

Cardiothoracic Activity

Key messages

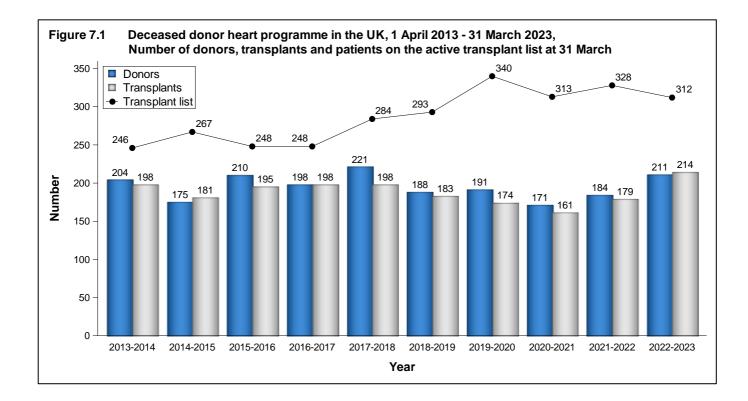
- At 31 March 2023, there were 312 patients on the active heart transplant list, 290 on the lung list and 12 on the heart-lung list
- Of the 772 organ donors after brain death during 2022-2023, 153 (20%) donated their heart and 69 (9%) donated at least one lung
- The number of heart transplants increased by 20% to 214; 56% of these were urgent heart transplants, 25% were super-urgent, and 19% were non-urgent
- The number of lung and heart-lung transplants fell by 7% this year to 101; 22% of these were urgent lung transplants, 3% were super-urgent, and 75% were non-urgent.
- There were 55 DCD heart transplants in 2022-2023 (including one heart/liver), 11 more than the previous year.

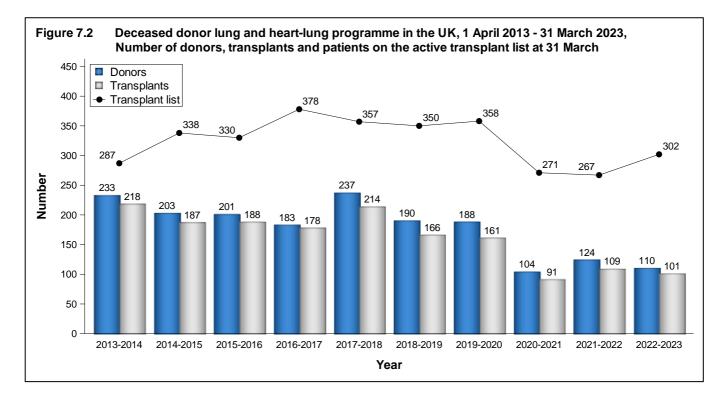
7.1 Overview

Last year the number of heart transplants increased by 20% to 214 compared with 2021-2022, and the number of lung or heart-lung transplants fell by 7% to 101. There were increases in the lung transplant list since 31 March 2022, but the heart transplant list fell by 5% to 312. The number of patients active on the heart transplant list at year end has increased by 27% since 2014, while the number of patients active on the lung or heart-lung transplant list has increased by 5% since 2014.

A summary of the deceased donor cardiothoracic activity from 1 April 2013 to 31 March 2023 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

Table 7.1 shows the number of patients on the active transplant lists at 31 March 2023 by centre. There was one patient waiting on the superurgent heart transplant list. There were no patients waiting on the super-urgent lung transplant list, and seven patients waiting on the urgent lung transplant list. The lung transplant list accounts for 47% of the patients waiting for a cardiothoracic organ transplant. Overall, Newcastle and Harefield had the largest cardiothoracic transplant waiting lists on 31 March 2023.

