames	160	21.4	107	14.3
Nottingham	23	16.3	29	20.6
Oxford	74	24.1	98	31.9
Plymouth	15	8.2	23	12.6
Portsmouth	25	10.2	21	8.6
Sheffield	30	16.0	46	24.6
South Thames	124	18.0	91	13.2
TOTAL	1076	17.9	1056	17.5

Living donor kidney transplants increased by 20% to 829 in 2007-2008, and now represent 36% of the total kidney transplant programme. The total number of living donor adult transplants and the number of related and unrelated donor adult transplants performed by each transplant centre/alliance is shown in **Table 3.6**. Also shown are the number of living donor adult transplants per million population and the number as a percentage of patients listed at the end of the year, to indicate the size of the living donor programme relative to the centre's transplant list.

There has been an increase of 10% in the number of living related donor adult transplants and an increase of 47% in living unrelated donor adult transplants.

For the first time in the UK this financial year saw unrelated living donor kidney transplants as a result of both altruistic living kidney donation and paired donation (or exchange). In 2007-2008, there were 4 paired donations (2 x 2 transplants) and 6 altruistic donors.

As a percentage of the number of patients on the active transplant list at 31 March 2008, the number of living donor adult transplants in the year was 11% and ranged from 4% to 19% at individual transplant centres.

Table 3.6 Adult living donor kidney transplants in the UK, 1 April 2006 - 31 March 2008, and percentage of active transplant list at 31 March, by transplant centre/alliance

Transplant centre/alliance	2006-2007				2007-2008			
	Related donor	Unrelated donor	TOTAL N	% list	Related donor	Unrelated donor	TOTAL N	% list
Belfast	7	0	7	3	9	1	10	4
Birmingham	28	19	47	9	43	19	62	12
Bristol	20	14	34	12	20	14	34	12
Cambridge	19	7	26	11	15	9	24	9
Cardiff	15	8	23	10	18	12	30	11
Coventry	16	12	28	25	9	15	24	17
Edinburgh	11	3	14	5	17	12	29	9
Glasgow	7	3	10	3	23	11	34	11
Leeds	24	10	34	9	24	12	36	9
Leicester	23	9	32	10	27	16	43	11
Liverpool	10	3	13	6	18	6	24	10
Manchester	27	9	36	8	37	13	50	9
Newcastle	21	5	26	12	23	8	31	13
North Thames	82	50	132	14	73	59	132	13
Nottingham	9	5	14	8	7	7	14	7
Oxford	15	7	22	6	18	13	31	8
Plymouth	16	3	19	16	10	9	19	17
Portsmouth	12	5	17	10	11	7	18	9
Sheffield	12	3	15	7	10	7	17	8
South Thames	65	28	93	16	69	48	117	19
TOTAL	439	203	642	10	481	298¹	779	11

¹ Includes 4 paired donor kidney transplants and 6 altruistic donor kidney transplants

The number of deceased heartbeating and living donor paediatric transplants performed by each paediatric transplant centre is shown in **Table 3.7**. The number of living donor paediatric (<18 years) transplants, at 50 in 2007-2008, is slightly higher than last year. However, the number of deceased heartbeating donor transplants decreased to 62 from 88 in 2006-2007. The paediatric transplant list has increased by 17% from 102 at 31 March 2007 to 119 at the end of March 2008.

At 31 March 2008, there were about 22,000 recipients with a functioning kidney (or multi-organ) transplant being followed-up.

Table 3.7 Paediatric patient kidney transplants in the UK, 1 April 2006 - 31 March 2008, by transplant centre								
Paediatric transplant centre	2006-2007				2007-2008			
	HB donor	NHB donor	Living donor	TOTAL	HB donor	NHB donor	Living donor	TOTAL
Belfast	2	0	0	2	2	0	1	3
Birmingham	12	0	4	16	12	0	2	14
Bristol	7	1	3	11	3	1	4	8
Glasgow	6	0	2	8	2	0	6	8
Great Ormond Street	18	0	12	30	10	0	10	20
Guy's	6	0	10	16	7	0	7	14
Leeds	10	0	5	15	8	0	4	12
Manchester	12	0	2	14	4	0	5	9
Newcastle	3	0	4	7	3	0	5	8
Nottingham	10	0	4	14	7	0	5	12
Adult centres	2	0	2	4	4	0	1	5
TOTAL	88	1	48	137	62	1	50	113

Rates of pre-emptive kidney only transplantation are shown in **Table 3.8**. Of the 2,078 kidney only transplant recipients in 2007-2008, dialysis status at transplant was reported for 2,035 (97.9%). Of these 2,035 transplants, 337 (17%) were carried out in pre-dialysis patients. Pre-emptive transplants accounted for 32% of all paediatric kidney only transplants with reported dialysis status, compared with 15% of those in adults. Pre-emptive transplants also accounted for a higher proportion of living donor transplants than deceased donor transplants: 31% and 7% respectively.

Table 3.8 Pre-emptive kidney only transplants in the UK, 1 April 2007 - 31 March 2008			
	Number of kidney only transplants	Number of transplants with known dialysis status at transplant (% of all)	Percentage of patients transplanted prior to the need for dialysis (of those with known status)
Adult			
Deceased donor transplant	1190	1176 (98.8)	5.9
Living donor transplant	779	763 (97.9)	29.7
Paediatric			
Deceased donor transplant	59	52 (88.1)	22.0
Living donor transplant	50	44 (88.0)	44.0

3.5 Demographic characteristics

The ethnicity of heartbeating donors, transplant recipients and patients on the transplant list is shown in **Table 3.9**. Note that the percentages quoted are based only on data where ethnicity information was available. Differences in ethnicity of heartbeating donors, transplant recipients and patients listed for transplant are clear.

Table 3.9 Ethnicity of heartbeating kidney donors and recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March in the UK												
Ethnicity	Donors				Transplant recipients				Active transplant list patients			
	2006-2007		2007-2008		2006-2007		2007-2008		2006-2007		2007-2008	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
White	597	(98.0)	568	(95.6)	946	(81.5)	934	(83.5)	4966	(71.2)	5298	(81.8)
Asian	8	(1.3)	10	(1.7)	121	(10.4)	100	(8.9)	885	(12.7)	998	(15.4)
Black	0	(0.0)	11	(1.9)	68	(5.9)	62	(5.5)	473	(6.8)	507	(7.8)
Chinese	0	(0.0)	1	(0.2)	10	(0.9)	10	(0.9)	58	(0.8)	74	(1.1)
Other	4	(0.7)	4	(0.7)	16	(1.4)	12	(1.1)	94	(1.3)	98	(1.5)
Not reported	0	-	0	-	3	-	0	-	5	-	5	-
TOTAL	609		594		1164		1118		6481		6980	

Table 3.10 shows the age group and sex of heartbeating kidney donors, transplant recipients and patients waiting for a kidney transplant. There was a greater proportion of male transplant recipients and patients listed for transplant than female, 59% compared with 41%. Over 30% of donors, recipients and patients on the transplant list were aged 35-49 years.

Table 3.10 Age and sex of heartbeating kidney donors and transplant recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March 2008									
	Age group (years)						TOTAL		
	0-17	18-34	35-49	50-59	60+				
Donors									
Male	19	64	103	66	64		316	(53%)	
Female	11	43	83	78	63		278	(47%)	
TOTAL	30	107	186	144	127		594	(100%)	
Recipients									
Male	32	112	283	136	93		656	(59%)	
Female	30	91	176	91	74		462	(41%)	
TOTAL	62	203	459	227	167		1118	(100%)	
Transplant list									
Male	56	512	1312	1037	1204		4121	(59%)	
Female	63	389	904	734	769		2859	(41%)	
TOTAL	119	901	2216	1771	1973		6980	(100%)	

4 PANCREAS ACTIVITY

4.1 Overview

Throughout this section, multivisceral transplants that used a pancreas are not included in the pancreas transplant activity reported. Any pancreata retrieved and used for such transplants are however included in the pancreas donor activity. In 2007/2008 there were 4 (3 liver, pancreas & small bowel/multivisceral transplants (1 including kidney) and 1 modified multivisceral transplant).

A summary of activity for deceased heartbeating donor pancreas transplants and the transplant list for 1 April 1997 to 31 March 2008 is shown in **Figure 4.1**. The number of patients registered on the active transplant list at 31 March for a pancreas only or simultaneous kidney/pancreas (SPK) transplant has more than tripled over the ten-year period, from 45 patients in 1999 to 216 patients in 2008. The number of pancreas donors and transplants has also increased steadily since 1998-1999 from 30 donors, resulting in 24 transplants, to 305 donors and 209 transplants in 2007-2008.

The proportion of pancreata retrieved that cannot be used for transplantation, is greater than in kidney, liver or heart transplantation. However, these pancreata were generally used in islet cell research for the benefit of diabetic patients.

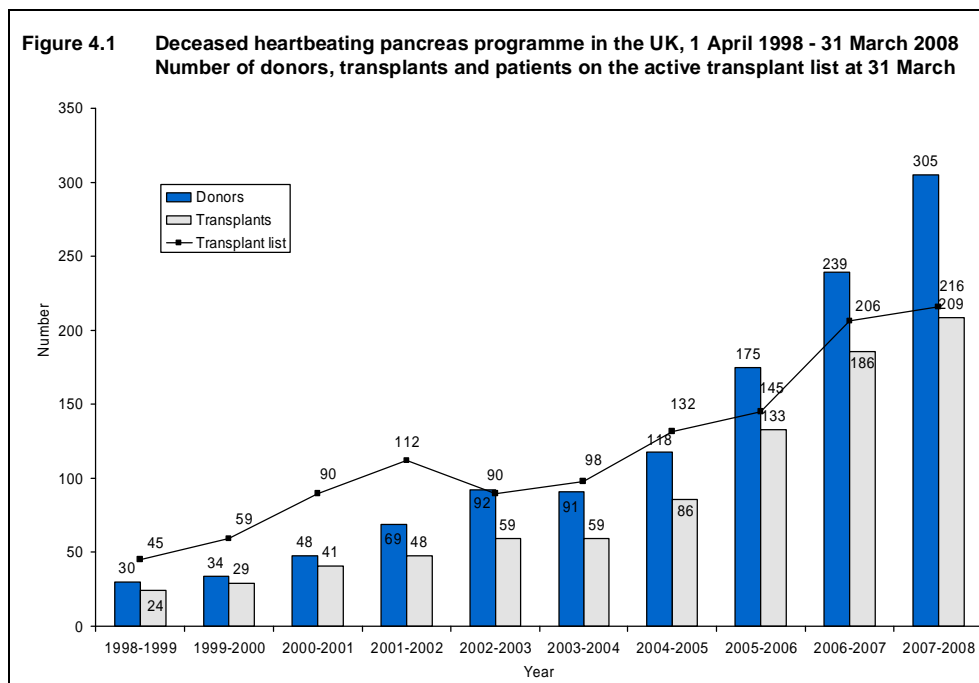


Table 4.1 shows the number of deceased heartbeating pancreas donors and the number of pancreas transplants carried out in 2007-2008 at each centre and by type of pancreas transplant. Compared with the previous financial year, the total number of deceased heartbeating pancreas donors increased to 305 in 2007-2008 from 239 in 2006-2007 and the number of deceased heartbeating donor transplants increased to 209 from 186.

Table 4.1 Pancreas donors and transplants, 1 April 2007 - 31 March 2008 (2006-2007) and transplant list at 31 March 2008 (2007) in the UK, by centre

Centre	Deceased donors ¹				Deceased donor transplants ³											Active transplant list		
	HB		NHB		SPK		HB		Total		SPK		NHB		Total			
			Pancreas only				Pancreas only											
Cambridge	22	(34)	3	(1)	20	(15)	0	(0)	20	(15)	0	(0)	0	(0)	0	0	9	(2)
Cardiff	20	(13)	2	(1)	16	(9)	7	(3)	23	(12)	2	(1)	1	(0)	3	(1)	3	(13)
Edinburgh	34	(24)	1	(0)	20	(14)	1	(1)	21	(15)	0	(0)	0	(0)	0	0	11	(12)
Liverpool ²	0	(12)	0	(0)	0	(5)	0	(1)	0	(6)	0	(0)	0	(0)	0	0	0	(22)
Manchester	46	(34)	11	(1)	23	(22)	5	(6)	28	(28)	3	(1)	5	(1)	8	(2)	48	(44)
WLRTC	26	(24)	8	(0)	6	(13)	8	(2)	14	(15)	2	(0)	1	(0)	0	0	17	(23)
Newcastle	20	(14)	1	(0)	11	(7)	0	(1)	11	(8)	0	(0)	0	(0)	0	0	10	(13)
Oxford	94	(47)	16	(1)	60	(46)	13	(10)	73	(56)	1	(0)	14	(1)	15	(1)	101	(68)
Guy's	43	(37)	11	(1)	17	(30)	2	(1)	19	(31)	7	(1)	0	(0)	7	(1)	17	(9)
TOTAL	305	(239)	53	(5)	173	(161)	36	(25)	209	(186)	15	(3)	21	(2)	36	(5)	216	(206)

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¹ Includes 18 (11) donors aged less than 8 or greater than 60 years in 2007-2008 (2006-2007)

² Liverpool ceased to provide a pancreas transplant program in February 2007

³ Includes 4 (6) transplants using organs from donors aged less than 8 or greater than 60 years in 2007-2008 (2006-2007)

4.2 Transplant list

The number of patients registered on the pancreas transplant list increased by 5% in the year: on 31 March 2008, 216 patients were registered active, compared with 206 at the end of March 2007.

Of the 216 patients on the active transplant list at 31 March 2008, 178 required a SPK transplant (146 at 31 March 2007). Additionally, 38 patients were actively registered for a pancreas only transplant (60 at 31 March 2007).

The outcome of patients registered on the UK pancreas transplant list at 1 April 2007, or subsequently registered during the financial year, is shown in **Table 4.2**. Overall, 39% of patients waiting for a SPK transplant and 26% waiting for a pancreas only transplant had received a transplant by 31 March 2008.

Table 4.2 Pancreas transplant list and new registrations in the UK, 1 April 2007 - 31 March 2008

Outcome of patient at 31 March 2008	Active and suspended patients at 1 April 2007		New registrations in 2007-2008 ¹		TOTAL	
	N	%	N	%	N	%
Pancreas transplant list						
Remained active/suspended	96	64	24	41	120	57
Transplanted	30	20	24	41	54	26
Removed	24 ²	16	9 ³	15	33	16
Died	1	1	2	3	3	1
TOTAL	151		59		210	
Kidney/pancreas transplant list						
Remained active/suspended	91	42	183	64	274	54
Transplanted	102	47	93	32	195	39
Removed	14	6	7	2	21	4
Died	9	4	5	2	14	3
TOTAL	216		288		504	

¹ Includes re-registrations for second or subsequent transplants

² Includes 3 registrations removed from pancreas list but active on kidney/pancreas list

³ Includes 1 registration removed from pancreas list but active on kidney/pancreas list

4.3 Donor and organ supply

In 2007-2008, there were 287 deceased heartbeating pancreas donors aged between 8 and 60 years, the age range where donor organs are generally suitable for pancreas transplantation (prior to February 2008, 50 was the general upper age limit for pancreas transplantation). This represents 58% of all deceased heartbeating solid organ donors aged between 8 and 60 years. Of 287 pancreata donated, 205 (71%) resulted in pancreas transplants. **Table 4.3** shows this activity by transplant centre.

Table 4.3 Pancreas donation and retrieval rates for deceased donors (aged 8 to 60 years) in the UK, 1 April 2007 - 31 March 2008, by centre

Centre	Donors		Pancreas donors (% of donors) ¹				Pancreas used (% of retrieved) ²			
	HB	NHB	HB		NHB		HB		NHB	
Cambridge	34	17	18	(53)	3	(18)	9	(50)	1	(33)
Cardiff	27	6	19	(70)	2	(33)	18	(95)	1	(50)
Edinburgh	57	11	34	(60)	1	(9)	27	(79)	0	(0)
Manchester	99	26	45	(45)	11	(42)	31	(69)	9	(82)
WLRTC	55	18	24	(44)	8	(44)	15	(63)	7	(88)
Newcastle	40	14	19	(48)	1	(7)	13	(68)	1	(100)
Oxford	121	49	88	(73)	15	(31)	68	(77)	13	(87)
Guy's	58	24	40	(69)	11	(46)	24	(60)	4	(36)
TOTAL	491	165	287	(58)	52	(32)	205	(71)	36	(69)

WLRTC - West London Renal and Transplant Centre

¹ There were an additional 18 HB and 1 NHB pancreas donors outside of the 8 - 60 age range

² There were an additional 4 HB pancreata transplanted from donors outside of the 8 - 60 age range

4.4 Transplants

There were 209 deceased heartbeating donor pancreas transplants in 2007-2008 an increase of 8% on the 186 transplants performed in 2006-2007. Of these 209, 173 (83%) were SPK transplants. The number of transplants performed at each centre is shown in **Table 4.1**.

4.5 Demographic characteristics

The ethnicity of deceased heartbeating donors, transplant recipients and patients on the transplant list is shown in **Table 4.4**. Asian patients represented 6.9% of the active pancreas transplant list at 31 March 2008 and 3.8% of pancreas transplant recipients in 2007-2008. There were only six Asian pancreas donors in the last financial year and two in the previous financial year.

Table 4.4 Ethnicity of deceased heartbeating pancreas donors and recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March in the UK

Ethnicity	Donors				Transplant recipients				Active transplant list patients			
	2006-2007		2007-2008		2006-2007		2007-2008		2006-2007		2007-2008	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
White	236	(98.7)	287	(94.1)	175	(94.1)	195	(93.3)	193	(88.9)	200	(92.6)
Asian	2	(0.8)	6	(2.0)	8	(4.3)	8	(3.8)	10	(4.6)	15	(6.9)
Black	0	(0.0)	8	(2.6)	2	(1.1)	2	(1.0)	2	(0.9)	1	(0.5)
Chinese	0	(0.0)	1	(0.3)	0	(0.0)	2	(1.0)	0	(0.0)	0	(0.0)
Other	1	(0.4)	3	(1.0)	1	(0.5)	2	(1.0)	1	(0.5)	0	(0.0)
TOTAL	239		305		186		209		206		216	

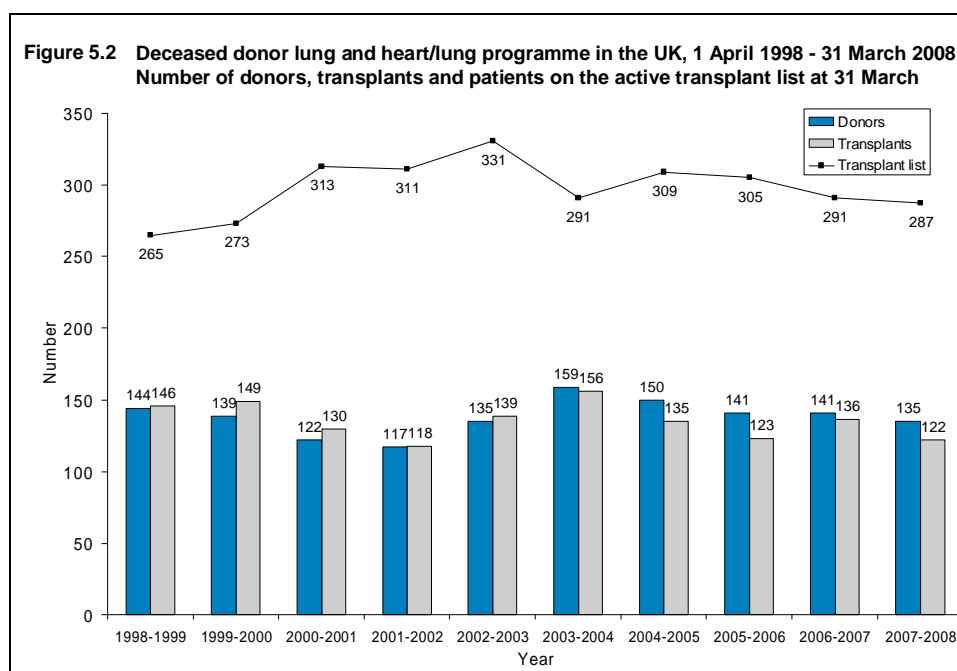
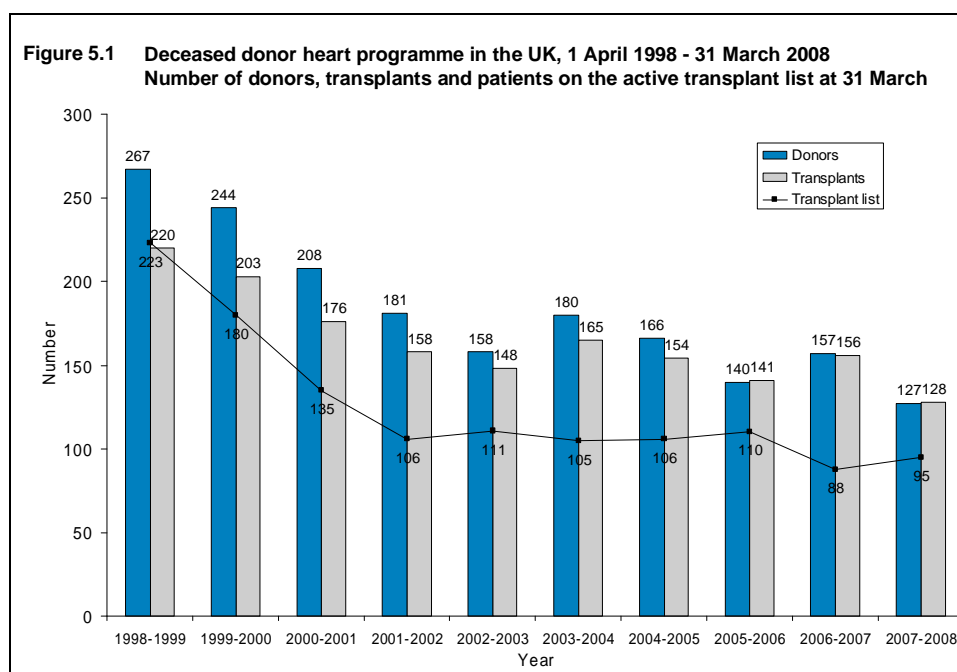
Table 4.5 shows the age group and sex of deceased heartbeating pancreas donors, transplant recipients and patients waiting for a pancreas transplant. There was a greater proportion of male transplant recipients than female, 52% compared with 48%. There were 18 pancreas donors outside the preferred age range of 8 to 60 years, 4 of which resulted in a transplant, and the age group 35-50 years had the highest proportion of pancreas donors, recipients and patients on the transplant list.

