NHS
Blood and Transplant

Organ and Tissue Donation and Transplantation

Activity Report 2023/2024

Preface

This report has been produced by Statistics and Clinical Research, NHS Blood and Transplant.

All figures quoted in this report are as reported to NHS Blood and Transplant by 13 May 2024 for the UK Transplant Registry, 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 2-10 does not always distinguish between adult and paediatric transplantation. For the most part, the data also do not distinguish between patients entitled to NHS treatment (Group 1 patients) and those who are not (Group 2 patients).

The UK definition of an organ donor is any donor from whom at least one 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.

The number of donors after brain death (DBD) and donors after circulatory death (DCD) by hospital are documented in **Appendix I**. Donation and transplant rates in this report are presented per million population (pmp): population figures used throughout this report are mid-2022 estimates based on ONS 2021 Census figures and are given in **Appendix III**.

All charts presented in this report are available as an accompanying slide set available from http://www.odt.nhs.uk.

A supplementary report on organ donation and transplantation activity for Black, Asian and ethnic minority groups is published alongside this Activity Report – *Annual report on ethnicity differences in Organ Donation and Transplantation*. It provides additional information on trends in organ donation and transplantation by ethnicity.

The COVID-19 pandemic led to unprecedented challenges for UK transplantation. Concerns about the ability to care for transplant recipients, lack of access to resource because it is being used for patients in the pandemic, and the risk versus benefit for immunosuppressed transplant recipients, resulted in a major reduction in the number of organ transplants undertaken and the impact of the pandemic is still evident.

Waiting list figures at 31 March 2020, 2021 and 2022 do not accurately reflect the need for an organ transplant due to the COVID-19 pandemic. Different practices were established across the UK and across organ groups with regards to waiting list management.

Acknowledgement

NHS Blood and Transplant would like to thank all those in the donation and transplantation communities responsible for providing data to the UK Transplant Registry and the Potential Donor Audit, without whom this report would not be possible. Thanks also go to NHS Blood and Transplant staff responsible for data entry, accuracy and completeness.

Photograph L to R: Tina and Aky who both donated kidneys to their son Akash. Katy Portell who received a heart valve, Ali Golian and Prafula Shah who are also both living kidney donors.

Foreword

Transplantation is a milestone in modern medicine, and we are continuing to build on the progress of recent years. Thanks to the 1,510 people who donated their organs after death and the 938 living donors last year (2023/24), 4,651 people with organ failure, who desperately needed a transplant, were given a gift of life. This represents a 6% increase in deceased organ donors and 3% increase in the number of people receiving transplants on the previous year.

However, this increase is not enough to meet the need of those desperately waiting for an organ transplant. The number of people on the active transplant waiting list reached 7,484 at the end of March 2024, with a further 3,795 temporarily suspended because they were unfit or otherwise unavailable for a transplant. This is the highest number of people in need of a transplant in the last decade.

Only one per cent of people who die in the UK every year die in the right circumstances and in the right location to be eligible for their organs to be used to save someone's life. That is why we need as large a pool of people as possible who have agreed to donate their organs by signing the NHS Organ Donor Register and telling their families to support their decision.

Overall consent/authorisation for organ donation has fallen by 1% (from 62% to 61%). Deemed consent/authorisation last year was 51%. We know that families are much more likely to support donation when the individual's positive decision is known beforehand. Declaring your decision by signing the NHS Organ Donor Register and discussing your end-of-life decision with those closest to you will ease the burden families face and make it more likely that they will support your decision to be a donor.

Since the change in organ donation legislation, opt-in registrations on the NHS Organ Donation Register have steadily increased to more than 28 million people in the UK, which is encouraging and shows that the organ donation message is clearly making its way into people's conscious. However, legislation could never be the sole answer to improving organ donation, transplant, and consent rates, rather it's a piece of the whole jigsaw. We continually develop regular training programmes for our specialist nurses who work closely with bereaved families. Acting with our partners and communities we strive to deliver empowering initiatives which motivate individuals to register their decision, which in turn will hopefully convert positive decisions into lifesaving donations.

The biggest success of last year was the number of lung transplants carried out. There was a 39% increase in the total number of lung or heart-lung transplants in 2023/24. 18% of these were urgent lung transplants, 1% were super-urgent, and 78% were non-urgent, meaning 140 patients received a lifesaving transplant. This was due, in part, to the coming together of the lung transplant clinical community and stakeholders at a Lung Summit to discuss and activate new ways of working to maximise the opportunity for donation and utilisation of lungs for transplant.

The number of patients donating after brain stem death (DBD) remained the same, while patients donating after circulatory death (DCD) increased by 12% in 2023/24. This shift in emphasis poses its own challenges in terms of the type and quality of organs that can be donated. There is mounting evidence that perfusion technologies, can maintain donated organs outside the body, assess viability of the organ and potentially offer a way to repair and recover donated organs in the future. These technologies give surgeons greater confidence to transplant more organs successfully. The facilitation of heart transplants via such technology is another huge success story. Last year (2023/24) there were 65 DCD heart transplants, 10 more than the previous year**.** The development of these and other projects is the goal of renewed collaborations with our NHS partners.

Living donation makes an invaluable contribution each year in providing people in need of kidney and liver transplants the chance at a new life. However, the number of living donors decreased by 2% to 938 last year, accounting for 38% of the total number of organ donors.

Last year there was an increase of 9% in the total number of corneas retrieved to NHSBT Eye Banks (5,152) and the number of corneal transplants increased by 11% to 4,165.

We are in touching distance of getting organ donation and transplantation back to pre-pandemic levels and remain committed to giving excellent care for every potential donor and their family and maximising the successful transplantation of all available organs. This will only be possible through the continued hard work and dedication of all those involved in donation, retrieval, and transplantation and with the support of donors and their families, so that together we can save and improve lives both now and in the future.

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Contents

Summary of Donor and Transplant Activity

In the financial year to 31 March 2024, compared with the previous year:

- there was a 6% increase in the number of deceased donors to 1,510
- the number of donors after brain death remained at 772, while the number of donors after circulatory death increased by 12% to 738
- the number of living donors decreased by 2% to 938, accounting for 38% of the total number of organ donors
- the total number of patients whose lives were potentially saved or improved by an organ transplant increased by 3% to 4,651

The total number of patients registered for a transplant has increased (by 8%), so that:

- there were 7,484 patients waiting for a transplant at the end of March 2024, with a further 3,795 temporarily suspended from transplant lists
- 418 patients died while on the active list waiting for their transplant compared with 439 in the previous year, a decrease of 5%. A further 916 patients were removed from the transplant list. The removals were mostly as a result of deteriorating health and ineligibility for transplant and many of these patients are likely to have died shortly afterwards.

Some of the other key messages from this report are that, compared with last year, there has been:

- an increase of 2% in the total number of kidney transplants
- an increase of 6% in the total number of transplants involving a pancreas
- a decrease of 4% in the total number of liver transplants
- an increase of 11% in the total number of heart transplants
- an increase of 39% in the total number of lung or heart-lung transplants
- a decrease of 12% in the total number of intestinal transplants
- an increase of 9% in the total number of corneas retrieved to NHSBT Eye Banks and an increase of 11% in the total number of corneal transplants
- a continuation of the high overall referral rate of potential donors at 94%
- a consistently high proportion of approaches to donor families where a Specialist Nurse - Organ Donation was present at 93%
- a static overall consent/authorisation rate for organ donation, at 61%, halting the declining trend post COVID
- just over 28.1 million opt-in registrations and just under 2.6 million opt-out registrations on the Organ Donor Register (ODR) at the end of March 2024.

Overview of Organ Donation and Transplantation

A summary of organ donation and transplantation activity in the UK during the financial year from 1 April 2023 to 31 March 2024

2.1 Summary of activity

Many patients became suspended from the active transplant list as transplant centres reacted to the COVID-19 pandemic in March 2020 and 2021, hence the dip in the waiting list numbers at that time. There has since followed an increase in waiting list numbers and there were 525 more active patients at 31 March 2024 than at the end of the previous financial year. The change in donor and transplant numbers (1 April 2014 to 31 March 2024) and the number of patients registered on the transplant lists at 31 March each year are shown in **Figure 2.1**. There were 137 more deceased donor transplants in 2023-2024 than in the previous year, representing a 4% increase. There was a 6% increase in the number of deceased donors. Despite these increases, donor and transplant numbers still remain lower than pre-pandemic levels.

Figure 2.1 **Number of deceased donors and transplants in the UK, 1 April 2014 - 31 March 2024, and patients on the active transplant list at 31 March**

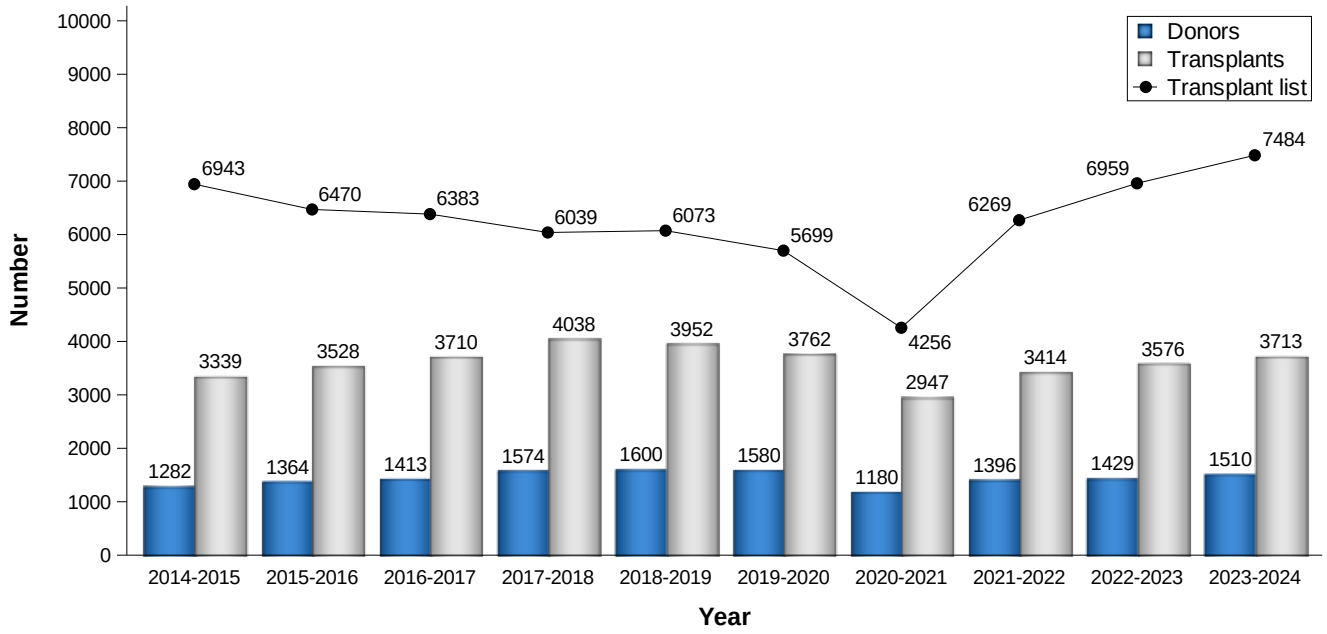


Figure 2.2 shows the number of deceased and living donors for 2014-2024. The number of deceased donors after circulatory death (DCD) has increased over the decade, while numbers of donors after brain death (DBD) have largely fallen, such that DCD donors made up almost half of all deceased donors last year, for the first time. In 2023-2024, the numbers of DBD donors remained static and DCD donors increased compared to the previous year, to 772 and 738 respectively. The number of living donors has fallen, from a peak of 1,091 donors in 2014-2015 to 938 in 2023-2024, which represents a 2% decrease compared with 2022-2023.

Figure 2.2 Number of deceased and living donors in the UK, 1 April 2014 - 31 March 2024

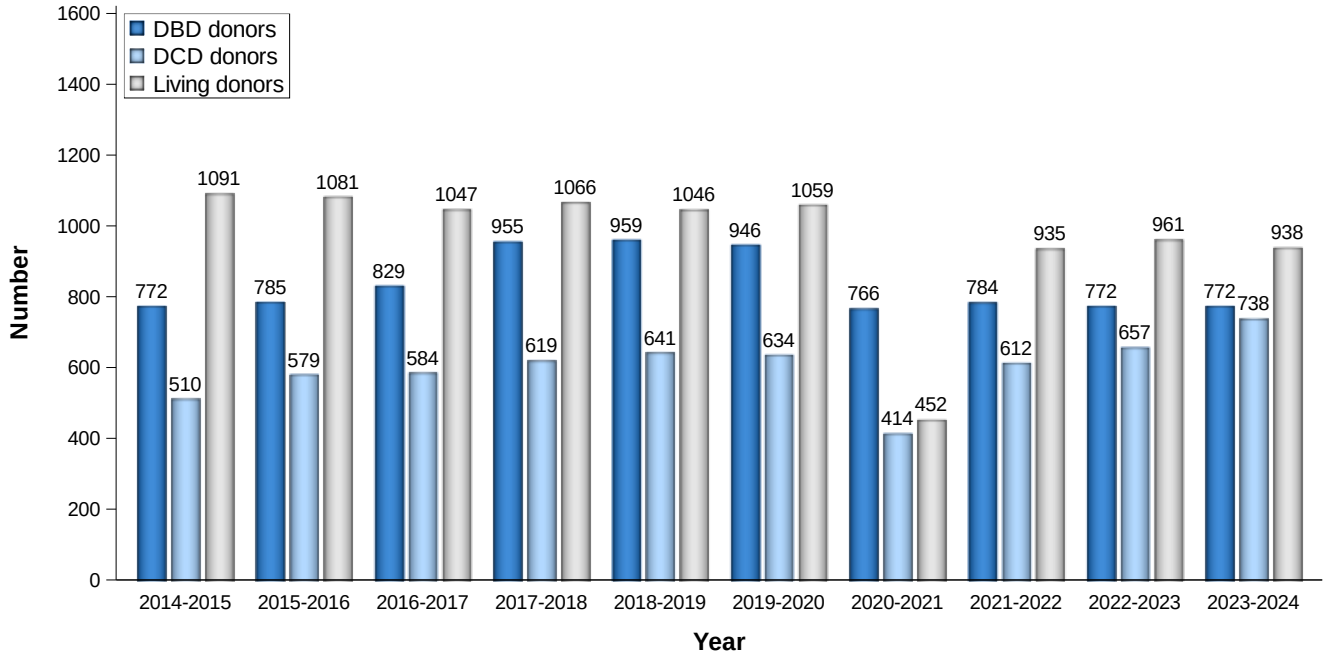
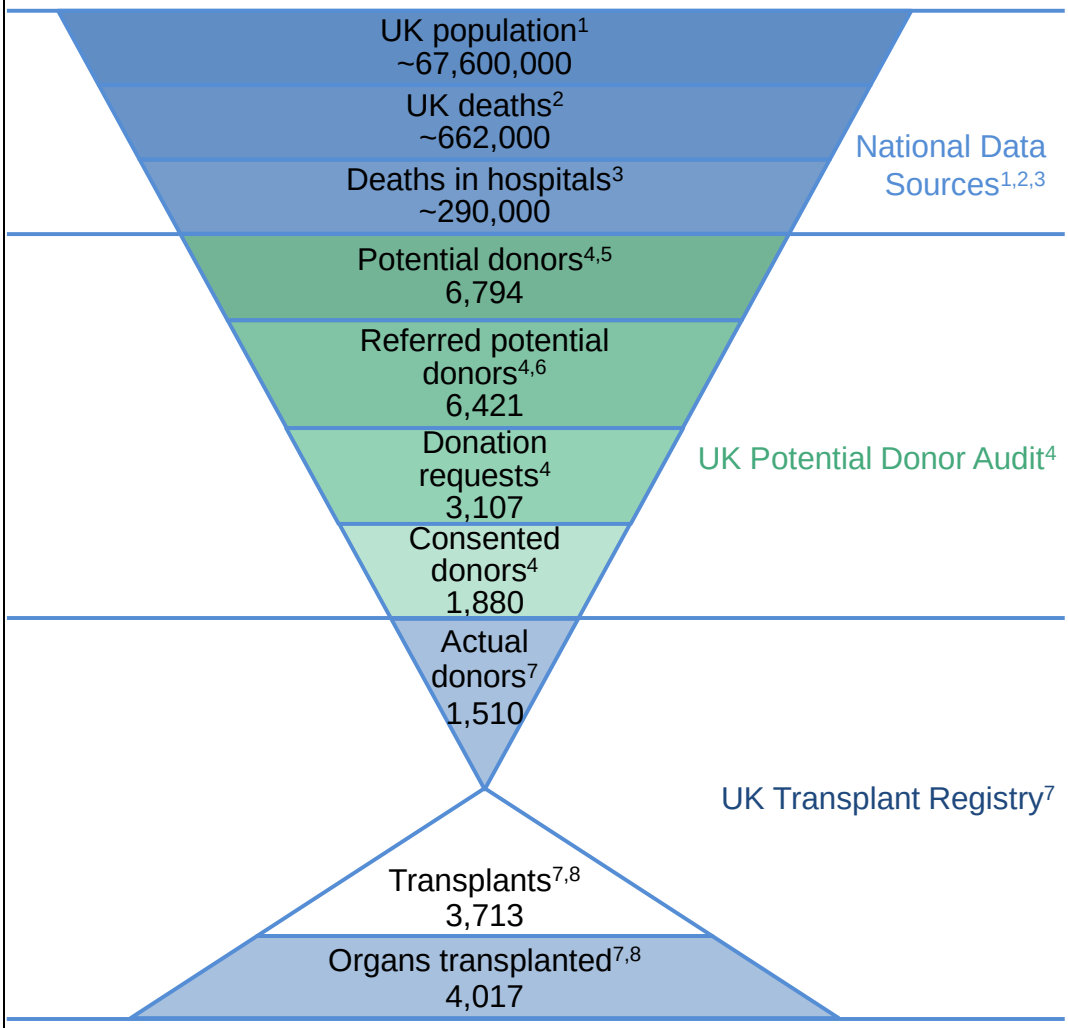