							Acti	ve trans	splant	lists						
Centre	Non-	urgent		eart gent	Super-	urgent	Heart	lung	Non	-urgent	Lu Urg	ng ent	Super-	urgent	то	TAL
Adult																
Birmingham	38	(43)	3	(4)	0	(0)	3	(2)	37	(42)	0	(0)	0	(0)	81	(91
Glasgow	15	(14)	4	(2)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	19	(16
Great Ormond Street	1	(1)	1	(0)	0	(0)	0	(0)	0	(1)	0	(0)	0	(0)	2	(2
Harefield	49	(62)	9	(4)	1	(2)	1	(0)	79	(55)	1	(0)	0	(0)	140	(123
Manchester	29	(30)	2	(2)	0	(1)	0	(1)	34	(39)	1	(0)	0	(0)	66	(73
Newcastle	62	(72)	12	(10)	0	(0)	2	(3)	80	(60)	2	(6)	0	(0)	158	(151
Papworth	34	(32)	4	(3)	0	(1)	3	(2)	42	(43)	1	(3)	0	(0)	84	`(8 4
TOTAL	228	(254)	35	(25)	1	(4)	9	(8)	272	(240)	5	(9)	0	(0)	550	(540
Paediatric																
Great Ormond Street	19	(14)	8	(4)	0	(1)	2	(1)	9	(7)	2	(1)	0	(0)	40	(28
Newcastle	15	(17)	6	(9)	0	(O)	1	(0)	2	(1)	0	(0)	0	(0)	24	(27
TOTAL	34	(31)	14	(13)	0	(1)	3	(1)	11	(8)	2	(1)	0	(0)	64	(55

- 64 -

During 2022-2023, there were 325 registrations onto the heart transplant list, 7 registrations onto the heart-lung transplant list and 203 onto the lung transplant list. Registration outcomes as at 31 March 2023 for patients on the list at 1 April 2022 and those joining the list during the year are shown in Table 7.2.

Table 7.2Cardiothoracion1 April 2022 - 3			s and new re	egistrations	s in the UK	,
	Active suspended at 1 April	patients	New registr 2022-20		ΤΟΤΑ	AL.
Outcome of patient at 31 March 2023	N	%	Ν	%	Ν	%
Heart transplant list						
Remained active/suspended	243	66	141	43	384	55
Transplanted	70	19	142	44	212	31
Removed	47	13	34	10	81	12
Died	10	3	8	2	18	3
TOTAL	370		325		695	
Heart-lung transplant list						
Remained active/suspended	9	90	5	63	14	78
Transplanted ²	1	10	0	0	1	6
Removed	1	10	2	25	3	17
TOTAL	11		7		18	
Lung transplant list						
Remained active/suspended	182	67	125	62	307	65
Transplanted	47	17	51	25	98	21
Removed	29	11	5	2	34	7
Died	12	4	22	11	34	7
TOTAL	270		203		473	
¹ Includes re-registrations for second ² Patients may have received hea	ond or subsequ				475	

Table 7.3 shows the transplant list rates per million population by country/NHS region of patient's residence. The overall UK heart transplant list rate at 31 March 2023 was 4.7 pmp and ranged from 3.1 to 6.0 across NHS regions. The overall UK lung transplant list rate was 4.5 pmp and ranged from 3.1 to 5.8 across NHS regions.