Table 4.5 Age and sex of deceased heartbeating pancreas donors and transplant recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March 2008								
	Age group (years)						TOTAL	
	<8	8-17	18-34	35-50	51-60	60+		
Donors								
Male	0	13	47	65	23	10	158	(52%)
Female	1	8	29	64	38	7	147	(48%)
TOTAL	1 (0%)	21 (7%)	76 (25%)	129 (42%)	61 (20%)	17 (6%)	305	(100%)
Recipients								
Male	0	0	17	82	13	2	114	(55%)
Female	0	1	25	57	12	0	95	(45%)
TOTAL	0 (-)	1 (0%)	42 (20%)	139 (67%)	25 (12%)	2 (1%)	209	(100%)
Transplant list								
Male	0	0	22	73	20	3	118	(55%)
Female	0	0	22	63	11	2	98	(45%)
TOTAL	0 (-)	0 (-)	44 (21%)	136 (63%)	31 (14%)	5 (2%)	216	(100%)

5 CARDIOTHORACIC ACTIVITY

5.1 Overview

A summary of the deceased donor cardiathoracic activity from 1 April 1998 to 31 March 2008 is shown in **Figure 5.1** for heart activity and **Figure 5.2** for lung activity. Donors who donate both heart and lung(s) are included in both figures, but heart/lung block transplants and patients active on the transplant list for a heart/lung block are only included in **Figure 5.2**.



The number of patients registered on the active transplant list at 31 March for a heart transplant has decreased by 57% since 1999, and the number of patients registered for a lung or heart/lung transplant has increased by 8%. In 2007-2008 there were 128 heart transplants and 122 lung or heart/lung transplants from deceased donors. This represents an 18% and 10% decrease, respectively, from the previous financial year.

5.2 Transplant list

Table 5.1 shows the number of patients on the active transplant lists at 31 March 2008 by centre. The lung transplant list accounts for 70% of the patients waiting for a cardiothoracic transplant. Overall, Newcastle and Harefield have the largest cardiothoracic lists.

The outcome of patients registered at 1 April 2007 and throughout the subsequent year is shown in **Table 5.2**. Of the 808 patients on the transplant list for a cardiothoracic organ in 2007-2008, 390 (48%) were still waiting at the end of the year, 241 (30%) had received a transplant and 177 (22%) had either died or been removed from the transplant list.

Table 5.1 Patients on the cardiothoracic transplant lists at 31 March 2008 (2007) in the UK, by centre

Centre	Active transplant lists					
	Heart		Heart/lung		Lung	
						TOTAL
Birmingham	8	(7)	3	(3)	11	(9)
Glasgow	1	(3)	0	(0)	0	(0)
Great Ormond Street	9	(5)	2	(2)	9	(3)
Harefield	22	(28)	4	(5)	85	(81)
Manchester	6	(6)	2	(2)	60	(57)
Newcastle ¹	24	(29)	5	(8)	87	(81)
Papworth	25	(10)	2	(7)	17	(34)
TOTAL	95	(88)	18	(27)	269	(265)
					382	(380)

¹ Adult and paediatric patients on transplant list

**Table 5.2 Cardiothoracic transplant lists and new registrations in the UK,
1 April 2007 - 31 March 2008**

Outcome of patient at 31 March 2008	Active and suspended patients at 1 April 2007		New registrations in 2007-2008 ¹		TOTAL	
	N	%	N	%	N	%
Heart transplant list						
Remained active/suspended	29	31	71	35	100	34
Transplanted	32	34	91	45	123	41
Removed	20	21	21	10	41	14
Died	13	14	21	10	34	11
TOTAL	94		204		298	
Heart/lung transplant list						
Remained active/suspended	11	48	7	64	18	53
Transplanted ²	5	22	3	27	8	24
Removed	4	17	0	0	4	12
Died	3	13	1	9	4	12
TOTAL	23		11		34	
Lung transplant list						
Remained active/suspended	124	48	148	68	272	57
Transplanted	61	24	49	23	110	23
Removed	31	12	3	1	34	7
Died	43	17	17	8	60	13
TOTAL	259		217		476	

¹ Includes re-registrations for second or subsequent transplants

² Heart, lung or heart/lung

Table 5.3 Cardiothoracic organ donors in the UK, 1 April 2007 - 31 March 2008 (2006-2007), by age group and retrieval centre

Retrieval centre	Type of cardiothoracic donor						TOTAL	
	Heart only		Heart & lung		Lung(s) only			
Adult								
Birmingham	10	(14)	10	(11)	12	(15)	32	(40)
Glasgow	9	(8)	2	(1)	3	(3)	14	(12)
Great Ormond Street	0	(2)	0	(0)	0	(0)	0	(2)
Harefield	8	(7)	7	(6)	18	(9)	33	(22)
Manchester	11	(17)	9	(11)	10	(12)	30	(40)
Newcastle	11	(13)	11 ²	(15)	16	(17)	38 ²	(45)
Papworth	16	(21)	12 ²	(13)	13	(15)	41 ²	(49)
Other European countries	0	(0)	1	(2)	1	(0)	2	(2)
TOTAL	65	(84 ¹)	52 ^{1,2}	(59)	78 ^{1,3}	(75 ^{1,4})	195 ^{1,2,3}	(218 ^{1,4})
Paediatric								
Birmingham	0	(0)	0	(0)	0	(1)	0	(1)
Glasgow	0	(0)	3	(0)	0	(0)	3	(0)
Great Ormond Street	2	(3)	0	(3)	0	(0)	2	(6)
Harefield	0	(0)	0	(0)	0	(1)	0	(1)
Manchester	0	(0)	0	(0)	1	(2)	1	(2)
Newcastle	3	(5)	2	(0)	1	(0)	6	(5)
Papworth	0	(3)	0	(0)	0	(0)	0	(3)
TOTAL	5	(11)	5	(3)	2 ⁵	(4)	12 ⁵	(18)

Paediatric donors are aged 14 years or under

¹ Includes organs retrieved by other centres

² Includes one heart and lung donor whose heart was retrieved by Papworth and lung retrieved by Newcastle

³ Includes two living lung donors and six non-heartbeating donors

⁴ Includes three non-heartbeating donors

⁵ Includes one non-heartbeating donor

5.3 Donor and organ supply

The number of cardiothoracic organ donors classified by retrieval centre, rather than geographical zone, is summarised in **Table 5.3**. Six and two of the 78 adult lung only donors were non-heartbeating and living donors respectively. Of the 187 adult deceased heartbeating cardiothoracic donors, 35% donated only the heart, 28% heart and lung and 37% lung only. Of the 12 paediatric deceased heartbeating cardiothoracic donors, 42% donated only the heart, 42% heart and lung and 17% lung only.

Table 5.4 shows the number of deceased heartbeating solid organ donors identified in each cardiothoracic zone, the number that donated cardiothoracic organs and the number of organs retrieved. The numbers in this table reflect the number of organs retrieved from within each zone (by any centre) rather than the number of retrievals made by that centre.

Of the 609 heartbeating solid organ donors, 33% donated cardiothoracic organs. Overall, 90% of the 360 organs retrieved were transplanted: 98% of hearts and 86% of lungs.

Table 5.4 Deceased heartbeating cardiothoracic organ donation and retrieval rates in the UK, 1 April 2007 - 31 March 2008, by donation zone

Donation zone	Number of donors		Number of organs retrieved (used)				TOTAL retrieved (used)	
	Heartbeating solid organ	Cardiothoracic	Hearts		Lungs			
Birmingham	119	33	20	(19)	41	(35)	61	(54)
Glasgow	41	18	15	(15)	16	(16)	31	(31)
Harefield	118	30	16	(15)	42	(30)	58	(45)
Manchester	88	33	21	(21)	35	(31)	56	(52)
Newcastle ¹	102	40	26	(26)	48	(46)	74	(72)
Papworth	141	44	29	(28)	51	(43)	80	(71)
TOTAL	609	198	127	(124)	233	(201)	360	(325)

¹ Newcastle transplant adult and paediatric patients

Deceased heartbeating donation rates per million population are shown in **Table 5.5**. The overall cardiothoracic donor rate was 3.3 pmp in 2007-2008 and varied across the donation zones from 2.2 pmp to 4.6 pmp.

Table 5.5 Deceased heartbeating cardiothoracic organ donation rates per million population (pmp) in the UK, 1 April 2007 - 31 March 2008, by donation zone

Donation zone	Heartbeating solid organ donors pmp	Cardiothoracic donors pmp		
		Heart	Lung	Total
Birmingham	12.1	2.0	2.3	3.4
Glasgow	8.1	2.9	1.8	3.5
Harefield	8.8	1.2	1.6	2.2
Manchester	10.9	2.6	2.6	4.1
Newcastle	11.8	3.0	3.0	4.6
Papworth	9.3	1.9	1.8	2.9
TOTAL	10.1	2.1	2.1	3.3

5.4 Transplants

Table 5.6 shows cardiothoracic transplant activity for each centre. In 2007-2008, 251 transplants were carried out, a decrease of 14% on 2006-2007. Of these, 51% were deceased donor heart transplants. Three adult non-heartbeating lung transplants were performed by Harefield and one by Newcastle. Newcastle also performed one adult living lung transplant and one paediatric non-heartbeating lung transplant. There was one heart and kidney transplant in 2007-2008, shown in the 2007-2008 adult deceased non-urgent heart column.

Table 5.6 Cardiothoracic transplants, 1 April 2007 - 31 March 2008 (2006-2007), by age group and centre

Transplant centre	Transplant type								TOTAL	
	Heart		Urgent		Heart/ lung		Lung(s)			
Non-urgent										
Adult										
Birmingham	12	(4)	6	(7)	3	(1)	9	(13)	30	(25)
Glasgow	5	(5)	4	(5)	0	(0)	0	(0)	9	(10)
Great Ormond Street	1	(1)	0	(0)	0	(1)	1	(0)	2	(2)
Harefield	14	(18)	8	(7)	0	(1)	29	(18)	51	(44)
Manchester	7	(14)	6	(5)	0	(0)	18	(22)	31	(41)
Newcastle	13	(14)	8	(5)	3	(1)	34	(41)	58	(61)
Papworth	9	(34)	8	(6)	1	(1)	19	(28)	37	(69)
TOTAL	61	(90)	40	(35)	7	(5)	110 ¹	(122 ²)	218 ¹	(252 ²)
Paediatric										
Great Ormond Street	7	(14)	6	(6)	0	(1)	5	(7)	18	(28)
Newcastle	3	(4)	11	(7)	0	(0)	1	(1)	15	(12)
TOTAL	10	(18)	17	(13)	0	(1)	6 ³	(8)	33 ³	(40)

Paediatric recipients are aged under 16 years at time of transplant

¹ Includes 1 living lung donor transplant and 4 NHB donor transplants

² Includes 3 NHB donor transplants

³ Includes 1 NHB donor transplant

There were 40 adult urgent heart transplants in 2007-2008, representing 40% of all adult heart transplants and ranging from 33% at Birmingham to 47% at Papworth. There were 17 paediatric urgent heart transplants in 2007-2008, representing 63% of all paediatric heart transplants.

At 31 March 2008 there were about 3,300 recipients with a functioning cardiothoracic organ transplant being followed-up.

5.5 Demographic characteristics

The ethnicity of cardiothoracic donors, transplant recipients and patients on the transplant list is shown in **Table 5.7**. While 6.3% of donors in 2007-2008 were non-white, 6.6% of the transplant list at 31 March 2008 was non-white.

Table 5.7 Ethnicity of cardiothoracic donors and recipients, 1 April 2006 - 31 March 2008 and transplant list patients at 31 March in the UK												
Ethnicity	Donors				Transplant recipients				Active transplant list patients			
	2006-2007		2007-2008		2006-2007		2007-2008		2007		2008	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
White	232	(98.3)	194	(93.7)	267	(91.4)	237	(94.4)	351	(92.4)	357	(93.5)
Asian	4	(1.7)	3	(1.4)	13	(4.5)	8	(3.2)	18	(4.7)	11	(2.9)
Black	0	(0.0)	5	(2.4)	8	(2.7)	4	(1.6)	8	(2.1)	10	(2.6)
Chinese	0	(0.0)	0	(0.0)	0	(0.0)	1	(0.4)	0	(0.0)	1	(0.3)
Other	0	(0.0)	5	(2.4)	4	(1.4)	1	(0.4)	3	(0.8)	3	(0.8)
TOTAL	236		207		292		251		380		382	

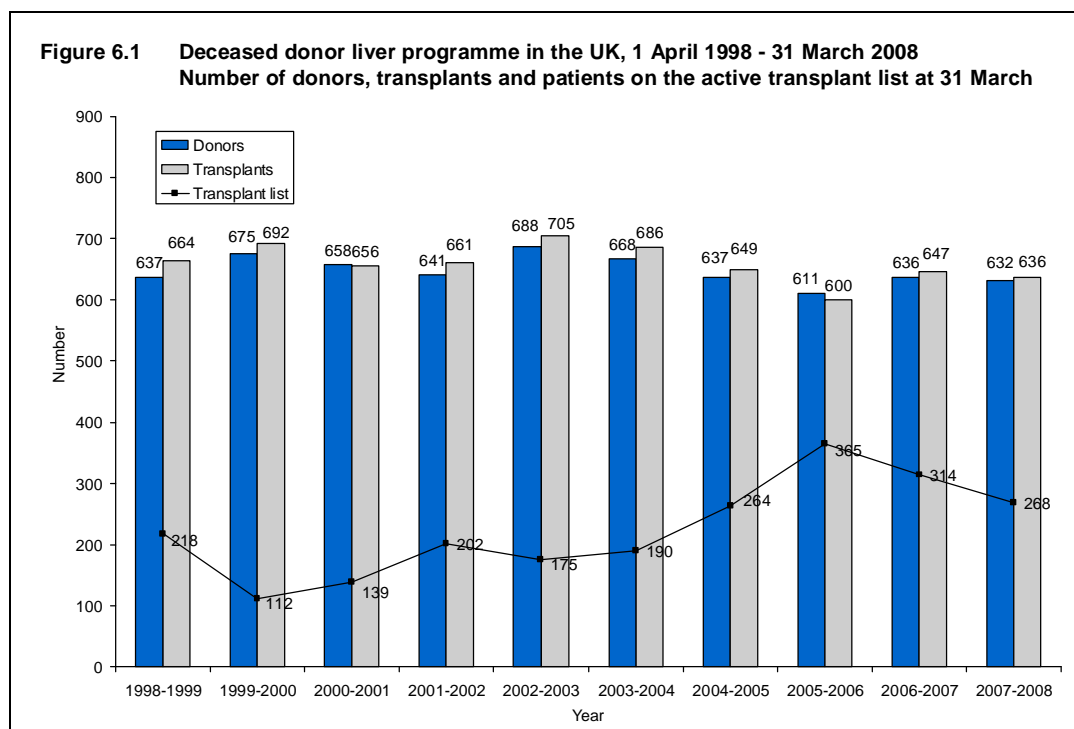
Of the 251 cardiothoracic recipients, 64% were male compared with 58% of donors and 53% of the transplant list; see **Table 5.8**. Of the 207 cardiothoracic donors, 41% were in the 35 to 49 years age group compared with 24% of recipients and 26% of the transplant list.

Table 5.8 Age and sex of cardiothoracic donors and transplant recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March 2008												
Age group (years)												
	0-17		18-34		35-49		50-59		60+		TOTAL	
Donors												
Male	11		38		53		14		5		121	(58%)
Female	9		15		32		20		10		86	(42%)
TOTAL	20	(10%)	53	(26%)	85	(41%)	34	(16%)	15	(7%)	207	(100%)
Recipients												
Male	21		23		38		52		26		160	(64%)
Female	16		21		23		28		3		91	(36%)
TOTAL	37	(15%)	44	(18%)	61	(24%)	80	(32%)	29	(12%)	251	(100%)
Transplant list												
Male	11		26		57		68		41		203	(53%)
Female	20		57		43		42		17		179	(47%)
TOTAL	31	(8%)	83	(22%)	100	(26%)	110	(29%)	58	(15%)	382	(100%)

6 LIVER ACTIVITY

6.1 Overview

The number of deceased liver donors and transplants in the UK has remained relatively constant in the last ten years as shown in **Figure 6.1**. Although there has been an overall increase in the number of patients on the active transplant list since 1999, the number of patients on the list at 31 March has decreased by 27% since 2006.



The number of deceased donors, deceased and living donor transplants, and patients on the active or suspended transplant list, by centre, is shown in **Table 6.1**. In 2007-2008, 632 solid organ donors donated their liver for transplant: 545 heartbeating and 87 non-heartbeating. There were 268 patients on the active transplant list at 31 March 2008, including five for liver, pancreas and small bowel/multivisceral transplants, a decrease of 15% from 2007.

Overall, the number of heartbeating donor liver transplants, including three liver, pancreas and small bowel/multivisceral transplants, decreased by 7% to 568, and the number of non-heartbeating donor transplants increased by 94% to 68, compared with the previous financial year. Additionally, there were twenty living liver lobe donor transplants in NHS Group 1 (thirteen) and Group 2 (seven) paediatric and adult recipients and four domino donor transplants in NHS Group 1 (one) and Group 2 (three) adult recipients. There were 92 adult super-urgent transplants in 2007-2008, representing 16% of all adult transplants, ranging from 8% at Newcastle to 26% at Leeds. There were 18 paediatric super-urgent transplants in 2007-2008, representing 20% of all paediatric transplants, ranging from 15% at Birmingham to 25% at King's College.

Table 6.1 Deceased and living liver donors and transplants, 1 April 2007 - 31 March 2008 (2006-2007) and transplant list patients at 31 March 2008 (2007) in the UK, by age group and centre

Retrieval/ transplant centre	Deceased donors						Deceased transplants						Living donor transplants		Active transplant list	
	HB		NHB		TOTAL		HB		NHB		TOTAL					
Adult																
Birmingham	126	(138)	10	(7)	136	(145)	120	(121)	9	(6)	129	(127)	0	(1)	35	(53)
Cambridge	63	(71)	6	(8)	69	(79)	57	(64)	3	(5)	60	(69)	0	(0)	22	(14)
Edinburgh	39	(38)	5	(0)	44	(38)	53	(50)	6	(0)	59	(50)	1	(0)	22	(20)
King's College	136	(128)	42	(23)	178	(151)	127	(125)	28	(16)	155	(141)	6	(2)	71	(124)
Leeds	55	(76)	11	(7)	66	(83)	57	(64)	13	(6)	70	(70)	3	(0)	51	(39)
Newcastle	42	(34)	2	(0)	44	(34)	22	(37)	2	(0)	24	(37)	0	(0)	8	(9)
Royal Free	62	(62)	4	(2)	66	(64)	58	(58)	4	(1)	62	(59)	0	(1)	23	(30)
TOTAL	525 ¹	(552 ¹)	80	(47)	605 ¹	(599 ¹)	494	(519)	65	(34)	559	(553)	10 ²	(4 ³)	232	(289)
Paediatric																
Birmingham	8	(9)	2	(0)	10	(9)	26	(44)	1	(0)	27	(44)	0	(0)	10	(9)
Cambridge	2	(6)	0	(0)	2	(6)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Edinburgh	3	(3)	0	(0)	3	(3)	0	(0)	0	(0)	0	(1)	0	(0)	0	(0)
King's College	1	(8)	2	(2)	3	(10)	35	(35)	2	(1)	37	(36)	12	(8)	21	(16)
Leeds	2	(4)	3	(1)	5	(5)	13	(14)	0	(0)	13	(14)	2	(0)	5	(0)
Newcastle	2	(3)	0	(0)	2	(3)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Royal Free	2	(1)	0	(0)	2	(1)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
TOTAL	20	(34)	7	(3)	27	(37)	74	(93)	3	(1)	77	(94)	14 ⁴	(8 ⁵)	36	(25)

¹ Includes donors whose livers were retrieved by other teams

² Includes 3 and 3 living liver lobe transplants, and 1 and 3 domino transplants in NHS Group 1 and Group 2 recipients, respectively

³ Includes 4 domino transplants in NHS Group 1 recipients

⁴ Includes 10 and 4 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively

⁵ Includes 4 and 4 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively

6.2 Transplant list

The outcome of patients registered at 1 April 2007 and patients registered during the year is shown in **Table 6.2**. This includes patients registered for a liver, pancreas and small bowel/multivisceral transplant. Of the 1,121 patients waiting on the list during 2007-2008, 58% were transplanted and 25% were still waiting at 31 March 2008.

Table 6.2 Liver transplant list and new registrations in the UK, 1 April 2007 - 31 March 2008

Outcome of patient at 31 March 2008	Active and suspended patients at 1 April 2007		New registrations in 2007-2008 ¹		TOTAL	
	N	%	N	%	N	%
Remained active/suspended	48	15	233	29	281	25
Transplanted	187	58	460	57	647	58
Removed	57	18	45	6	102	9
Died	28	9	63	8	91	8
TOTAL	320		801		1121	

¹ Includes re-registrations for second or subsequent transplants

6.3 Donor and organ supply

Of the 809 solid organ donors, 632 (78%) donated their liver and 582 (92%) of these donated livers were transplanted; see **Table 6.3**. Of livers retrieved from heartbeating and non-heartbeating donors, 94% and 78% were transplanted, respectively.

