

Cardiothoracic Activity

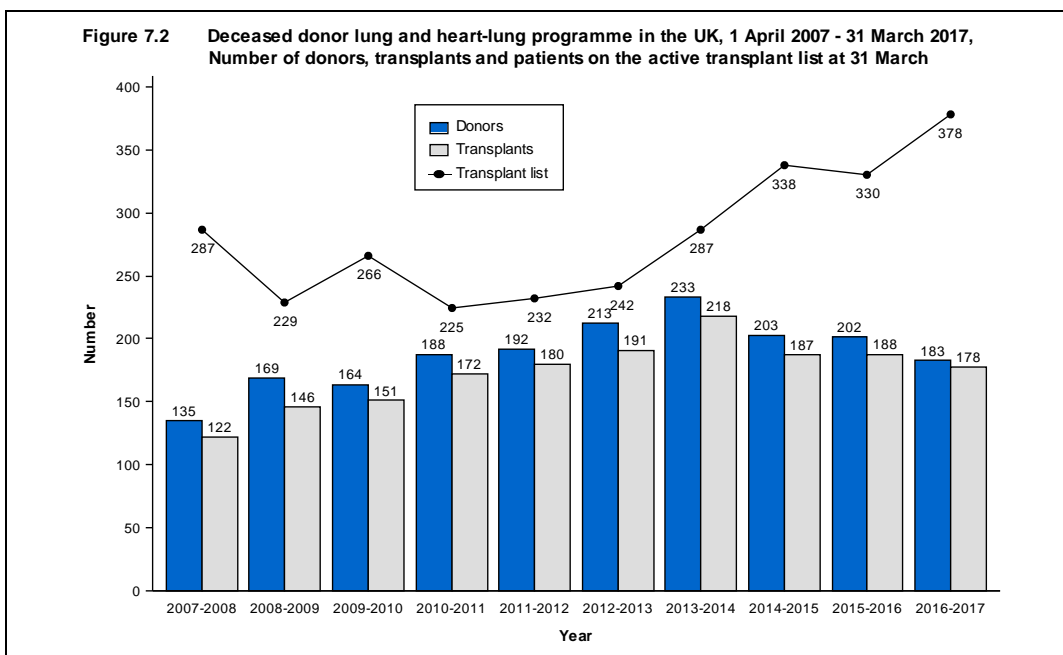
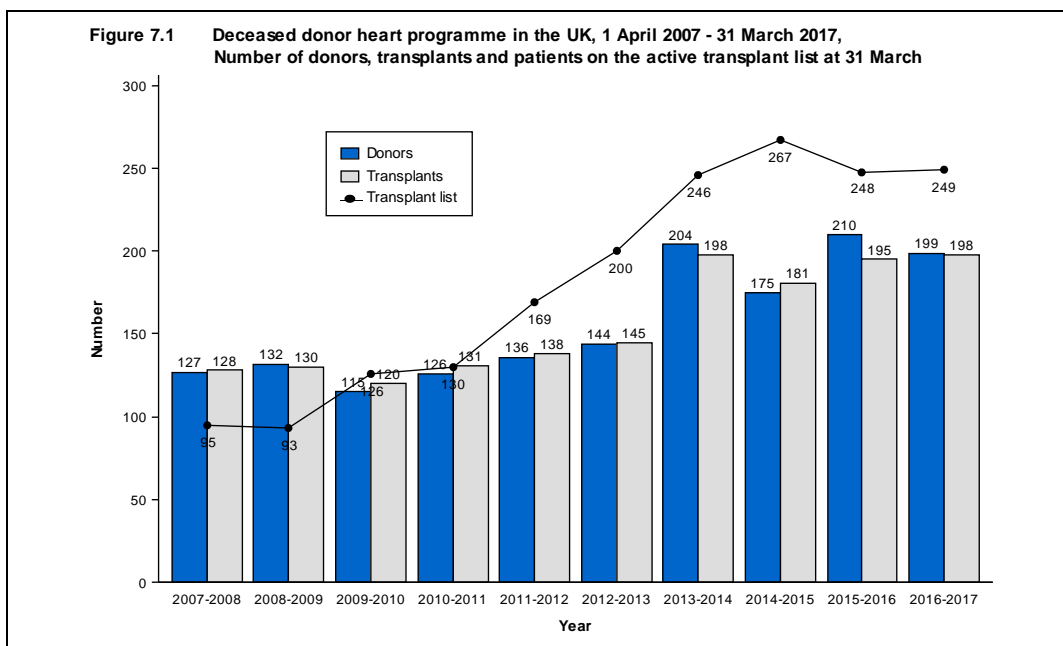
Key messages

- At 31 March 2017, there were 249 patients on the active heart transplant list, 360 on the lung list and 18 on the heart-lung list
- Of the 829 organ donors after brain death during 2016-2017, 265 (32%) were cardiothoracic organ donors
- As of 26 October 2016 patients can now be registered as super-urgent for a heart transplant
- The number of heart transplants increased by 2% to 198 this year; 72% of these were urgent heart transplants, 8% were super-urgent and 20% were non-urgent
- The number of lung and heart-lung transplants from deceased donors fell by 5% this year to 178
- There were 14 DCD heart transplants in 2016-2017

7.1 Overview

Last year the number of heart transplants rose by 2% to 198 and the number of lung or heart-lung transplants fell by 5% to 178. There have been increases in both the heart and the lung transplant lists since March 2016. The number of patients waiting on the active heart transplant list at year end has increased by 162% since 2008, while the number of patients registered for a lung or heart-lung transplant has increased by 32% since 2008.