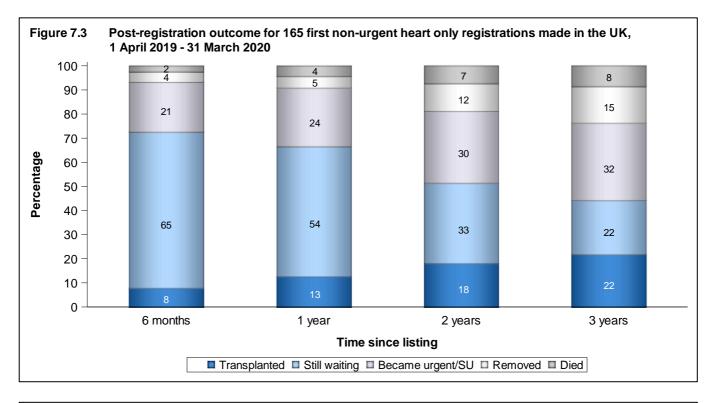


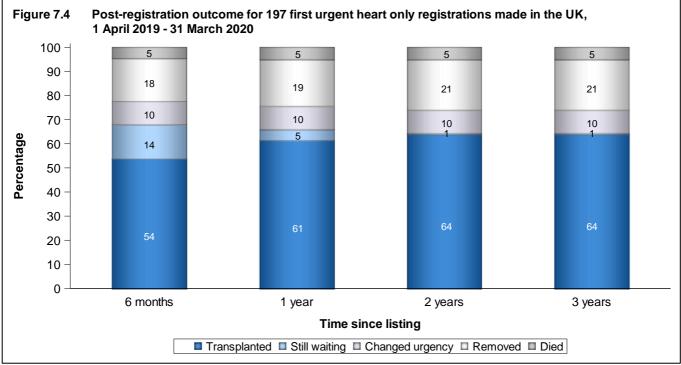
Table 7.3 Active cardiot		ransplan	t list at 3	1 March,	by coun	try/NHS r	egion	
Country/ NHS region of residence		r t transpla 23		omp) 22		g transpla 23	ant list (p 20	• •
North East and Yorkshire North West Midlands East of England London South East South West	49 32 46 20 37 43 23	(6.0) (4.3) (4.2) (3.1) (4.2) (4.6) (4.0)	60 35 50 19 45 43 23	(7.4) (4.7) (4.6) (3.0) (5.1) (4.6) (4.0)	47 30 54 25 40 29 23	(5.8) (4.0) (5.0) (3.9) (4.5) (3.1) (4.0)	39 34 53 20 24 28 20	(4.8) (4.6) (4.9) (3.1) (2.7) (3.0) (3.5)
England Isle of Man Channel Islands	250 0 1	(4.4) (0.0) (5.9)	275 0 1	(4.9) (0.0) (5.9)	248 0 0	(4.4) (0.0) (0.0)	218 0 0	(3.9) (0.0) (0.0)
Wales	14	(4.5)	11	(3.5)	12	(3.9)	14	(4.5)
Scotland	29	(5.3)	24	(4.4)	29	(5.3)	26	(4.7)
Northern Ireland	17	(8.9)	16	(8.4)	12	(6.3)	8	(4.2)
TOTAL ^{1,2}	312	(4.7)	328	(4.9)	302	(4.5)	267	(4.0)
¹ Includes heart patients in 2023 (2 ² Includes lung patients in 2023 (20								

The transplant list outcomes for adult patients listed for a cardiothoracic organ transplant between 1 April 2019 and 31 March 2020 are summarised in **Figure 7.3**, **Figure 7.4** and **Figure 7.5**, for non-urgent heart, urgent heart and non-urgent lung registrations, respectively. 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, 8% of non-urgent heart patients were transplanted while 2% had died, compared with 54% transplanted and 5% died for urgent heart patients. Of those listed for a non-urgent lung transplant, 16% were transplanted within six months, rising to 34% after three years, however at three years, 22% had died. The patients removed from these lists may have subsequently died.

In October 2016 and May 2017, respectively, the super-urgent heart offering scheme and urgent and super-urgent lung offering schemes were introduced, with corresponding new registration types. The post-registration outcomes of super-urgent heart, super-urgent lung and urgent lung registrations are not presented due to the small number of patients who start off on these lists.