Table 6.3 Deceased liver retrieval rates in the UK, 1 April 2007 - 31 March 2008, by donation zone

Donation zone	Number of donors						Number of livers retrieved (used)					
	Solid organ			Liver			HB			NHB		
	HB	NHB	TOTAL	HB	NHB	TOTAL	HB			NHB		TOTAL
Birmingham	149	20	169	136	12	148	136	(132)		12	(11)	148 (143)
Cambridge	68	23	91	62	10	72	62	(57)		10	(5)	72 (62)
Edinburgh	41	13	54	37	5	42	37	(36)		5	(5)	42 (41)
King's College	154	77	231	140	33	173	140	(131)		33	(23)	173 (154)
Leeds	73	28	101	57	13	70	57	(55)		13	(13)	70 (68)
Newcastle	50	16	66	45	3	48	45	(40)		3	(3)	48 (43)
Royal Free	74	23	97	68	11	79	68	(63)		11	(8)	79 (71)
TOTAL	609	200	809	545	87	632	545	(514)		87	(68)	632 (582)

Table 6.4 shows the deceased solid organ and liver donor rates per million population for 2007-2008. Overall, the liver donor rate was 10.5 pmp and ranged from 7.6 to 13.8 pmp across the donation zones.

Table 6.4 Deceased liver donation rates per million population (pmp), 1 April 2007 - 31 March 2008, by donation zone		
Donation zone	Solid organ donor pmp	Liver donor pmp
Birmingham	12.6	11.1
Cambridge	9.7	7.6
Edinburgh	10.6	8.3
King's College	15.4	11.6
Leeds	12.6	8.7
Newcastle	19.0	13.8
Royal Free	16.5	13.5
TOTAL	13.4	10.5

6.4 Transplants

The number of whole, reduced and split liver transplants in 2007-2008 is shown in **Table 6.5**. The term "reduced" is used when only one lobe of the liver is transplanted and the term "split" applies when both lobes of the liver are transplanted into two different recipients.

Overall, the number of deceased liver transplants dropped by 2% in 2007-2008. There were 636 deceased liver transplants performed in 2007-2008: 531 whole liver, including 9 liver and kidney, 2 liver, pancreas and small bowel/multivisceral (1 including kidney); and 105 deceased liver lobe, including 5 liver and kidney and 1 liver, pancreas and small bowel/multivisceral. Split liver transplants accounted for 86% of liver lobe transplant activity.

Table 6.5 Deceased liver transplants performed in the UK, 1 April 2006 - 31 March 2008								
Transplant centre	2006-2007				2007-2008			
	Whole liver	Reduced liver	Split liver	TOTAL	Whole liver	Reduced liver	Split liver	TOTAL
Birmingham	126	7	38	171	113	7	36	156
Cambridge	67	0	2	69	58	0	2	60
Edinburgh	44	0	6	50	50	1	8	59
King's College	129	7	41	177	154	5	33	192
Leeds	70	1	13	84	72	2	9	83
Newcastle	35	0	2	37	24	0	0	24
Royal Free	58	0	1	59	60	0	2	62
TOTAL	529	15	103	647	531	15	90	636
Birmingham, King's College and Leeds transplant paediatric patients								

At 31 March 2008 there were about 6,000 recipients with a functioning liver transplant being followed-up.

6.5 Demographic characteristics

The ethnicity of liver donors, transplant recipients and transplant list patients is shown in **Table 6.6**. In 2007-2008, the proportion of Asian patients waiting on the transplant list was much greater than that of Asian donors, 10.4% compared with 2.1%, respectively.

Table 6.6 Ethnicity of liver donors and recipients, 1 April 2006 - 31 March 2008 and transplant list patients at 31 March in the UK												
Ethnicity	Donors				Transplant recipients				Active transplant list patients			
	2006-2007		2007-2008		2006-2007		2007-2008		2007		2008	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
White	627	(96.8)	621	(94.5)	549	(83.3)	549	(83.2)	262	(83.4)	222	(82.8)
Asian	9	(1.4)	14	(2.1)	76	(11.5)	65	(9.8)	25	(8.0)	28	(10.4)
Black	4	(0.6)	13	(2.0)	25	(3.8)	28	(4.2)	7	(2.2)	9	(3.4)
Chinese	1	(0.2)	1	(0.2)	3	(0.5)	6	(0.9)	1	(0.3)	0	(0.0)
Other	7	(1.1)	8	(1.2)	6	(0.9)	12	(1.8)	19	(6.1)	9	(3.4)
TOTAL	648		657		659		660		314		268	

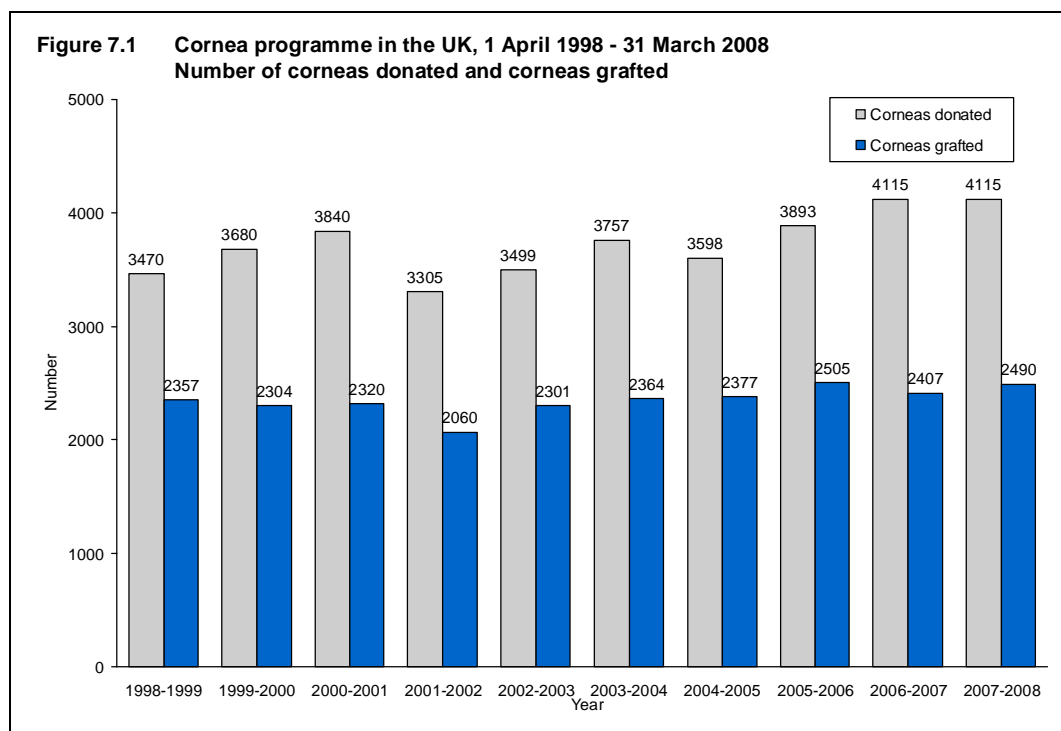
The age and sex distribution of donors and recipients in 2007-2008, and patients on the transplant list at 31 March 2008, are shown in **Table 6.7**. The 35-49 year age group had the largest proportion of donors (32%), and the 50-59 year age group had the largest proportion of patients transplanted (29%) and patients on the transplant list (32%).

Table 6.7 Age and sex of liver donors and transplant recipients, 1 April 2007 - 31 March 2008, and transplant list patients at 31 March 2008									
Age group (years)									
	0-17	18-34	35-49	50-59	60+	TOTAL			
Donors									
Male	25	85	115	71	60	356		(54%)	
Female	14	49	95	83	60	301		(46%)	
TOTAL	39	134	210	154	120	657		(100%)	
Recipients									
Male	54	31	91	127	89	392		(59%)	
Female	40	39	71	65	53	268		(41%)	
TOTAL	94	70	162	192	142	660		(100%)	
Transplant list									
Male	14	18	35	53	32	152		(57%)	
Female	24	15	27	33	17	116		(43%)	
TOTAL	38	33	62	86	49	268		(100%)	

7 CORNEA ACTIVITY

7.1 Overview

The number of corneas donated in 2007-2008 was 4115, the same as last year, however the number of corneas grafted increased in 2007-2008 by 3%, as shown in **Figure 7.1**. Additionally, 286 sclera were issued and used.



In 2007-2008 there were 2,062 cornea donors, of whom 1,862 donated corneas only and 200 donated corneas and solid organs: see **Table 7.1**. Compared with 2006-2007, the number of cornea only donors decreased by 4, and the number of cornea and solid organ donors decreased by 1. In 2006-2007, corneas were retrieved from 23% of deceased heartbeating solid organ donors; this was the same in 2007-2008. Of the 200 non-heartbeating solid organ donors in 2007-2008, 60 also donated corneas, 30% compared with 33% in 2006-2007.

Table 7.1 also shows the number and rate per million population (pmp) of donors in 2007-2008 by country and English Strategic Health Authority (StHA), with figures for 2006-2007 in parentheses. England had the highest cornea donor rate in the UK in 2007-2008 (37.5 pmp). In 2007-2008, the cornea donor rate increased in England, and Scotland but fell in Wales and Northern Ireland. Across the StHAs the cornea donor rate ranged from 7.2 pmp to 90.1 pmp.

Table 7.1 Cornea donation rates per million population, pmp, in the UK, 1 April 2007 - 31 March 2008 (2006 - 2007), by country and English Strategic Health Authority

Country of residence/ Strategic Health Authority	Cornea only		Solid organ and cornea		TOTAL		TOTAL pmp	
North East	206	(130)	15	(17)	221	(147)	86.3	(57.4)
North West	389	(282)	21	(21)	410	(303)	59.9	(44.2)
Yorkshire and The Humber	120	(211)	7	(10)	127	(221)	25.1	(43.7)
East Midlands	149	(131)	8	(5)	157	(136)	36.4	(31.6)
West Midlands	67	(61)	14	(12)	81	(73)	15.1	(13.6)
East of England	122	(180)	14	(26)	136	(206)	24.5	(37.2)
London	22	(24)	32	(27)	54	(51)	7.2	(6.8)
South East Coast	136	(235)	14	(17)	150	(252)	35.6	(59.9)
South Central	78	(87)	19	(7)	97	(94)	24.6	(23.8)
South West	425	(374)	32	(26)	457	(400)	90.1	(78.9)
England	1714	(1715)	176	(168)	1890	(1883)	37.5	(37.3)
Isle of Man	0	(0)	0	(0)	0	(0)	0.0	(0.0)
Channel Islands	1	(0)	0	(0)	1	(0)	6.7	(0.0)
Wales	55	(72)	9	(11)	64	(83)	21.6	(28.0)
Scotland	90	(71)	8	(15)	98	(86)	19.3	(16.9)
Northern Ireland	2	(8)	7	(7)	9	(15)	5.2	(8.7)
TOTAL	1862	(1866)	200	(201)	2062	(2067)	34.2	(34.3)

7.2 Donor and tissue supply

In 2007-2008, 97.4% (97.7% in 2006-2007) of retrieved corneas reported to the National Transplant Database were supplied to the Corneal Transplant Service (CTS) Eye Banks in Bristol and Manchester. **Table 7.2** shows the number of corneas supplied to and taken from the CTS Eye Banks for those centres that supplied more than 25 corneas in 2007-2008. The difference between the number supplied and number taken is also shown, together with the number of corneas that were deemed suitable for a penetrating keratoplasty (PK), which is where donor and tissue selection criteria were met. Centres with a negative balance have taken more corneas than they supplied to the CTS Eye Banks.

**Table 7.2 Corneas supplied to and taken from the CTS Eye Banks,
1 April 2007 - 31 March 2008**

Centre	Corneas supplied	Suitable for PK (%)		Corneas taken	Balance
Exeter, Royal Devon & Exeter Hospital	336	204	(61)	1	335
East Grinstead, Queen Victoria Hospital	260	164	(63)	37	223
Newcastle, Royal Victoria Infirmary	238	148	(62)	48	190
Bristol, Eye Hospital	232	157	(68)	51	181
Bolton, Royal Bolton Hospital	230	141	(61)	17	213
Prescot, Whiston Hospital	216	130	(60)	0	216
Nottingham, University Hospital	210	133	(63)	66	144
Middlesbrough, James Cook University Hospital	191	108	(57)	9	182
Norfolk and Norwich University Hospital	157	126	(80)	17	140
Liverpool, Royal Liverpool University Hospital	140	77	(55)	94	46
Plymouth, Royal Eye Infirmary	72	52	(72)	30	42
Leeds, General Infirmary	71	49	(69)	0	71
Preston, Royal Preston Hospital	68	38	(56)	3	65
Leeds, St James University Hospital	59	44	(75)	81	-22
London, Moorfields Eye Hospital	54	34	(63)	229	-175
Manchester, Royal Eye Hospital	52	24	(46)	116	-64
Southampton, University Hospitals	48	38	(79)	48	0
Glasgow, Gartnavel General Hospital	44	34	(77)	68	-24
Newport, Royal Gwent Hospital	42	21	(50)	9	33
Reading, Royal Berkshire Hospital	38	24	(63)	43	-5
Truro, Royal Cornwall Hospital (Treliske)	38	24	(63)	6	32
Torquay, Torbay Hospital	37	22	(59)	10	27
Oxford, John Radcliffe Hospital	36	22	(61)	25	11
Birmingham, Birmingham & Midland Eye Centre	36	30	(83)	61	-25
Edinburgh, Royal Infirmary	36	28	(78)	0	36
Coventry & Warwickshire Hospital	28	24	(86)	13	15
Cardiff, University of Wales Hospital	28	19	(68)	16	12
Taunton, Taunton & Somerset Hospital	26	23	(88)	10	16
Hereford, Victoria Eye Hospital	26	23	(88)	5	21
Stoke, North Staffordshire Royal Infirmary	26	13	(50)	0	26
Centres supplying more than 25 corneas	3075	1974	(64)	1113	1962
All other centres	934	658	(70)	1377	-443
TOTAL	4009	2632	(66)	2490	1519

PK - Penetrating keratoplasty

Of the 4,009 corneas supplied to the CTS Eye Banks, 2,632 (66%) were suitable for a PK. This was an increase compared with 2006-2007, when 62% of corneas supplied to the CTS Eye Banks were suitable for a PK.

7.3 CTS Eye Bank activity

The activity levels for the Bristol and Manchester Eye Banks are shown in **Table 7.3**. The numbers of corneas received by the CTS Eye Banks remained constants in 2007-2008, whereas the number of corneas issued increased by 6%. In 2007-2008, 4,009 corneas were received into the CTS Eye Banks, of which 2,688 (67%) were subsequently issued for grafting. The difference equates to corneas unsuitable for transplantation.

Table 7.3 Corneas received into the Bristol and Manchester Eye Banks, 1 April 2007 - 31 March 2008 (2006-2007), by year								
	Total received		Number issued ¹		% issued		Difference between number received and issued	
Bristol	1855	(1880)	1279	(1232)	69	(66)	576	(648)
Manchester	2154	(2141)	1409	(1310)	65	(61)	745	(831)
Total	4009	(4021)	2688	(2542)	67	(63)	1321	(1479)

¹ Number issued of those received in each year

The outcome of corneas received into the CTS Eye Banks is given in **Table 7.4**. Of the corneas supplied to the Eye Banks in 2007-2008, 62% were issued with an endothelium suitable for penetrating keratoplasty (these corneas may have been used for penetrating keratoplasty, deep anterior lamellar keratoplasty or endothelial keratoplasty), 1% were issued for lamellar grafts and 4% were issued but not used. Of the corneas supplied to the Eye Banks, 16% were unsuitable because of medication contraindications, 10% had endothelial deficiencies or stromal opacity and 5% were discarded because of bacterial or fungal contamination. Less than 1% of corneas became outdated, that is, they exceeded 28 days storage. Corneas that were unsuitable for transplantation were, where possible, used for research when permission had been given by the relatives.

7.4 Transplants

Transplant activity by country of residence and Strategic Health Authority in England for the years 2006-2007 and 2007-2008 is detailed in **Table 7.5**. The overall transplant rate was 39.9 pmp in 2006-2007; this increased to 41.3 pmp in 2007-2008. The transplant rates increased in England and Northern Ireland, but decreased in Wales and Scotland. England had the highest transplant rate in the UK: 42.3 pmp, this ranged from 32.5 pmp to 61.1 pmp across the StHAs.

Table 7.4 Outcome of corneas received into the Bristol and Manchester Eye Banks, 1 April 2007 - 31 March 2008 (2006 - 2007), by year

Outcome of cornea	Bristol				Manchester				TOTAL			
	N		%		N		%		N		%	
Used												
Penetrating keratoplasty	1169	(1139)	63	(61)	1308	(1223)	61	(57)	2477	(2362)	62	(59)
Lamellar keratoplasty	11	(12)	1	(1)	19	(19)	1	(1)	30	(31)	1	(1)
Lathed lamellar lenticule	0	(1)	0	(<1)	1	(0)	<1	(0)	1	(1)	<1	(<1)
Other/ not reported	16	(1)	1	(<1)	7	(6)	<1	(<1)	23	(7)	1	(<1)
Total used	1196	(1153)	64	(61)	1335	(1248)	62	(58)	2531	(2401)	63	(60)
Not used												
Issued, not used	83	(79)	4	(4)	74	(62)	3	(3)	157	(141)	4	(4)
Unsuitable - endothelium, stromal, opacity, other	188	(234)	10	(12)	220	(249)	10	(12)	408	(483)	10	(12)
Medical reason - virology	163	(166)	9	(9)	234	(313)	11	(15)	397	(479)	10	(12)
Medical reason - other	121	(121)	7	(6)	134	(124)	6	(6)	255	(245)	6	(6)
Contaminated	90	(114)	5	(6)	115	(130)	5	(6)	205	(244)	5	(6)
Other/not reported	14	(13)	1	(1)	42	(15)	2	(1)	56	(28)	1	(1)
Total not used	659	(727)	36	(39)	819	(893)	38	(42)	1478	(1620)	37	(40)
TOTAL	1855	(1880)			2154	(2141)			4009	(4021)		

Table 7.5 Cornea transplants performed per million population (pmp) in the UK, 1 April 2006 - 31 March 2008, by country of residence and English Strategic Health Authority

Country of residence/ Strategic Health Authority	Number of transplants (pmp)			
	2006-2007		2007-2008	
North East	89	(34.8)	110	(43.0)
North West	261	(38.1)	318	(46.4)
Yorkshire and The Humber	311	(61.5)	309	(61.1)
East Midlands	206	(47.8)	205	(47.6)
West Midlands	218	(40.6)	188	(35.0)
East of England	198	(35.7)	229	(41.3)
London	272	(36.2)	280	(37.2)
South East Coast	143	(34.0)	137	(32.5)
South Central	155	(39.2)	187	(47.3)
South West	178	(35.1)	172	(33.9)
England	2031	(40.3)	2135	(42.3)
Isle of Man	2	(25.0)	3	(37.5)
Channel Islands	4	(26.7)	11	(73.3)
Wales	125	(42.2)	105	(35.5)
Scotland	175	(34.4)	142	(27.9)
Northern Ireland	48	(27.9)	63	(36.6)
TOTAL¹	2402	(39.9)	2488	(41.3)

¹ Includes UK recipients where the postcode was unspecified and non-UK recipients

8 TRANSPLANT SURVIVAL

This chapter shows graft survival estimates for kidney, pancreas and cornea transplants, and patient survival for kidney, pancreas, cardiothoracic and liver transplants, performed in the UK, by organ type and, where appropriate, by calendar year group. Separate estimates are presented for adult and paediatric patients, using organ specific age definitions, and for heartbeating and non-heartbeating donor organ recipients.

In all cases, the Kaplan-Meier estimate of the survivor function was used and groups were compared using the log-rank test. The analyses do not take account of risk factors, which may change over time. Graft survival is defined as time from transplant to graft failure, censoring for death with a functioning graft and grafts still functioning at time of analysis. Patient survival is defined as time from transplant to patient death, censoring for patients still alive at time of analysis.

8.1 Kidney graft and patient survival

8.1.1 Adult recipients

8.1.1.1 Deceased heartbeating donor transplants

Figure 8.1 shows long-term graft survival in adult (≥ 18 years) recipients for first deceased heartbeating donor kidney only transplants in the UK. **Table 8.1** shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There have been significant improvements in one, two and five year survival over the year groups, $p < 0.001$ in each case.

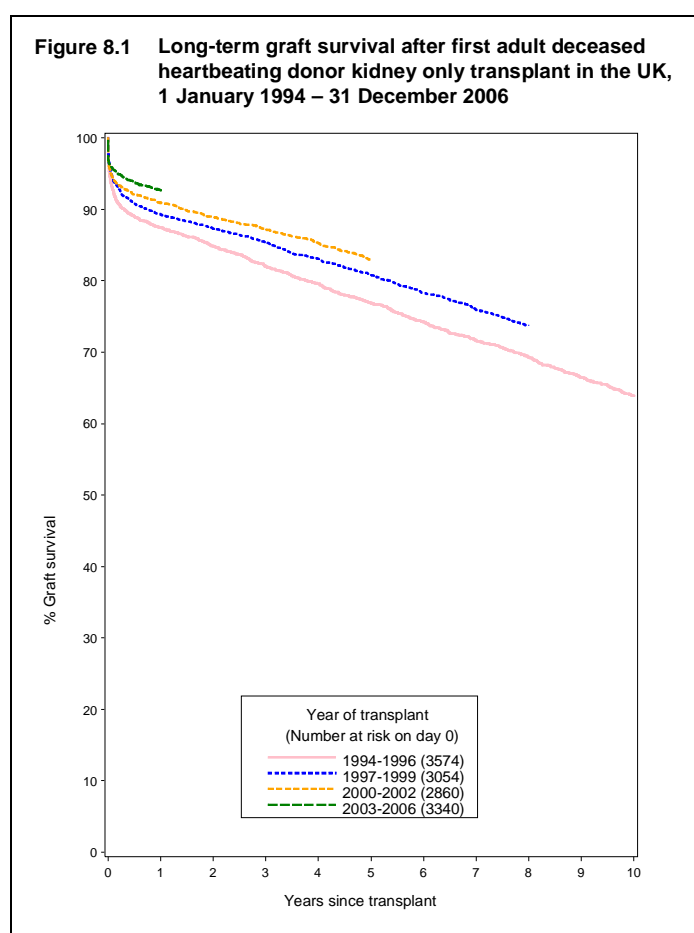


Table 8.1 Long-term graft survival after first adult deceased heartbeating donor kidney only transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	3574	87	(86-89)	85	(84-86)	77	(75-78)	64	(62-66)
1996-1999	3054	89	(88-90)	87	(86-88)	81	(79-82)		
2000-2002	2860	91	(90-92)	89	(88-90)	83	(82-84)		
2003-2006	3340	93	(92-93)						

Table 8.2 shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There have been significant improvements in one, two and five year survival over the year groups, $p < 0.001$ in each case.