A summary of the deceased donor cardiothoracic activity from 1 April 2007 to 31 March 2017 is shown in **Figure 7.1** for heart activity and **Figure 7.2** 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 7.2**.



7.2 Transplant list

As of 26 October 2016 patients can be registered super-urgently on the heart transplant waiting list. This additional category is a result of the growing number of patients registered urgently and will help to prioritise the patients with the greatest need for a transplant. It will also be possible for patients to be registered urgently or super-urgently for a lung transplant from May 2017 (during 2016-2017 and before there was no national facility for this).

Table 7.1 shows the number of patients on the active transplant lists at 31 March 2017 by centre. There were no patients waiting super-urgently for a heart on this date, although 19 patients had been on the super-urgent waiting list at some point between 26 October 2016 and 31 March 2017. The lung transplant list accounts for 60% of the patients waiting for a cardiothoracic organ transplant. Overall, Newcastle and Harefield had the largest cardiothoracic lists on 31 March 2017.

Table 7.1 Patients on the cardiothoracic organ transplant lists at 31 March 2017 (2016) in the UK, by centre											
Centre			Heart		Active transplant lists			Lung		TOTAL	
	Non-urgent		Urgent		Super-urgent	Heart-lung					
Adult											
Birmingham	26	(18)	4	(3)	0	2	(1)	44	(30)	76	(52)
Glasgow	13	(13)	0	(4)	0	0	(0)	0	(0)	13	(17)
Great Ormond Street ¹	1	(2)	0	(0)	0	0	(0)	0	(2)	1	(4)
Harefield	51	(62)	9	(5)	0	3	(2)	141	(125)	204	(194)
Manchester	23	(17)	1	(1)	0	4	(1)	42	(46)	70	(65)
Newcastle	50	(43)	5	(4)	0	5	(4)	95	(61)	155	(112)
Papworth	35	(39)	2	(2)	0	2	(6)	30	(45)	69	(92)
TOTAL	199	(194)	21	(19)	0	16	(14)	352	(309)	588	(536)
Paediatric											
Great Ormond Street	14	(17)	4	(5)	0	2	(0)	3	(7)	23	(29)
Newcastle	7	(6)	4	(7)	0	0	(0)	5	(0)	16	(13)
TOTAL	21	(23)	8	(12)	0	2	(0)	8	(7)	39	(42)

¹ Paediatric patients are aged under 16 years at 31 March 2017 (2016). Note that 1 patient active at 31 March 2017 and 4 patients active at 31 March 2016 at Great Ormond Street had turned 16 whilst on the list and so are categorised here as adults

During 2016-2017, 311 patients joined the heart transplant list while 17 joined the heart-lung transplant list and 338 joined the lung transplant list. Outcomes as at 31 March 2017 for patients on the list at 1 April 2016 and those joining the list during the year are shown in **Table 7.2**.

Table 7.2 Cardiothoracic organ transplant lists and new registrations in the UK, 1 April 2016 - 31 March 2017						
Outcome of patient at 31 March 2017	Active and suspended patients at 1 April 2016		New registrations in 2016-2017¹		TOTAL	
	N	%	N	%	N	%
Heart transplant list						
Remained active/suspended	144	54	126	41	270	47
Transplanted	68	26	127	41	195	34
Removed	40	15	42	14	82	14
Died	13	5	16	5	29	5
TOTAL	265		311		576	
Heart-lung transplant list						
Remained active/suspended	6	46	11	65	17	57
Transplanted ²	2	15	2	12	4	13
Removed	2	15	0	0	2	7
Died	3	23	4	24	7	23
TOTAL	13		17		30	
Lung transplant list						
Remained active/suspended	153	52	215	64	368	58
Transplanted	83	28	85	25	168	26
Removed	28	9	7	2	35	6
Died	33	11	31	9	64	10
TOTAL	297		338		635	

¹ Includes re-registrations for second or subsequent transplants
² Patient may have received heart, lung or heart-lung

Table 7.3 shows the transplant list rate per million population by country/Strategic Health Authority of patient's residence. The overall UK heart transplant list rate at 31 March 2017 was 3.8 pmp and ranged from 2.6 to 6.1 across the Strategic Health Authorities. The overall UK lung transplant list rate was 5.8 pmp and ranged from 3.6 to 8.0 across the Strategic Health Authorities.