Figure 2.3 shows the potential deceased organ donor population in the UK. Not everyone can be a deceased organ donor and this figure highlights the small proportion of deaths in the UK that represent potential donors. *Please note that the information presented comes from several different sources. The NHSBT Potential Donor Audit collects information on most, but not all, actual donors and the potential for donation could therefore be slightly underestimated. The quoted numbers of transplants and organs transplanted are those achieved using organs from deceased actual donors in the UK, which may include some transplants performed overseas, and these transplant numbers do not reflect the number of deceased donor transplants in the UK reported elsewhere in this report, which may have used organs from overseas donors.*

Figure 2.3 UK potential deceased organ donor population, 1 April 2023 – 31 March 2024



[1] Mid 2022 estimates: www.ons.gov.uk
[2] 2023 data: England & Wales www.ons.gov.uk; Scotland www.nrscotland.gov.uk; Northern Ireland www.nisra.gov.uk
[3] 2023 data: England & Wales www.ons.gov.uk; Scotland www.nrscotland.gov.uk; Northern Ireland www.nisra.gov.uk
[4] 2023/2024 data, NHSBT, Potential Donor Audit as at 8 May 2024
[5] Potential donor - patients for whom death was confirmed following neurological tests or patients who had treatment withdrawn and death was anticipated within a time frame to allow donation to occur
[6] Referred potential donor – Potential donor who was discussed with a Specialist Nurse – Organ Donation
[7] 2023/2024 deceased donor data: NHSBT, UK Transplant Registry
[8] Using organs from actual donors in the UK

Table 2.1 shows the number of deceased donors and transplants in 2023-2024 and patients on the transplant list at 31 March 2024 for each country in the UK and overall.

Table 2.1 Deceased donors and transplants 1 April 2023 - 31 March 2024, and transplant lists as at 31 March 2024, by Country of residence

	Country of residence[1]									
	England		Wales		Scotland		Northern Ireland		TOTAL[2]	
Organ	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
Kidney										
Deceased donors	1138	(19.9)	60	(19.2)	108	(19.8)	64	(33.5)	1447	(21.4)
Transplants	2102	(36.8)	102	(32.6)	172	(31.6)	50	(26.2)	2448	(36.2)
Transplant list	5450	(95.4)	216	(69.0)	485	(89.0)	78	(40.8)	6250	(92.5)
Pancreas										
Deceased donors	272	(4.8)	12	(3.8)	29	(5.3)	18	(9.4)	350	(5.2)
Transplants	130	(2.3)	9	(2.9)	16	(2.9)	3	(1.6)	159	(2.4)
Transplant list	254	(4.4)	24	(7.7)	51	(9.4)	3	(1.6)	334	(4.9)
Heart										
Deceased donors	180	(3.2)	10	(3.2)	26	(4.8)	16	(8.4)	246	(3.6)
Transplants[3]	180	(3.2)	10	(3.2)	33	(6.1)	8	(4.2)	237	(3.5)
Transplant list[3]	231	(4.0)	13	(4.2)	24	(4.4)	19	(9.9)	289	(4.3)
Lung										
Deceased donors	118	(2.1)	7	(2.2)	16	(2.9)	7	(3.7)	153	(2.3)
Transplants	117	(2.0)	10	(3.2)	8	(1.5)	5	(2.6)	140	(2.1)
Transplant list	216	(3.8)	10	(3.2)	33	(6.1)	15	(7.9)	275	(4.1)
Liver										
Deceased donors	866	(15.2)	44	(14.1)	90	(16.5)	40	(20.9)	1099	(16.3)
Transplants	710	(12.4)	31	(9.9)	84	(15.4)	19	(9.9)	854	(12.6)
Transplant list	547	(9.6)	31	(9.9)	51	(9.4)	40	(20.9)	678	(10.0)
Intestinal										
Deceased donors	24	(0.4)	0	(0.0)	0	(0.0)	0	(0.0)	24	(0.4)
Transplants	16	(0.3)	1	(0.3)	2	(0.4)	1	(0.5)	22	(0.3)
Transplant list	10	(0.2)	0	(0.0)	1	(0.2)	0	(0.0)	13	(0.2)
Total[4]										
Deceased donors	1194	(20.9)	63	(20.1)	110	(20.2)	64	(33.5)	1510	(22.3)
Transplants	3130	(54.8)	154	(49.2)	304	(55.8)	85	(44.5)	3713	(54.9)
Transplant list	6427	(112.5)	271	(86.6)	600	(110.1)	151	(79.1)	7484	(110.7)

[1] Country of residence of donor given for deceased donor numbers, and residence of recipient given for transplant and waiting list numbers
[2] Includes patients resident in Channel Islands, Isle of Man, overseas and in the Republic of Ireland
[3] Excludes heart-lung recipients
[4] Organ numbers do not add up to total due to multi-organ donors and patients waiting for a multi-organ transplant

2.2 Transplant list

At 31 March 2024, 7,484 patients were registered for an organ transplant in the UK on the active transplant list. A further 3,795 patients were temporarily suspended from the active national transplant list because they were unfit or otherwise unavailable for transplant. Details of numbers of patients on each of the organ transplant lists are given in **Table 2.2** for 31 March 2023 and 2024. Between these dates the total number increased by 525 (8%). This is mostly due to increases in the kidney and pancreas transplant lists, while the number of patients on cardiothoracic and liver transplant waiting lists fell.

Table 2.2 Active transplant lists in the UK at 31 March 2023 and 2024

	2023	2024	% Change
Kidney & pancreas patients	**5643**	**6232**	**+10**
Kidney	5353	5898	+10
Kidney & pancreas	258	297	+15
Kidney & pancreas islets	13	17	+31
Pancreas	7	5	-
Pancreas islets	12	15	+25
Cardiothoracic patients	**607**	**559**	**-8**
Heart	305	284	-7
Heart-lung	12	8	-
Lung(s)	290	267	-8
Liver patients	**663**	**639**	**-4**
Intestinal patients	**10**	**13**	**+30**
Other multi-organ patients[1]	**36**	**41**	**+14**
ALL PATIENTS	**6959**	**7484**	**+8**

Percentages not reported when fewer than 10 in either year

[1] Includes patients waiting for kidney and liver transplants (29 in 2023, 36 in 2024), kidney and heart transplants (2 in 2023, 2 in 2024), liver and heart transplants (5 in 2023, 3 in 2024)

During 2023-2024, 418 patients died whilst active/suspended on the transplant list or within one year of removal from the list. For comparison, in 2022-2023, 439 patients died. This information is shown by organ and age group in **Table 2.3**.

Table 2.3 Number of patient deaths on transplant lists in the UK, 1 April 2022 and 31 March 2024

	2022-2023	2023-2024		
	Total	Total	Adult	Paediatric
Kidney & pancreas patients	**313**	**291**	**291**	**0**
Kidney	281	265	265	0
Kidney & pancreas	26	24	24	0
Kidney & pancreas islets	0	0	0	0
Pancreas	1	2	2	0
Pancreas islets	5	0	0	0
Cardiothoracic patients	**57**	**57**	**53**	**4**
Heart	21	13	10	3
Heart-lung	0	2	2	0
Lung(s)	36	42	41	1
Liver patients	**67**	**67**	**65**	**2**
Intestinal patients	**0**	**2**	**0**	**2**
Other multi-organ patients[1]	**2**	**1**	**1**	**0**
ALL PATIENTS	**439**	**418**	**410**	**8**

[1] Includes patients waiting for kidney and liver transplants (1 adult in 2022-2023) and liver and lung transplant (1 in 2022-2023, 1 adult in 2023-2024)

2.3 Transplants

As services started to return to more normal levels, there was a 3% increase in the total number of organ transplants (from deceased and living donors) last year: 4,651 transplants were performed in 2023-2024 compared with 4,537 in 2022-2023 (**Table 2.4**). All multi-organ transplants are identified separately as are transplants from living donors.

The total number of kidney transplants increased in 2023-2024; kidney only transplants from donors after circulatory death increased by 11%, while the number of DBD and living donor kidney transplants fell by 2%. The number of heart transplants increased by 11%, the number of lung and heart-lung transplants increased by 39%, the number of liver transplants decreased by 4%, and the number of pancreas transplants (including pancreas only, intestinal, kidney/pancreas and pancreas islets) increased by 6%.

Table 2.4 Transplants performed in the UK, 1 April 2023 - 31 March 2024

Transplant	2022-2023	2023-2024	% Change
DBD kidney	1204	1175	-2
DCD kidney	1011	1126	+11
Living donor kidney	926	907	-2
DBD kidney and pancreas	81	73	-10
DCD kidney and pancreas	40	54	+35
Kidney and pancreas islets	5	10	-
DBD pancreas	5	10	-
DCD pancreas	3	1	-
Pancreas Islets	13	11	-15
DBD heart	158	172	+9
DCD heart	54	65	+20
Heart-lung	1	5	-
DBD single lung	7	4	-
DCD single lung	1	1	-
DBD bilateral lung	55	98	+78
DCD bilateral lung	37	32	-14
DBD liver	523	505	-3
DCD liver	249	264	+6
DBD liver lobe	93	75	-19
Living donor liver lobe	35	31	-11
Bowel only	5	4	-
Liver, bowel & pancreas	1	0	-
Multivisceral	12	6	-
Modified multivisceral	7	12	-
Kidney & liver	9	10	-
Heart & liver	2[2]	0	-
TOTAL ORGAN TRANSPLANTS	**4537**	**4651**	**+3**
Total kidney transplants	**3276**	**3355**	**+2**
Total pancreas transplants[1]	**167**	**177**	**+6**
Total cardiothoracic transplants	**315**	**377**	**+20**
Total liver transplants[1]	**924**	**891**	**-4**
Total intestinal transplants	**25**	**22**	**-12**

Percentage not reported when fewer than 10 in either year
[1] Includes intestinal transplants
[2] Includes 1 DCD heart transplant

The total approximate number of patients with a functioning transplant on 31 March 2024 is 61,400 (**Table 2.5**). This reflects information held on the UK Transplant Registry database and excludes those patients who are known to be lost to follow-up.

Table 2.5 Number of transplants reported as functioning at 31 March 2024

	Functioning transplants[1]
Kidney	44900
Pancreas	2200
Cardiothoracic	4200
Liver	12000
Intestinal	180
ALL PATIENTS	61400

[1] Approximate number of patients with a functioning transplant being followed up. Multi-organ transplants (excluding intestinal transplants) are counted in each organ. Excludes those patients known to be lost to follow-up

Organ Donation Activity

Key messages

- **There has been a 6% increase in deceased donors (to 1,510) and a 2% decrease in living organ donors (to 938), compared with last year**
- **There has been no change in number of donors after brain death at 772 and an increase of 12% in donors after circulatory death to 738, compared with last year**
- **Donors after brain death provide, on average, one more organ for transplantation for every two donors after circulatory death**
- **Following changes observed in 2020-2021, donor characteristics have returned to those similar to pre-pandemic and the long term trend towards more donors being affected by obesity has continued**

3.1 Summary of activity

There was a 6% increase in the number of deceased organ donors in 2023-2024 (1,510). There was no change in donors after brain death (DBD) and an increase of 12% in donors after circulatory death (DCD).

The 1,510 deceased organ donors donated 4,887 organs, compared with 1,429 donors and 4,576 organs in 2022-2023. This represents a 7% increase in organs donated. **Table 3.1** shows deceased, as well as living, organ donors according to the organs they donated.

Nearly all deceased donors (96%) gave a kidney and of these, the majority (76%) also donated at least one other organ. Only 13% of donors after brain death were single organ donors, with similar proportions being liver only or kidney only donors. By contrast, 41% of donors after circulatory death were single organ donors, the majority (95%) of these donating just their kidneys.

Although the vast majority of living organ donors donated a kidney, 31 donated part of their liver. All living donations are approved by the Human Tissue Authority.

Table 3.1 Solid organ donors in the UK, 1 April 2023 - 31 March 2024, by organ types donated

	DBD	DCD	Living donor	**TOTAL**
Kidney only	58	286	907	**1251**
Kidney & thoracic	11	21	-	**32**
Kidney & liver	338	269	-	**607**
Kidney & pancreas	5	17	-	**22**
Kidney, thoracic & liver	88	30	-	**118**
Kidney, thoracic & pancreas	5	4	-	**9**
Kidney, liver & pancreas	93	52	-	**145**
Kidney, liver and bowel	1	-	-	**1**
Kidney, liver, pancreas & bowel	8	-	-	**8**
Kidney, thoracic, liver & pancreas	104	43	-	**147**
Kidney, thoracic, liver, pancreas & bowel	14	-	-	**14**
Thoracic only	1	2	-	**3**
Thoracic & liver	2	1	-	**3**
Thoracic, liver & pancreas	1	-	-	**1**
Thoracic, pancreas & bowel	1	-	-	**1**
Liver only	39	13	31	**83**
Liver & pancreas	3	-	-	**3**
TOTAL	**772**	**738**	**938**	**2448**

Bowel may include abdominal wall/colon/stomach/spleen

3.2 Organ donors

Organ donor rates per million population (pmp) for 2023-2024 are given by country and NHS region according to where the donor lived in **Table 3.2**, while the numbers of deceased donors are shown based on location of the hospital in which they died in **Table 3.3**. **Table 3.4** shows the number of deceased donors by Organ Donation Services Team. **Appendix I** shows a more detailed breakdown of the number of donors from the donating hospitals and **Appendix III** details the populations used. Number and rates of utilised donors are given in Chapter 4.