Table 8.2 Long-term patient survival after first adult deceased heartbeating donor kidney only transplant in the UK, 1 January 1994 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	3580	93	(92-94)	91	(90-92)	83	(82-84)	68	(67-70)
1996-1999	3058	95	(94-95)	93	(92-94)	86	(84-87)		
2000-2002	2860	95	(94-96)	93	(92-94)	87	(86-88)		
2003-2006	3341	96	(96-97)						

8.1.1.2 Deceased non-heartbeating donor transplants

Long-term graft survival in adult recipients for non-heartbeating donor kidney transplants in the UK is shown in **Figure 8.2**.

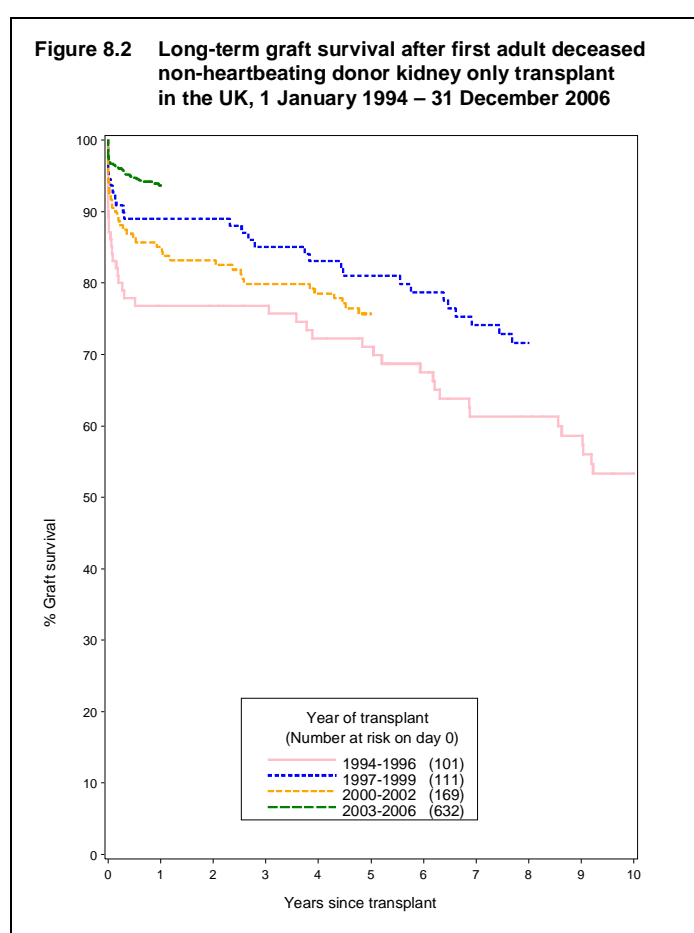


Table 8.3 shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been a significant improvement in one year survival over the year groups, $p < 0.001$. One year graft survival is comparable with that for heartbeating donor transplants in the most recent time period.

Table 8.3 Long-term graft survival after first adult deceased non-heartbeating donor kidney only transplant in the UK, 1 January 1993 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	101	77	(67-84)	77	(67-84)	71	(61-79)	53	(42-63)
1996-1999	111	89	(81-94)	89	(81-94)	81	(72-87)		
2000-2002	169	85	(79-90)	83	(77-88)	76	(68-82)		
2003-2006	632	94	(91-95)						

Table 8.4 shows the patient survival estimates and confidence intervals for each year group. There has been a significant improvement in one year survival over the year groups, $p = 0.04$.

Table 8.4 Long-term patient survival after first adult deceased non-heartbeating donor kidney only transplant in the UK, 1 January 1993 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	101	90	(81-94)	87	(79-93)	80	(70-87)	66	(65-75)
1996-1999	111	92	(85-96)	90	(83-94)	80	(71-87)		
2000-2002	169	92	(86-95)	89	(83-93)	80	(73-86)		
2003-2006	632	96	(94-97)						

8.1.1.3 Living donor transplants

Long-term graft survival in adult recipients for living donor kidney transplants in the UK is shown in **Figure 8.3**. **Table 8.5** shows graft survival estimates and confidence intervals for each year group. There has been a significant improvement in one year survival over the year groups, $p < 0.001$.

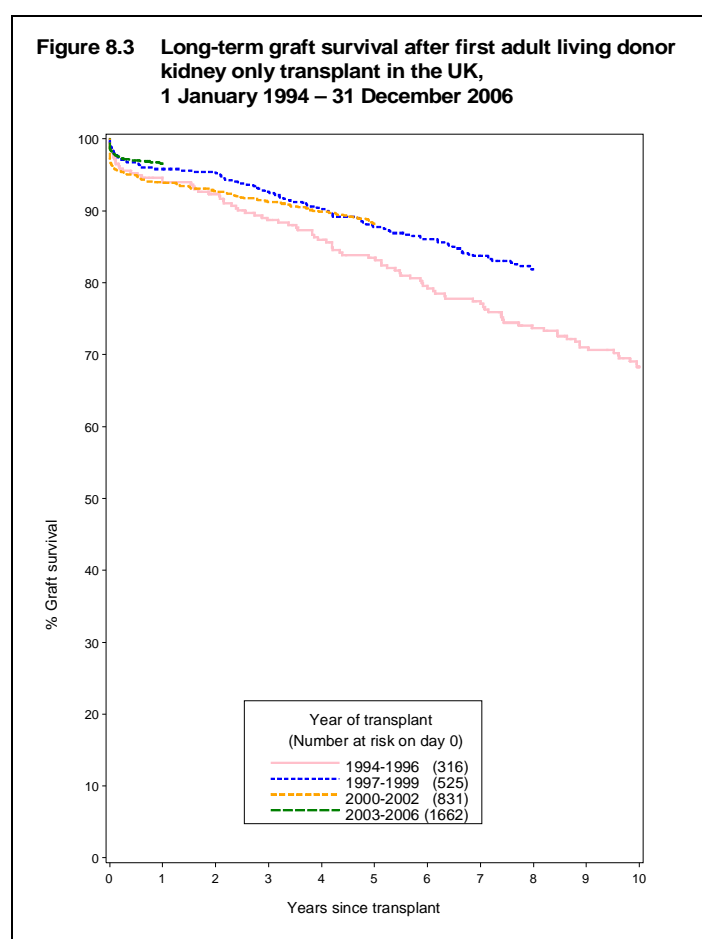


Table 8.5 Long-term graft survival after first adult living donor kidney transplant in the UK, 1 January 1993 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	316	94	(91-96)	92	(89-95)	83	(79-87)	68	(62-73)
1996-1999	525	96	(94-97)	95	(93-97)	88	(85-90)		
2000-2002	831	94	(92-95)	93	(91-94)	88	(86-90)		
2003-2006	1662	97	(96-97)						

Table 8.6 shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant differences in patient survival across the year groups ($p > 0.1$).

Table 8.6 Long-term patient survival after first adult living donor kidney transplant in the UK, 1 January 1993 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	317	98	(96-99)	97	(94-98)	94	(91-96)	89	(84-92)
1996-1999	525	98	(97-99)	98	(96-99)	95	(93-97)		
2000-2002	832	98	(97-99)	97	(96-98)	95	(93-96)		
2003-2006	1662	99	(98-99)						

8.1.2 Paediatric recipients

8.1.2.1 Deceased heartbeating donor transplants

Figure 8.4 shows long-term graft survival in paediatric (<18 years) recipients for first deceased heartbeating donor kidney only transplants in the UK. Graft survival estimates and confidence intervals are shown for each year group in **Table 8.7**. There have been significant improvements in one year survival over the year groups, $p < 0.001$.

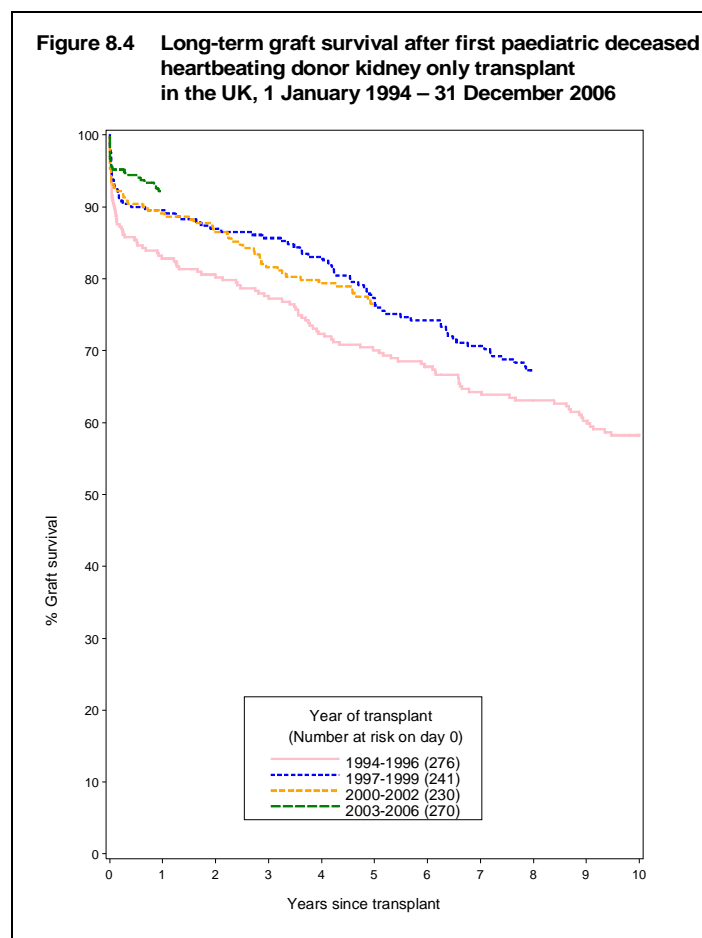


Table 8.7		Long-term graft survival after first paediatric deceased heartbeating donor kidney only transplant in the UK, 1 January 1993 - 31 December 2006							
Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	276	83	(78-87)	80	(75-84)	70	(64-75)	58	(52-64)
1996-1999	241	90	(85-93)	87	(82-91)	77	(71-82)		
2000-2002	230	89	(84-93)	86	(81-90)	77	(70-82)		
2003-2006	270	92	(88-95)						

Table 8.8 shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There have been improvements in one and five year survival over the year groups ($p=0.04$ and $p=0.03$, respectively). There were no statistically significant differences in two year survival over the year groups ($p>0.1$).

Table 8.8		Long-term patient survival after first paediatric deceased heartbeating donor kidney only transplant in the UK, 1 January 1993 - 31 December 2006							
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	276	98	(95-99)	98	(95-99)	95	(92-97)	89	(84-92)
1996-1999	241	97	(94-99)	97	(93-98)	94	(91-97)		
2000-2002	230	100	(-)	100	(-)	99	(96-100)		
2003-2006	270	100	(-)						

8.1.2.2 Living donor transplants

Long-term graft survival in paediatric recipients for living donor kidney transplants in the UK is shown in **Figure 8.5**. **Table 8.9** shows graft survival estimates and confidence intervals for each year group. There were no statistically significant differences in graft survival across the year groups ($p>0.1$).

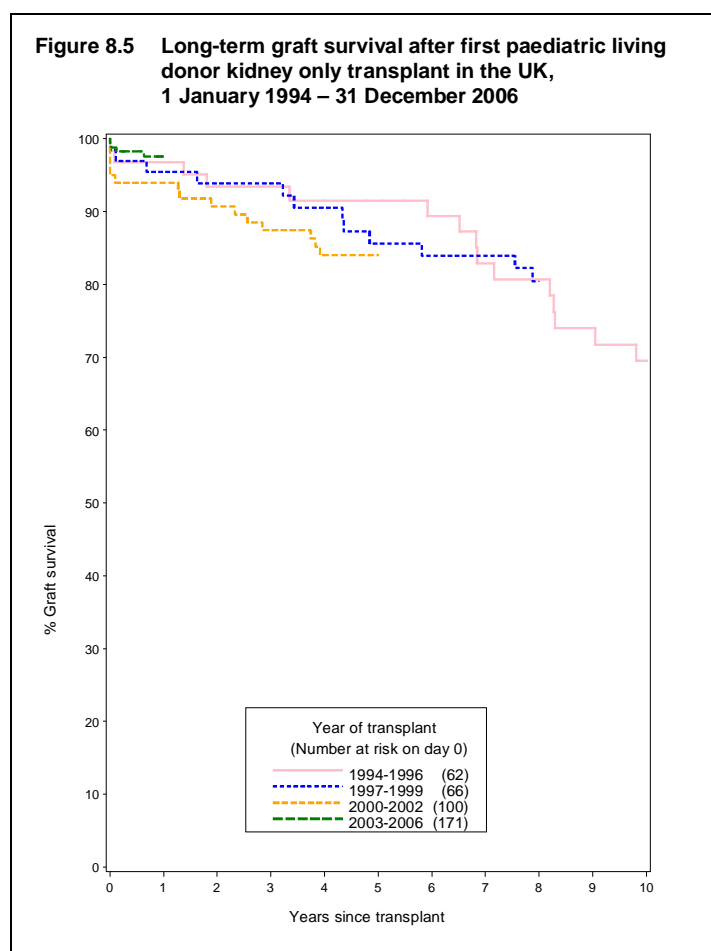


Table 8.9 Long-term graft survival after first paediatric living donor kidney transplant in the UK, 1 January 1993 - 31 December 2006

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	62	97	(88-99)	93	(83-97)	92	(81-96)	70	(54-81)
1996-1999	66	95	(86-99)	94	(84-98)	86	(74-92)		
2000-2002	100	94	(87-97)	91	(83-95)	84	(75-90)		
2003-2006	171	98	(94-99)						

Table 8.10 shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant differences in patient survival across the year groups ($p>0.1$).

Table 8.10 Long-term patient survival after first paediatric living donor kidney transplant in the UK, 1 January 1993 - 31 December 2006									
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	62	97	(88-99)	97	(88-99)	97	(88-99)	95	(85-98)
1996-1999	66	100	(-)	98	(89-100)	97	(88-99)		
2000-2002	100	97	(91-99)	97	(91-99)	96	(89-98)		
2003-2006	171	99	(95-100)						

There were insufficient paediatric recipients of first deceased non-heartbeating donor kidney only transplants to permit reliable analysis by year of transplant.

8.2 Pancreas graft and patient survival

National pancreas follow-up data are only available for transplants performed since 1 January 2001. There are insufficient data available to analyse long-term survival effects. **Figure 8.6** shows pancreas graft survival in recipients receiving their first deceased heartbeating donor simultaneous kidney/pancreas (SPK) transplant performed in the UK between 1 January 2001 and 31 December 2006, by year of transplant. Graft and patient survival estimates and confidence intervals are shown by transplant type at 30 days, 90 days and one year in **Table 8.11** and **Table 8.12** respectively.

Figure 8.7 shows pancreas graft survival in recipients receiving their first deceased heartbeating donor pancreas only transplant performed in the UK between 1 January 2004 and 31 December 2006. Graft and patient survival estimates and confidence intervals are shown by transplant type at 30 days, 90 days and one year in **Table 8.13** and **Table 8.14** respectively.

Figure 8.6 Pancreas graft survival after first deceased heartbeating donor SPK transplant in the UK, 1 January 2001 – 31 December 2006

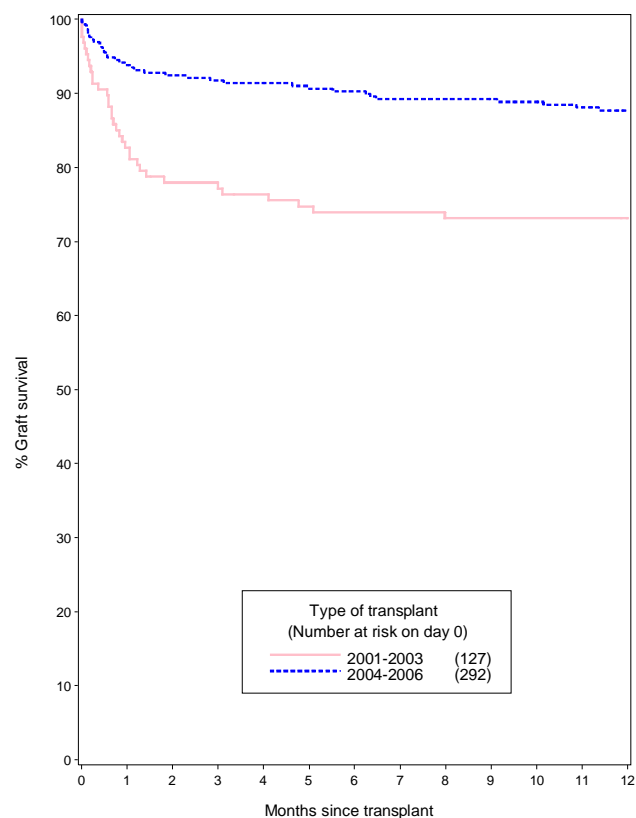


Table 8.11 Pancreas graft survival after first heartbeating donor SPK transplant in the UK, 1 January 2002 - 31 December 2006

Transplant	No. at risk on day 0	% Graft survival (95% confidence interval)					
		30-day		90-day		One year	
2001-2003	127	83	(75-88)	78	(70-84)	73	(65-80)
2004-2006	292	94	(90-96)	92	(88-94)	88	(83-91)

Table 8.12 Pancreas patient survival after first heartbeating donor SPK transplant in the UK, 1 January 2002 - 31 December 2006

Transplant	No. at risk on day 0	% Patient survival (95% confidence interval)					
		30-day		90-day		One year	
2001-2003	128	98	(93-99)	93	(87-97)	88	(81-93)
2004-2006	293	99	(97-100)	97	(94-98)	94	(91-96)

Figure 8.7 Pancreas graft survival after first deceased heartbeating donor pancreas only transplant in the UK, 1 January 2004 – 31 December 2006

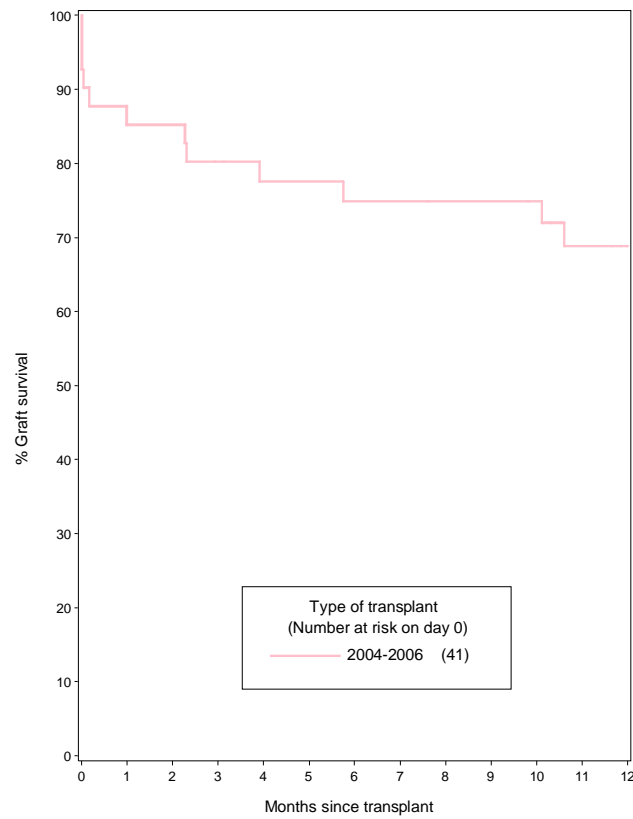


Table 8.13 Pancreas graft survival after first heartbeating donor pancreas only transplant in the UK, 1 January 2002 - 31 December 2006

Transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		30-day	90-day	One year	
2004-2006	41	85 (70-93)	80 (64-90)	69	(52-81)

Table 8.14 Pancreas patient survival after first heartbeating donor pancreas only transplant in the UK, 1 January 2002 - 31 December 2006

Transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		30-day	90-day	One year	
2004-2006	42	98 (84-100)	98 (84-100)	98	(84-100)

8.3 Cardiothoracic patient survival

8.3.1 Adult recipients

Long-term patient survival for adult (≥ 16 years) recipients after first heart only transplants is shown in **Figure 8.8**. Domino and deceased donor transplants are included as well as urgent and heterotopic transplants. **Table 8.15** shows the survival estimates and confidence intervals for one, two, five and ten years post-transplant. There was evidence of a difference in five year survival over the year groups ($p=0.02$). There were no statistically significant differences in one or two year survival over the year groups ($p>0.1$).