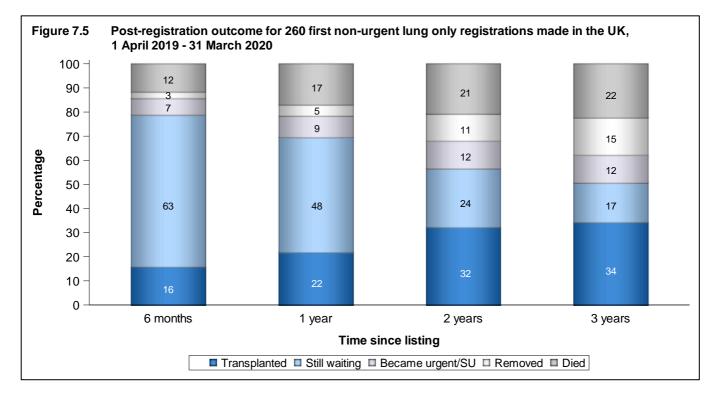


Table 7.4 and **Table 7.5** show the median waiting time to cardiothoracic organ transplant by blood group and ethnicity of patient, respectively, for patients registered between 1 April 2014 and 31 March 2020. The overall median waiting time to non-urgent heart transplantation for adult patients who were never on the urgent or super-urgent list was 6 years. For adult patients who had been on the urgent list, the overall median time on the urgent list before transplant was 43 days. For patients who had been on the super-urgent list ('ever super-urgent'), the overall median time on the super-urgent list before transplant was 13 days.

The overall median waiting time to non-urgent lung transplantation for adult patients who were never on the urgent or super-urgent list, was 471 days, but for blood group O patients alone was longer, at 712 days. The overall median time on the urgent list before transplant was 17 days. Median waiting time is not calculated for adult super-urgent lung patients due to the small number of registrations.

For paediatric heart patients, the median waiting time was 754 days for non-urgent registrations and 97 days for urgent registrations (this is not broken down by blood group or ethnicity and is not presented for super-urgent patients due to low numbers). The overall median waiting time to non-urgent lung transplantation for paediatric patients who were never on the urgent or super-urgent list, was 162 days. Median waiting time is not calculated for paediatric urgent or super-urgent lung patients due to the small number of registrations. Note that these waiting time estimates are not adjusted for other relevant factors which may be influential and which may differ across blood or ethnic groups.



for patients reg	istered 1 April 2014 - 3 ⁴	1 March 2020	
Blood group	Number of patients		aiting time (days)
	registered	Median	95% Confidence interval
Adult non-urgent heart ¹			
0	224	-	-
A	251	1434	769 - 2099
В	60	1473	847 - 2099
AB	16	693	287 - 1099
TOTAL	551	2082	-
Adult urgent heart ²			
0	333	55	45 - 65
A	347	30	24 - 36
В	96	50	31 - 69
AB	39	27	18 - 36
TOTAL	815	43	39 - 47
Adult super-urgent heart	153	13	8 - 18
Paediatric non-urgent heart ¹	51	754	424 - 1084
Paediatric urgent heart ²	244	97	77 - 117
Adult non-urgent lung ¹			
0	672	712	584 - 840
A	650	298	235 - 361
В	136	454	205 - 703
AB	53	191	79 - 303
TOTAL	1511	471	409 - 533
Adult urgent lung ²	135	17	10 - 24
Paediatric non-urgent lung ¹	33	162	42 - 282

Median waiting time to cardiothoracic transplant in the UK,

- Median and/or 95% confidence interval cannot be estimated due to insufficient numbers of patients ¹ Excludes patients that were moved to the urgent/super-urgent lists ² Excludes patients that were moved to the super-urgent list