Table 3.2 Organ donation rates per million population (pmp), in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region of donor residence

Country/ NHS region of residence	DBD		DCD		**TOTAL**		Living	
	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
North East and Yorkshire	112	(13.6)	103	(12.5)	215	(26.2)	86	(10.5)
North West	70	(9.3)	50	(6.6)	120	(16.0)	71	(9.4)
Midlands	92	(8.4)	97	(8.9)	189	(17.2)	98	(8.9)
East of England	66	(10.3)	94	(14.7)	160	(25.0)	55	(8.6)
London	70	(7.9)	78	(8.8)	148	(16.7)	87	(9.8)
South East	115	(12.3)	101	(10.8)	216	(23.0)	132	(14.1)
South West	72	(12.5)	74	(12.8)	146	(25.3)	60	(10.4)
England	**597**	**(10.5)**	**597**	**(10.5)**	**1194**	**(20.9)**	**589**	**(10.3)**
Isle of Man	**1**	**(12.5)**	**0**	**(0.0)**	**1**	**(12.5)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**	**2**	**(11.8)**
Wales	**38**	**(12.1)**	**25**	**(8.0)**	**63**	**(20.1)**	**46**	**(14.7)**
Scotland	**60**	**(11.0)**	**50**	**(9.2)**	**110**	**(20.2)**	**85**	**(15.6)**
Northern Ireland	**34**	**(17.8)**	**30**	**(15.7)**	**64**	**(33.5)**	**49**	**(25.7)**
TOTAL[1]	**772**	**(11.4)**	**738**	**(10.9)**	**1510**	**(22.3)**	**910**	**(13.5)**

[1] Includes 217 donors (42 DBD, 36 DCD and 139 living) with an unknown UK postcode and excludes 28 living donors resident outside the UK

Table 3.2 shows variation in the number of DBD and DCD donors pmp across the UK. There were 11.4 DBD donors pmp for the UK as a whole, but across NHS regions this ranged between 7.9 and 13.6 pmp. Across the four countries of the UK, Northern Ireland had the highest rate of 17.8 pmp. However, the number of eligible donors pmp also varies and further information can be seen in Chapter 13. It should be noted that these figures are not directly comparable, since not all donors are reported in the Potential Donor Audit. For DCD donors the UK rate is 10.9 pmp, and Northern Ireland had the highest rate of 15.7 pmp across countries of the UK, and across NHS regions it ranged from 6.6 to 14.7 pmp. No adjustment has been made for any differences in demographics of the populations across countries or NHS regions.

Table 3.3 Deceased organ donors in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region of hospital of donor death

Country of donation/ NHS region	DBD N	DCD N	**TOTAL** N
North East and Yorkshire	114	113	227
North West	73	49	122
Midlands	98	96	194
East of England	60	87	147
London	110	107	217
South East	103	100	203
South West	77	79	156
England	**635**	**631**	**1266**
Isle of Man	**2**	**0**	**2**
Channel Islands	**1**	**0**	**1**
Wales	**37**	**20**	**57**
Scotland	**64**	**56**	**120**
Northern Ireland	**33**	**31**	**64**
TOTAL	**772**	**738**	**1510**

Table 3.4	Deceased organ donors in the UK, 1 April 2023 - 31 March 2024 by Organ Donation Services Team		
Team	DBD N	DCD N	**TOTAL** N
Eastern	66	95	161
London	80	71	151
Midlands	82	90	172
North West	85	55	140
Northern	50	41	91
Northern Ireland	33	31	64
Scotland	64	56	120
South Central	71	48	119
South East	74	89	163
South Wales	29	17	46
South West	69	73	142
Yorkshire	69	72	141
TOTAL	**772**	**738**	**1510**

The mean number of organs retrieved per donor in 2023-2024 is given by country in **Table 3.5**. Overall, an average of 3.6 organs were donated per DBD donor and 2.9 per DCD donor. These rates ranged from 3.3 (DBD) and 2.6 (DCD) organs per donor in Wales, to 3.9 (DBD) and 3.2 (DCD) in Scotland.

Table 3.5	Organs retrieved per donor, in the UK, 1 April 2023 - 31 March 2024, by country of donor residence								
Country	Adult			Paediatric			All		
	DBD	DCD	TOTAL	DBD	DCD	TOTAL	DBD	DCD	TOTAL
England	3.5	2.8	**3.2**	5.7	3.9	**5.1**	3.6	2.8	**3.2**
Wales	3.5	2.6	**3.2**	-	-	**-**	3.3	2.6	**3.2**
Scotland	3.8	3.2	**3.5**	4.5	6.0	**4.7**	3.9	3.2	**3.6**
Northern Ireland	3.7	2.9	**3.3**	5.5	-	**5.5**	3.8	2.9	**3.4**
TOTAL	**3.5**	**2.8**	**3.2**	**5.4**	**4.1**	**5.0**	**3.6**	**2.9**	**3.2**

3.3 Demographic characteristics

While the number of donors overall has increased over the last 10 years, it is important to be aware that there have been changes over time with regard to donor characteristics (**Table 3.6**). In 2023-2024, 38% of deceased donors were aged 60 years or more (**Figure 3.1**). The proportion of clinically obese donors (Body Mass Index (BMI) of 30 or higher) has increased from 25% to 28% in deceased donors in the last 10 years (**Figure 3.2**). In absolute numbers, this represents approximately 100 more donors in the 30+ BMI category in 2023 than in 2014. In addition, the proportion of all deceased donors after a trauma death has decreased from 8% to 3% over the same time period. Trends towards more obese deceased donors and those with non-trauma related deaths may all have an adverse impact on the quality and utilisation of the organs, and the subsequent transplant outcome for the recipient.

Table 3.6 also indicates the ethnicity of deceased organ donors, highlighting that 6% of donors are from the Black, Asian and minority ethnic community. By contrast, these communities are estimated to represent 18% of the UK population.

Table 3.6 Demographic characteristics of organ donors in the UK 1 April 2023 - 31 March 2024

		DBD		DCD		TOTAL	
		N	%	N	%	N	%
Age (Years)	0-17	28	4	11	1	39	3
	18-49	306	40	220	30	526	35
	50-59	170	22	196	27	366	24
	60-69	167	22	216	29	383	25
	70+	101	13	95	13	196	13
	Mean (SD)	50	(17)	54	(15)	52	(16)
BMI	0-19	47	6	61	8	108	7
	20-29	528	68	454	62	982	65
	30+	197	26	223	30	420	28
	Mean (SD)	27	(6)	28	(7)	27	(6)
Cause of death	Intracranial	701	91	619	84	1320	87
	Trauma	18	2	23	3	41	3
	Other	53	7	96	13	149	10
Ethnicity	White	694	92	688	96	1382	94
	Asian	36	5	18	3	54	4
	Black	13	2	6	1	19	1
	Other	8	1	7	1	15	1
	Unknown	21	-	19	-	40	-
Blood group	O	400	52	344	47	744	49
	A	270	35	276	38	546	36
	B	68	9	82	11	150	10
	AB	31	4	34	5	65	4
	Unknown	3	-	2	-	5	-
Donor gender	Male	406	53	499	68	905	60
	Female	366	47	239	32	605	40
TOTAL		**772**	**100**	**738**	**100**	**1510**	**100**

Figure 3.1 Age of deceased donors in the UK, 1 April 2014 - 31 March 2024

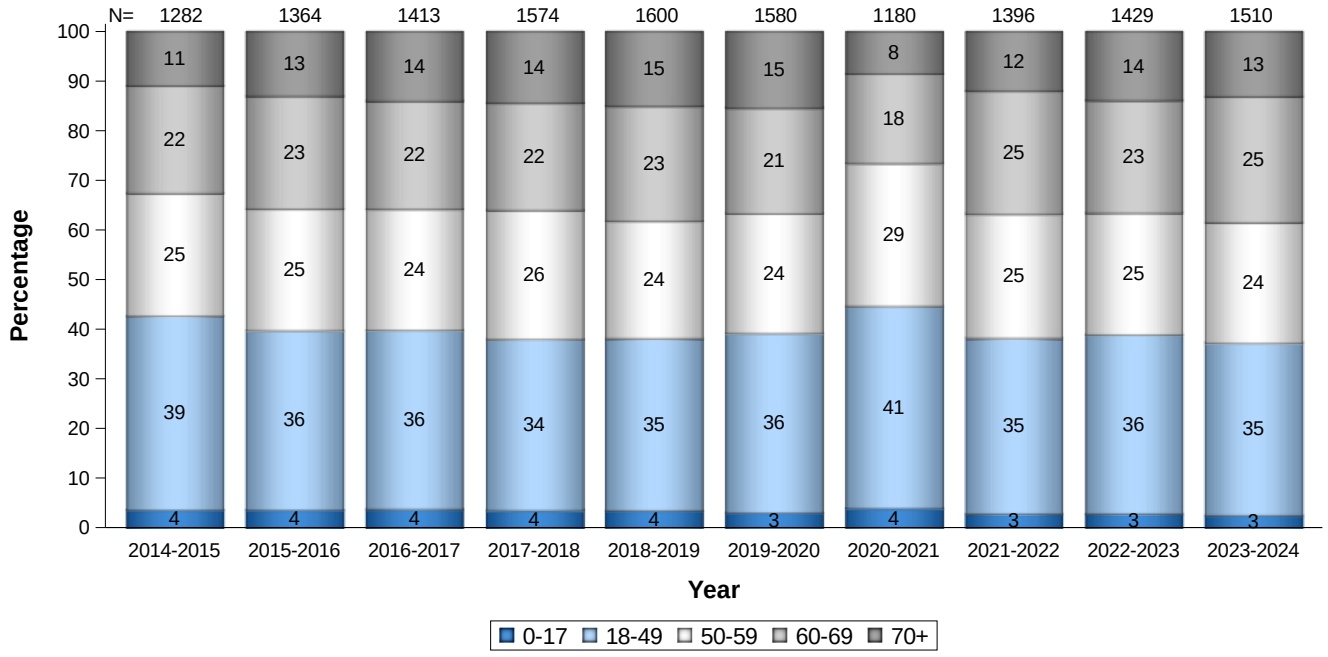
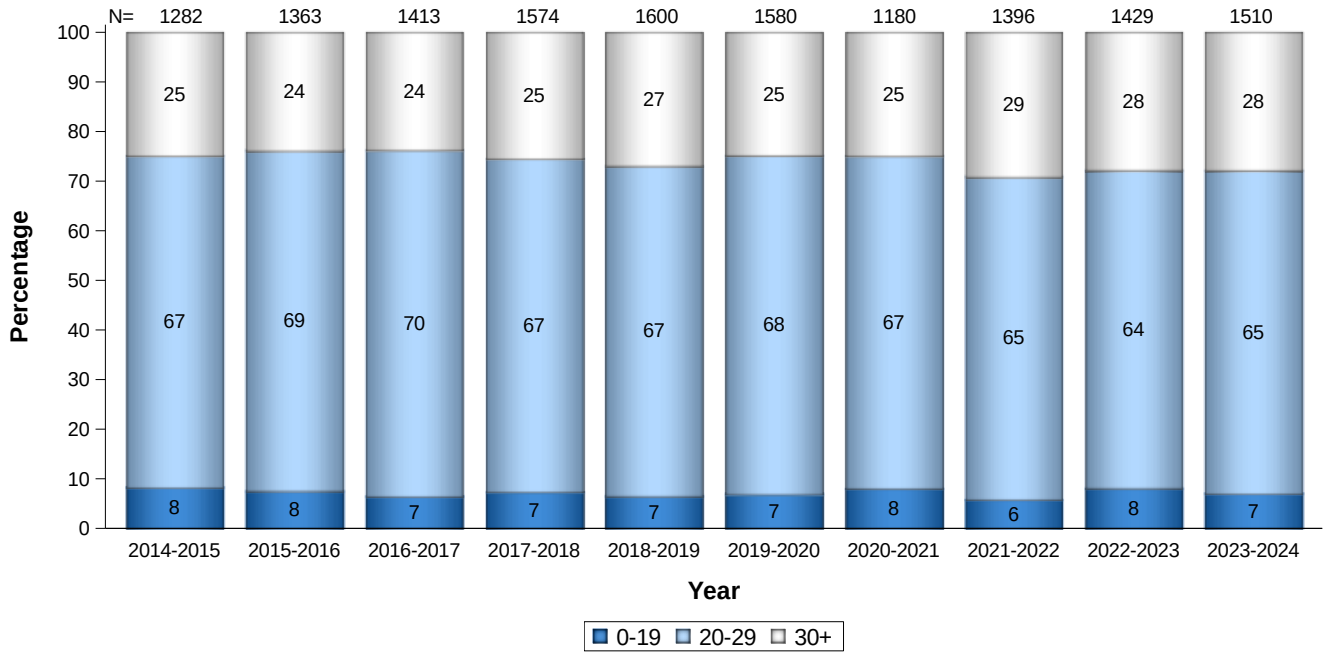


Figure 3.2 BMI of deceased donors in the UK, 1 April 2014 - 31 March 2024



*Note that BMI cannot be determined for all deceased donors thus numbers indicated in **Figure 3.2** are the numbers of donors for which BMI was available, not total number of donors.*

The National Organ Retrieval Service and Usage of Organs

Key messages

- **National Organ Retrieval Service teams attended 794 possible DBD donors and 967 possible DCD donors; 97% of these DBD donors and 76% of these DCD donors attended, proceeded to donation**
- **Overall, 54% of organs offered from those donors that did proceed were transplanted, but individually, these rates were 84% for kidneys, 57% for livers, 24% for pancreases, 41% for hearts, 19% for lungs and 11% for bowels**
- **Overall, 82% of organs retrieved were transplanted, but individually, these rates were 87% for kidneys, 75% for livers, 51% for pancreases, 96% for hearts, 91% for lungs and 92% for bowels**
- **The number of deceased donors per million of population was 22.3, however 6% of actual donors resulted in no organ transplants, an increase on the previous year (5%)**

4.1 The National Organ Retrieval Service (NORS)

There are 16 NORS teams in total, ten abdominal and six cardiothoracic. Since January 2020, the abdominal aspect of the service increased capacity to eight abdominal NORS teams available to retrieve organs from deceased donors in the UK for transplantation, at any given time. Three cardiothoracic NORS teams are available at any given time, an arrangement that has been in place since April 2016.

NORS teams are mobilised using a sequence. The first and second teams in the sequence are defined for each UK hospital (largely based on travel times but adjusted to give a more even workload across NORS teams), while subsequent teams in the sequence are ordered based on travel time and availability, known as 'closest available'.

If a team is first in sequence for a particular donor hospital, they are required to attend possible donors at that hospital within an agreed timescale if at least one organ has been accepted for transplantation. If the team is already retrieving when they are called to attend, then a second team is called in to retrieve and so on.

The number of possible DBD and DCD donors that were attended by each of the teams in 2023-2024 is shown in **Table 4.1**. The geographical distribution of donors and the on-call arrangements lead to variation in these numbers across teams. The figures are broken down by whether the possible donor proceeded to organ donation (proceeding donors) or not. Non-proceeding donors are more common in the pool of potential DCD donors as prolonged time to death after treatment withdrawal can result in unsuitability of organs for transplantation. A small number of possible donors may be attended by local kidney transplant teams. This is typically for DCD donors when only the kidneys have been accepted for transplantation and the teams are appropriately reimbursed if they are willing and able to retrieve.

Table 4.1 **Number of proceeding and non-proceeding donors attended by each NORS team in the UK, 1 April 2023 – 31 March 2024**

NORS team	DBD				DCD			
	Proceeding[2]	Non-proceeding	% non-proc	**No. attended**	Proceeding[2]	Non-proceeding	% non-proc	**No. attended**
Abdominal								
Birmingham[1]	87	2	2	89	90	24	21	114
Cambridge	86	3	3	89	113	34	23	147
Cardiff[1]	22	-	-	22	26	11	30	37
Edinburgh	66	1	1	67	81	17	17	98
King's	132	5	4	137	105	22	17	127
Leeds[1]	77	3	4	80	73	18	20	91
Manchester[1]	73	2	3	75	44	37	46	81
Newcastle	79	2	2	81	60	23	28	83
Oxford[1]	85	1	1	86	67	25	27	92
Royal Free[1]	64	3	4	67	77	18	19	95
Abdominal total	**771**	**22**	**3**	**793**	**736**	**229**	**24**	**965**
Cardiothoracic[1]								
Birmingham	46	35	43	81	4	11	73	15
Glasgow	23	9	28	32	23	12	34	35
Harefield	38	34	47	72	15	19	56	34
Manchester	38	28	42	66	3	13	81	16
Newcastle	52	26	33	78	6	4	40	10
Papworth	30	14	32	44	50	26	34	76
Cardiothoracic total	**227**	**146**	**39**	**373**	**101**	**85**	**46**	**186**
Total donors attended	**772**	**22**	**3**	**794**	**738**	**229**	**24**	**967**

[1] Part-time teams
[2] For abdominal, at least one abdominal organ retrieved. For cardiothoracic, at least one cardiothoracic organ retrieved

For more detailed information regarding the National Organ Retrieval Service and individual team activity, an annual NORS report is available here: https://www.odt.nhs.uk/statistics-and-reports/annual-national-organ-retrieval-service-report/

4.2 Retrieval and usage of organs

The number of 'consented' donors ('authorised' donors in Scotland) and 'offered' donors (where at least one organ was offered for transplant) are shown in **Table 4.2**. Note that organs are not always offered from 'consented' donors, e.g. because the donor's condition deteriorates, or it is discovered the donor is unsuitable for organ donation. The number of organs offered from 'offered' donors is also shown. Each year a number of actual organ donors result in no transplants. Donors resulting in at least one transplant are termed 'utilised' donors and the number of actual and utilised donors is shown in **Table 4.2**. The number of donors per million of population (pmp) is also shown. In 2023-2024, 6% of actual donors resulted in no organ transplants, the same as the previous year.