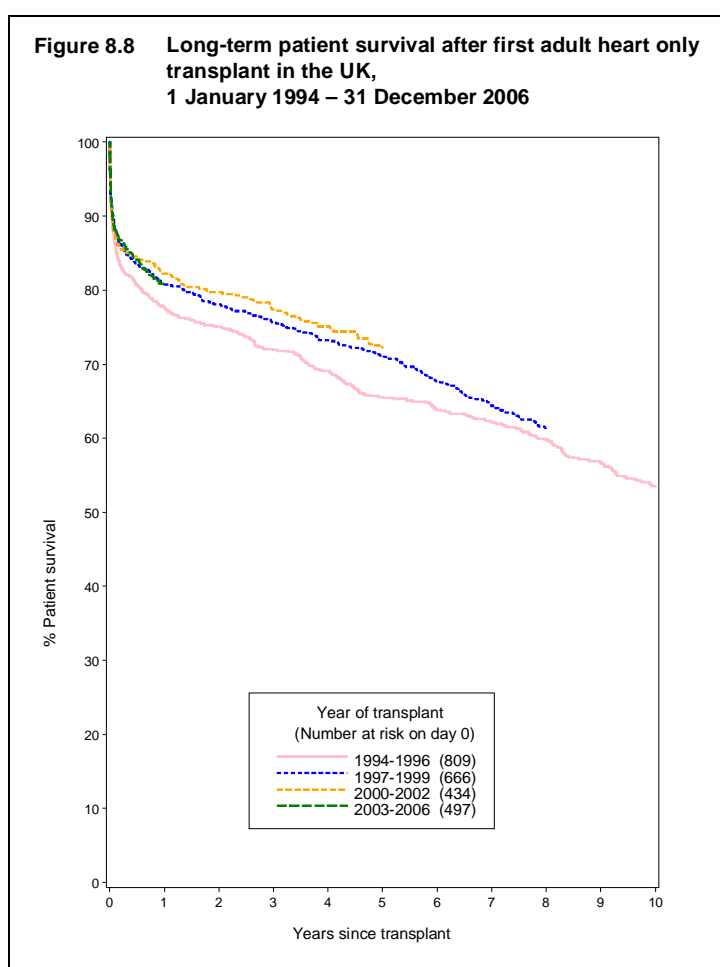


Table 8.15 Long-term patient survival after first adult heart only transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	809	78	(75-80)	75	(72-78)	66	(62-69)	54	(50-57)
1996-1999	666	81	(78-84)	78	(75-81)	71	(68-74)		
2000-2002	434	82	(78-86)	80	(76-83)	72	(68-76)		
2003-2006	497	81	(77-84)						

Patient survival for adult recipients after first heart/lung block transplants is shown in **Figure 8.9**. Patient survival estimates and confidence intervals for each year group are shown in **Table 8.16**. There were no statistically significant differences in patient survival across the year groups ($p>0.1$).

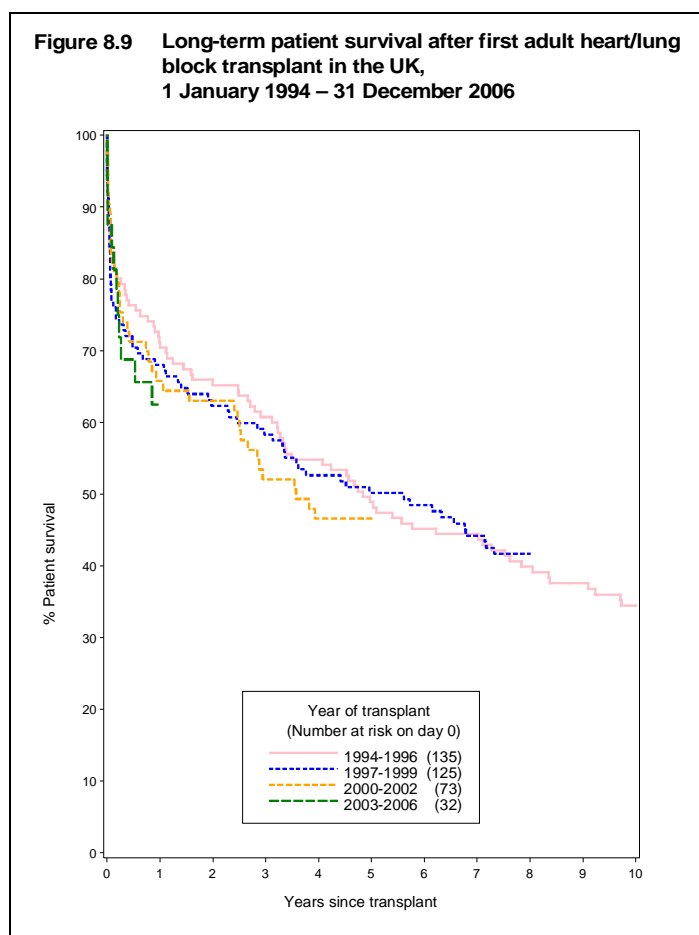


Table 8.16 Long-term patient survival after first adult heart/lung block transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)					
		One year	Two year	Five year	Ten year		
1994-1996	135	71 (63-78)	65 (57-73)	49 (40-57)	34 (27-43)		
1996-1999	125	68 (59-75)	62 (53-70)	50 (41-59)			
2000-2002	73	66 (54-75)	63 (51-73)	47 (35-57)			
2003-2006	32	63 (44-77)					

Patient survival for first deceased heartbeating lung only transplants for adult recipients is shown in **Figure 8.10**, with survival estimates and confidence intervals shown in **Table 8.17**. There is evidence of differences in one, two and five year patient survival across the year groups, $p < 0.01$.

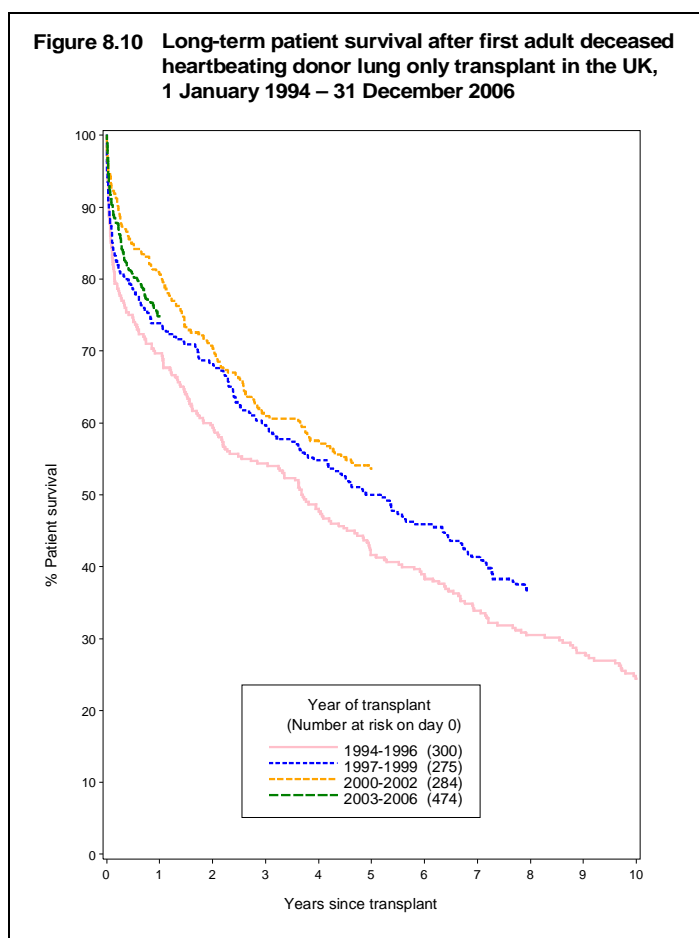


Table 8.17 Long-term patient survival after first adult deceased heartbeating donor lung only transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	300	70	(64-75)	59	(54-65)	42	(36-47)	24	(20-29)
1996-1999	275	74	(68-79)	68	(62-73)	50	(44-56)		
2000-2002	284	81	(76-85)	70	(55-75)	54	(47-59)		
2003-2006	474	75	(71-79)						

8.3.2 Paediatric recipients

Long-term patient survival for paediatric recipients after first heart only transplant is shown in **Figure 8.11**. Domino and deceased donor transplants are included as well as urgent and heterotopic transplants. **Table 8.18** shows the survival estimates and confidence intervals for one, two, five and ten years post-transplant. There is evidence of an improvement in one, two and five year survival over the year groups, $p < 0.001$, $p = 0.03$ and $p = 0.03$ respectively.

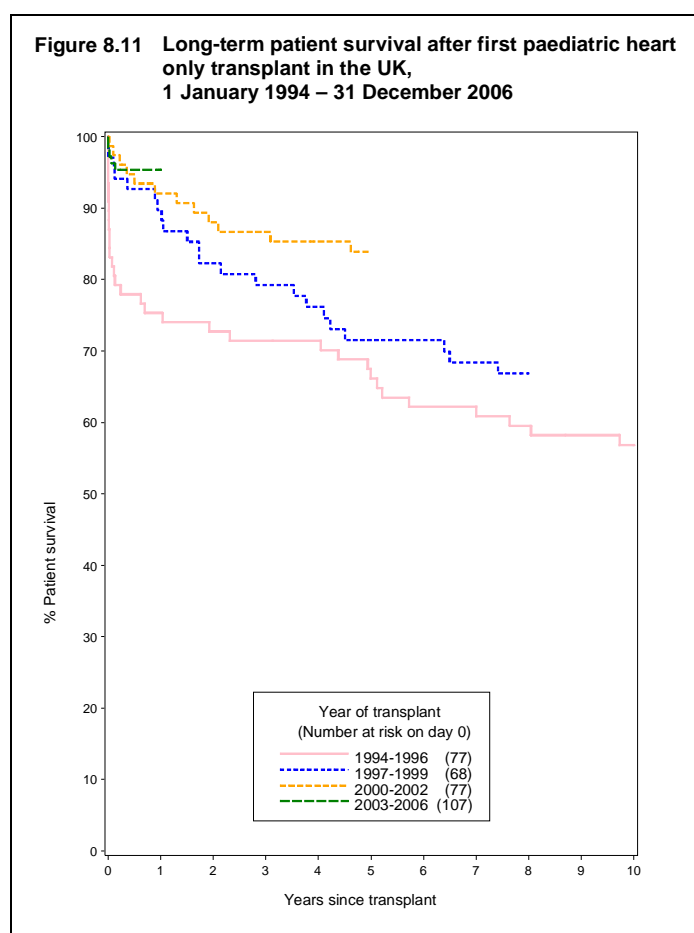


Table 8.18 Long-term patient survival after first paediatric heart only transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	77	75	(64-83)	73	(61-81)	66	(54-76)	57	(45-67)
1996-1999	68	90	(80-95)	82	(71-90)	71	(59-81)		
2000-2002	77	92	(83-96)	88	(78-94)	84	(73-91)		
2003-2006	107	95	(89-98)						

The number of paediatric lung and heart/lung transplant recipients was too small to perform the analysis by year of transplant.

8.4 Liver patient survival

8.4.1 Adult recipients

Long-term patient survival for adult (≥ 17 years) recipients after first elective deceased heartbeating donor liver only transplants is shown in **Figure 8.12**. **Table 8.19** shows patient survival estimates at one, two, five and ten years post-transplant. There have been significant improvements in one, two and five year patient survival over the year groups, $p < 0.001$, $p < 0.001$ and $p = 0.03$ respectively.

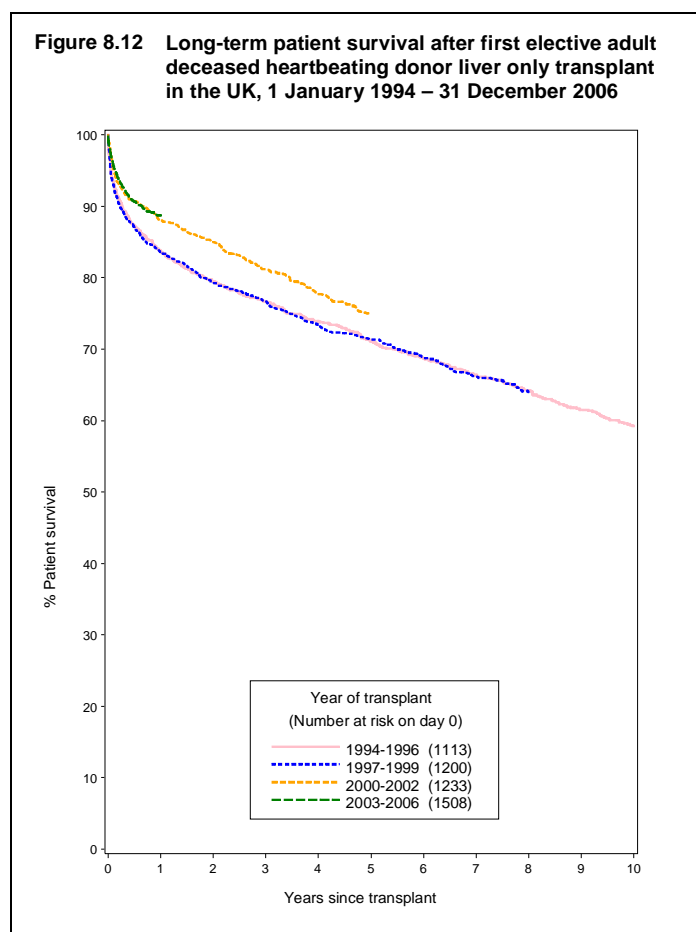
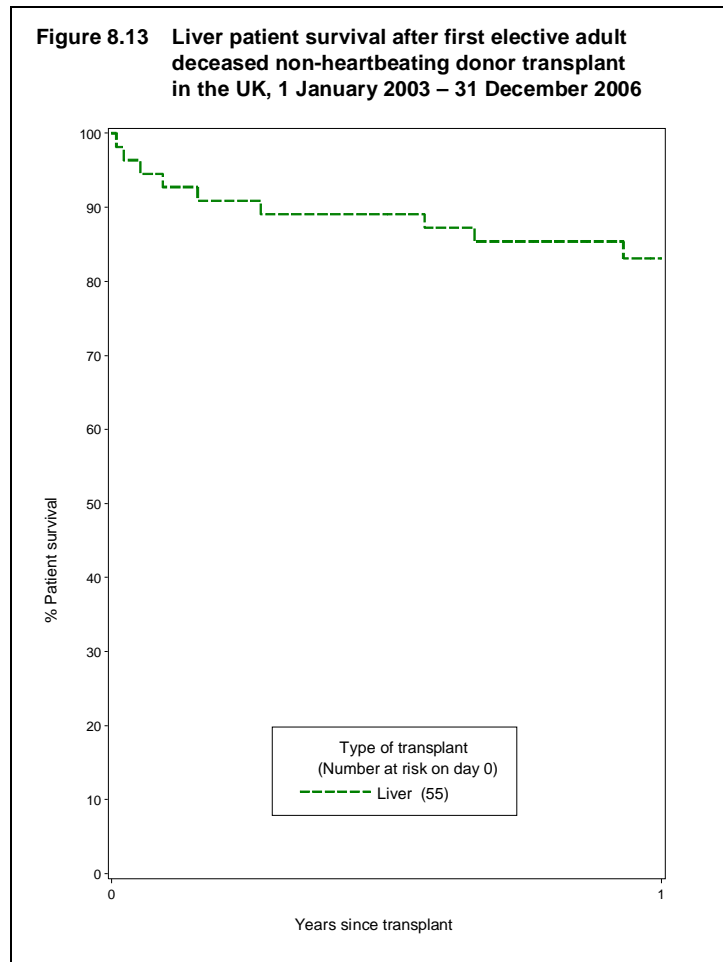


Table 8.19 Long-term patient survival after first elective adult deceased heartbeating donor liver only transplant in the UK, 1 January 1994 - 31 December 2006

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	1113	84	(81-86)	79	(77-82)	71	(68-74)	59	(56-62)
1996-1999	1200	83	(81-85)	79	(77-82)	71	(69-74)		
2000-2002	1233	88	(86-90)	85	(83-87)	75	(72-77)		
2003-2006	1508	89	(87-90)						

Patient survival for adult (≥ 17 years) recipients after first elective deceased non-heartbeating donor liver only transplants is shown in **Figure 8.13**. The majority of non-heartbeating liver transplants have been performed since 1 January 2002, so there are insufficient data available to analyse long-term patient survival, but patient survival at one year is 83% (95% confidence interval: 70-91).



8.4.2 Paediatric recipients

Figure 8.14 and **Table 8.20** show long-term patient survival estimates for first elective deceased heartbeating donor liver only transplants in paediatric (<17 years) recipients. There have been no statistically significant improvements in one, two or five year patient survival over the year groups ($p>0.1$).

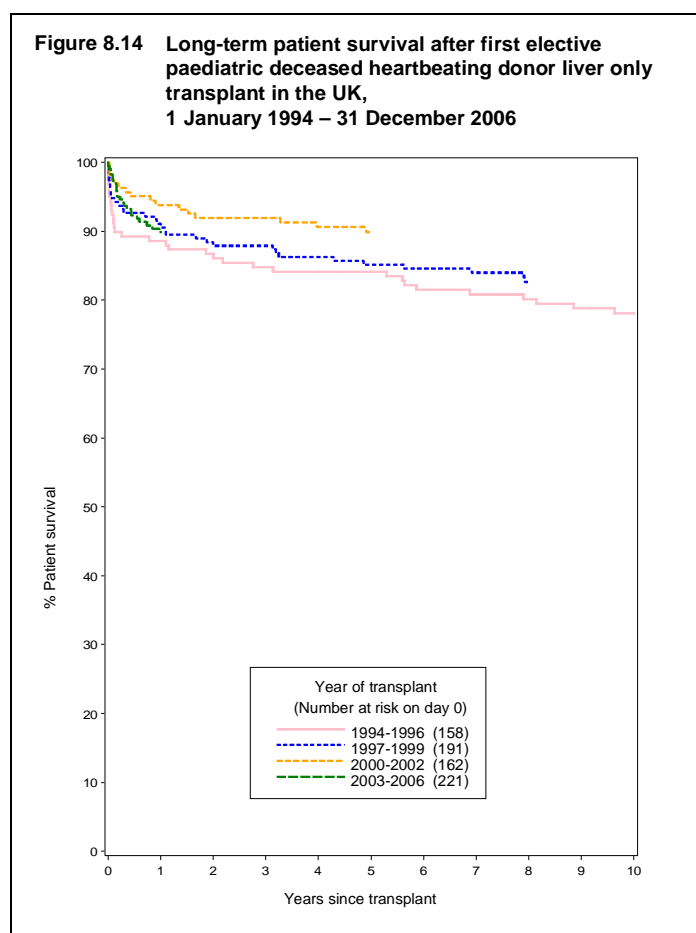


Table 8.20 Long-term patient survival after first elective paediatric deceased heartbeating donor liver only transplant in the UK, 1 January 1994 – 31 December 2006									
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
1994-1996	158	89	(83-93)	87	(80-91)	84	(77-89)	78	(71-84)
1996-1999	191	91	(85-94)	88	(82-92)	85	(79-89)		
2000-2002	162	94	(89-97)	92	(86-95)	90	(84-94)		
2003-2006	221	90	(85-93)						

The number of paediatric non-heartbeating donor liver transplant recipients was too small to estimate patient survival.

8.5 Cornea graft survival

Graft survival estimates for first penetrating keratoplasty (PK) are presented in **Figure 8.15** and **Table 8.21**. The one, two and five year graft survival estimates are 93%, 86% and 69%, respectively, for grafts between 1 January 2001 and 31 December 2007. Good quality cornea follow-up data were only available for transplants performed since 1 April 1999, so there are insufficient data available to compare graft survival over earlier time periods.

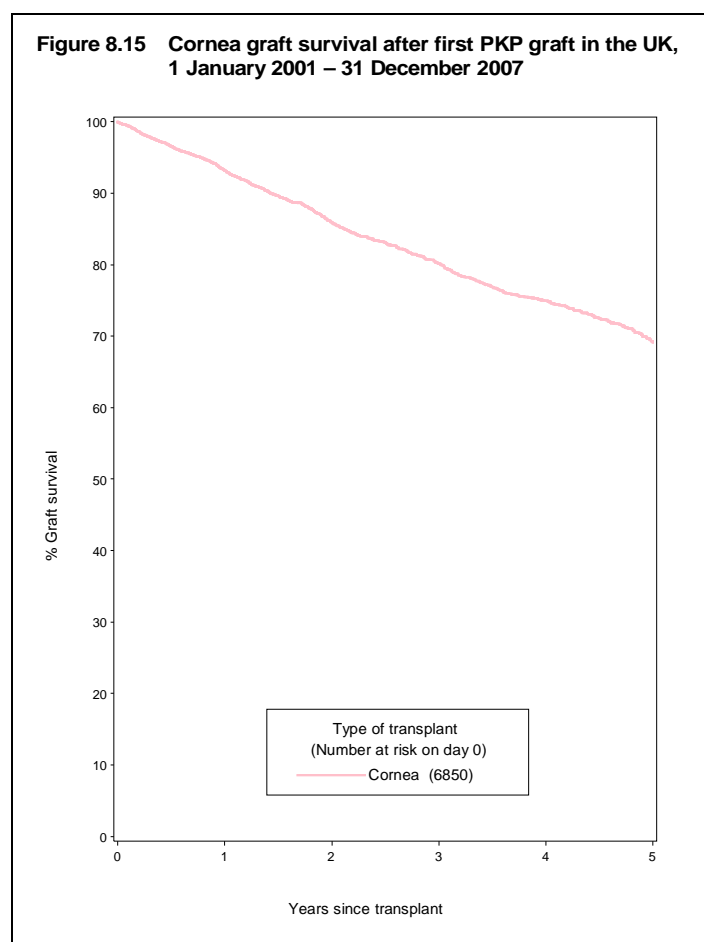


Table 8.21 Cornea graft survival after first PK in the UK, 1 January 2001 - 31 December 2007

No. at risk on day 0	% Graft survival (95% confidence interval)		
	One year	Two year	Five year
6850	93 (92-94)	86 (85-87)	69 (67-71)

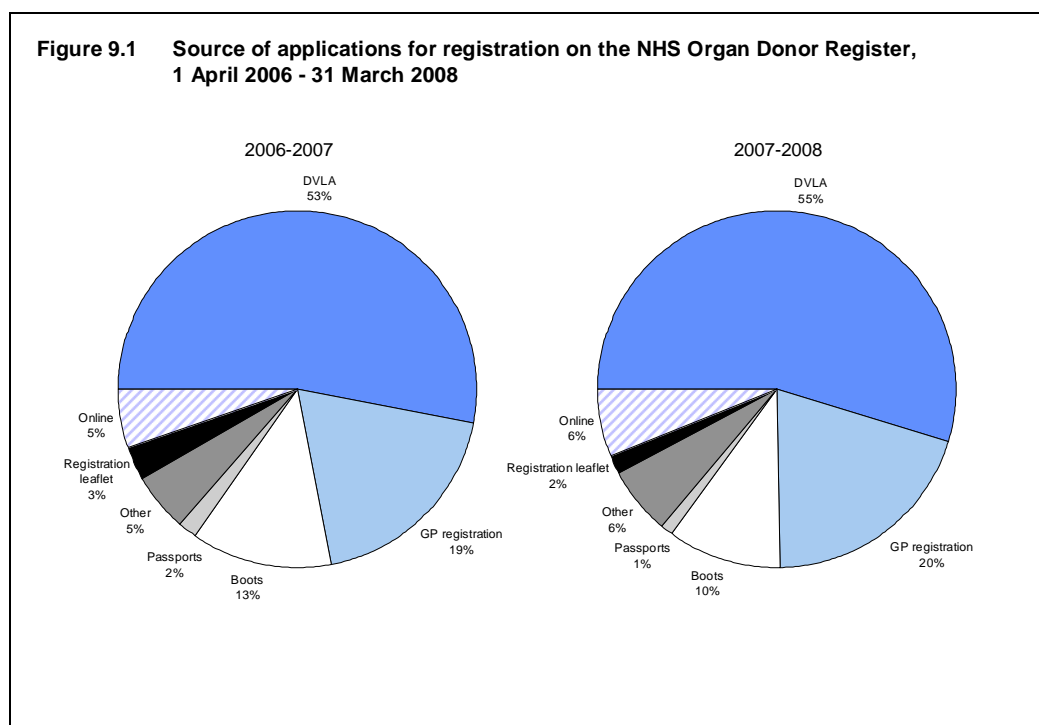
9 NHS ORGAN DONOR REGISTER

By the end of March 2008 the NHS Organ Donor Register (ODR) held 15,140,826 registrations. During the year data on the register were continually reviewed and validated.