Table 7.4



for patients regis	stered 1 April 2014 - 3	1 March 2020	
Ethnicity	Number of patients registered	Wa Median	aiting time (days) 95% Confidence interval
Adult non-urgent heart ¹			
White	479	2082	-
Asian	45	-	-
Black	19	-	-
Other	0	-	-
TOTAL ³	551	2082	-
Adult urgent heart ²			
White	681	43	39 - 47
Asian	80	37	17 - 57
Black	39	45	3 - 87
Other	12	78	10 - 146
TOTAL⁴	815	43	39 - 47
Adult super-urgent heart	153	13	8 - 18
Paediatric non-urgent heart ¹	51	754	424 - 1084
Paediatric urgent heart	244	97	77 - 117
Adult non-urgent lung ¹			
White	1410	449	383 - 515
Asian	64	-	-
Black	26	1227	344 - 2110
Other	0	-	
TOTAL⁵	1511	471	409 - 533
Adult urgent lung ²	135	17	10 - 24
Paediatric non-urgent lung ¹	33	162	42 - 282

Table 7.5Median waiting time to cardiothoracic transplant in the UK,
for patients registered 1 April 2014 - 31 March 2020

- Median and/or 95% confidence interval cannot be estimated due to insufficient numbers of patients transplanted

¹ Excludes patients that were moved to the urgent/super-urgent lists

² Excludes patients that were moved to the super-urgent list

³ Includes 8 patients whose ethnicity was not reported

⁴ Includes 3 patients whose ethnicity was not reported

⁵ Includes 11 patients whose ethnicity was not reported



7.3 Donor and organ supply

Table 7.6 shows the number of deceased organ donors identified in each heart allocation zone, and the number of donors where the heart was retrieved and transplanted, by donor type. It also shows the number in each zone who donated their lung(s) as well as their heart. Of the 772 DBD donors, 153 (20%) donated their heart, resulting in 152 transplants. Of the 657 DCD donors, 58 (9%) donated their heart, resulting in 55 transplants.

Table 7.7 shows the number of deceased organ donors identified in each lung allocation zone, and the number of donors where at least one lung was retrieved and transplanted, by donor type. It also shows the number in each zone who donated their heart as well as their lung(s). Of the 772 DBD donors, 69 (9%) donated at least one lung, with 66 proceeding to transplantation. Of the 657 DCD donors, 43 (7%) donated at least one lung, with 37 proceeding to transplantation.

Table 7.6	Heart organ o 1 April 2022 -				n the UK, cation zone an	d donor	type	
Heart Allocation Zone	Number of donors	Num he dor	BD ber of eart nors ised)	Number donated heart and lungs	Number of donors	DC Numb he don (utili	oer of art ors	Number donated heart and lungs
Birmingham	109	15	(15)	3	101	9	(9)	1
Glasgow	58	17	(17)	2	58	4	(3)	0
Harefield	181	25	(24)	6	155	17	(17)	5
Manchester	107	18	(18)	2	94	9	(8)	2
Newcastle	173	40	(40)	13	135	9	(8)	2
Papworth	144	38	(38)	5	114	10	(10)	4
TOTAL	772	153	(152)	31	657	58	(55)	14

Table 7.7	Lung organ 1 April 2022				the UK, ation zone ar	nd donor	type	
Lung Allocation Zone	Number of donors	DB Number don (utili	of lung ors	Number donated heart and lungs	Number of donors	DC Number don (utili	Number donated heart and lungs	
Birmingham	109	7	(7)	3	98	3	(3)	1
Harefield	190	22	(20)	7	162	14	(11)	6
Manchester	117	10	(10)	3	106	9	(9)	3
Newcastle	203	20	(19)	14	164	8	(7)	1
Papworth	153	10	(10)	4	127	9	(7)	3
TOTAL	772	69	(66)	31	657	43	(37)	14



The rates per million population for cardiothoracic organ donors are shown in **Table 7.8** by country/NHS region of residence. No adjustments have been made for potential demographic differences in populations. The overall heart donor rate was 3.1 pmp in 2022-2023 and varied across NHS regions from 1.8 pmp to 3.7 pmp. For lungs, the overall donor rate was 1.7 pmp in 2022-2023 and varied across NHS regions from 0.9 pmp to 2.6 pmp.