Table 4.2 Consented, offered, actual and utilised deceased donors in the UK, 1 April 2023 - 31 March 2024

	DBD	(pmp)	DCD	(pmp)	Total	(pmp)
Consented donors[1]	849	(12.6)	1135	(16.8)	1984	(29.3)
Offered donors[2]	822	(12.2)	1052	(15.6)	1874	(27.7)
Kidneys offered	*1574*		*2068*		*3642*	
Livers offered	*789*		*963*		*1752*	
Pancreases offered	*483*		*374*		*857*	
Bowels offered	*199*		*3*		*202*	
Hearts offered	*444*		*193*		*637*	
Lungs offered	*937*		*770*		*1707*	
Actual donors[3]	772	(11.4)	738	(10.9)	1510	(22.3)
Utilised donors[4]	737	(10.9)	680	(10.1)	1417	(21.0)

[1] Consented donors defined as patients where consent for at least one organ was given
[2] Offered donors defined as donors where one or more organs were offered for transplantation
[3] Actual donors defined as donors where one or more organs were retrieved
[4] Utilised donors defined as donors where one or more organs were retrieved and transplanted

There were 1,510 actual deceased organ donors in 2023-2024, but not all organs from these donors were offered for transplantation. **Table 4.3** shows the number of organs offered, retrieved and transplanted from the 772 DBD and 738 DCD actual donors. The number of organs from these donors that were subsequently used for research purposes is also shown. The number of organs offered for transplantation excludes those where the donor did not meet the nationally agreed age criteria for suitability for donation of that specific organ. There are no nationally agreed age criteria for kidney and liver donation.

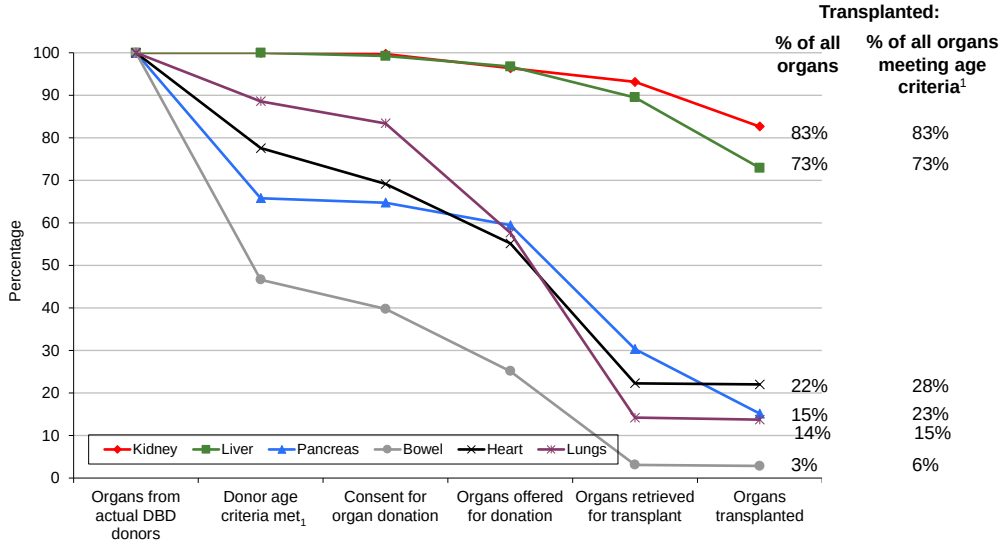
Table 4.3 Donation and transplantation of organs from 1,510 deceased donors in the UK, 1 April 2023 - 31 March 2024

Organ	Organs meeting initial suitability criteria and offered for transplantation	Organs retrieved for transplantation		Organs transplanted			Organs used for research (from actual organ donors)
		N	% of offered	N	% of retrieved	% of offered	
DBD donor organs							
Kidney	1488	1438	97	1276	89	86	86
Liver	747	691	93	563	81	75	49
Pancreas	459	234	51	117	50	25	32
Bowel	194	24	12	22	92	11	0
Heart	426	172	40	170	99	40	1
Lung	891	219	25	212	97	24	4
Total	**4205**	**2778**	**66**	**2360**	**85**	**56**	**172**
DCD donor organs							
Kidney	1464	1427	97	1206	85	82	129
Liver	692	408	59	263	64	38	54
Pancreas	291	116	40	60	52	21	18
Heart	153	74	48	65	88	42	3
Lung	564	84	15	63	75	11	17
Total	**3166**	**2109**	**67**	**1657**	**79**	**52**	**221**
Deceased donor organs							
Kidney	2952	2865	97	2482	87	84	215
Liver	1439	1099	76	826	75	57	103
Pancreas	750	350	47	177	51	24	50
Bowel	196	24	12	22	92	11	0
Heart	579	246	42	235	96	41	4
Lung	1455	303	21	275	91	19	21
Total	**7371**	**4887**	**66**	**4017**	**82**	**54**	**393**

Suitability criteria:
Pancreas: donors with a BMI < 40 and aged < 60 years (DBD) or aged < 55 years (DCD)
Bowel: donors aged < 60 years and weighting < 90kg
Heart: donors aged < 65 years (DBD) or aged < 55 years (DCD) or died due to myocardial infarction (DBD)
Lung: donors aged < 70 years

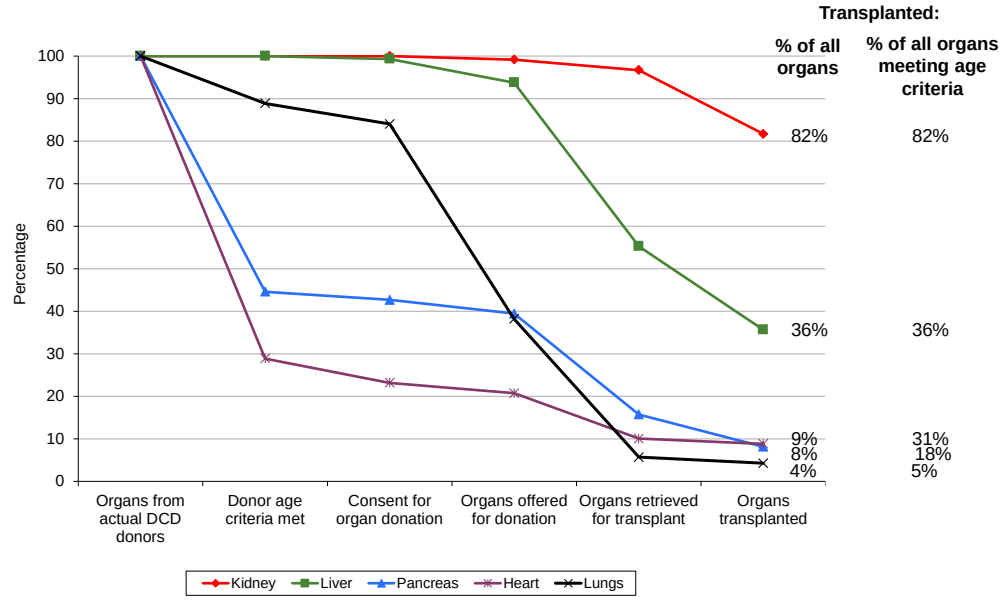
Figures 4.1 and 4.2 show line graphs of the pathway for all donor organs through to transplantation. The charts start at 100% for each organ, representing all organs from the 772 DBD and 738 DCD donors. The proportion of these organs where any national donor age criteria are met is then shown, followed by the proportion with consent, the proportion offered, the proportion retrieved and finally the proportion transplanted. For example, **Figure 4.2** shows that 82% of the kidneys from the 738 DCD donors were transplanted. Transplantation rates for kidneys and livers are generally high, while for other organs, even after allowing for the agreed age criteria, the rates are generally low.

Figure 4.1 Donation and transplantation rates of organs from DBD organ donors in the UK, 1 April 2023 – 31 March 2024



[1] Hearts – in addition to age criteria, donors who died due to myocardial infarction are excluded
Bowels – in addition to age criteria, donors who weigh >=90kg are excluded

Figure 4.2 Donation and transplantation rates of organs from DCD organ donors in the UK, 1 April 2023 – 31 March 2024



Reasons for organs not being offered for transplantation, being offered but not accepted and being retrieved but not subsequently transplanted are shown in **Table 4.4** and **Table 4.5** for abdominal organs from DBD and DCD donors, respectively. **Table 4.6** shows the same information for cardiothoracic organs. Reasons for the medical unsuitability of an organ include infections, tumours, anatomy and disease. Non-medical reasons include donor size and donor instability. Clinical unsuitability of an organ encompasses poor perfusion, prolonged ischaemia, past history of the donor and, in the case of pancreases for islet usage, insufficiency of viable islet yield. Reasons reported under 'other' primarily include recipient related issues (such as no suitable recipients), but may also include logistical reasons and un-coded reasons reported of a miscellaneous nature. Note that reasons associated with the COVID-19 pandemic may also be included under either medical unsuitability or 'other'.

These tables also show the number of organs from UK donors that were transplanted overseas. These organs were not accepted for transplantation by any UK transplant centre, but were accepted for suitable recipients identified elsewhere, usually in Europe. In 2023-2024 only a small number of livers, hearts and lungs were exported for transplantation outside the UK. Organs from outside the UK are occasionally imported for transplant. Further information on the import and export of organs can be found in **Appendix IV.**

The percentage of organs retrieved that were not transplanted are shown in **Figure 4.3**, **Figure 4.4, Figure 4.5, Figure 4.6** and **Figure 4.7** for kidneys, livers, pancreases, hearts, and lungs respectively. The rates are shown over the last decade. Some organs are found not to be suitable for transplantation after they have been retrieved and this 'non-utilisation rate' is generally increasing over time for each organ, reflecting the ageing donor population. Many organs retrieved but found not to be suitable for transplantation are instead used for research (with appropriate consent).

Table 4.4 Reasons for non-retrieval and non-use of abdominal organs from DBD donors in the UK, 1 April 2023 - 31 March 2024

	Kidney		Liver		Pancreas		Bowel	
All actual DBD organ donors	**772**		**772**		**772**		**772**	
Donors from whom organs not offered for donation	28		25		313		578	
Reasons for organs not being offered[1]								
Family permission refused	2		4		4		44	
Permission refused by coroner	0		2		0		3	
Permission refused other	0		0		4		6	
Donor unsuitable - medical	3		0		1		2	
Donor unsuitable - non-medical	0		0		18		17	
Donor unsuitable - age	0		0		231		4	
Organ unsuitable - clinical	7		16		45		28	
Poor function	16		2		2		2	
Donor age>=60 or donor weight >=90kg	-		-		-		410	
Other	0		1		8		62	
Organs offered for donation	**1488**		**747**		**459**		**194**	
Organs not retrieved (% of organs offered for donation)	**50**	**(3)**	**56**	**(7)**	**225**	**(49)**	**170**	**(88)**
Donor unsuitable - medical	3		8		3		17	
Donor unsuitable - non-medical	0		4		32		47	
Donor unsuitable - age	6		0		26		12	
Organ unsuitable - clinical	26		30		89		35	
Poor function	12		4		17		8	
Other	3		10		58		51	
Organs retrieved (% of organs offered for donation)	**1438**	**(97)**	**691**	**(93)**	**234**	**(51)**	**24**	**(12)**
Organs transplanted in the UK	1276		563		117		22	
Organs transplanted overseas	0		5		0		0	
Organs not transplanted	162		128		117		2	
Reasons for organ not being transplanted								
Donor unsuitable - medical	66		25		16		0	
Donor unsuitable - non-medical	0		6		0		0	
Donor unsuitable - age	2		0		0		0	
Organ unsuitable - clinical	48		65		69		0	
Poor function	10		10		3		0	
Other	36		22		29		2	
TOTAL ORGANS RETRIEVED, NOT TRANSPLANTED (Number used for research)	**162**	**(86)**	**128**	**(49)**	**117**	**(32)**	**2**	**(0)**

[1] Includes donors whose organ may have been offered but are outside of organ specific criteria

Table 4.5 Reasons for non-retrieval and non-use of abdominal organs from DCD donors in the UK, 1 April 2023 - 31 March 2024

	Kidney		Liver		Pancreas	
All actual DCD organ donors	**738**		**738**		**738**	
Donors from whom organs not offered for donation	6		46		447	
Reasons for organs not being offered[1]						
Family permission refused	0		0		5	
Permission refused by coroner	0		3		6	
Permission refused other	0		2		3	
Donor unsuitable - medical	0		0		0	
Donor unsuitable - non-medical	0		3		17	
Donor unsuitable - age	0		6		366	
Organ unsuitable - clinical	4		28		42	
Poor function	0		1		0	
Other	2		3		8	
Organs offered for donation	**1464**		**692**		**291**	
Organs not retrieved (% of organs offered for donation)	**37**	**(3)**	**284**	**(41)**	**175**	**(60)**
Donor unsuitable - medical	4		12		9	
Donor unsuitable - non-medical	0		15		26	
Donor unsuitable - age	7		32		28	
Organ unsuitable - clinical	20		131		69	
Poor function	2		34		11	
Other	4		60		32	
Organs retrieved (% of organs offered for donation)	**1427**	**(97)**	**408**	**(59)**	**116**	**(40)**
Organs transplanted in the UK	1206		263		60	
Organs transplanted overseas	0		0		0	
Organs not transplanted	221		145		56	
Reasons for organ not being transplanted						
Donor unsuitable - medical	72		20		6	
Donor unsuitable - non-medical	1		11		0	
Donor unsuitable - age	1		2		2	
Organ unsuitable - clinical	77		58		29	
Poor function	19		25		1	
Other	51		29		18	
TOTAL ORGANS RETRIEVED, NOT TRANSPLANTED (Number used for research)	**221**	**(129)**	**145**	**(54)**	**56**	**(18)**

[1] Includes donors whose organ may have been offered but are outside of organ specific criteria

Table 4.6 Reasons for non-retrieval and non-use of cardiothoracic organs from deceased donors in the UK, 1 April 2023 - 31 March 2024

	Heart (DBD)		Lung (DBD)		Heart (DCD)		Lung (DCD)	
All actual organ donors	**772**		**772**		**738**		**738**	
Donors from whom organs not offered for donation	346		327		585		456	
Reasons for organs not being offered[1]								
Family permission refused	36		19		12		11	
Permission refused by coroner	23		18		29		22	
Permission refused other	6		3		1		3	
Donor unsuitable - medical	6		25		3		28	
Donor unsuitable - non-medical	2		0		25		2	
Donor unsuitable - age	163		68		409		112	
Organ unsuitable - clinical	75		86		79		147	
Poor function	26		97		15		123	
Other	9		11		12		8	
Organs offered for donation	**426**		**891**		**153**		**564**	
Organs not retrieved (% of organs offered for donation)	**254**	**(60)**	**672**	**(75)**	**79**	**(52)**	**480**	**(85)**
Reasons for non-retrieval								
Donor unsuitable - medical	8		10		4		26	
Donor unsuitable - non-medical	10		26		6		17	
Donor unsuitable - age	17		46		5		28	
Organ unsuitable - clinical	55		148		15		130	
Poor function	108		328		26		164	
Other	56		114		23		115	
Organs retrieved (% of organs offered for donation)	**172**	**(40)**	**219**	**(25)**	**74**	**(48)**	**84**	**(15)**
Organs transplanted in the UK	169		208		65		63	
Organs transplanted overseas	1		4		0		0	
Organs not transplanted	2		7		9		21	
Reasons for organ not being transplanted								
Donor unsuitable - medical	0		0		1		0	
Donor unsuitable - non-medical	1		0		0		0	
Donor unsuitable - age	0		0		0		0	
Organ unsuitable - clinical	1		3		0		5	
Poor function	0		2		7		6	
Other	0		2		1		10	
TOTAL ORGANS RETRIEVED, NOT TRANSPLANTED (Number used for research)	**2**	**(1)**	**7**	**(4)**	**9**	**(3)**	**21**	**(17)**