Table 7.3 Active cardiothoracic organ transplant list at 31 March, by country/ Strategic Health Authority of patient residence								
Country/ Strategic Health Authority of residence	Heart transplant list (pmp)				Lung transplant list (pmp)¹			
	2017		2016		2017		2016	
North East	16	(6.1)	21	(8.0)	13	(5.0)	7	(2.7)
North West	36	(5.0)	22	(3.1)	38	(5.3)	39	(5.4)
Yorkshire and The Humber	14	(2.6)	21	(3.9)	37	(6.9)	26	(4.8)
North of England	66	(4.3)	64	(4.2)	88	(5.8)	72	(4.7)
East Midlands	12	(2.6)	12	(2.6)	17	(3.6)	16	(3.4)
West Midlands	28	(4.9)	23	(4.0)	39	(6.8)	29	(5.0)
East of England	16	(2.6)	22	(3.6)	23	(3.8)	32	(5.3)
Midlands and East	56	(3.4)	57	(3.5)	79	(4.8)	77	(4.7)
London	32	(3.7)	33	(3.8)	35	(4.0)	46	(5.3)
South East Coast	20	(4.3)	19	(4.1)	37	(8.0)	26	(5.6)
South Central	16	(3.7)	15	(3.5)	25	(5.8)	27	(6.3)
South West	14	(2.6)	19	(3.5)	37	(6.8)	34	(6.2)
South of England	50	(3.5)	53	(3.7)	99	(6.9)	87	(6.0)
England	204	(3.7)	207	(3.8)	301	(5.5)	282	(5.1)
Isle of Man	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Channel Islands	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Wales	7	(2.3)	9	(2.9)	25	(8.1)	17	(5.5)
Scotland	24	(4.5)	23	(4.3)	34	(6.3)	22	(4.1)
Northern Ireland	8	(4.3)	4	(2.2)	14	(7.6)	7	(3.8)
TOTAL^{2,3}	249	(3.8)	248	(3.8)	378	(5.8)	330	(5.0)

¹ Includes patients waiting for both heart and lungs
² Includes heart patients in 2017 (2016) resident in: UK unknown 1 (0); Republic of Ireland 2 (4); Overseas 3 (1)
³ Includes lung patients in 2017 (2016) resident in: UK unknown 1 (0); Republic of Ireland 3 (2)

The transplant list outcomes for adult patients listed for a cardiothoracic organ transplant between 1 April 2013 and 31 March 2014 are summarised in **Figure 7.3**, **Figure 7.4** and **Figure 7.5**. These show the proportion of patients transplanted, still waiting, removed and those who died within six months, one year, two years and three years after joining the non-urgent or urgent heart list or the lung list, respectively. Within six months of listing, 15% of non-urgent heart patients were transplanted while 5% had died, compared with 69% transplanted and 8% died for urgent heart patients. Of those listed for a lung transplant, 39% were transplanted within six months, rising to 65% after three years. The patients removed from these lists may have subsequently died.

Figure 7.3 Post-registration outcome for 203 first non-urgent heart only registrations made in the UK, 1 April 2013 - 31 March 2014