Table 7.8 Cardiothora 1 April 2022							the UP	٢,				
Country/ NHS region of residence	DI	ЗD		Heart (pmp) DCD		TAL	DBD			s) (pmp) CD		TAL
North East and Yorkshire North West Midlands East of England London South East South West	24 15 18 15 15 20 9	(3.0) (2.0) (1.7) (2.4) (1.7) (2.2) (1.6)	5 4 10 3 6 14 1	(0.6) (0.5) (0.9) (0.5) (0.7) (1.5) (0.2)	29 19 28 18 21 34 10	(3.6) (2.6) (2.6) (2.8) (2.4) (3.7) (1.8)	16 6 10 1 9 12 5	(2.0) (0.8) (0.9) (0.2) (1.0) (1.3) (0.9)	5 2 7 5 5 10 3	$\begin{array}{c} (0.6) \\ (0.3) \\ (0.6) \\ (0.8) \\ (0.6) \\ (1.1) \\ (0.5) \end{array}$	21 8 17 6 14 22 8	(2.6) (1.1) (1.6) (0.9) (1.6) (2.4) (1.4)
England Isle of Man Channel Islands	116 0 1	(2.1) (0.0) (5.9)	43 0 0	(0.8) (0.0) (0.0)	159 0 1	(2.8) (0.0) (5.9)	59 0 0	(1.0) (0.0) (0.0)	37 0 0	(0.7) (0.0) (0.0)	96 0 0	(1.7) (0.0) (0.0)
Wales	6	(1.9)	6	(1.9)	12	(3.9)	2	(0.6)	1	(0.3)	3	(1.0)
Scotland	16	(2.9)	3	(0.5)	19	(3.5)	2	(0.4)	1	(0.2)	3	(0.5)
Northern Ireland	5	(2.6)	2	(1.1)	7	(3.7)	2	(1.1)	2	(1.1)	4	(2.1)
TOTAL ¹	153	(2.3)	58	(0.9)	211	(3.1)	69	(1.0)	43	(0.6)	112	(1.7)
¹ Includes 13 heart (9 DBD	and 4 D	CD) and	6 lung	(4 DBD) and 2	DCD) w	ith an i	unknow	n UK po	ostcode		



7.4 Transplants

The number of cardiothoracic organ transplants by recipient country/NHS region of residence is shown in **Table 7.9**. No adjustments have been made for potential demographic differences in populations. The heart transplant rate ranged from 2.1 to 3.6 pmp across NHS regions and overall was 3.2 pmp. The lung transplant rate ranged from 1.1 to 2.2 pmp across NHS regions and overall was 1.5 pmp. Lung transplant rates include the small number of heart-lung transplants.

Table 7.9 Cardiothora 1 April 2022							(pmp)	in the L	JK,			
Country/ NHS region of residence	D	BD		(pmp) CD	то	TAL	D	I BD		s) (pmp) CD		TAL
North East and Yorkshire North West Midlands East of England London South East South West	18 13 26 10 18 17 9	(2.2) (1.8) (2.4) (1.6) (2.0) (1.8) (1.6)	3 5 8 5 14 6 3	(0.4) (0.7) (0.7) (0.8) (1.6) (0.6) (0.5)	21 18 34 15 32 23 12	(2.6) (2.4) (3.1) (2.4) (3.6) (2.5) (2.1)	9 6 11 7 6 9 7	(1.1) (0.8) (1.0) (1.1) (0.7) (1.0) (1.2)	7 3 2 7 4 3 4	(0.9) (0.4) (0.2) (1.1) (0.5) (0.3) (0.7)	16 9 13 14 10 12 11	(2.0) (1.2) (1.2) (2.2) (1.1) (1.3) (1.9)
England Isle of Man Channel Islands	111 0 0	(2.0) (0.0) (0.0)	44 0 0	(0.8) (0.0) (0.0)	155 0 0	(2.7) (0.0) (0.0)	55 0 0	(1.0) (0.0) (0.0)	30 0 0	(0.5) (0.0) (0.0)	85 0 0	(1.5) (0.0) (0.0)
Wales	4	(1.3)	1	(0.3)	5	(1.6)	4	(1.3)	2	(0.6)	6	(1.9)
Scotland	36	(6.6)	8	(1.5)	44	(8.0)	3	(0.5)	4	(0.7)	7	(1.3)
Northern Ireland	6	(3.2)	2	(1.1)	8	(4.2)	1	(0.5)	1	(0.5)	2	(1.1)
TOTAL ^{1,2}	159	(2.4)	55	(0.8)	214	(3.2)	63	(0.9)	38	(0.6)	101	(1.5)