[1] Includes donors whose organ may have been offered but are outside of organ specific criteria

Figure 4.3 Percentage of kidneys retrieved that were not transplanted from deceased organ donors in the UK, 1 April 2014 - 31 March 2024

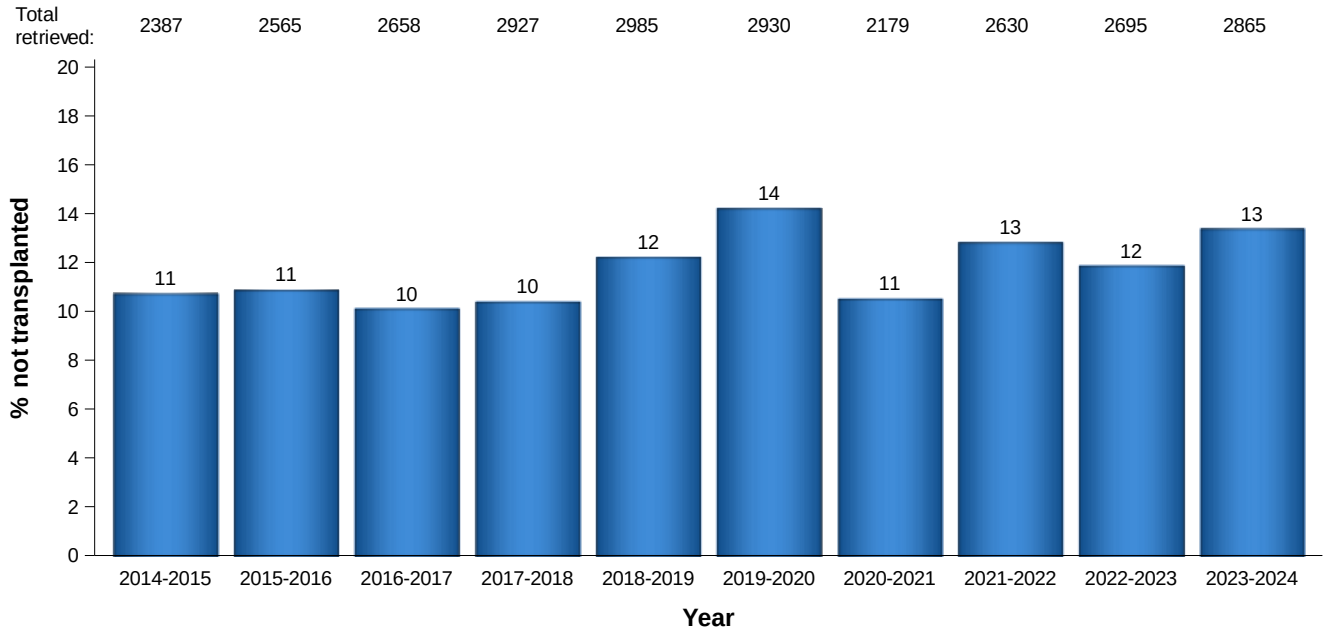


Figure 4.4 Percentage of livers retrieved that were not transplanted from deceased organ donors in the UK, 1 April 2014 - 31 March 2024

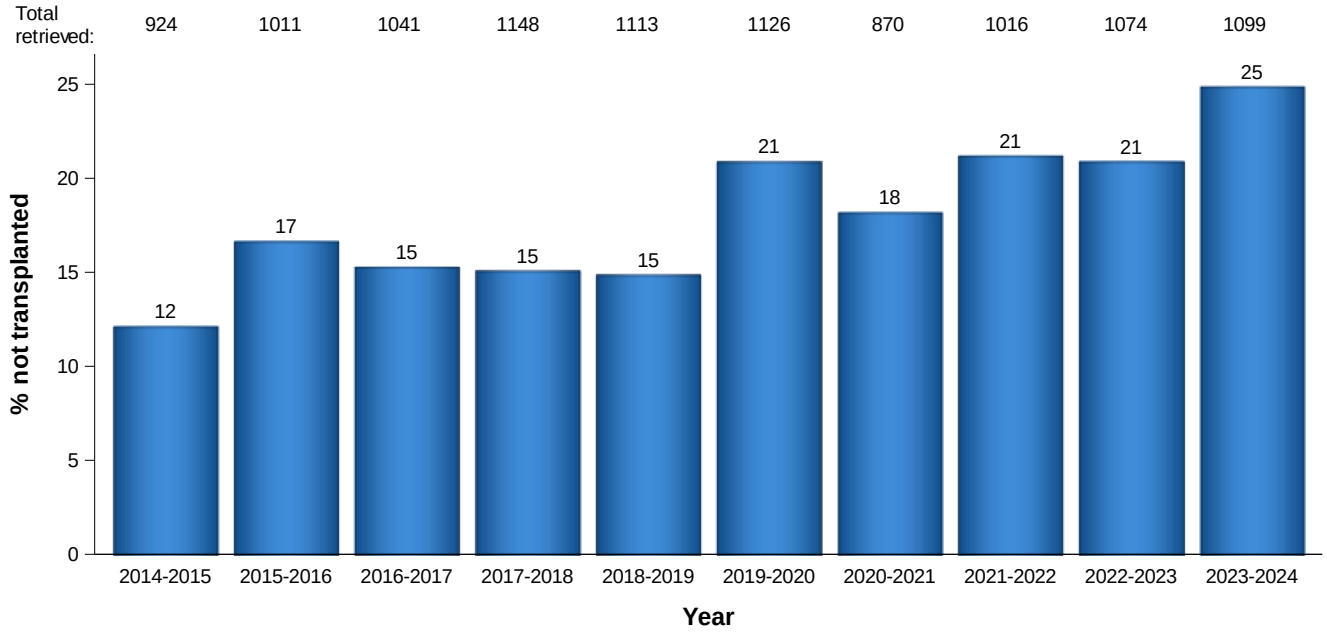
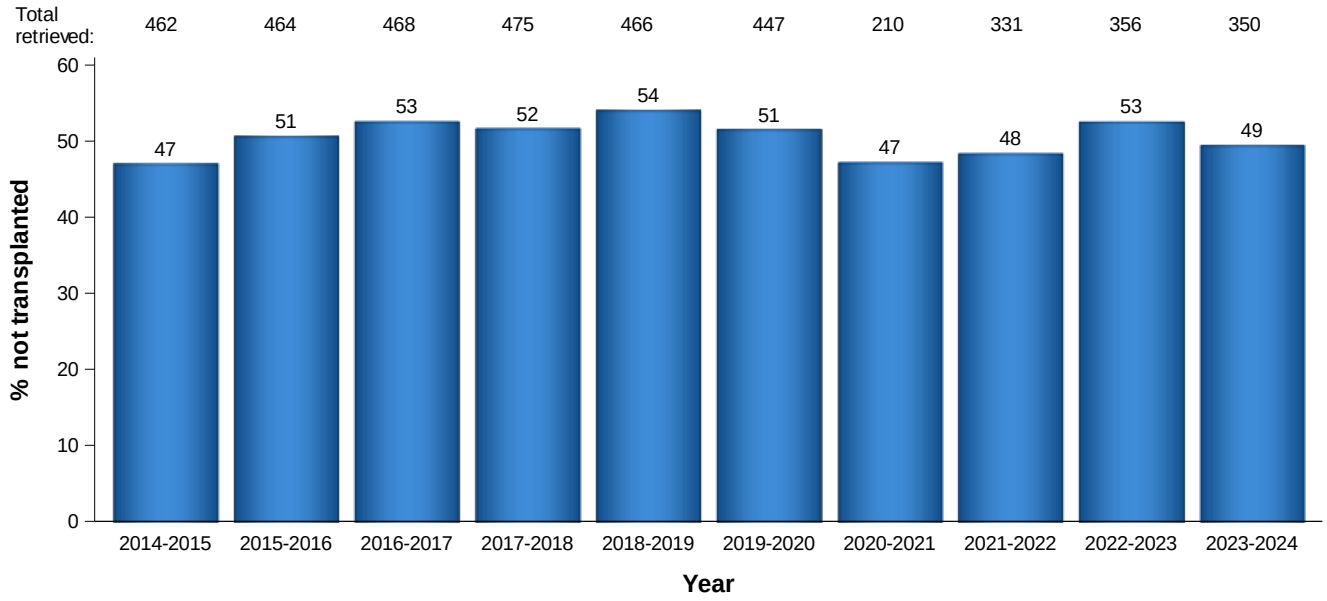


Figure 4.5 Percentage of pancreases[1] retrieved that were not transplanted from deceased organ donors in the UK, 1 April 2014 - 31 March 2024



[1]Includes pancreases retrieved for islet transplantation and not transplanted due to the outcome of the islet isolation

Figure 4.6 Percentage of hearts retrieved that were not transplanted from deceased organ donors in the UK, 1 April 2014 - 31 March 2024

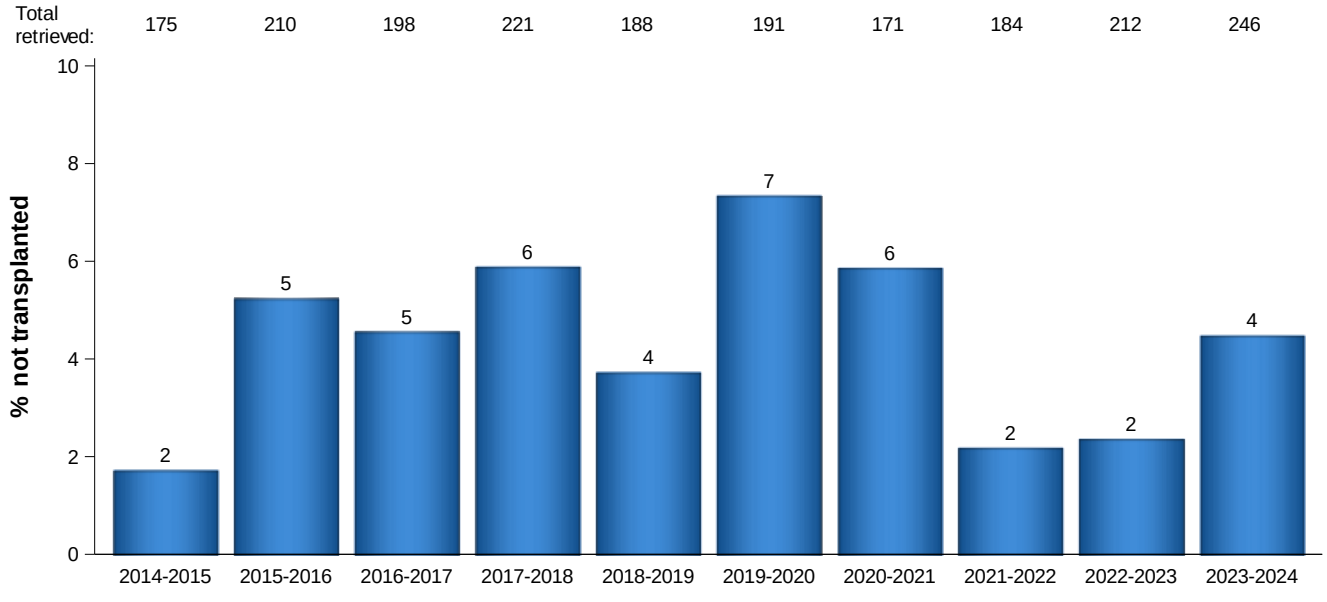
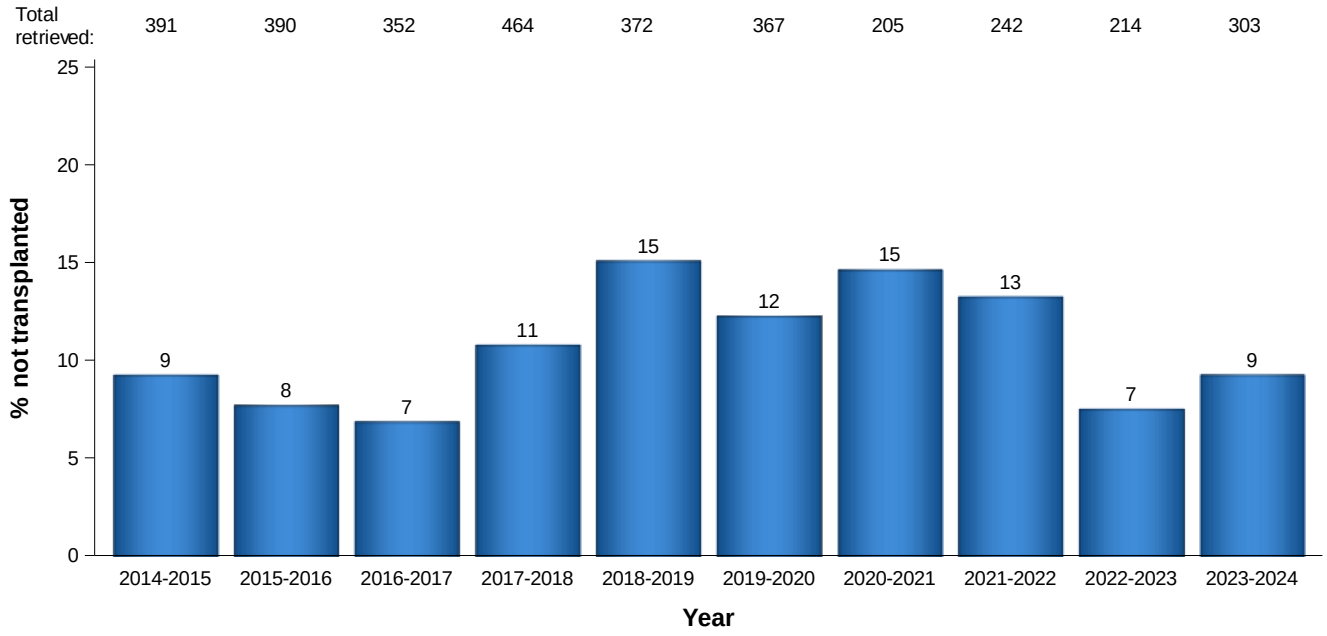


Figure 4.7 Percentage of lungs retrieved that were not transplanted from deceased organ donors in the UK, 1 April 2014 - 31 March 2024



Kidney Activity

Key messages

- **The number of patients registered on the kidney transplant list this year increased to 6,250**
- **The number of deceased kidney donors increased by 6% to 1,447**
- **Kidney transplants from living donors fell by 2% to 907, while transplants from deceased donors increased by 4% to 2,448**
- **97 kidney transplants were made possible by the paired living kidney donation programme (17 2-way and 21 3-way exchanges)**
- **There were 48 non-directed altruistic living kidney donors, leading to 102 patients benefitting from a living donor transplant**

5.1 Overview

The number of deceased kidney donors increased by 6% in 2023-2024 compared to 2022-2023 and the number of deceased donor kidney transplants increased by 4%. There were 6,250 patients waiting for a kidney transplant at 31 March 2024, with the number of patients on the national list increasing as more patients are reactivated on the list following the height of the COVID-19 pandemic.

A summary of activity for deceased donor kidney transplants and the transplant list at year end for the last ten years is shown in **Figure 5.1**. The number of patients registered on the active transplant list at 31 March 2024 for a kidney only or multi-organ kidney transplant has increased by 9% since 31 March 2015. These registrations include patients suspended on the kidney waiting list but active on the liver waiting list for a combined liver and kidney transplant.