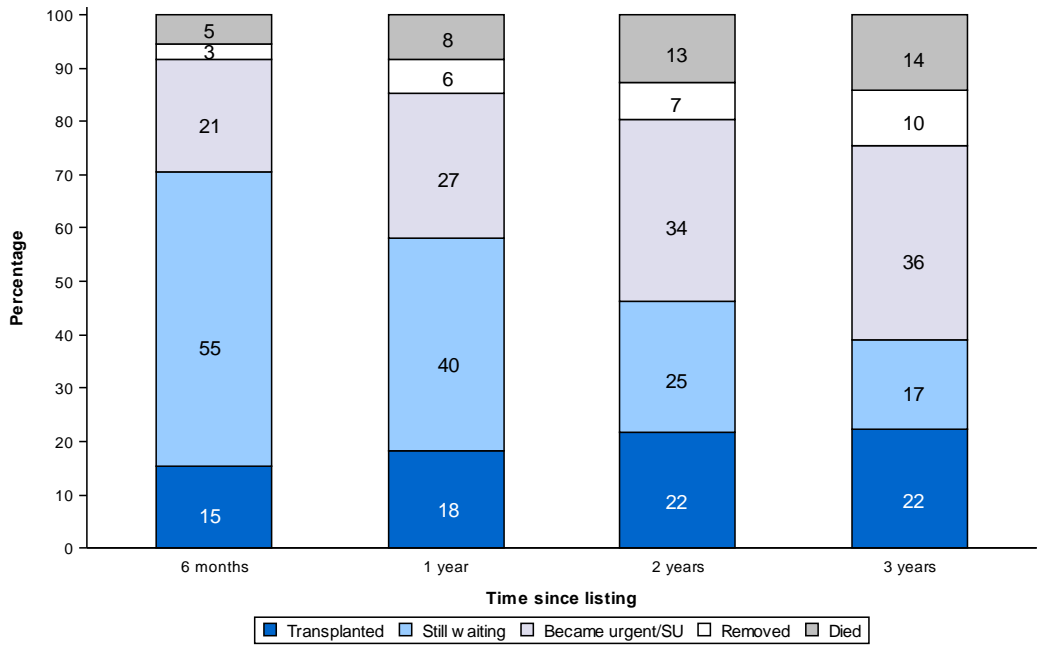
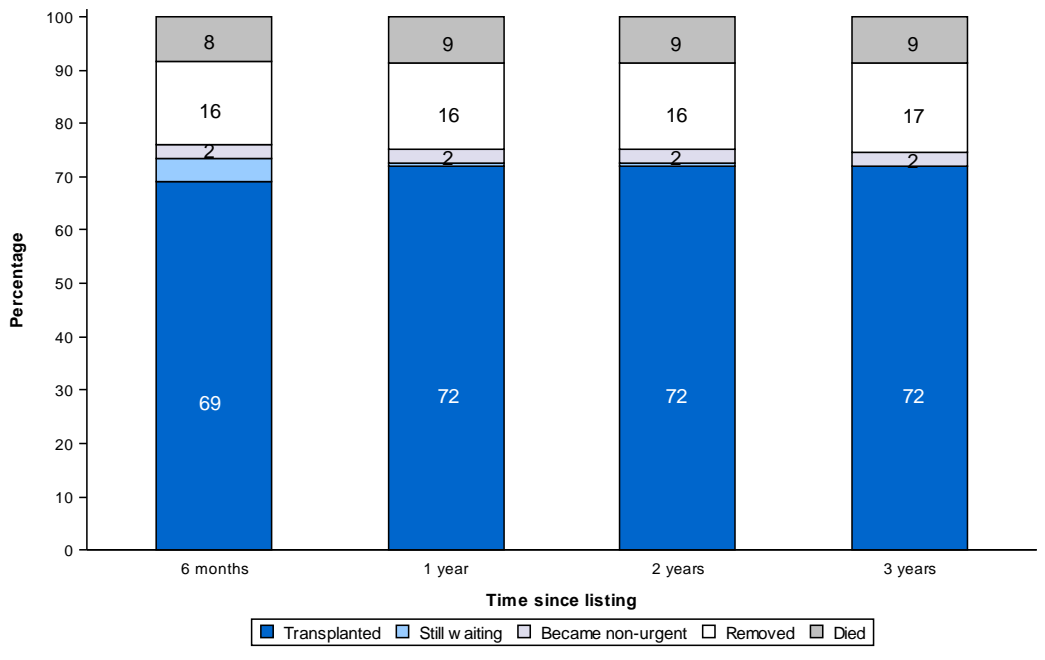


Figure 7.4 Post-registration outcome for 204 first urgent heart only registrations made in the UK, 1 April 2013 - 31 March 2014