¹ Excludes 1 heart and 1 lung recipient who resides in the Republic of Ireland

² Includes 1 heart recipient with an unknown UK postcode

Table 7.10 and **Table 7.11** show cardiothoracic organ transplant activity for each centre by urgency status and donor type, respectively. In 2022-2023, a total of 315 transplants were carried out; an increase of 9% on 2021-2022. Of these, 214 were heart transplants, of which 174 (81%) were urgent or super-urgent and additionally, 55 (26%) were achieved from donors after circulatory death. There was a total of 101 lung or heart-lung transplants, of which 25 (25%) were urgent or super-urgent.



							1	Franspla	ant type	;						
Transplant centre				eart			Hear	-lung				ung			ТО	TAL
	Non-ι	urgent	Ur	gent	Super	-urgent			Non-	urgent	Urę	gent	Super-	urgent		
Adult																
Birmingham	7	(1)	14	(11)	8	(4)	0	(1)	8	(5)	1	(3)	1	(0)	39	(2
Glasgow	10	(10)	19	(11)	11	(3)	0	(0)	0	(0)	0	(0)	0	(0)	40	(2
Great Ormond Street	0	(3)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	. (
Harefield	5	(8)	23	(11)	10	(5)	0	(0)	13	(23)	2	(1)	1	(1)	54	(4
Manchester	3	(2)	10	(11)	3	(3)	0	(0)	9	(12)	4	(4)	0	(0)	29	(3
Newcastle	2	(6)	21	(25)	5	(2)	0	(0)	17	(5)	8	(15)	0	(1)	53	(5
Papworth	11	(13)	12	(11)	12	(12)	1	(2)	28	(28)	6	(6)	1	(0)	71	(7
TOTAL	38	(43)	99	(80)	49	(29)	1	(3)	75	(73)	21	(29)	3	(2)	286	(25
Paediatric ¹																
Great Ormond Street	1	(3)	11	(11)	3	(2)	0	(0)	0	(0)	1	(2)	0	(0)	16	(1
Newcastle	1	(4)	10	(6)	3 2	(1)	0	(0)	0	(0)	0	(0)	0	(0)	13	(1
TOTAL	2	(7)	21	(17)	5	(3)	0	(0)	0	(0)	1	(2)	0	(0)	29	(2

Table 7.10Cardiothoracic transplants from deceased donors, 1 April 2022 - 31 March 2023 (2021 - 2022)
by age group, centre, transplant type and urgency

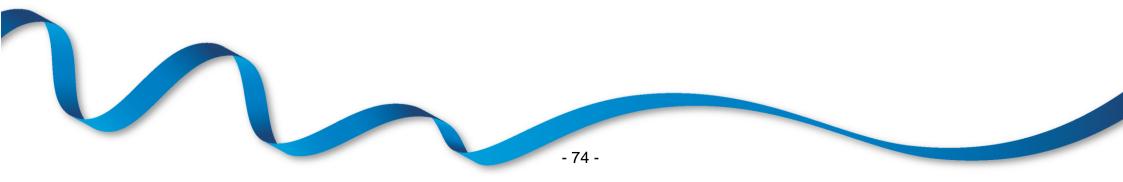


Table 7.11

Cardiothoracic transplants from deceased donors, 1 April 2022 - 31 March 2023 (2021 - 2022) by age group, centre, transplant type and donor type