Of the 809 deceased organ donors in 2007-2008, 30% were registered on the ODR compared with 25% in 2006-2007. Similarly, 32% of cornea-only donors in 2007-2008 were registered on the ODR compared with 34% in 2006-2007.

There are a number of registration routes: Health Department registration leaflets readily available in the community; campaigns in both national and regional newspapers and by community groups; the European Health Insurance Card; when registering as a patient with a General Practitioner (via the Family Health Services Authorities); with driving licence applications and reminders (via the Driver and Vehicle Licensing Agency (DVLA)); from the Passport Agency when applying for a new passport; when applying for a Boots Advantage Card, online registrations via the UK Transplant website and by telephone.

The source of applications for registration on the ODR is illustrated in **Figure 9.1**. This figure shows that 20% of registrations in 2007-2008 arrived by means of the Family Health Services Authorities, 55% from driving licence applications and reminders through the DVLA and 10% through the Boots Advantage Card route.



At the end of March 2008 87% of registrants, where the information was available, indicated a willingness to donate all organs and tissue (kidneys, pancreas, heart, lungs, liver and corneas). However, of those who were not willing to donate all organs, the majority (56%) did not wish to donate their corneas. Of the restricted

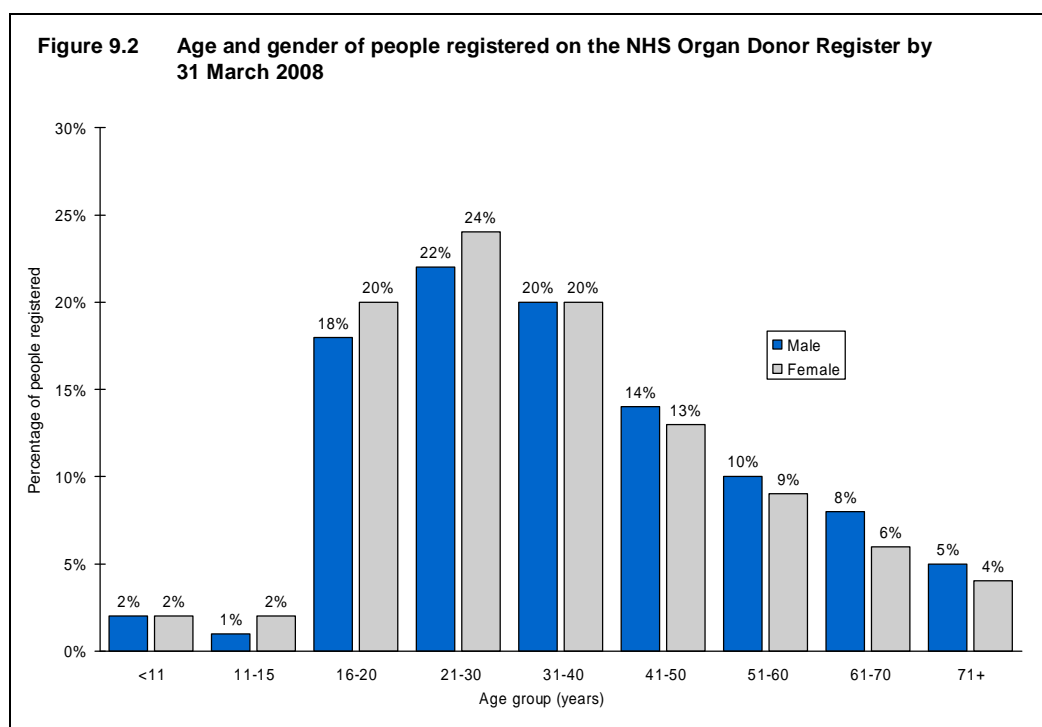
registrations, only 6% (less than 1% of the total register) did not wish to donate their kidneys. Willingness to donate, by organ type, is shown in **Table 9.1**.

Table 9.1 Preparedness of those registered on the NHS Organ Donor Register at 31 March 2008 to donate different organs*

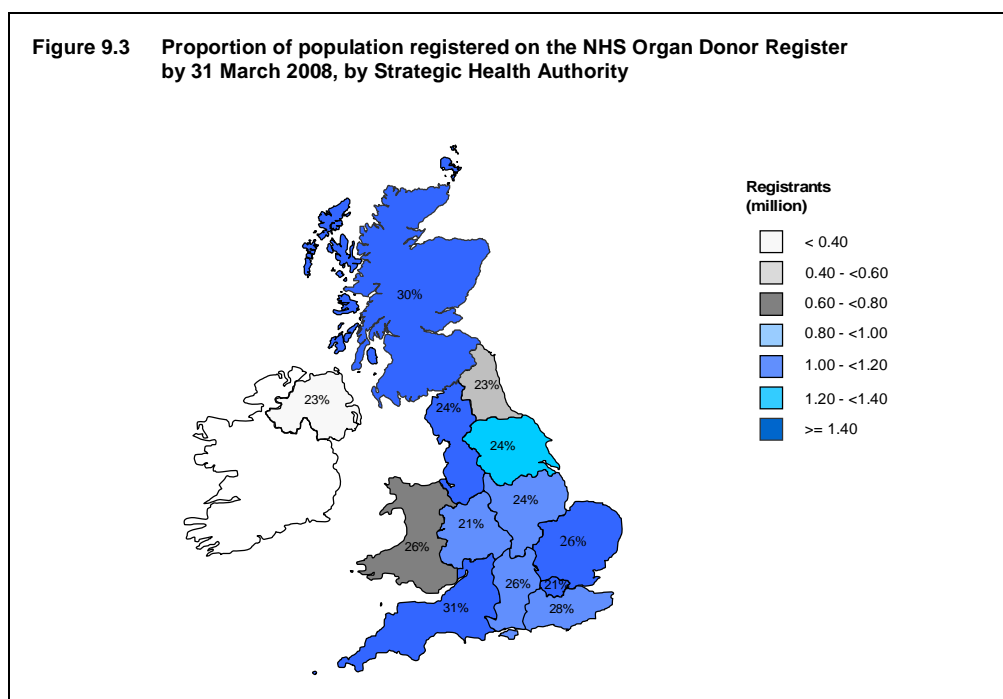
Registrants prepared to donate all organs		87%
Of those not prepared to donate all organs (“restricted donors”):		
	% of all	
Not prepared to donate:	“Restricted donors”	Registrants
Kidneys	6	0.8
Pancreas	24	3.0
Heart	38	4.8
Lungs	18	2.3
Liver	15	1.9
Corneas	56	7.1

* This information was not available for approximately 7% of the total registered

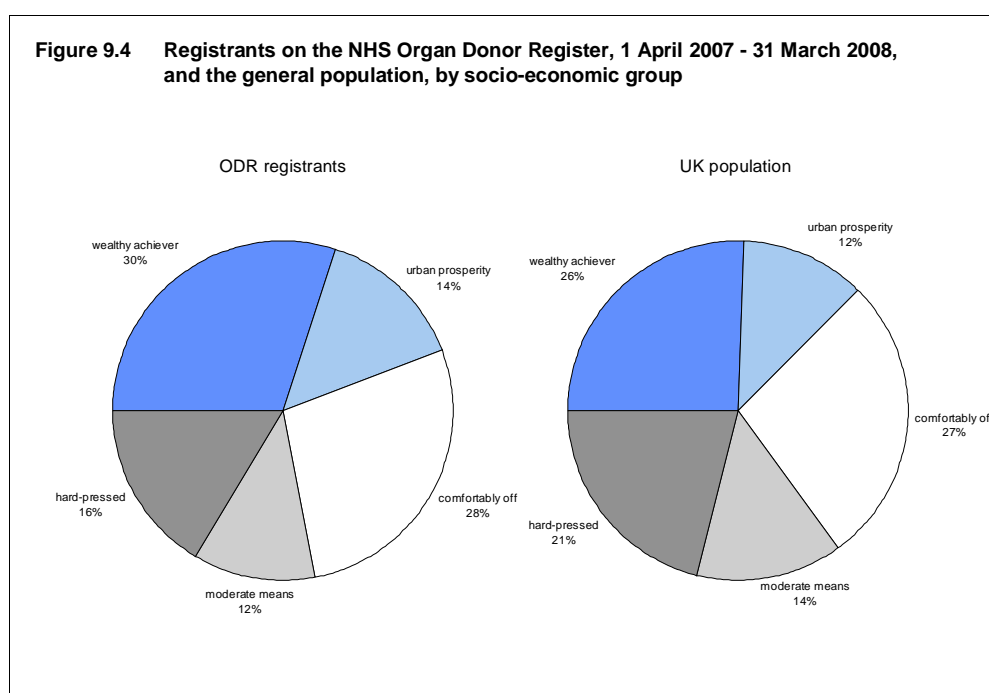
People of all ages are eligible for organ donor registration: the distribution of age by sex at time of registration is shown in **Figure 9.2**. The highest proportion of males and females, representing 22% and 24%, respectively, of registrations, are registered in the 21-30 years age group. The lowest proportions are in the under 11 and 11-15 age groups. Of all the registrations on the NHS Organ Donor Register, 46% were male and 54% were female.



Those registered on the ODR come from all parts of the UK. **Figure 9.3** illustrates the percentage of the population registered in each Strategic Health Authority at 31 March 2008, and the number of registrations.



The breakdown of registrants on the ODR during 2007-2008 by socio-economic group (using the ACORN¹ classifications, based on postcode) is shown in **Figure 9.4**, where it is compared with the general UK population. Though having basically similar distributions, there were proportionately more 'wealthy achievers' and less 'hard-pressed' on the ODR than in the general population.



¹ ACORN data supplied by CACI Ltd.

10 NATIONAL POTENTIAL DONOR AUDIT

10.1 Introduction

In this chapter, summary data from the national Potential Donor Audit (PDA) covering the 24-month period from 1 January 2006 to 31 December 2007 are presented. The data comprise all audited patient deaths in UK Intensive Care Units (ICUs) in the time period, based on PDA forms received by UK Transplant on or before 28 April 2008, validated and input onto the National Transplant Database.

10.2 Definitions

Potential heartbeating (HB) donors are defined as patients for whom death was diagnosed following brain stem tests and who had no absolute medical contraindications to HB solid organ donation.

Potential non-heartbeating (NHB) donors are defined as patients suitable for NHB donation, with no absolute medical contraindications and for whom treatment was withdrawn.

The referral rate is the percentage of potential donors referred to a coordinator.

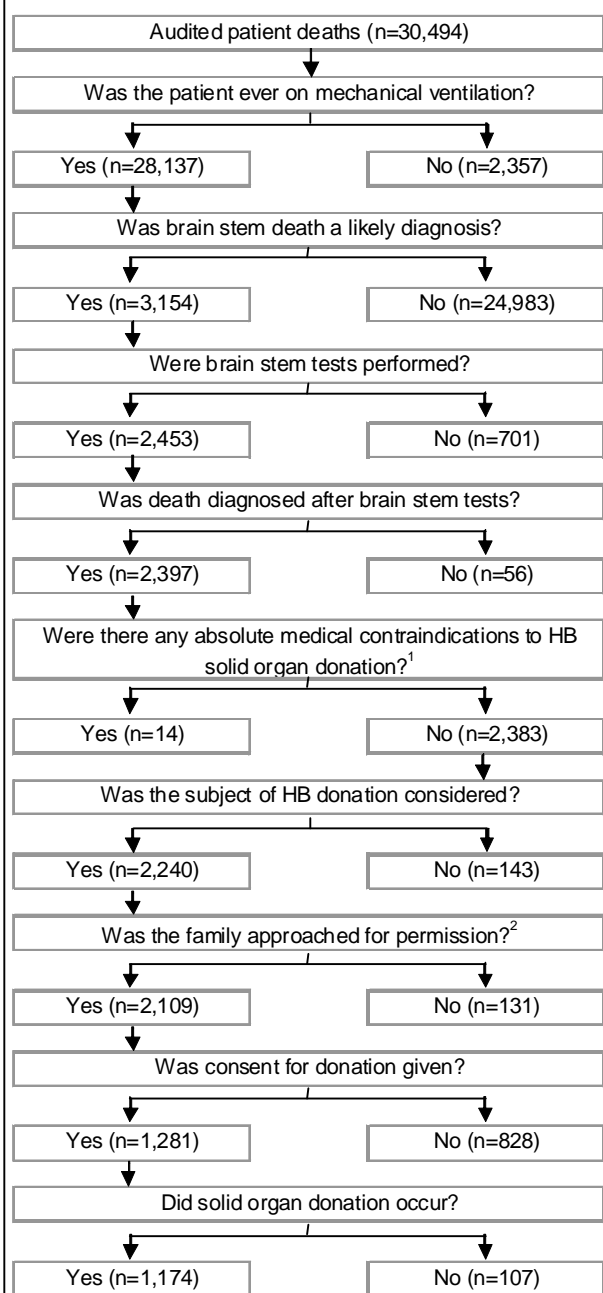
The approach rate is the percentage of potential donors for whom solid organ donation was considered, whose family were approached for consent to donation.

The consent rate is the percentage of potential donors whose families were approached or made the approach for consent to donation who gave consent.

The conversion rate is the percentage of potential donors who became actual donors.

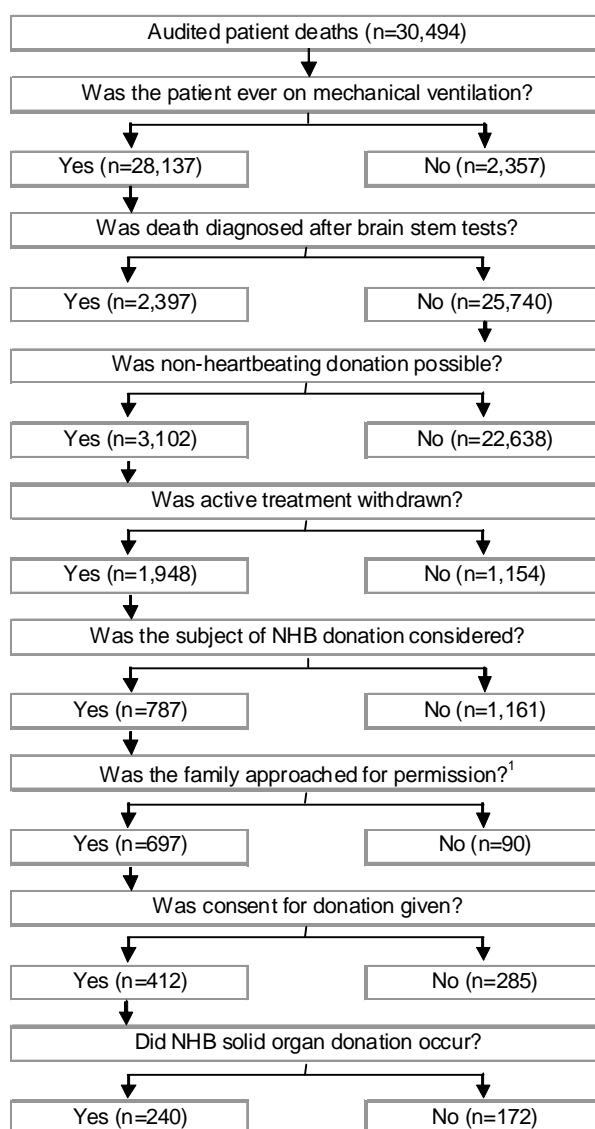
10.3 Breakdown of audited deaths in ICUs

In the 24-month period there were a total of 30,494 audited patient deaths in UK ICUs. **Figures 10.1** and **10.2** show a detailed breakdown from the number of audited patient deaths to the number of HB and NHB solid organ donors, respectively. **Table 10.1** shows the key percentages calculated from the flow chart information.

Figure 10.1 HB donation

¹ Either known or suspected CJD or known HIV

² Includes cases where the family made the approach

Figure 10.2 NHB donation

¹ Includes cases where the family made the approach

Table 10.1 Summary of key percentages

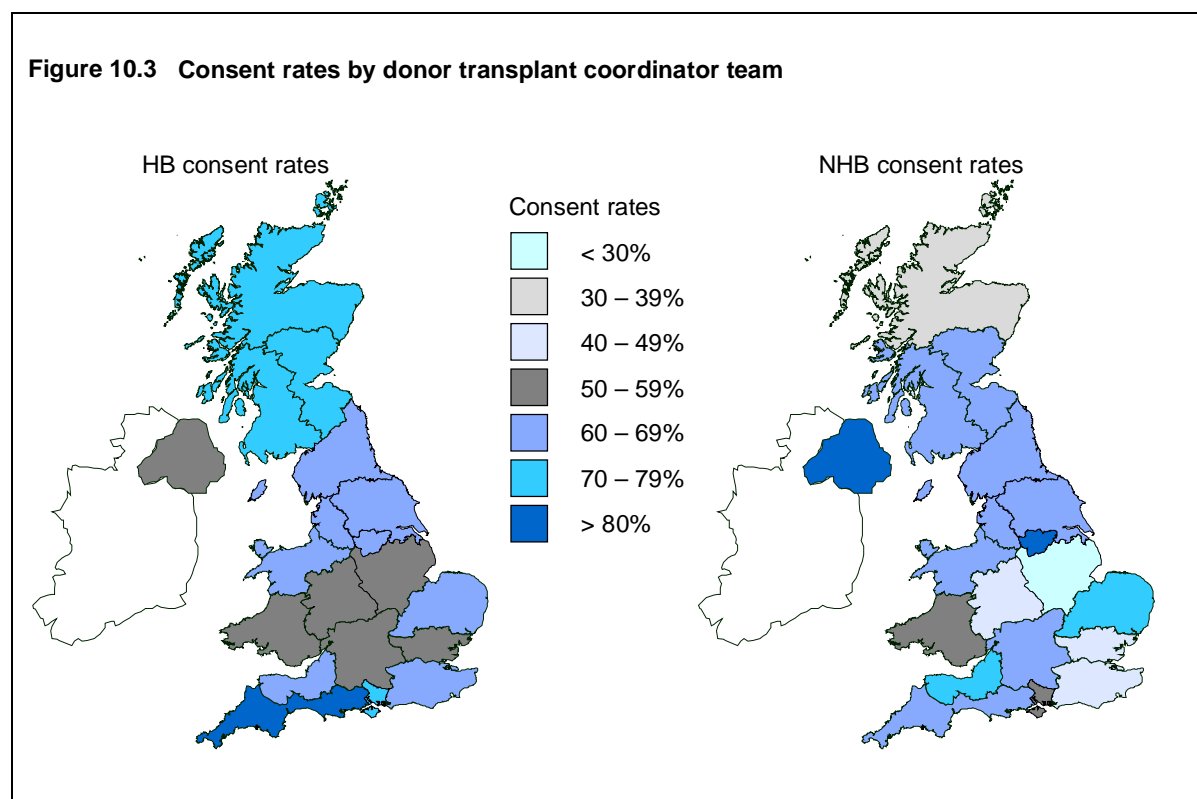
	HB	NHB
Potential donors	2,383	1,948
Referral rate	83%	36%
Approach rate	94%	89%
Consent rate	61%	59%
Conversion rate	49%	12%

10.4 Consent rates

The overall HB consent rate was 61% and the 95% confidence limits for this percentage range from 59% to 63%. For NHB donation, the overall consent rate was 59% and the 95% confidence limits range from 55% to 63%.

Consent rates by donor transplant coordinator team are illustrated in **Figure 10.3** for both HB and NHB donation. Caution should be applied when interpreting these consent rates as no adjustment has been made for the mix of patients in terms of age, sex and ethnicity. The numbers used in the NHB analysis are very small, so additional caution should be applied when interpreting the rates.

The HB consent rates range from 51% in East Midlands to 86% in Plymouth. For transplant coordinator teams with more than ten NHB donor families approached, the NHB consent rates range from 44% in South Thames to 74% in Bristol. There are five transplant coordinator teams with less than ten NHB donor families approached in this time period. **Appendix IV** contains the number of families approached and the precise HB and NHB consent rates for each donor transplant co-ordinator team, including the five teams with less than ten families approached.



(Trust specific information on referral, approach, consent, conversion and donation rates will be produced in the 2008/09 financial year to inform individual Trusts of their donation activity.)

APPENDICES

Appendix IA provides details of the 609 deceased heartbeating solid organ donors reported in 2007-2008. Details are given for each donating hospital and the hospitals have been grouped by English Strategic Health Authority and country. This appendix does not reflect regional retrieval rates: for example, in Wales three of the donating hospitals reported are listed under Liverpool for kidney retrievals.