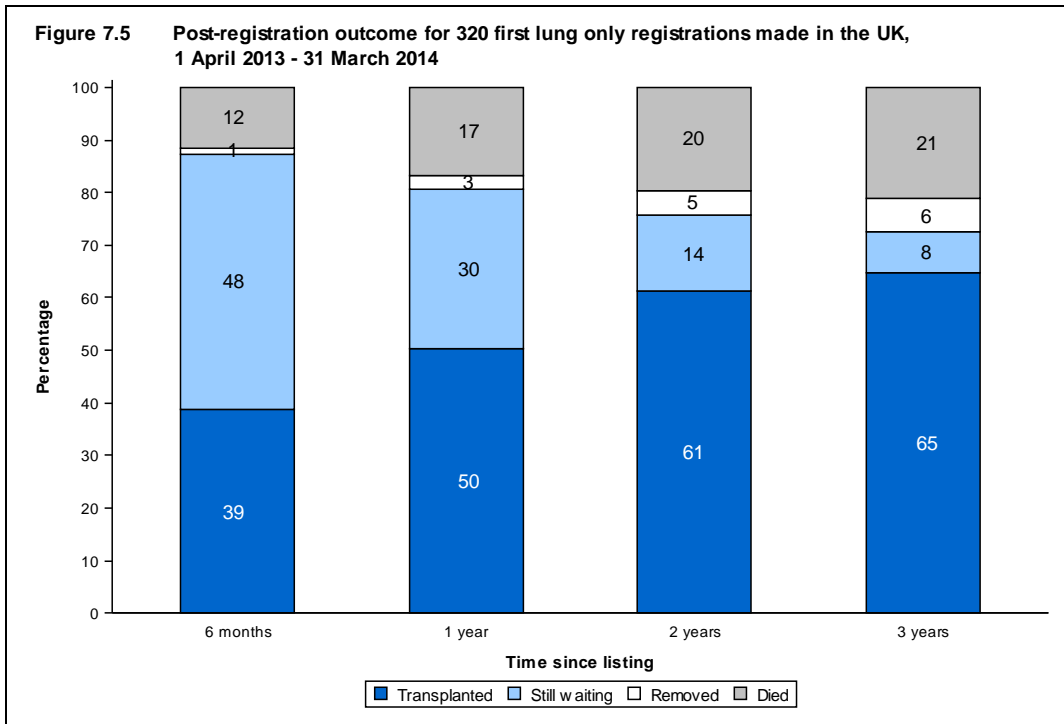


Table 7.4 and **Table 7.5** show the median waiting time to cardiothoracic organ transplant by blood group and ethnicity of patient, respectively, for patients registered between 1 April 2011 and 31 March 2014. The overall median waiting time to heart transplantation, for adults, was 1,280 days for patients who had never been on the urgent waiting list ('never urgent'). For patients who had been on the urgent list ('ever urgent'), the overall median time on the urgent list before transplant was 26 days. The overall median waiting time to lung transplantation, for adults, was 255 days, but for blood group O patients alone was 406 days. For paediatric heart patients, the median waiting time was 463 days for non-urgent registrations and 70 days for urgent registrations (this is not broken down by blood group or ethnicity due to low numbers). Median waiting time is not calculated for paediatric lung patients due to the small number of registrations. Note that these waiting times are not adjusted for other relevant factors which may be influential and which may differ across blood or ethnic groups.

Table 7.4 Median waiting time to cardiothoracic organ transplant in the UK, for patients registered 1 April 2011 - 31 March 2014

Blood group	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult never urgent heart			
O ¹	116	-	-
A	135	418	289 - 547
B	24	344	9 - 679
AB	15	58	19 - 97
TOTAL	290	1280	703 - 1857
Adult ever urgent heart (urgent waiting time only)			
O	184	44	35 - 53
A	151	15	12 - 18
B	56	30	23 - 37
AB	17	13	10 - 16
TOTAL	408	26	21 - 31
Paediatric never urgent heart	24	463	0 - 1460
Paediatric ever urgent heart (urgent waiting time only)	116	70	41 - 99
Adult lung			
O	377	406	332 - 480
A	315	137	107 - 167
B	83	182	87 - 277
AB	18	186	121 - 251
TOTAL	793	255	216 - 294

¹ Median and/or 95% confidence interval cannot be estimated

Table 7.5 Median waiting time to cardiothoracic organ transplant in the UK, for patients registered 1 April 2011 - 31 March 2014

Ethnicity	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult never urgent heart			
White	260	1283	590 - 1976
Asian	11	143	0 - 357
Black ¹	12	-	-
TOTAL³	290	1280	703 - 1857
Adult ever urgent heart (urgent waiting time only)			
White	351	23	18 - 28
Asian	32	43	27 - 59
Black	11	71	65 - 77
Other	10	38	5 - 71
TOTAL³	408	26	21 - 31
Paediatric never urgent heart	24	463	0 - 1460
Paediatric ever urgent heart (urgent waiting time only)	116	70	41 - 99
Adult lung			
White	756	239	202 - 276
Asian	24	1217	121 - 2313
Black ^{1,2}	6	-	-
Other ^{1,2}	3	-	-
TOTAL³	793	255	216 - 294

¹ Median and/or 95% confidence interval cannot be estimated

² Median waiting time not calculated for fewer than 10 patients

³ Totals do not add up where we do not have ethnicity reported for all patients

7.3 Donor and organ supply

The number of cardiothoracic organ donors classified by allocation zone of the donor hospital is summarised in **Table 7.6**. The numbers reflect the donors within each centre's allocation zone (attended by any retrieval team) rather than the donors attended by that centre. 28 of the 107 adult lung only donors were donors after circulatory death and there were no living donors during the time period. There were also no domino heart donors. Of the 250 adult cardiothoracic organ donors after brain death, 43% donated only the heart, 26% heart and lung and 32% lung only. Of the 15 paediatric cardiothoracic organ donors after brain death, 53% donated only the heart, 20% heart and lung and 27% lung only.

Table 7.6 Cardiothoracic organ donors in the UK, 1 April 2016 - 31 March 2017 (2015-2016), by age group and allocation zone

Allocation zone	Type of cardiothoracic organ donor												TOTAL	
	Heart only				Heart & lung				Lung(s) only					
	DBD		DCD		DBD		DCD		DBD		DCD			
Adult														
Birmingham	16	(11)	1	(0)	6	(7)	0	(0)	6	(11)	3	(6)	32	(35)
Glasgow	9	(4)	0	(0)	5	(6)	0	(0)	10	(10)	4	(5)	28	(25)
Harefield	26	(26)	4	(4)	25	(20)	0	(0)	23	(17)	10	(11)	88	(78)
Manchester	25	(27)	1	(0)	8	(12)	2	(1)	20	(7)	5	(3)	61	(50)
Newcastle	13	(12)	0	(0)	13	(13)	0	(0)	8	(16)	2	(6)	36	(47)
Papworth	18	(20)	7	(15)	7	(16)	2	(1)	12	(16)	4	(3)	50	(71)
TOTAL	107	(100)	13	(19)	64	(74)	4	(2)	79	(77)	28	(34)	295	(306)
Paediatric¹														
Birmingham	2	(2)	0	(0)	0	(2)	0	(0)	0	(0)	0	(1)	2	(5)
Glasgow	0	(1)	0	(0)	0	(1)	0	(0)	0	(1)	0	(0)	0	(3)
Harefield	3	(2)	0	(0)	1	(1)	0	(0)	1	(0)	0	(1)	5	(4)
Manchester	2	(0)	0	(0)	2	(1)	0	(0)	1	(0)	0	(0)	5	(1)
Newcastle	0	(0)	0	(0)	0	(5)	0	(0)	2	(0)	1	(2)	3	(7)
Papworth	1	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	1	(0)
TOTAL	8	(5)	0	(0)	3	(10)	0	(0)	4	(1)	1	(4)	16	(20)