On 11 September 2019, a new National Kidney Offering Scheme was introduced to offer kidneys from both donors after brain death and donors after circulatory death. This is a change from the previous system where kidneys from donors after circulatory death were offered under a different scheme than kidneys from donors after brain death. The scheme has two tiers with priority going to patients who are the most difficult to match or who have waited over 7 years for a transplant.

Figure 5.1 Deceased donor kidney programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March

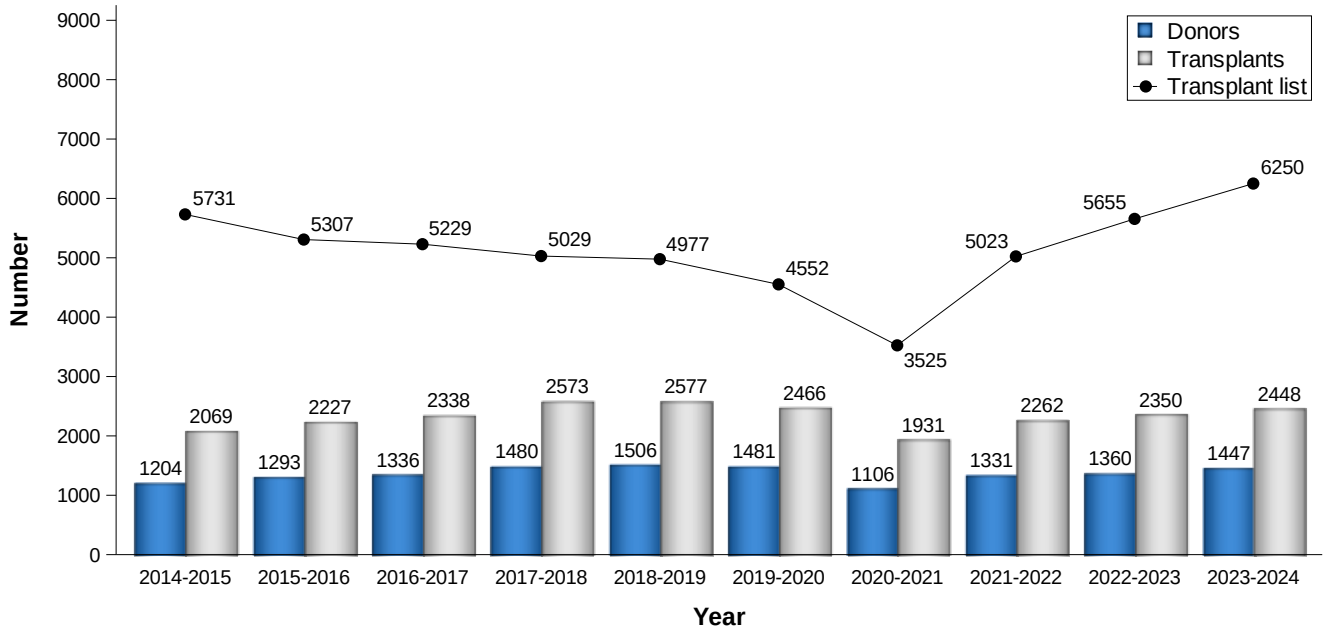


Table 5.1 shows the number of deceased and living donor kidney transplants carried out in 2022-2023 at each centre. Donation figures for centres in London are not reported individually as they have shared designated areas and donor populations. Multi-organ transplants including a kidney are included in the table.

The total number of deceased kidney donors increased to 1,447 in 2023-2024 from 1,360 in 2022-2023 and the number of transplants increased from 2,350 to 2,448. The number of kidney donors after circulatory death increased to 722 from 638 in 2022-2023 and the number of transplants from such donors increased by 13% to 1,188.

Throughout this chapter, intestinal transplants involving a kidney are not included in the kidney transplant activity reported. Any kidneys retrieved and used for such transplants are however reported in the kidney donor activity. Intestinal transplant activity is reported in Chapter 9.

Table 5.1 **Kidney donors and transplants, 1 April 2023 - 31 March 2024 (2022-2023) and transplant list at 31 March 2024 (2023) in the UK, by centre**

Centre	Deceased kidney donors				Deceased donor transplants				Living donor transplants		Active transplant list	
	DBD		DCD		DBD		DCD					
Belfast	33	(33)	31	(21)	15	(28)	34	(35)	56	(63)	74	(73)
Birmingham	29	(33)	51	(57)	110	(95)	72	(63)	46	(42)	450	(392)
Bristol	34	(31)	39	(28)	44	(45)	43	(46)	46	(38)	222	(183)
Cambridge	21	(33)	45	(37)	58	(68)	96	(94)	22	(17)	203	(175)
Cardiff	24	(29)	15	(26)	43	(37)	44	(39)	42	(41)	150	(139)
Coventry[1]	14	(13)	9	(7)	27	(23)	28	(22)	20	(18)	139	(123)
Edinburgh	21	(11)	20	(25)	40	(43)	34	(23)	48	(38)	231	(185)
Glasgow	48	(42)	38	(26)	53	(50)	46	(43)	46	(58)	256	(239)
Leeds	49	(50)	55	(45)	50	(66)	65	(56)	43	(56)	440	(356)
Leicester	19	(17)	15	(22)	59	(41)	38	(43)	25	(28)	292	(233)
Liverpool	26	(25)	11	(19)	47	(50)	39	(23)	27	(25)	191	(177)
London[2]	189	(193)	214	(156)	-	-	-	-	-	-	-	-
Great Ormond Street	-	-	-	-	5	(7)	4	(1)	16	(19)	20	(15)
Guy's	-	-	-	-	121	(112)	99	(80)	93	(86)	389	(394)
Royal Free	-	-	-	-	36	(70)	64	(34)	22	(33)	286	(260)
Royal London	-	-	-	-	76	(58)	67	(46)	34	(41)	376	(379)
St George's	-	-	-	-	62	(54)	49	(49)	45	(22)	297	(281)
WLRTC	-	-	-	-	61	(100)	61	(68)	32	(41)	385	(409)
Manchester	62	(74)	50	(41)	108	(105)	105	(86)	64	(76)	586	(531)
Newcastle	31	(28)	25	(19)	55	(44)	31	(41)	44	(50)	290	(247)
Nottingham	20	(19)	20	(22)	36	(26)	21	(18)	14	(19)	153	(151)
Oxford[1]	27	(38)	25	(32)	79	(75)	68	(73)	57	(58)	375	(322)
Plymouth	24	(12)	19	(8)	16	(28)	16	(15)	16	(18)	108	(114)
Portsmouth	35	(25)	23	(35)	39	(43)	33	(36)	32	(21)	205	(164)
Sheffield	19	(16)	17	(12)	20	(28)	31	(20)	14	(9)	132	(113)
TOTAL	**725**	**(722)**	**722**	**(638)**	**1260**	**(1296)**	**1188**	**(1054)**	**907[3,5]**	**(926[4,6])**	**6250**	**(5655)**

WLRTC - West London Renal and Transplant Centre
[1] As of 1 June 2016 Coventry and Oxford began working in partnership as a transplant network.
[2] Donor figures in this area cannot be linked to individual transplant centres due to shared retrieval areas.
[3] Includes an additional 2 transplants performed at London, Cromwell Hospital and 1 transplant performed at London, London Bridge Hospital
[4] Includes an additional 3 transplants performed at London, Cromwell Hospital and 6 transplants performed at London, London Bridge Hospital
[5] Includes 1 domino donor
[6] Includes 5 domino donors

5.2 Transplant list

The number of patients registered on the kidney or kidney and pancreas transplant list increased in the year: on 31 March 2024, 6,250 patients were registered as active, compared with 5,655 at the end of March 2023.

Of the 6,250 patients on the active transplant list at 31 March 2024, 314 required a kidney and pancreas/islet transplant (271 at 31 March 2023).

The outcome of patients registered on the UK kidney and kidney/pancreas transplant list at 1 April 2023, or subsequently registered during the financial year, is shown in **Table 5.2**. A total of 4,541 patients joined the kidney transplant list last year, while a further 227 joined the kidney/pancreas transplant list.

Table 5.2 Kidney transplant list and new registrations in the UK, 1 April 2023 - 31 March 2024

Outcome of patient at 31 March 2024	Active and suspended patients at 1 April 2023		New registrations in 2023-2024[1]		TOTAL	
	N	%	N	%	**N**	**%**
Kidney transplant list						
Remained active/suspended	5725	66	3541	78	9266	70
Transplanted	2196	25	944	21	3140	24
Removed[2]	553	6	31	1	584	4
Died	233	3	25	1	258	2
TOTAL	**8707**		**4541**		**13248**	
Kidney/pancreas transplant list						
Remained active/suspended	295	64	203	89	498	72
Transplanted	115	25	16	7	131	19
Removed[3]	31	7	5	2	36	5
Died	21	5	3	1	24	3
TOTAL	**462**		**227**		**689**	

[1] Includes re-registrations for second or subsequent transplants
[2] Includes 6 patients removed from kidney list and made active on kidney/pancreas list
[3] Includes 6 patients removed from kidney/pancreas list and made active on kidney/islet list

Table 5.3 shows the active transplant list in the UK at 31 March 2024 and 2023 by country/NHS region of patient's residence. In 2024, the overall kidney transplant list rate was 92.5 pmp with rates across NHS regions ranging from 68.6 pmp to 139.3 pmp.

Table 5.3 Active kidney transplant list at 31 March, by Country/ NHS region of patient residence

Country/ NHS region of residence	Kidney transplant list (pmp) 2024		2023	
North East and Yorkshire	866	(105.4)	732	(89.1)
North West	662	(88.0)	604	(80.3)
Midlands	1097	(100.1)	957	(87.3)
East of England	439	(68.6)	371	(58.0)
London	1236	(139.3)	1274	(143.6)
South East	698	(74.4)	621	(66.2)
South West	452	(78.5)	386	(67.0)
England	**5450**	**(95.4)**	**4945**	**(86.6)**
Isle of Man	**4**	**(50.0)**	**8**	**(100.0)**
Channel Islands	**8**	**(47.1)**	**9**	**(52.9)**
Wales	**216**	**(69.0)**	**185**	**(59.1)**
Scotland	**485**	**(89.0)**	**422**	**(77.4)**
Northern Ireland	**78**	**(40.8)**	**76**	**(39.8)**
TOTAL[1]	**6250**	**(92.5)**	**5655**	**(83.7)**

[1]Includes patients in 2024 (2023) residing in: Unspecified UK 8 (7); Overseas 1 (3)

An indication of outcomes for adult patients listed for a kidney only transplant is summarised in **Figure 5.2**. This shows the proportion of patients transplanted or still waiting one, three and five years after joining the list. It also shows the proportion removed from the transplant list (typically because they become too unwell for transplant) and those dying while on the transplant list. Only 37% of patients are transplanted within one year, while five years after listing 75% of patients have received a transplant.

The median (average) waiting time for a kidney only transplant has fallen from 509 days reported last year to 489 days for an adult patient and is shown by blood group in **Table 5.4** and patient ethnicity in **Table 5.5**. Because of the need to match donor and recipient blood groups and tissue types, waiting times to transplant differ according to patient blood groups and ethnicity due to differences between the donor pool and patients awaiting a kidney transplant. 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.

Figure 5.2 **Post-registration outcome for 3502 new adult kidney only registrations made in the UK, 1 April 2018 - 31 March 2019**

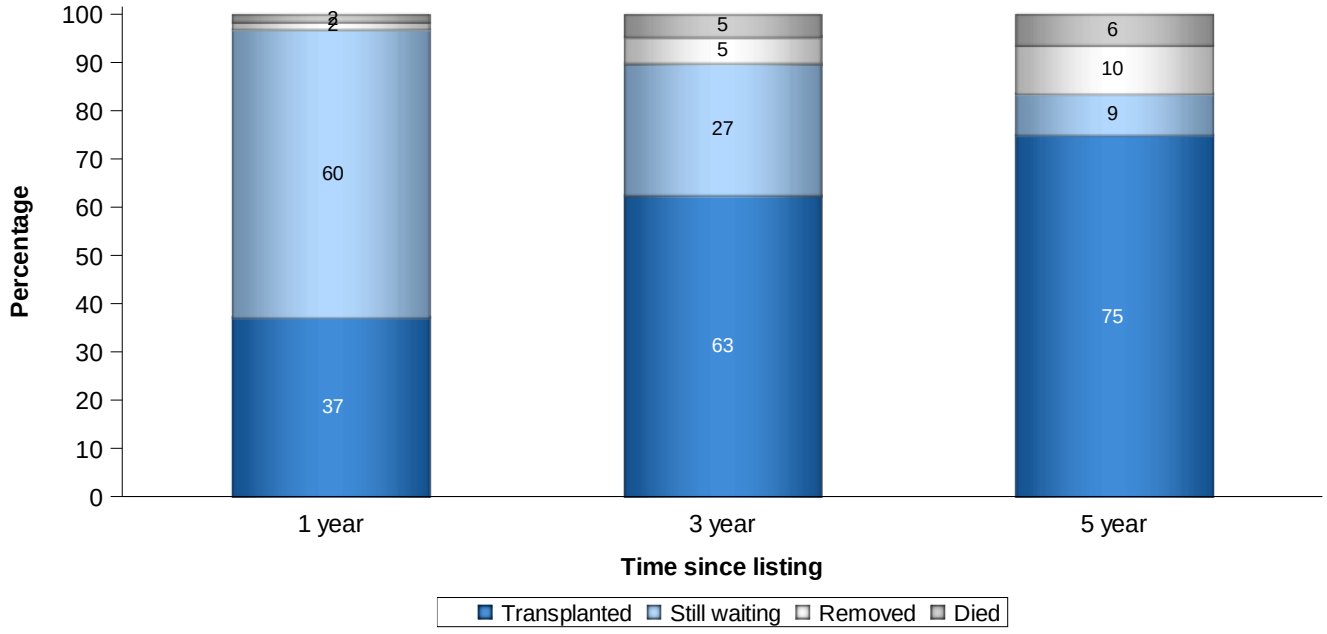


Table 5.4 **Median waiting time to kidney only transplant in the UK, for patients registered 1 April 2017 - 31 March 2021**

Blood group	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult			
O	4889	697	674 - 720
A	3815	283	269 - 297
B	1624	821	770 - 872
AB	496	153	128 - 178
TOTAL	**10824**	**489**	**474 - 504**
Paediatric			
O	136	360	239 - 481
A	86	231	142 - 320
B	45	650	571 - 729
AB	17	127	80 - 174
TOTAL	**284**	**337**	**281 - 393**

Table 5.5 Median waiting time to kidney only transplant in the UK, for patients registered 1 April 2017 - 31 March 2021

Ethnicity	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult			
White	7229	448	432 - 464
Asian	1843	586	548 - 624
Black	1108	612	561 - 663
Other	489	521	447 - 595
TOTAL[1]	**10824**	**489**	**474 - 504**
Paediatric			
White	152	234	175 - 293
Asian	76	558	361 - 755
Black	32	360	314 - 406
Other	15	748	699 - 797
TOTAL[2]	**284**	**337**	**281 - 393**

[1] Includes 155 patients whose ethnicity was not reported
[2] Includes 9 patients whose ethnicity was not reported

5.3 Donor and organ supply

Of the 772 organ donors after brain death in the UK in 2023-2024, 725 (94%) were kidney donors. From these donors, 1,438 kidneys were retrieved. There were 722 kidney donors after circulatory death in 2023-2024. From these donors, 1,427 kidneys were retrieved. **Table 5.6** shows this activity by donor country/NHS region of donor's residence. No adjustments have been made for potential demographic differences in populations.

The overall rate for kidney donors after brain death is 10.7 pmp, with rates across NHS regions ranging from 7.2 to 12.9 pmp. The number of kidneys retrieved from donors after brain death in the UK is 21.3 pmp and varies from 14.4 to 25.7 pmp.

The overall rate for kidney donors after circulatory death is 10.7 pmp, with rates across NHS regions ranging from 6.6 to 14.2 pmp. The number of kidneys retrieved from donors after circulatory death is 21.1 pmp and varies from 13.0 to 28.3 pmp.