Appendix IB gives similar information for the 200 deceased non-heartbeating solid organ donors.

The number of donors per kidney designated area is given in **Appendix II**; where the kidneys were not retrieved, donors and organs have been assigned to the designated area that would normally have retrieved the kidney.

The populations used for kidney, liver and cardiothoracic retrievals per million population are given in **Appendices IIIA** and **IIIB**; these populations are based on ONS 2001 Census figures.

Appendix IV gives the refusal rate for each donor transplant co-ordinator team from the national Potential Donor Audit.

Appendix IA Deceased heartbeating solid organ donors and donated organs in the UK, 1 April 2007 - 31 March 2008 (2006-2007), by donating hospital

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
East Midlands									
Boston, Pilgrim Hospital	0	(1)	0	(1)	0	0	0	0	0
Chesterfield, Chesterfield Royal Hospital	5	(2)	4	(2)	10	1	4	4	2
Derby, Derbyshire Royal Infirmary	3	(0)	3	(0)	6	0	0	3	2
Kettering, Kettering General Hospital	1	(3)	1	(3)	2	0	0	1	0
Leicester, Glenfield General Hospital	1	(1)	0	(1)	0	0	0	1	0
Leicester, Leicester General Hospital	1	(0)	1	(0)	2	0	0	1	1
Leicester, Leicester Royal Infirmary	2	(5)	2	(5)	4	0	0	2	0
Lincoln, Lincoln County Hospital	0	(1)	0	(1)	0	0	0	0	0
Northampton, Northampton General Hospital	1	(2)	1	(2)	2	1	0	1	1
Nottingham, Nottingham City Hospital	0	(1)	0	(1)	0	0	0	0	0
Nottingham, Nottingham University Hospital	4	(11)	3	(10)	8	2	4	3	2
Sutton-In-Ashfield, King's Mill Hospital	2	(1)	2	(1)	4	1	2	2	2
Worksop, Bassetlaw District General Hospital	2	(1)	2	(1)	4	0	0	2	0
Total	22	(29)	19	(28)	42	5	10	20	10
East of England									
Basildon, Basildon Hospital	1	(4)	1	(4)	2	0	0	1	0
Bedford, Bedford Hospital	1	(2)	0	(2)	2	0	0	0	0
Bury St Edmunds, West Suffolk Hospital	2	(2)	2	(2)	4	0	0	2	2
Cambridge, Addenbrooke's Hospital	14	(14)	13	(14)	28	2	8	13	6
Chelmsford, Broomfield Hospital	1	(0)	1	(0)	1	0	0	1	0
Great Yarmouth, James Paget Hospital	0	(1)	0	(1)	0	0	0	0	0
Harlow, Princess Alexandra Hospital	1	(2)	1	(2)	2	0	0	1	0
Hemel Hempstead, Hemel Hempstead General Hospital	1	(5)	1	(5)	2	0	0	1	1
Ipswich, Ipswich Hospital	1	(1)	1	(1)	2	0	0	1	1
Kings Lynn, The Queen Elizabeth Hospital	1	(0)	1	(0)	2	0	0	1	0
Luton, Luton And Dunstable Hospital	2	(1)	2	(1)	3	0	0	2	0
Norwich, Norfolk And Norwich University Hospital	5	(3)	5	(3)	10	1	7	5	4
Papworth, Papworth Hospital	0	(3)	0	(2)	0	0	0	0	0
Stevenage, Lister Hospital	3	(3)	3	(3)	6	1	0	3	1
Watford, Watford General Hospital	2	(3)	2	(2)	3	0	0	2	2

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Welwyn Garden City, Queen Elizabeth Hospital	2	(4)	2	(4)	4	1	2	2	1
Westcliff On Sea, Southend Hospital	1	(5)	1	(4)	2	0	0	1	1
Total	38	(53)	36	(50)	73	5	17	36	19
London									
Barnet, Barnet General Hospital	2	(3)	2	(3)	4	0	0	2	0
Bishop Auckland, Bishop Auckland General Hospital	1	(0)	1	(0)	2	0	0	1	0
Carshalton, St Helier Hospital	4	(0)	4	(0)	8	1	4	4	2
Croydon, Mayday University Hospital	1	(0)	1	(0)	2	0	0	1	0
Enfield, Chase Farm Hospital	1	(1)	1	(1)	2	1	2	1	0
Harrow, Northwick Park Hospital	0	(1)	0	(1)	0	0	0	0	0
Isleworth, West Middlesex University Hospital	3	(3)	3	(3)	6	0	0	3	2
Kingston, Kingston Hospital	2	(0)	1	(0)	4	0	0	1	0
London, Atkinson Morleys Hospital	1	(0)	1	(0)	2	0	0	1	1
London, Charing Cross Hospital	12	(10)	11	(10)	24	2	0	11	4
London, Great Ormond Street Hospital For Children	0	(2)	0	(1)	0	0	4	0	0
London, Hammersmith Hospital	2	(0)	0	(0)	0	0	0	2	0
London, King's College Hospital	9	(12)	9	(11)	18	3	0	8	6
London, Nat. Hosp. For Neurology And Neurosurgery	3	(3)	3	(3)	6	0	0	3	3
London, Newham General Hospital	2	(1)	2	(1)	4	0	0	2	1
London, North Middlesex Hospital	3	(1)	3	(1)	6	0	0	3	0
London, Queen Elizabeth Hospital	2	(3)	2	(2)	4	0	0	2	0
London, Royal Brompton Hospital	0	(1)	0	(1)	0	0	0	0	0
London, Royal Free Hospital	10	(8)	10	(8)	20	2	7	9	3
London, St George's Hospital	5	(10)	5	(10)	10	0	2	5	4
London, St Mary's Hospital	1	(0)	1	(0)	2	0	0	1	1
London, St Thomas' Hospital	4	(1)	3	(1)	6	1	2	4	2
London, The Royal London Hospital (Whitechapel)	12	(8)	8	(8)	22	2	2	9	3
London, The Wellington Hospital	0	(1)	0	(1)	0	0	0	0	0
London, The Whittington Hospital	2	(1)	2	(1)	4	1	0	2	1
London, University College Hospital	2	(0)	2	(0)	4	2	2	2	2
London, University Hospital Lewisham	0	(1)	0	(1)	0	0	0	0	0
Orpington, Princess Royal University Hospital	4	(2)	4	(1)	7	1	4	4	2
Romford, Oldchurch Hospital	0	(6)	0	(6)	0	0	0	0	0
Romford, Queens Hospital	11	(7)	10	(7)	22	3	2	10	6

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Sidcup, Queen Mary's Hospital	2	(3)	2	(3)	4	0	0	2	0
Southall, Ealing Hospital	2	(1)	0	(1)	3	0	0	0	0
Uxbridge, Hillingdon Hospital	0	(3)	0	(2)	0	0	0	0	0
Total	103	(93)	91	(88)	196	19	31	93	43
North East									
Ashington, Wansbeck Hospital	0	(1)	0	(1)	0	0	0	0	0
Darlington, Darlington Memorial Hospital	4	(0)	4	(0)	8	2	5	4	3
Durham, University Hospital Of North Durham	3	(2)	3	(2)	6	0	0	3	1
Gateshead, Queen Elizabeth Hospital	1	(2)	1	(1)	2	0	2	0	0
Hartlepool, University Hospital Of Hartlepool	3	(2)	1	(2)	2	1	0	3	1
Middlesbrough, The James Cook University Hospital	11	(14)	11	(13)	20	6	8	9	5
Newcastle, Freeman Hospital	1	(0)	1	(0)	2	0	2	1	0
Newcastle, Newcastle General Hospital	19	(15)	19	(12)	38	3	6	19	8
South Shields, South Tyneside District General Hospital	1	(0)	1	(0)	2	1	0	1	1
Stockton-On-Tees, University Hospital of North Tees	2	(1)	1	(1)	4	1	0	1	0
Sunderland, Sunderland Royal Hospital	1	(1)	1	(1)	2	0	2	0	0
Total	46	(38)	43	(33)	86	14	25	41	19
North West									
Ashton-Under-Lyme, Tameside General Hospital	1	(3)	1	(2)	2	0	0	1	0
Barrow-In-Furness, Furness General Hospital	2	(2)	2	(2)	4	0	0	2	0
Blackburn, Royal Blackburn Hospital	1	(3)	0	(3)	2	0	0	0	0
Blackpool, Blackpool Victoria Hospital	7	(4)	6	(4)	13	1	0	6	3
Bolton, Royal Bolton Hospital	3	(2)	2	(1)	6	2	1	2	2
Burnley, Burnley General Hospital	1	(0)	1	(0)	2	0	0	1	1
Bury, Fairfield General Hospital	3	(0)	2	(0)	6	1	4	2	2
Carlisle, Cumberland Infirmary	0	(1)	0	(1)	0	0	0	0	0
Cheadle, The Alexandra Hospital	1	(0)	1	(0)	2	0	0	1	0
Chester, Countess Of Chester Hospital	7	(8)	6	(8)	14	1	0	6	0
Crewe, Leighton Hospital	1	(1)	1	(1)	2	0	0	1	0
Liverpool, Alder Hey Children's Hospital	1	(2)	1	(2)	2	0	1	1	1
Liverpool, Broadgreen Hospital	1	(0)	0	(0)	2	0	0	0	0
Liverpool, Royal Liverpool University Hospital	1	(2)	1	(2)	2	0	0	1	1
Liverpool, The Cardiothoracic Centre	0	(1)	0	(0)	0	0	0	0	0

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Liverpool, University Hospital Aintree	4	(5)	4	(3)	8	1	4	4	0
Liverpool, Walton Centre For Neurology And Neurosurgery	9	(13)	8	(13)	16	4	0	9	4
Liverpool, Walton Hospital	2	(0)	2	(0)	4	0	0	2	0
Macclesfield, Macclesfield District General Hospital	0	(1)	0	(0)	0	0	0	0	0
Manchester, Manchester Royal Infirmary	1	(3)	1	(3)	2	0	0	1	0
Manchester, North Manchester General Hospital	0	(1)	0	(1)	0	0	0	0	0
Manchester, Royal Manchester Childrens Hospital (Pendlebury)	1	(2)	1	(2)	2	0	1	1	1
Manchester, Wythenshawe Hospital	2	(3)	2	(3)	4	0	2	2	2
Oldham, Royal Oldham Hospital (Rochdale Road)	1	(2)	1	(2)	2	0	0	1	0
Prescot, Whiston Hospital	3	(5)	3	(4)	6	0	0	3	2
Preston, Royal Preston Hospital	1	(3)	1	(3)	2	0	0	1	0
Salford, Hope Hospital	11	(13)	10	(12)	22	3	8	10	7
Southport, Southport District General Hospital	1	(1)	1	(1)	2	0	0	1	0
Stockport, Stepping Hill Hospital	1	(1)	1	(0)	2	1	1	1	1
Whitehaven, West Cumberland Hospital	1	(0)	0	(0)	2	0	0	0	0
Wigan, Royal Albert Edward Infirmary	1	(1)	1	(1)	2	1	0	1	0
Wirral, Arrowe Park Hospital	2	(1)	2	(1)	4	1	0	2	1
Total	71	(84)	62	(75)	139	16	22	63	28
South Central									
Aylesbury, Stoke Mandeville Hospital	2	(1)	1	(1)	4	0	0	1	1
Basingstoke, North Hampshire Hospital	2	(2)	2	(1)	4	0	0	2	1
Milton Keynes, Milton Keynes General Hospital	1	(0)	1	(0)	2	0	0	1	1
Newport, St Mary's Hospital	2	(1)	2	(1)	4	0	0	2	1
Oxford, John Radcliffe Hospital	13	(5)	13	(5)	26	1	2	13	10
Oxford, Radcliffe Infirmary	0	(6)	0	(6)	0	0	0	0	0
Portsmouth, Queen Alexandra Hospital	3	(4)	3	(4)	6	0	2	3	3
Reading, Royal Berkshire Hospital	1	(2)	1	(2)	2	0	0	1	1
Slough, Wexham Park Hospital	2	(3)	2	(3)	4	0	0	2	2
Southampton, Southampton University Hospitals	7	(3)	7	(3)	14	2	6	7	5
Winchester, Royal Hampshire County Hospital	0	(1)	0	(1)	0	0	0	0	0
Total	33	(28)	32	(27)	66	3	10	32	25

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
South East Coast									
Ashford, William Harvey Hospital	4	(2)	4	(2)	8	0	0	4	1
Brighton, Royal Sussex County Hospital	1	(5)	1	(5)	2	0	0	1	1
Camberley, Frimley Park Hospital	3	(0)	3	(0)	6	0	2	3	1
Canterbury, Kent And Canterbury Hospital	4	(0)	3	(0)	8	2	2	2	2
Chertsey, St Peter's Hospital	0	(1)	0	(1)	0	0	0	0	0
Chichester, St Richard's Hospital	2	(2)	2	(2)	4	1	0	2	2
Dartford, Darent Valley Hospital	1	(1)	1	(1)	2	0	0	1	1
Eastbourne, Eastbourne District General Hospital	2	(1)	2	(1)	4	0	2	2	1
Gillingham, Medway Hospital	3	(2)	3	(2)	6	1	0	3	3
Guildford, Royal Surrey County Hospital	2	(1)	2	(0)	4	0	0	2	2
Hastings, Conquest Hospital	1	(2)	1	(1)	2	0	0	1	0
Haywards Heath, Hurstwood Park Hospital	1	(3)	1	(3)	2	0	2	1	1
Maidstone, Maidstone District General Hospital	0	(3)	0	(3)	0	0	0	0	0
Margate, Queen Elizabeth The Queen Mother Hospital	3	(2)	2	(2)	4	0	0	3	1
Redhill, East Surrey Hospital	3	(5)	1	(5)	6	0	1	1	1
Tunbridge Wells, Kent And Sussex Hospital	4	(2)	3	(2)	8	2	2	3	2
Worthing, Worthing Hospital	1	(4)	1	(3)	2	0	0	0	1
Total	35	(36)	30	(33)	68	6	11	29	20
South West									
Barnstaple, North Devon District Hospital	2	(2)	2	(1)	4	0	0	2	2
Bournemouth, Royal Bournemouth General Hospital	5	(1)	5	(1)	10	0	0	5	2
Bristol, Bristol Royal Hospital For Children	0	(1)	0	(1)	0	0	0	0	0
Bristol, Bristol Royal Infirmary	0	(1)	0	(1)	0	0	0	0	0
Bristol, Frenchay Hospital	12	(6)	12	(6)	24	3	4	12	8
Cheltenham, Cheltenham General Hospital	3	(1)	3	(1)	6	0	2	3	2
Dorchester, Dorset County Hospital	2	(1)	2	(1)	4	1	0	2	2
Exeter, Royal Devon And Exeter Hospital (Wonford)	0	(2)	0	(1)	0	0	0	0	0
Gloucester, Gloucestershire Royal Hospital	4	(4)	4	(4)	8	2	3	4	3
Plymouth, Derriford Hospital	9	(10)	9	(9)	17	3	9	9	5
Poole, Poole General Hospital	5	(5)	5	(5)	10	2	4	5	5
Salisbury, Salisbury District Hospital	1	(1)	1	(1)	2	1	0	1	1
Swindon, Great Western Hospital	2	(4)	2	(3)	4	0	0	2	2
Taunton, Taunton And Somerset Hospital (Musgrove Park)	2	(1)	2	(1)	4	0	2	2	2

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Torquay, Torbay Hospital	2	(1)	2	(1)	4	0	0	2	1
Truro, Royal Cornwall Hospital (Treliske)	4	(3)	4	(2)	8	1	2	4	3
Weston-Super-Mare, Royal Hospital	1	(0)	1	(0)	2	0	0	1	1
Yeovil, Yeovil District Hospital	1	(1)	0	(0)	0	0	0	1	0
Total	55	(45)	54	(39)	107	13	26	55	39
West Midlands									
Birmingham, Birmingham Heartlands Hospital	4	(4)	4	(3)	8	1	2	4	4
Birmingham, City Hospital	0	(1)	0	(1)	0	0	0	0	0
Birmingham, Diana Princess Of Wales Children Hospital	2	(1)	2	(1)	4	0	0	2	2
Birmingham, Queen Elizabeth Hospital	10	(4)	8	(3)	20	0	2	8	3
Birmingham, Selly Oak Hospital	6	(5)	6	(4)	12	3	4	6	5
Burton-On-Trent, Queen's Hospital	3	(0)	3	(0)	6	0	0	3	3
Coventry, Coventry and Warwickshire Hospital	3	(0)	3	(0)	6	0	0	3	2
Coventry, University Hospital	5	(5)	4	(5)	10	1	1	4	3
Dudley, Russells Hall Hospital	2	(2)	2	(2)	4	1	1	2	1
Hereford, Hereford County	1	(0)	1	(0)	2	0	2	1	1
Hereford, The County Hospital	2	(0)	2	(0)	4	0	0	2	1
Nuneaton, George Eliot Hospital	1	(3)	0	(2)	2	0	0	0	0
Redditch, The Alexandra Hospital	1	(0)	1	(0)	2	0	0	1	1
Shrewsbury, Royal Shrewsbury Hospital	5	(4)	5	(4)	10	2	3	5	3
Solihull, Solihull Hospital	0	(1)	0	(1)	0	0	0	0	0
Stafford, Stafford District General Hospital	1	(0)	1	(0)	2	0	2	1	1
Stoke On Trent, Stoke City General Hospital	0	(3)	0	(2)	0	0	0	0	0
Stoke, North Staffordshire Royal Infirmary	2	(9)	2	(8)	4	1	0	2	1
Sutton Coldfield, Good Hope District General Hospital	0	(1)	0	(1)	0	0	0	0	0
Telford, The Princess Royal Hospital	1	(2)	1	(2)	2	0	2	1	0
Walsall, Manor Hospital	2	(2)	2	(2)	4	0	0	2	1
West Bromwich, Sandwell General Hospital	4	(0)	4	(0)	8	1	1	4	2
Wolverhampton, New Cross Hospital	2	(2)	2	(2)	4	0	0	2	1
Worcestershire Royal Hospital	0	(1)	0	(1)	0	0	0	0	0
Total	57	(50)	53	(44)	114	10	20	53	35

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Yorkshire and the Humber									
Barnsley, Barnsley District General Hospital	2	(2)	2	(1)	4	0	0	2	0
Bradford, Bradford Royal Infirmary	3	(1)	2	(1)	6	0	2	1	2
Dewsbury, Dewsbury And District Hospital	0	(1)	0	(1)	0	0	0	0	0
Doncaster, Doncaster Royal Infirmary	1	(3)	1	(3)	2	0	1	1	1
Grimsby, Diana Princess Of Wales Hospital	2	(2)	1	(2)	4	0	0	1	0
Halifax, Calderdale Royal Hospital	0	(1)	0	(1)	0	0	0	0	0
Harrogate, Harrogate District Hospital	0	(1)	0	(1)	0	0	0	0	0
Huddersfield, Huddersfield Royal Infirmary	2	(3)	2	(1)	4	1	2	2	1
Hull, Hull Royal Infirmary	2	(5)	1	(5)	2	1	0	2	1
Keighley, Airedale General Hospital	1	(1)	1	(1)	2	0	0	1	0
Leeds, Leeds General Infirmary	13	(8)	10	(8)	25	1	5	10	2
Leeds, St James's University Hospital	2	(2)	2	(2)	4	1	3	1	1
Northallerton, Friarage Hospital	0	(2)	0	(2)	0	0	0	0	0
Rotherham, Rotherham District General Hospital	2	(0)	1	(0)	4	0	2	1	0
Scarborough, Scarborough General Hospital	1	(1)	1	(1)	2	0	0	1	0
Scunthorpe, Scunthorpe General Hospital	1	(5)	1	(5)	2	0	0	1	0
Sheffield, Northern General Hospital	2	(2)	2	(1)	4	0	0	2	1
Sheffield, Royal Hallamshire Hospital	9	(12)	8	(12)	18	5	11	6	3
Sheffield, Sheffield Children's Hospital	1	(1)	1	(1)	2	1	2	1	0
Wakefield, Pinderfields General Hospital	1	(0)	1	(0)	2	0	0	1	1
York, York District Hospital	1	(2)	1	(2)	2	1	0	1	0
Total	46	(55)	38	(51)	89	11	28	35	13
Channel Islands									
St Helier, Jersey General Hospital	0	(1)	0	(1)	0	0	0	0	0
Total	0	(1)	0	(1)	0	0	0	0	0
Isle of Man									
Douglas, Nobles I-O-M Hospital	1	(1)	1	(1)	2	0	0	1	0
Total	1	(1)	1	(1)	2	0	0	1	0
England	507	(513)	459	(470)	982	102	200	458	251