¹ Paediatric donors are aged <16 years

Table 7.7 shows the number of organ donors after brain death and circulatory death identified in each allocation zone, and the number of organs retrieved and transplanted. Of the 829 organ donors after brain death, 265 (32%) donated cardiothoracic organs. Overall, 96% of the 470 DBD organs retrieved were used for transplantation: 96% of hearts and 95% of lungs. Of the DCD organs retrieved, 84% were used for transplantation: 82% of hearts and 84% of lungs.

Table 7.7 Cardiothoracic organ donation and retrieval rates from deceased donors in the UK, 1 April 2016 - 31 March 2017, by allocation zone								
Allocation zone	Number of donors		Number of organs retrieved (used)				TOTAL retrieved (used)	
	Solid organ	Cardiothoracic	Hearts		Lungs			
DBD								
Birmingham	102	30	24	(24)	24	(24)	48	(48)
Glasgow	91	24	14	(14)	30	(28)	44	(42)
Harefield	210	79	55	(50)	97	(94)	152	(144)
Manchester	160	58	37	(36)	56	(53)	93	(89)
Newcastle	123	36	26	(26)	45	(41)	71	(67)
Papworth	143	38	26	(25)	36	(34)	62	(59)
TOTAL	829	265	182	(175)	288	(274)	470	(449)
DCD								
Birmingham	54	4	1	(1)	6	(6)	7	(7)
Glasgow	62	4	0	(0)	8	(6)	8	(6)
Harefield	134	14	4	(4)	20	(16)	24	(20)
Manchester	126	8	3	(2)	13	(13)	16	(15)
Newcastle	76	3	0	(0)	6	(6)	6	(6)
Papworth	132	13	9	(7)	11	(7)	20	(14)
TOTAL	584	46	17	(14)	64	(54)	81	(68)

The rates per million population for cardiothoracic organ donors are shown in **Table 7.8** by country/Strategic Health Authority of residence. No adjustments have been made for potential demographic differences in populations. The overall cardiothoracic organ donor rate was 4.8 pmp in 2016-2017 and varied across the Strategic Health Authorities from 2.6 pmp to 6.9 pmp. Of the four nations the highest cardiothoracic organ donor rate was in Northern Ireland at 7.6 pmp.

Table 7.8 Cardiothoracic organ donation and retrieval rates for deceased donors in the UK, 1 April 2016 - 31 March 2017, by country/ Strategic Health Authority						
Country/ Strategic Health Authority	Heart (pmp)		Lungs (pmp)		Total (pmp)	
	DBD	DCD ¹	DBD	DCD		
North East	15 (5.7)	0 (0.0)	10 (3.8)	1 (0.4)	18 (6.9)	
North West	23 (3.2)	1 (0.1)	19 (2.6)	4 (0.6)	41 (5.7)	
Yorkshire and The Humber	7 (1.3)	0 (0.0)	9 (1.7)	0 (0.0)	14 (2.6)	
North of England	45 (3.0)	1 (0.1)	38 (2.5)	5 (0.3)	73 (4.8)	
East Midlands	10 (2.1)	2 (0.4)	7 (1.5)	4 (0.9)	17 (3.6)	
West Midlands	24 (4.2)	0 (0.0)	11 (1.9)	1 (0.2)	32 (5.6)	
East of England	14 (2.3)	4 (0.7)	13 (2.1)	5 (0.8)	31 (5.1)	
Midlands and East	48 (2.9)	6 (0.4)	31 (1.9)	10 (0.6)	80 (4.8)	
London	24 (2.8)	4 (0.5)	18 (2.1)	1 (0.1)	38 (4.4)	
South East Coast	12 (2.6)	5 (1.1)	12 (2.6)	6 (1.3)	32 (6.9)	
South Central	12 (2.8)	0 (0.0)	14 (3.2)	2 (0.5)	19 (4.4)	
South West	15 (2.7)	1 (0.2)	14 (2.6)	2 (0.4)	22 (4.0)	
South of England	39 (2.7)	6 (0.4)	40 (2.8)	10 (0.7)	73 (5.1)	
England	156 (2.8)	17 (0.3)	127 (2.3)	26 (0.5)	264 (4.8)	
Isle of Man	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Channel Islands	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Wales	6 (1.9)	0 (0.0)	2 (0.6)	2 (0.6)	10 (3.2)	
Scotland	11 (2.0)	0 (0.0)	13 (2.4)	3 (0.6)	23 (4.3)	
Northern Ireland	9 (4.9)	0 (0.0)	8 (4.3)	2 (1.1)	14 (7.6)	
TOTAL²	182 (2.8)	17 (0.3)	150 (2.3)	33 (0.5)	311 (4.8)	