Table 5.6 Kidney donation and retrieval rates for deceased donors in the UK, 1 April 2023 - 31 March 2024, by Country/ NHS region

Country/ NHS region of residence	Kidney donors (pmp)				Kidneys retrieved (pmp)			
	DBD		DCD		DBD		DCD	
North East and Yorkshire	106	(12.9)	102	(12.4)	211	(25.7)	202	(24.6)
North West	67	(8.9)	50	(6.6)	132	(17.6)	98	(13.0)
Midlands	82	(7.5)	95	(8.7)	161	(14.7)	187	(17.1)
East of England	62	(9.7)	91	(14.2)	123	(19.2)	181	(28.3)
London	64	(7.2)	78	(8.8)	128	(14.4)	152	(17.1)
South East	105	(11.2)	98	(10.4)	207	(22.1)	192	(20.5)
South West	68	(11.8)	70	(12.2)	135	(23.4)	139	(24.1)
England	**554**	**(9.7)**	**584**	**(10.2)**	**1097**	**(19.2)**	**1151**	**(20.2)**
Isle of Man	**1**	**(12.5)**	**0**	**(0.0)**	**2**	**(25.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**36**	**(11.5)**	**24**	**(7.7)**	**72**	**(23.0)**	**48**	**(15.3)**
Scotland	**60**	**(11.0)**	**48**	**(8.8)**	**120**	**(22.0)**	**96**	**(17.6)**
Northern Ireland	**34**	**(17.8)**	**30**	**(15.7)**	**68**	**(35.6)**	**60**	**(31.4)**
TOTAL[1]	**725**	**(10.7)**	**722**	**(10.7)**	**1438**	**(21.3)**	**1427**	**(21.1)**

[1] Includes 64 donors with unknown UK postcode (40 DBD and 36 DCD)

5.4 Transplants

The number of kidney transplants by recipient country/NHS region of residence is shown in **Table 5.7**. No adjustments have been made for potential demographic differences in populations. The deceased donor transplant rate ranged from 25.7 to 53.1 pmp across NHS regions and overall was 34.0 pmp. The living donor transplant rate ranged from 8.9 to 15.6 pmp across NHS regions and overall was 13.3 pmp.

Table 5.7 Kidney only transplant rates per million population (pmp), in the UK, 1 April 2023 - 31 March 2024, by country and English NHS region

Country/ NHS region of residence	DBD		DCD		**TOTAL**		Living	
	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
North East and Yorkshire	115	(14.0)	122	(14.8)	237	(28.8)	104	(12.7)
North West	119	(15.8)	121	(16.1)	240	(31.9)	81	(10.8)
Midlands	232	(21.2)	155	(14.1)	387	(35.3)	102	(9.3)
East of England	82	(12.8)	126	(19.7)	208	(32.5)	57	(8.9)
London	251	(28.3)	220	(24.8)	471	(53.1)	124	(14.0)
South East	149	(15.9)	137	(14.6)	286	(30.5)	146	(15.6)
South West	71	(12.3)	77	(13.4)	148	(25.7)	83	(14.4)
England	**1019**	**(17.8)**	**958**	**(16.8)**	**1977**	**(34.6)**	**697**	**(12.2)**
Isle of Man	**3**	**(37.5)**	**2**	**(25.0)**	**5**	**(62.5)**	**0**	**(0.0)**
Channel Islands	**4**	**(23.5)**	**6**	**(35.3)**	**10**	**(58.8)**	**0**	**(0.0)**
Wales	**46**	**(14.7)**	**47**	**(15.0)**	**93**	**(29.7)**	**53**	**(16.9)**
Scotland	**85**	**(15.6)**	**76**	**(13.9)**	**161**	**(29.5)**	**94**	**(17.2)**
Northern Ireland	**15**	**(7.9)**	**34**	**(17.8)**	**49**	**(25.7)**	**53**	**(27.7)**
TOTAL[1,2]	**1173**	**(17.4)**	**1125**	**(16.6)**	**2298**	**(34.0)**	**899**	**(13.3)**

[1] Excludes 10 recipients of a kidney who reside outside of the UK (2 DBD, 1 DCD and 7 living)
[2] Includes 5 recipient with an unknown UK postcode (1DBD, 2 DCD and 1 living)

The number of kidney only transplants at each transplant centre is shown in **Table 5.8** for adult patients only. Kidney transplants from donors after brain death include 1 en bloc kidneys and 14 double kidney transplants in 2023-2024 (2 and 12 in 2022-2023, respectively). Kidney transplants from donors after circulatory death include 1 en bloc and 19 double kidney transplants in 2023-2024 (3 and 11 in 2022-2023, respectively). This table excludes multi-organ transplants: 10 (8) kidney and liver, 127 (121) kidney and pancreas, and 10 (5) kidney and islets in 2023-2024 (2022-2023).

Table 5.8 Adult kidney only transplants in the UK, 1 April 2022 - 31 March 2024, by transplant centre

	2022-2023				2023-2024			
Transplant centre	DBD	DCD	Living donor	TOTAL	DBD	DCD	Living donor	TOTAL
Belfast	28	35	60	123	14	34	53	101
Birmingham	85	58	35	178	101	71	40	212
Bristol	41	45	34	120	40	43	40	123
Cambridge	56	87	17	160	52	82	21	155
Cardiff	33	36	41	110	35	40	42	117
Coventry[1]	23	22	18	63	27	28	20	75
Edinburgh	31	17	37	85	32	30	48	110
Glasgow	47	41	52	140	53	45	43	141
Guy's	89	71	75	235	106	91	82	279
Leeds	63	56	49	168	49	65	36	150
Leicester	41	43	28	112	59	38	24	121
Liverpool	50	23	25	98	47	39	27	113
Manchester	84	81	66	231	85	92	53	230
Newcastle	39	38	48	125	49	28	40	117
Nottingham	25	18	13	56	33	21	10	64
Oxford[1]	52	64	58	174	56	50	55	161
Plymouth	28	15	18	61	16	16	16	48
Portsmouth	43	36	21	100	39	33	32	104
Sheffield	28	20	9	57	20	31	14	65
St George's	54	49	22	125	62	49	45	156
The Royal Free	70	34	33	137	34	64	22	120
The Royal London	58	46	40	144	76	67	33	176
WLRTC	96	66	41	203	57	59	32	148
TOTAL	**1164**	**1001**	**849[2]**	**3014[2]**	**1142**	**1116**	**831[3]**	**3089[3]**

WLRTC - West London Renal and Transplant Centre
[1] As of 1 June 2016 Coventry and Oxford began working in partnership as a transplant network.
[2] Includes 3 transplants performed at London Cromwell Hospital and 6 transplants performed at London Bridge Hospital
[3] Includes 2 transplants performed at London Cromwell Hospital and 1 transplant performed at London Bridge Hospital

Living donor kidney only transplants fell by 2% to 907 in 2023-2024, representing 27% of the total kidney transplant programme. The total number of living donor adult transplants performed by each transplant centre is shown in **Table 5.9**. Also shown is 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.

Most living donor transplants are 'directed'. This means that a kidney is donated to a specific recipient known to the donor - a close family member or friend. There has been a 7% increase in these transplants. In addition, there are a number of 'non-directed' living donor transplants (also known as altruistic donor transplants). Last year 48 such donors donated a kidney to a recipient, 46 of which were transplanted into an adult recipient. Of the 48 non-directed altruistic donors, 32 donated into an altruistic donor chain (10 short (2 transplants each) and 22 long chains (3 transplants each)), benefiting 54 patients in the paired/pooled scheme. The kidneys from the paired donors of these recipients led to 32 adult patients on the deceased donor transplant list receiving a transplant. Thus 48 non-directed altruistic donors created chains benefiting 102 patients in total (100 adult and 2 paediatric patients).

When a potential living donor and recipient are biologically incompatible (blood group or tissue type), they may consider joining a list of others in the same situation with the hope that an exchange of kidneys between them can lead to a compatible living donor transplant. The scheme also includes compatible pairs that would like a better match. This type of exchange is known as paired donation and most exchanges are between two pairs (i.e. two donors and their respective incompatible recipients), or between three pairs. In 2023-2024, there were 97 paired living kidney donor transplants (95 adult and 2 paediatric recipients).

As a percentage of the number of patients on the active transplant list at 31 March 2024, the number of living donor adult transplants in the year was 14% nationally and ranged from 7% to 72% at individual transplant centres.

Table 5.9 Adult living donor kidney transplants in the UK, 1 April 2023 - 31 March 2024, and percentage of active transplant list at 31 March, by transplant centre/region

Transplant centre	Directed	Non-directed (altruistic) to waiting list	Paired/ pooled exchanges	Altruistic donor chain	TOTAL N	TOTAL % list
Belfast	44	1	3	5	**53**	**72**
Birmingham	33	1	3	3	**40**	**9**
Bristol	29	0	6	5	**40**	**19**
Cambridge	18	0	2	1	**21**	**10**
Cardiff	37	1	3	1	**42**	**28**
Coventry[1]	15	1	3	1	**20**	**14**
Edinburgh	41	0	5	2	**48**	**21**
Glasgow	29	2	9	3	**43**	**17**
Guy's	62	2	9	9	**82**	**22**
Leeds	21	1	7	7	**36**	**8**
Leicester	18	0	1	5	**24**	**8**
Liverpool	21	1	3	2	**27**	**14**
Manchester	48	0	2	3	**53**	**9**
Newcastle	29	1	5	5	**40**	**14**
Nottingham	4	1	3	2	**10**	**7**
Oxford[1]	40	1	8	6	**55**	**15**
Plymouth	8	0	4	4	**16**	**15**
Portsmouth	25	0	4	3	**32**	**16**
Sheffield	11	0	2	1	**14**	**11**
St George's	32	0	8	5	**45**	**15**
The Royal Free	18	1	2	1	**22**	**8**
The Royal London	29	3	0	1	**33**	**9**
WLRTC	20	0	3	9	**32**	**8**
TOTAL[2]	**635**	**17[3]**	**95**	**84**	**831**	**14**

[1] As of 1 June 2016 Coventry and Oxford began working in partnership as a transplant network.
[2] Includes 2 directed transplants performed at London Cromwell and 1 at London Bridge
[3] Includes 1 domino donor transplant

Non-directed, altruistic donor kidneys are matched to a suitable recipient on a national basis and thus are rarely used in the transplant centre responsible for the 'work-up' of the donor. The number of non-directed donors according to donor hospital (rather than transplant hospital) and whether the altruistic donor donated as part of a chain within the paired/ pooled scheme or directly to the deceased donor list is shown in **Table 5.10**.

Table 5.10 Non-directed altruistic kidney donors in the UK, 1 April 2022 - 31 March 2024, by donor centre

	2022-2023				2023-2024			
Donor centre	Transplant list	Donation to Chain	**Total**	**%**	Transplant list	Donation to Chain	**Total**	**%**
Belfast	7	4	11	13	7	10	17	35
Birmingham	1	2	3	4	1	3	4	8
Bristol	1	2	3	4	0	1	1	2
Cambridge	0	0	0	0	1	0	1	2
Cardiff	1	3	4	5	0	0	0	0
Coventry[1]	0	1	1	1	1	0	1	2
Edinburgh	1	1	2	2	1	1	2	4
Glasgow	2	3	5	6	0	1	1	2
Guy's	4	6	10	12	0	3	3	6
Leeds	4	4	8	10	0	1	1	2
Leicester	1	0	1	1	0	0	0	0
Liverpool	0	0	0	0	1	2	3	6
Manchester	1	1	2	2	0	2	2	4
Newcastle	0	4	4	5	0	0	0	0
Nottingham	1	3	4	5	1	1	2	4
Oxford[1]	2	2	4	5	2	2	4	8
Plymouth	4	1	5	6	0	0	0	0
Portsmouth	2	8	10	12	0	1	1	2
Sheffield	1	2	3	4	0	0	0	0
St George's	1	0	1	1	0	1	1	2
The Royal Free	0	0	0	0	0	0	0	0
The Royal London	0	2	2	2	1	3	4	8
WLRTC	0	0	0	0	0	0	0	0
Total donors	**34**	**49**	**83**	**100**	**16**	**32**	**48**	**100**

WLRTC - West London Renal and Transplant Centre

[1] As of 1 June 2016 Coventry and Oxford began working in partnership as a transplant network.

The number of deceased donor and living donor transplants in paediatric patients (<18 years) performed by each paediatric transplant centre is shown in **Table 5.11**. There were 76 living donor transplants and 43 deceased donor transplants in paediatric patients in 2023-2024. The paediatric transplant list has increased by 19% from 104 patients at 31 March 2023 to 124 at the end of March 2024.

Table 5.11 Paediatric kidney only transplants in the UK, 1 April 2022 - 31 March 2024, by transplant centre

Transplant centre	2022-2023				2023-2024			
	DBD	DCD	Living donor	TOTAL	DBD	DCD	Living donor	TOTAL
Belfast	0	0	3	3	1	0	3	4
Birmingham	10	5	7	22	9	1	6	16
Bristol	4	1	4	9	4	0	6	10
Glasgow	3	2	6	11	0	1	3	4
Great Ormond Street	7	1	19	27	5	4	16	25
Guy's	6	0	11	17	6	2	11	19
Leeds	3	0	7	10	1	0	7	8
Manchester	5	1	10	16	4	1	11	16
Newcastle	0	0	2	2	0	1	4	5
Nottingham	1	0	6	7	3	0	4	7
Adult centres	1	0	2	3	0	0	5	5
TOTAL	**40**	**10**	**77[1]**	**127**	**33**	**10**	**76[2]**	**119**

[1] Includes 2 non-directed donor transplants, 1 paired living donor transplant and 5 altruistic donor chain (4 as a patient on transplant list at end of chain)
[2] Includes 2 paired living donor transplants and 2 altruistic donor chain

At 31 March 2024, there were approximately 44,900 recipients with a functioning kidney transplant (including multi-organ transplants) being followed-up as reported to the UK Transplant Registry.

Rates of pre-emptive kidney only transplantation are shown in **Table 5.12**. Of the 3,208 kidney only transplant recipients in 2023-2024, dialysis status at time of transplant was reported for 3,039 (95%). Of these 3,039 transplants, 559 (18%) were carried out in pre-dialysis patients.

Pre-emptive transplants accounted for 25% of all paediatric kidney only transplants with reported dialysis status, compared with 18% of those in adults. Living donor transplants are more likely to be carried out before the need for dialysis than deceased donor transplants: 36% and 12% respectively. This is because a living donor transplant can often be carried out more quickly than a deceased donor kidney transplant as the latter often necessitates a long waiting time.

Table 5.12 Pre-emptive kidney only transplants in the UK, 1 April 2023 - 31 March 2024				
	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	2258	2155	(95.4)	(11.8)
Living donor transplant	831	775	(93.3)	(35.7)
Paediatric				
Deceased donor transplant	43	40	(93.0)	(7.5)
Living donor transplant	76	69	(90.8)	(34.8)

The length of time that elapses between a kidney being removed from the donor to its transplantation into the recipient is called total preservation time. Generally, the shorter this time, the more likely the kidney is to work immediately and the better the long-term outcome. The factors which determine this time include a) transportation of the kidney from the retrieval hospital to the hospital where the transplant is performed, b) the need to tissue type the donor and cross-match the donor and potential recipients, c) the occasional necessity of moving the kidney to another hospital if a transplant cannot go ahead, d) contacting and preparing the recipient for the transplant and e) access to the operating theatre. Median total preservation times are shown in addition to inter-quartile ranges in **Table 5.13**.

Table 5.13 Median total preservation time for kidney only transplants in the UK, 1 April 2023 - 31 March 2024				
	Number of kidney only transplants[1]	Median (hours)	Inter-quartile range[2] Q1	Q3
Adult				
DBD donor transplant	1142	13.3	10.0	17.7
DCD donor transplant	1116	13.4	10.5	17.7
Total	**2258**	**13.4**	**10.3**	**17.7**
Paediatric				
DBD donor transplant	33	11.7	10.4	14.3
DCD donor transplant	10	11.6	9.8	13.8
Total	**43**	**11.7**	**10.2**	**14.3**
TOTAL	**2301**	**13.4**	**10.3**	**17.7**

[1] Not all cold ischaemia times are reported
[2] 25% of times are shorter than Q1, 25% are longer than Q3

Kidneys from donors after brain death and some kidneys from donors after circulatory death are allocated on the basis of a national Kidney Offering Scheme which incorporates HLA matching between donor and recipient. These HLA matches are based on four levels which are described in **Table 5.14**. Prior to 11 September 2019 patients with 000 HLA-A, B, DR mismatch (Level 1) were prioritised in the scheme, whereas kidneys were rarely transplanted as a Level 4 mismatch. Under the new scheme, Level 4 mismatches are only permitted for difficult to match patients. More information about the allocation scheme can be found at www.odt.nhs.uk. **Table 5.15** gives the HLA mismatch group for adult and paediatric patients for DBD donor transplants but also for DCD and living donor transplants. For living donor transplantation, many transplants have a poorer HLA match between donor and recipient than deceased donor transplantation. Very often there is no genetic relationship between donor and recipient.