						Т	rans	plant t	уре				_	
Transplant centre		Hea	art			Heart	-lung			Lun	ig		TC	TAL
-	D	BD	D	CD	D	BD	D	CD	D	BD	D	CD		
Adult														
Birmingham	23	(13)	6	(3)	0	(1)	0	(0)	9	(6)	1	(2)	39	(25)
Glasgow	32	(21)	8	(3)	0	(0)	0	(0)	0	(0)	0	(0)	40	(24)
Great Ormond Street	0	(2)	0	(1)	0	(0)	0	(0)	0	(0)	0	(0)	0	(3)
Harefield	22	(13)	16	(11)	0	(0)	0	(0)	10	(21)	6	(4)	54	(49)
Manchester	10	(15)	6	(1)	0	(0)	0	(0)	8	(11)	5	(5)	29	(32)
Newcastle	24	(23)	4	(10)	0	(0)	0	(0)	13	(15)	12	(6)	53	(54)
Papworth	22	(26)	13	(10)	1	(2)	0	(0)	22	(27)	13	(7)	71	(72)
TOTAL	133	(113)	53	(39)	1	(3)	0	(0)	62	(80)	37	(24)	286	(259)
Paediatric ¹														
Great Ormond Street	14	(15)	1	(1)	0	(0)	0	(0)	0	(2)	1	(0)	16	(18)
Newcastle	12	(7)	1	(4)	0	(0)	0	(0)	0	(0)	0	(0)	13	(11)
TOTAL	26	(22)	2	(5)	0	(0)	0	(0)	0	(2)	1	(0)	29	(29)
¹ Paediatric recipients	are ag	ed under	[.] 16 ye	ears at t	time c	of trans	plant							

At 31 March 2023 there were approximately 4,100 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. 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.

In 2022-2023, the median IT for a DBD heart transplant was 3.7 hours (Inter-Quartile (IQ) range 3.1 - 4.2) and for a DCD heart transplant was 5.4 hours (IQ range 4.8 - 6.4) and overall was 3.8 hours (IQ range 3.3 - 4.7).

The median IT for a DBD donor lung transplant was 6.6 hours (IQ range 5.5 - 8.8) and for a DCD donor lung transplant was 8.3 hours (IQ range 7.2 - 10.1) and overall was 7.2 hours (IQ range 6.2 - 9.2).



7.5 Demographic characteristics

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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 ch transplant recipio patients at 31 Ma	ents, 1 Api					
		Doi	nors		splant bients		ansplant atients
		Ν	(%)	N	(%)	N	(%)
Age (years)	0-17 18-34 35-49 50-59 60-69 70+ Mean (SD)	21 99 99 47 11 1 37	(8) (36) (36) (17) (4) (0) (14)	35 40 72 91 76 1 46	(11) (13) (23) (29) (24) (0) (17)	70 54 148 165 170 7 47	(11) (9) (24) (27) (28) (1) (18)
Sex	Male Female Unknown	156 122 0	(56) (44) -	216 99 0	(69) (31) -	379 233 2	(62) (38) -
Ethnicity	White Asian Black Other Unknown	252 14 2 5 5	(92) (5) (1) (2)	252 38 9 9 7	(82) (12) (3) (3)	493 75 32 5 9	(81) (12) (5) (1)
Blood group	O A B AB Unknown ¹	140 109 26 2 1	(51) (39) (9) (1)	118 142 45 10 0	(37) (45) (14) (3)	350 186 69 9 0	(57) (30) (11) (1)
Graft number	First graft Re-graft	-	-	312 3	(99) (1)	602 12	(98) (2)
TOTAL		278	(100)	315	(100)	614	(100)
¹ One donor h	ad an indeterminat	e blood gro	pup				