¹ DCD heart donation is not operational in all areas
² Includes 6 donors where the hospital postcode was used in place of an unknown donor postcode

7.4 Transplants

The number of cardiothoracic organ transplants by recipient country/Strategic Health Authority of residence is shown in **Table 7.9**. No adjustments have been made for potential demographic differences in populations. The cardiothoracic organ transplant rate ranged from 4.4 to 7.4 pmp across Strategic Health Authorities and overall was 5.7 pmp. Lung transplant rates include a small number of heart-lung transplants.

Table 7.9 Cardiothoracic organ transplant rates per million population (pmp) in the UK, 1 April 2016 - 31 March 2017, by country/ Strategic Health Authority					
Country/ Strategic Health Authority	Heart (pmp)		Lungs (pmp)		Total (pmp)
	DBD	DCD ¹	DBD	DCD	
North East	13 (5.0)	0 (0.0)	4 (1.5)	0 (0.0)	17 (6.5)
North West	25 (3.5)	0 (0.0)	26 (3.6)	2 (0.3)	53 (7.4)
Yorkshire and The Humber	18 (3.3)	1 (0.2)	12 (2.2)	4 (0.7)	35 (6.5)
North of England	56 (3.7)	1 (0.1)	42 (2.8)	6 (0.4)	105 (6.9)
East Midlands	12 (2.6)	2 (0.4)	10 (2.1)	3 (0.6)	27 (5.8)
West Midlands	22 (3.8)	0 (0.0)	7 (1.2)	3 (0.5)	32 (5.6)
East of England	12 (2.0)	3 (0.5)	22 (3.6)	3 (0.5)	40 (6.6)
Midlands and East	46 (2.8)	5 (0.3)	39 (2.4)	9 (0.5)	99 (6.0)
London	20 (2.3)	3 (0.3)	14 (1.6)	1 (0.1)	38 (4.4)
South East Coast	7 (1.5)	2 (0.4)	13 (2.8)	1 (0.2)	23 (5.0)
South Central	7 (1.6)	1 (0.2)	12 (2.8)	2 (0.5)	22 (5.1)
South West	11 (2.0)	2 (0.4)	11 (2.0)	1 (0.2)	25 (4.6)
South of England	25 (1.7)	5 (0.3)	36 (2.5)	4 (0.3)	70 (4.9)
England	147 (2.7)	14 (0.3)	131 (2.4)	20 (0.4)	312 (5.7)
Isle of Man	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Channel Islands	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Wales	12 (3.9)	0 (0.0)	6 (1.9)	3 (1.0)	21 (6.8)
Scotland	16 (3.0)	0 (0.0)	10 (1.9)	6 (1.1)	32 (6.0)
Northern Ireland	6 (3.2)	0 (0.0)	1 (0.5)	0 (0.0)	7 (3.8)
TOTAL^{2,3}	183 (2.8)	14 (0.2)	148 (2.3)	29 (0.4)	374 (5.7)

¹ DCD heart transplantation is not operational in all areas
² Excludes 2 recipients who reside in the Republic of Ireland
³ Includes 2 recipients in the UK with an unknown postcode

Table 7.10 and **Table 7.11** show cardiothoracic organ transplant activity for each centre by urgency status and donor type, respectively. In 2016-2017, a total of 376 transplants were carried out; a fall of 2% on 2015-2016. Of these, 198 were heart transplants, of which 158 (80%) were in urgent or super-urgent patients and additionally, 14 (7%) were achieved from donors after circulatory death. There were a total of 178 lung transplants including 29 (16%) from donors after circulatory death.

**Table 7.10 Cardiothoracic transplants from deceased donors,
1 April 2016 - 31 March 2017 (2015-2016), by age group and centre**

Transplant centre	Transplant type										TOTAL		
	Heart				Heart- lung				Lung(s)				
	Non-urgent		Urgent		Super-urgent								
Adult													
Birmingham	1	(3)	20	(23)	5	(0)	0	(1)	15	(24)	41	(51)	
Glasgow	2	(0)	9	(7)	4	(0)	0	(0)	0	(0)	15	(7)	
Great Ormond Street	0	(0)	0	(0)	0	(0)	0	(0)	1	(0)	1	(0)	
Harefield	3	(4)	18	(21)	0	(0)	0	(1)	41	(49)	62	(75)	
Manchester	5	(2)	20	(27)	3	(0)	1	(2)	33	(21)	62	(52)	
Newcastle	5	(4)	23	(19)	0	(0)	0	(0)	33	(42)	61	(65)	
Papworth	19	(21)	25	(30)	3	(0)	1	(2)	43	(37)	91	(90)	
TOTAL	35	(34)	115	(127)	15	(0)	2	(6)	166	(173)	333	(340)	
Paediatric¹													
Great Ormond Street	3	(3)	11	(12)	0	(0)	0	(0)	8	(7)	22	(22)	
Harefield	0	(0)	1	(0)	0	(0)	0	(0)	0	(0)	1	(0)	
Newcastle	2	(1)	16	(18)	0	(0)	0	(0)	2	(2)	20	(21)	
TOTAL	5	(4)	28	(30)	0	(0)	0	(0)	10	(9)	43	(43)	