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Northern Ireland									
Belfast, Belfast City Hospital	2	(1)	1	(1)	4	1	0	1	0
Belfast, Mater Infirmorum Hospital	0	(1)	0	(0)	0	0	0	0	0
Belfast, Royal Belfast Hospital For Sick Children	1	(1)	1	(1)	2	1	0	1	0
Belfast, Royal Victoria Hospital	7	(17)	4	(16)	14	0	4	4	2
Belfast, The Ulster Hospital	6	(6)	6	(6)	12	3	3	6	1
Coleraine, Causeway Hospital	0	(2)	0	(2)	0	0	0	0	0
Enniskillen, Erne Hospital	1	(2)	1	(2)	2	0	0	1	1
Londonderry, Altnagelvin Area Hospital	3	(3)	3	(3)	6	1	2	3	2
Portadown, Craigavon Area Hospital	2	(2)	1	(2)	2	0	0	2	0
Total	22	(35)	17	(33)	42	6	9	18	6
Scotland									
Aberdeen, Aberdeen Royal Infirmary	4	(3)	4	(3)	8	1	1	4	4
Dumfries, Dumfries And Galloway Royal Infirmary	2	(3)	2	(3)	4	1	2	2	1
Dundee, Ninewells Hospital	1	(2)	1	(2)	2	1	2	1	1
Dunfermline, Queen Margaret Hospital	1	(0)	1	(0)	1	0	0	1	0
East Kilbride, Hairmyres Hospital	1	(3)	1	(3)	2	0	0	1	1
Edinburgh, Royal Hospital For Sick Children	0	(1)	0	(1)	0	0	0	0	0
Edinburgh, Royal Infirmary Of Edinburgh	6	(6)	4	(6)	10	3	0	4	2
Edinburgh, Western General Hospital	8	(5)	7	(5)	16	2	4	7	6
Glasgow, Golden Jubilee National Hospital	0	(1)	0	(1)	0	0	0	0	0
Glasgow, Royal Hospital For Sick Children	1	(1)	1	(1)	2	1	1	1	1
Glasgow, Southern General Hospital	3	(6)	3	(4)	6	1	4	3	2
Glasgow, Western Infirmary	2	(0)	2	(0)	4	1	0	2	1
Inverness, Raigmore Hospital	7	(2)	7	(0)	14	2	0	7	5
Kilmarnock, Crosshouse Hospital	2	(0)	2	(0)	4	1	0	2	2
Kirkcaldy, Victoria Hospital	0	(1)	0	(1)	0	0	0	0	0
Livingston, St John's Hospital	0	(1)	0	(1)	0	0	0	0	0
Melrose, Borders General Hospital	0	(1)	0	(1)	0	0	0	0	0
Paisley, Royal Alexandra Hospital	1	(2)	0	(1)	2	0	0	0	0
Perth, Perth Royal Infirmary	1	(1)	1	(1)	2	1	2	1	1
Stirling, Stirling Royal Infirmary	1	(3)	1	(2)	2	0	0	1	1
Wishaw, Wishaw General Hospital	0	(2)	0	(2)	0	0	0	0	0
Total	41	(44)	37	(38)	79	15	16	37	28

Donating hospital	All donors		Multi-organ donor		Kidney	Heart	Lung	Liver	Pancreas
Wales									
Abergavenny, Nevill Hall Hospital	1	(1)	1	(1)	1	0	0	1	0
Aberystwyth, Bronglais Hospital	1	(2)	1	(2)	2	0	0	1	0
Bangor, Ysbyty Gwynedd District General Hospital	3	(6)	3	(5)	6	0	0	3	1
Bodelwyddan, Glan Clwyd District General Hospital	1	(4)	1	(4)	2	0	0	1	0
Bridgend, Princess Of Wales Hospital	1	(2)	1	(2)	2	0	0	1	1
Cardiff, University Of Wales Hospital	8	(7)	6	(7)	16	0	2	5	5
Carmarthen, West Wales General Hospital	1	(0)	1	(0)	2	0	0	1	1
Haverford West, Withybush General Hospital	2	(1)	1	(1)	4	0	0	0	1
Merthyr Tydfil, Prince Charles Hospital	4	(4)	3	(4)	6	0	0	4	2
Newport, Royal Gwent Hospital	1	(1)	0	(1)	2	1	0	0	0
Penarth, Llandough Hospital	3	(2)	3	(2)	6	1	0	3	2
Pontypridd, Royal Glamorgan Hospital	1	(0)	1	(0)	2	0	0	1	1
Swansea, Morriston Hospital	8	(10)	7	(9)	16	2	2	7	4
Swansea, Singleton Hospital	1	(0)	1	(0)	2	0	0	1	1
Wrexham, Maelor General Hospital	3	(2)	3	(2)	6	0	4	3	1
Total	39	(42)	33	(40)	75	4	8	32	20

Appendix IB **Deceased non-heartbeating solid organ donors and donated organs in the UK,
1 April 2007 - 31 March 2008 (2006-2007), by donating hospital**

Donating hospital	All donors		Multi-organ donor		Kidney	Lung	Liver	Pancreas
East Midlands								
Northampton, Northampton General Hospital	1	(0)	0	(0)	2	0	0	0
Total	1	(0)	0	(0)	2	0	0	0
East of England								
Bedford, Bedford Hospital	1	(0)	1	(0)	2	0	1	0
Bury St Edmunds, West Suffolk Hospital	0	(3)	0	(2)	0	0	0	0
Cambridge, Addenbrooke's Hospital	10	(17)	4	(5)	20	0	4	1
Great Yarmouth, James Paget Hospital	1	(1)	0	(0)	2	0	0	0
Harlow, Princess Alexandra Hospital	2	(3)	2	(3)	4	0	2	1
Hemel Hempstead, Hemel Hempstead General Hospital	1	(0)	1	(0)	2	0	1	1
Huntingdon, Hinchingbrooke Hospital	0	(1)	0	(0)	0	0	0	0
Ipswich, Ipswich Hospital	2	(0)	1	(0)	4	0	1	1
Luton, Luton And Dunstable Hospital	4	(3)	1	(0)	8	0	1	0
Norwich, Norfolk and Norwich University Hospital	1	(0)	1	(0)	2	0	1	0
Papworth, Papworth Hospital	0	(1)	0	(0)	0	0	0	0
Stevenage, Lister Hospital	1	(1)	0	(0)	2	0	0	0
Total	23	(30)	11	(10)	46	0	11	4
London								
Carshalton, St Helier Hospital	1	(0)	1	(0)	2	2	1	0
Enfield, Chase Farm Hospital	1	(0)	1	(0)	2	0	1	1
Kingston, Kingston Hospital	0	(1)	0	(0)	0	0	0	0
London, Atkinson Morleys Hospital	1	(0)	1	(0)	2	0	1	0
London, Charing Cross Hospital	4	(0)	3	(0)	8	0	2	3
London, Great Ormond Street Hospital For Children	1	(1)	1	(1)	2	0	1	1
London, King's College Hospital	1	(5)	1	(4)	2	0	1	1
London, Nat. Hospital for Neurology and Neurosurgery	5	(0)	3	(0)	9	0	3	0
London, Newham General Hospital	0	(1)	0	(1)	0	0	0	0

Donating hospital	All donors		Multi-organ donor		Kidney	Lung	Liver	Pancreas
London, North Middlesex Hospital	1	(0)	1	(0)	2	0	1	0
London, Royal Free Hospital	0	(2)	0	(0)	0	0	0	0
London, St George's Hospital	2	(2)	1	(1)	4	0	1	0
London, St Thomas' Hospital	2	(1)	0	(0)	4	0	0	0
London, The Royal London Hospital (Whitechapel)	4	(3)	2	(2)	8	0	2	2
London, The Whittington Hospital	0	(1)	0	(1)	0	0	0	0
London, University College Hospital	1	(1)	0	(0)	2	0	0	0
Romford, Oldchurch Hospital	0	(1)	0	(1)	0	0	0	0
Romford, Queens Hospital	3	(1)	0	(0)	4	0	1	0
Sidcup, Queen Mary's Hospital	1	(1)	1	(1)	2	0	1	1
Uxbridge, Hillingdon Hospital	1	(0)	1	(0)	2	0	1	0
Total	29	(21)	17	(12)	55	2	17	9
North East								
Gateshead, Queen Elizabeth Hospital	0	(1)	0	(0)	0	0	0	0
Middlesbrough, The James Cook University Hospital	3	(4)	1	(0)	6	0	1	0
Newcastle, Freeman Hospital	2	(0)	0	(0)	4	0	0	0
Newcastle, Newcastle General Hospital	9	(14)	1	(0)	18	0	1	0
Sunderland, Sunderland Royal Hospital	1	(2)	0	(0)	2	0	0	0
Total	15	(21)	2	(0)	30	0	2	0
North West								
Blackburn, Royal Blackburn Hospital	1	(0)	0	(0)	2	0	0	0
Bolton, Royal Bolton Hospital	2	(1)	0	(0)	4	0	0	0
Bury, Fairfield General Hospital	0	(1)	0	(1)	0	0	0	0
Carlisle, Cumberland Infirmary	0	(1)	0	(0)	0	0	0	0
Chester, Countess of Chester Hospital	1	(0)	1	(0)	2	0	1	1
Chorley and South Ribble Hospital	0	(1)	0	(0)	0	0	0	0
Manchester, Royal Manchester Childrens Hospital (Pendlebury)	2	(1)	1	(1)	4	0	1	1
Manchester, Wythenshawe Hospital	0	(1)	0	(0)	0	0	0	0
Oldham, Royal Oldham Hospital (Rochdale Road)	1	(0)	0	(0)	2	0	0	0
Preston, Royal Preston Hospital	4	(2)	3	(0)	8	0	2	3
Salford, Hope Hospital	3	(3)	0	(2)	5	0	0	0
Stockport, Stepping Hill Hospital	2	(0)	2	(0)	4	0	0	2
Wigan, Royal Albert Edward Infirmary	0	(1)	0	(1)	0	0	0	0
Total	16	(12)	7	(5)	31	0	4	7

Donating hospital	All donors		Multi-organ donor		Kidney	Lung	Liver	Pancreas
South Central								
Basingstoke, North Hampshire Hospital	4	(0)	0	(0)	8	0	0	0
Milton Keynes, Milton Keynes General Hospital	1	(0)	0	(0)	2	0	0	0
Newport, St Mary's Hospital	1	(0)	0	(0)	2	0	0	0
Oxford, John Radcliffe Hospital	2	(1)	0	(0)	4	0	0	0
Portsmouth, Queen Alexandra Hospital	2	(2)	1	(0)	4	0	0	1
Reading, Royal Berkshire Hospital	2	(2)	0	(0)	4	0	0	0
Southampton, Southampton University Hospitals	7	(6)	4	(3)	13	2	4	1
Winchester, Royal Hampshire County Hospital	1	(0)	1	(0)	2	0	1	1
Wycombe, Wycombe General Hospital	1	(0)	1	(0)	2	0	0	1
Total	21	(11)	7	(3)	41	2	5	4
South East Coast								
Ashford, William Harvey Hospital	1	(0)	0	(0)	0	0	1	0
Camberley, Frimley Park Hospital	2	(0)	1	(0)	2	2	2	1
Chertsey, St Peter's Hospital	1	(0)	0	(0)	0	0	1	0
Chichester, St Richard's Hospital	1	(1)	0	(1)	2	0	0	0
Gillingham, Medway Hospital	1	(0)	1	(0)	2	0	1	1
Haywards Heath, Hurtswood Park Hospital	3	(0)	2	(0)	6	0	1	2
Haywards Heath, Princess Royal Hospital	0	(1)	0	(1)	0	0	0	0
Maidstone, Maidstone District General Hospital	0	(1)	0	(0)	0	0	0	0
Margate, Queen Elizabeth The Queen Mother Hospital	2	(0)	1	(0)	4	0	1	1
Redhill, East Surrey Hospital	4	(0)	3	(0)	6	2	4	3
Total	15	(3)	8	(2)	22	4	11	8
South West								
Bath, Royal United Hospital	2	(0)	2	(0)	4	0	1	2
Bristol, Bristol Royal Hospital For Children	1	(1)	0	(0)	2	0	0	0
Bristol, Bristol Royal Infirmary	2	(5)	1	(2)	4	0	1	0
Bristol, Frenchay Hospital	7	(7)	4	(2)	14	0	4	2
Cheltenham, Cheltenham General Hospital	1	(1)	0	(1)	2	0	0	0
Dorchester, Dorset County Hospital	0	(1)	0	(1)	0	0	0	0
Exeter, Royal Devon and Exeter Hospital (Wonford)	1	(0)	0	(0)	2	0	0	0
Plymouth, Derriford Hospital	9	(9)	2	(0)	18	0	1	1
Poole, Poole General Hospital	2	(1)	0	(0)	4	0	0	0

Donating hospital	All donors		Multi-organ donor		Kidney	Lung	Liver	Pancreas
Swindon, Great Western Hospital	2	(1)	1	(0)	4	0	1	0
Taunton, Taunton and Somerset Hospital (Musgrove Park)	1	(0)	0	(0)	2	0	0	0
Torquay, Torbay Hospital	1	(0)	1	(0)	2	0	1	1
Truro, Royal Cornwall Hospital (Treliske)	1	(0)	1	(0)	2	0	1	0
Weston-Super-Mare, Weston Super Mare General Hospital	1	(2)	0	(2)	2	0	0	0
Yeovil, Yeovil District Hospital	0	(1)	0	(0)	0	0	0	0
Total	31	(29)	12	(8)	62	0	10	6
West Midlands								
Birmingham, Diana Princess of Wales Children Hospital	2	(0)	2	(0)	4	0	2	2
Birmingham, Queen Elizabeth Hospital	0	(8)	0	(4)	0	0	0	0
Birmingham, Selly Oak Hospital	1	(1)	1	(0)	2	0	1	1
Coventry, Coventry and Warwickshire Hospital	1	(0)	1	(0)	2	0	1	0
Coventry, University Hospital	2	(0)	1	(0)	4	0	1	0
Hereford, The County Hospital	1	(0)	1	(0)	2	0	1	0
Shrewsbury, Royal Shrewsbury Hospital	1	(0)	1	(0)	2	0	1	1
Stoke, North Staffordshire Royal Infirmary	5	(0)	4	(0)	10	0	3	3
Telford, The Princess Royal Hospital	1	(0)	1	(0)	2	0	1	0
Total	14	(9)	12	(4)	28	0	11	7
Yorkshire and the Humber								
Barnsley, Barnsley District General Hospital	1	(0)	1	(0)	2	2	1	1
Grimsby, Diana Princess Of Wales Hospital	0	(2)	0	(0)	0	0	0	0
Halifax, Calderdale Royal Hospital	0	(1)	0	(0)	0	0	0	0
Harrogate, Harrogate District Hospital	1	(0)	1	(0)	2	0	1	0
Hull, Hull Royal Infirmary	0	(2)	0	(1)	0	0	0	0
Leeds, Leeds General Infirmary	9	(2)	6	(2)	18	0	5	3
Leeds, St James's University Hospital	1	(0)	1	(0)	2	0	1	0
Scarborough, Scarborough General Hospital	1	(0)	1	(0)	2	1	1	1
Sheffield, Northern General Hospital	1	(0)	0	(0)	2	0	0	0
Wakefield, Pinderfields General Hospital	1	(1)	1	(0)	2	0	1	0
York, York District Hospital	1	(0)	1	(0)	2	0	1	0
Total	16	(8)	12	(3)	32	3	11	5
England	181	(144)	88	(47)	349	11	82	50

Donating hospital	All donors		Multi-organ donor		Kidney	Lung	Liver	Pancreas
Scotland								
Edinburgh, Royal Infirmary of Edinburgh	1	(0)	1	(0)	2	0	1	1
Edinburgh, Western General Hospital	4	(2)	3	(1)	8	2	3	0
Glasgow, Southern General Hospital	4	(3)	0	(0)	8	0	0	0
Glasgow, Western Infirmary	0	(1)	0	(0)	0	0	0	0
Greenock, Inter Clyde Royal Hospital	1	(0)	0	(0)	2	0	0	0
Livingston, St John's Hospital	1	(0)	0	(0)	1	0	0	0
Melrose, Borders General Hospital	1	(0)	0	(0)	2	0	0	0
Wishaw, Wishaw General Hospital	1	(0)	1	(0)	2	0	1	0
Total	13	(6)	5	(1)	25	2	5	1
Wales								
Cardiff, University Of Wales Hospital	4	(5)	2	(1)	8	0	0	2
Newport, Royal Gwent Hospital	0	(2)	0	(1)	0	0	0	0
Pontypridd, Royal Glamorgan Hospital	1	(1)	0	(0)	2	0	0	0
Swansea, Morriston Hospital	1	(1)	0	(0)	2	0	0	0
Total	6	(9)	2	(2)	12	0	0	2

Appendix II Numbers of heartbeating donors and organs retrieved in the UK, 1 April 2007 - 31 March 2008, by kidney designated area

Kidney designated area	All donors	Donors		pmp	Kidney	Heart	Organs		
		pmp	Multi-organ donors				Lung	Liver	Pancreas
Belfast	22	12.8	17	9.9	42	6	9	18	6
Birmingham	48	10.5	46	10.1	96	9	19	46	30
Bristol	22	10.9	21	10.4	42	5	9	22	16
Cambridge	27	10.5	25	9.8	53	3	15	25	13
Cardiff	32	14.0	26	11.4	61	4	4	25	18
Coventry	9	10.8	7	8.4	18	1	1	7	5
Edinburgh	28	11.6	25	10.4	53	10	9	25	19
Glasgow	13	4.9	12	4.5	26	5	7	12	9
Leeds	30	7.9	24	6.3	57	5	13	23	9
Leicester	5	2.3	4	1.8	8	0	0	5	1
Liverpool	40	12.1	37	11.2	78	7	9	38	11
Manchester	39	9.7	34	8.4	77	10	17	33	19
Newcastle	48	16.6	44	15.2	90	14	25	42	19
North Thames	79	10.6	69	9.2	149	15	21	71	32
Nottingham	9	6.4	8	5.7	18	3	6	8	6
Oxford	25	8.1	24	7.8	50	2	4	24	20
Plymouth	27	14.8	27	14.8	53	7	15	27	18
Portsmouth	17	7.0	17	7.0	34	4	8	17	13
Sheffield	22	11.8	19	10.2	44	6	19	18	6
South Thames	67	9.7	60	8.7	129	11	23	59	35
Total	609	10.1	546	9.1	1178	127	233	545	305

Appendix IIIA Retrieval populations for kidney centres, 2007-2008
(Mid-2005 estimates based on ONS 2001 census figures)

Kidney centre	Retrieval population (million)
Birmingham	4.55
Bristol	2.01
Cambridge	2.56
Coventry	0.83
Leeds	3.78
Leicester	2.17
Liverpool	3.31
Manchester	4.04
Newcastle	2.89
North Thames	7.48
Nottingham	1.41
Oxford	3.07
Plymouth	1.82
Portsmouth	2.44
Sheffield	1.87
South Thames	6.88
Total (England)	51.11 (50.44)
Cardiff	2.29
Total (Wales)	2.29 (2.96)
Edinburgh	2.41
Glasgow	2.68
Total (Scotland)	5.09 (5.09)
Belfast	1.72
Total (Northern Ireland)	1.72 (1.72)
TOTAL (UK)	60.21 (60.21)

Liver zone	Retrieval population (million)
1	1.0
2	1.0
3	1.0
4	1.0
5	1.0
6	1.0
7	1.0
8	1.0
9	1.0
10	1.0
11	1.0
12	1.0
13	1.0
14	1.0
15	1.0
16	1.0
17	1.0
18	1.0
19	1.0
20	1.0
21	1.0
22	1.0
23	1.0
24	1.0
25	1.0
26	1.0
27	1.0
28	1.0
29	1.0
30	1.0
31	1.0
32	1.0
33	1.0
34	1.0
35	1.0
36	1.0
37	1.0
38	1.0
39	1.0
40	1.0
41	1.0
42	1.0
43	1.0
44	1.0
45	1.0
46	1.0
47	1.0
48	1.0
49	1.0
50	1.0
51	1.0
52	1.0
53	1.0
54	1.0
55	1.0
56	1.0
57	1.0
58	1.0
59	1.0
60	1.0
61	1.0
62	1.0
63	1.0
64	1.0
65	1.0
66	1.0
67	1.0
68	1.0
69	1.0
70	1.0
71	1.0
72	1.0
73	1.0
74	1.0
75	1.0
76	1.0
77	1.0
78	1.0
79	1.0
80	1.0
81	1.0
82	1.0
83	1.0
84	1.0
85	1.0
86	1.0
87	1.0
88	1.0
89	1.0
90	1.0
91	1.0
92	1.0
93	1.0
94	1.0
95	1.0
96	1.0
97	1.0
98	1.0
99	1.0
100	1.0

Birmingham	13.38
Cambridge	9.43
Edinburgh	5.09
King's College	14.96
Leeds	8.01
Newcastle	3.47
Royal Free	5.87

Cardiothoracic zone	Retrieval population (million)
1	1.0
2	1.0
3	1.0
4	1.0
5	1.0
6	1.0
7	1.0
8	1.0
9	1.0
10	1.0
11	1.0
12	1.0
13	1.0
14	1.0
15	1.0
16	1.0
17	1.0
18	1.0
19	1.0
20	1.0
21	1.0
22	1.0
23	1.0
24	1.0
25	1.0
26	1.0
27	1.0
28	1.0
29	1.0
30	1.0
31	1.0
32	1.0
33	1.0
34	1.0
35	1.0
36	1.0
37	1.0
38	1.0
39	1.0
40	1.0
41	1.0
42	1.0
43	1.0
44	1.0
45	1.0
46	1.0
47	1.0
48	1.0
49	1.0
50	1.0
51	1.0
52	1.0
53	1.0
54	1.0
55	1.0
56	1.0
57	1.0
58	1.0
59	1.0
60	1.0
61	1.0
62	1.0
63	1.0
64	1.0
65	1.0
66	1.0
67	1.0
68	1.0
69	1.0
70	1.0
71	1.0
72	1.0
73	1.0
74	1.0
75	1.0
76	1.0
77	1.0
78	1.0
79	1.0
80	1.0
81	1.0
82	1.0
83	1.0
84	1.0
85	1.0
86	1.0
87	1.0
88	1.0
89	1.0
90	1.0
91	1.0
92	1.0
93	1.0
94	1.0
95	1.0
96	1.0
97	1.0
98	1.0
99	1.0
100	1.0

Birmingham	9.80
Glasgow	5.09
Harefield	13.41
Manchester	8.08
Newcastle	8.66
Papworth	15.17

Donor transplant co-ordinator team	HB		NHB	
	No. families approached	Unadjusted consent rate	No. families approached	Unadjusted consent rate
Belfast	100	53%	1	100%
Bristol	58	62%	65	74%
Cambridge	83	60%	77	71%
Cardiff	122	56%	28	50%
East Midlands	92	51%	1	0%
East of Scotland	47	72%	16	63%
Leeds	103	66%	46	65%
Liverpool	142	65%	5	60%
Manchester	127	65%	39	67%
Newcastle	146	64%	48	65%
North of Scotland	18	78%	3	33%
North Thames	312	55%	75	45%
Oxford	108	54%	34	65%
Plymouth	50	86%	36	69%
Portsmouth	45	78%	55	56%
Sheffield	65	63%	1	100%
South Thames	249	61%	89	44%
West Midlands	180	56%	55	49%
West of Scotland	62	71%	23	61%



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