¹ Paediatric recipients are aged under 16 years at time of transplant

**Table 7.11 Cardiothoracic transplants from deceased donors,
1 April 2016 - 31 March 2017 (2015-2016), by age group and centre**

Transplant centre	Transplant type										TOTAL			
	Heart				Heart-lung				Lung(s)					
	DBD		DCD		DBD		DCD		DBD		DCD			
Adult														
Birmingham	26	(26)	0	(0)	0	(1)	0	(0)	11	(21)	4	(3)	41	(51)
Glasgow	15	(7)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	15	(7)
Great Ormond Street	0	(0)	0	(0)	0	(0)	0	(0)	1	(0)	0	(0)	1	(0)
Harefield	19	(21)	2	(4)	0	(1)	0	(0)	36	(37)	5	(12)	62	(75)
Manchester	28	(29)	0	(0)	1	(2)	0	(0)	27	(18)	6	(3)	62	(52)
Newcastle	28	(23)	0	(0)	0	(0)	0	(0)	26	(31)	7	(11)	61	(65)
Papworth	35	(36)	12	(15)	1	(2)	0	(0)	37	(33)	6	(4)	91	(90)
TOTAL	151	(142)	14	(19)	2	(6)	0	(0)	138	(140)	28	(33)	333	(340)
Paediatric¹														
Great Ormond Street	14	(15)	0	(0)	0	(0)	0	(0)	7	(5)	1	(2)	22	(22)
Harefield	1	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	1	(0)
Newcastle	18	(19)	0	(0)	0	(0)	0	(0)	2	(2)	0	(0)	20	(21)
TOTAL	33	(34)	0	(0)	0	(0)	0	(0)	9	(7)	1	(2)	43	(43)

¹ Paediatric recipients are aged under 16 years at time of transplant

At 31 March 2017 there were approximately 3,800 recipients with a functioning cardiothoracic organ transplant being followed-up as reported to the UK Transplant Registry.

The length of time that elapses between cardiothoracic organs being removed from the donor and their transplantation into the recipient is called the total ischaemia time (IT). Generally, the shorter this time, the more likely the organ is to work immediately and the better the long-term outcome. In 2016-2017 the median IT for a DBD heart transplant was 3.3 hours (Inter-Quartile (IQ) range 2.6 – 3.9) and for a DCD heart transplant was 4.5 hours (IQ range 4 – 4.7) and overall was 3.3 hours (IQ range 2.6 – 4).

The median IT for DBD donor lung transplant was 4.9 hours (IQ range 3.9 - 6) and for a DCD donor lung transplant was 5.3 hours (IQ range 4.9 – 6.2) and overall was 5 hours (IQ range 4 - 6). Please note some of these data include the use of donor organ maintenance systems, in which cases the IT reported will be an overestimate of the true ischaemia time.

7.5 Demographic characteristics

The age group, sex, ethnicity and blood group of deceased donors, transplant recipients and patients on the transplant list are shown in **Table 7.12**.

Table 7.12 Demographic characteristics of deceased cardiothoracic organ donors and transplant recipients 1 April 2016 - 31 March 2017, and transplant list patients at 31 March in the UK						
Age group (years)	Donors		Transplant recipients		Active transplant list patients	
	N	(%)	N	(%)	N	(%)
0 - 17	25	(8)	46	(12)	41	(7)
18 - 34	84	(27)	77	(20)	100	(16)
35 - 49	103	(33)	74	(20)	139	(22)
50 - 59	76	(24)	104	(28)	201	(32)
60 - 69	23	(7)	73	(19)	143	(23)
70+	0	(0)	2	(1)	3	(0)
mean (SD)	40	(15)	43	(18)	47	(16)
Male	179	(58)	242	(64)	365	(58)
Female	132	(42)	134	(36)	262	(42)
White	281	(92)	340	(90)	560	(90)
Asian	8	(3)	21	(6)	37	(6)
Black	5	(2)	11	(3)	21	(3)
Chinese	1	(0)	2	(1)	1	(0)
Other	10	(3)	2	(1)	6	(1)
Not reported	6				2	
O	154	(50)	139	(37)	327	(52)
A	125	(40)	172	(46)	218	(35)
B	25	(8)	47	(13)	67	(11)
AB	7	(2)	18	(5)	15	(2)
First graft			372	(99)	612	(98)
Re-graft			4	(1)	15	(2)
TOTAL	311	(100)	376	(100)	627	(100)