Table 5.14 HLA mismatch groups

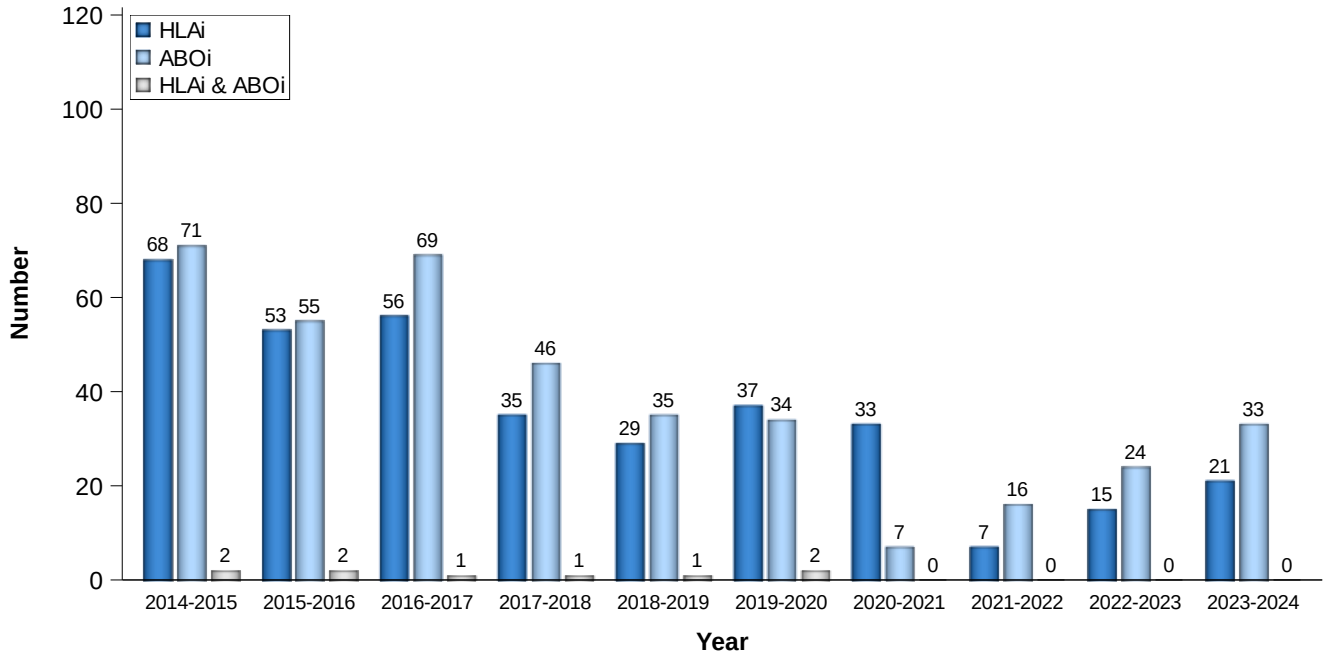
Level	HLA mismatch summary	HLA mismatch combinations included
1	000	000
2	[0 DR and 0/1 B]	100, 010, 110, 200, 210, 001, 101, 201
3	[0 DR and 2 B] or [1 DR and 0/1 B]	020, 120, 220, 011, 111, 211
4	[1 DR and 2 B] or [2 DR]	021, 121, 221, 002, 102, 202, 012, 112, 212, 022, 122, 222

Table 5.15 HLA matching for kidney only transplants in the UK, 1 April 2023 - 31 March 2024

	DBD		DCD		Living	
	N	%	N	%	N	%
Adult						
Level 1 (Best match)	26	(2)	24	(2)	53	(8)
Level 2	299	(26)	246	(22)	106	(17)
Level 3	528	(46)	559	(50)	288	(45)
Level 4	289	(25)	286	(26)	191	(30)
Not reported	0	-	1	-	193	-
Paediatric						
Level 1 (Best match)	2	(6)	1	(10)	0	(0)
Level 2	22	(67)	7	(70)	18	(31)
Level 3	5	(15)	1	(10)	40	(69)
Level 4	4	(12)	1	(10)	0	(0)
Not reported	0	-	0	-	18	-

Often potential living donors and their recipients are HLA or blood group incompatible. Increasingly it is possible to proceed with transplantation across the incompatibilities with appropriate management. The number of HLA and ABO blood group incompatible transplants over the last ten years is shown in **Figure 5.3**. Of the 354 HLA incompatible (HLAi) transplants performed; 171 were deceased donor transplants and 183 were living donor transplants, whilst the vast majority of ABO incompatible (ABOi) transplants were living donor transplants (386 of 390). Due to the nature of reporting HLA incompatible transplants, the numbers presented may be subject to change over time.

Figure 5.3 Incompatible kidney only transplants in the UK, 1 April 2014 - 31 March 2024



5.5 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 5.16** and for living donors and transplants in **Table 5.17**. Note that all percentages quoted are based only on data where relevant information was available.

Table 5.16 Demographic characteristics of deceased kidney donors and transplant recipients, 1 April 2023 - 31 March 2024, and transplant list patients at 31 March

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	38	(3)	43	(2)	124	(2)
	18-34	180	(12)	298	(12)	681	(11)
	35-49	324	(22)	585	(24)	1758	(28)
	50-59	357	(25)	637	(26)	1766	(28)
	60-69	369	(26)	620	(25)	1471	(24)
	70+	179	(12)	265	(11)	450	(7)
	mean (SD)	52	(16)	52	(15)	51	(14)
Sex	Male	863	(60)	1532	(63)	3791	(61)
	Female	584	(40)	916	(37)	2441	(39)
	Unknown	0	-	0	-	18	-
Ethnicity	White	1330	(94)	1487	(63)	3824	(64)
	Asian	48	(3)	487	(21)	1250	(21)
	Black	17	(1)	317	(13)	712	(12)
	Other	14	(1)	83	(3)	197	(3)
	Unknown	38	-	74	-	267	-
Blood group	O	713	(49)	1071	(44)	3319	(53)
	A	523	(36)	891	(36)	1634	(26)
	B	143	(10)	339	(14)	1172	(19)
	AB	63	(4)	147	(6)	125	(2)
	Unknown	5	-	0	-	0	-
Graft number	First graft	-	-	2072	(85)	5118	(82)
	Re-graft	-	-	376	(15)	1132	(18)
TOTAL		**1447**	**(100)**	**2448**	**(100)**	**6250**	**(100)**

Table 5.17 Demographic characteristics of living kidney donors and transplant recipients, 1 April 2023 - 31 March 2024

		Donors		Transplant recipients	
		N	(%)	N	(%)
Age (years)	0-17	0	(0)	76	(8)
	18-34	143	(16)	188	(21)
	35-49	339	(37)	266	(29)
	50-59	253	(28)	205	(23)
	60-69	139	(15)	133	(15)
	70+	33	(4)	39	(4)
	Mean (SD)	48	(12)	44	(17)
Sex	Male	432	(48)	552	(61)
	Female	475	(52)	351	(39)
	Unknown	0	-	4	-
Ethnicity	White	789	(87)	728	(84)
	Asian	68	(8)	80	(9)
	Black	27	(3)	39	(4)
	Other	22	(2)	22	(3)
	Unknown	1	-	38	-
Blood group	O	523	(58)	404	(45)
	A	292	(32)	376	(41)
	B	85	(9)	105	(12)
	AB	7	(1)	22	(2)
Graft number	First graft	-	-	794	(88)
	Re-graft	-	-	113	(12)
TOTAL		**907**	**(100)**	**907**	**(100)**

Pancreas Activity

Key messages

- **The number of patients waiting on the pancreas transplant list increased by 15% during the year, to 334 at 31 March 2024**
- **The number of pancreas donors after brain death fell by 5% to 234, while transplants from donors after brain death decreased by 2% to 99**
- **The number of pancreas donors after circulatory death increased by 5% to 116, while transplants from donors after circulatory death increased by 30% to 60**
- **21 islet transplants were made possible by the pancreas islet transplant programme**

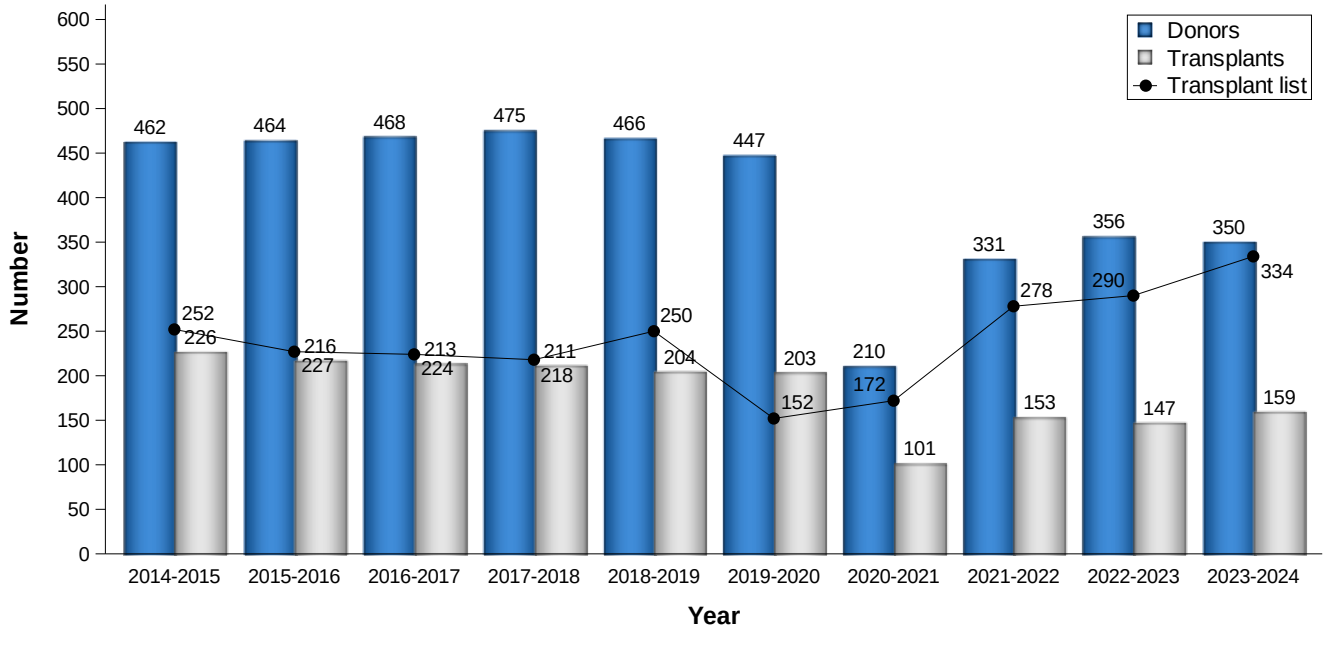
6.1 Overview

The number of patients registered on the active transplant list for a pancreas, simultaneous pancreas/kidney (SPK), simultaneous islet/kidney (SIK), or islet transplant has increased over the last ten years from 252 patients at 31 March 2015 to 334 patients at 31 March 2024. The number of pancreas donors fell from 356 to 350 in the last year. The number of transplants has decreased in the last 10 years to 159 transplants in 2023-2024. A summary of activity for deceased donor pancreas transplants and the transplant list for 1 April 2014 - 31 March 2024 is shown in **Figure 6.1**.

On 11 September 2019, an additional top tier of patients was introduced to the National Pancreas Offering Scheme. Patients in this top tier are either categorised as very difficult to HLA match to a donor or have been waiting for more than 3 years for a pancreas or islet transplant. All other patients appear in subsequent tiers and are prioritised according to a point system based on a range of clinical factors. A score is calculated for every potentially suitable patient and the pancreas is allocated preferentially to the patient with the most points after those in the top tier. Pancreases from donors after brain death and donors after circulatory death are allocated through this scheme. Patients listed for a vascularised pancreas or islet transplant are prioritised through one combined national transplant list.

Throughout this chapter, intestinal transplants involving a pancreas are not included in the pancreas transplant activity reported. Any pancreases retrieved and used for such transplants are however included in the pancreas donor activity. In 2023-2024 there were 18 intestinal transplants including a pancreas. Intestinal transplant activity is reported in Chapter 9.

Figure 6.1 Deceased pancreas and islet programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March



6.2 Transplant list

Table 6.1 shows the number of patients on the active transplant lists at 31 March 2024 by centre. The number of patients registered on the pancreas transplant list increased by 15% in the year: on 31 March 2024, 334 patients were registered active, compared with 290 at the end of March 2023.

Of the 334 patients on the active transplant list at 31 March 2024, 297 (89%) required a SPK transplant (258 at 31 March 2023), 5 (1%) patients required a pancreas only transplant (7 at 31 March 2023) and 32 (10%) were registered for a pancreas islet transplant (including 17 for a SIK transplant).

The outcome of patients registered on the UK pancreas transplant list at 1 April 2023, or subsequently registered during the financial year, is shown in **Table 6.2**. Eight patients joined the pancreas transplant list while 227 joined the list for a kidney and pancreas.

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

Table 6.1 Patients on the pancreas transplant lists at 31 March 2024 (2023) in the UK, by centre

Centre	Active transplant lists											
	Kidney/ pancreas		Kidney/islet		Pancreas alone		Islet				**TOTAL**	
							Routine		Priority			
Cambridge	23	(19)	-	-	0	(0)	-	-	-	-	**23**	**(19)**
Cardiff	13	(10)	-	-	0	(0)	-	-	-	-	**13**	**(10)**
Edinburgh	42	(28)	5	(2)	0	(0)	5	(4)	2	(0)	**54**	**(34)**
Guy's	41	(32)	-	-	0	(0)	-	-	-	-	**41**	**(32)**
King's College	-	-	0	(0)	-	-	0	(0)	0	(0)	**0**	**(0)**
Manchester	90	(88)	7	(8)	3	(3)	1	(0)	2	(1)	**103**	**(100)**
Newcastle	14	(9)	0	(0)	2	(1)	4	(4)	0	(1)	**20**	**(15)**
Oxford	66	(64)	5	(3)	0	(3)	1	(2)	0	(0)	**72**	**(72)**
Royal Free	-	-	0	(0)	-	-	0	(0)	0	(0)	**0**	**(0)**
WLRTC	8	(8)	-	-	0	(0)	-	-	-	-	**8**	**(8)**
TOTAL	**297**	**(258)**	**17**	**(13)**	**5**	**(7)**	**11**	**(10)**	**4**	**(2)**	**334**	**(290)**

WLRTC - West London Renal and Transplant Centre

Table 5.2 Whole pancreas transplant list and new registrations in the UK, 1 April 2023 - 31 March 2024

Outcome of patient at 31 March 2024	Active and suspended patients at 1 April 2023		New registrations in 2023-2024[1]		TOTAL	
	N	%	N	%	**N**	**%**
Pancreas transplant list						
Remained active/suspended	50	74	5	63	55	72
Transplanted	6	9	3	38	9	12
Removed	10	15	0	0	10	13
Died	2	3	0	0	2	3
TOTAL	**68**		**8**		**76**	
Kidney/pancreas transplant list						
Remained active/suspended	295	64	203	89	498	72
Transplanted	115	25	16	7	131	19
Removed[2]	31	7	5	2	36	5
Died	21	5	3	1	24	3
TOTAL	**462**		**227**		**689**	

[1] Includes re-registrations for second or subsequent transplants
[2] Includes 6 patients removed from kidney/pancreas list and made active on kidney/islet list

The active pancreas transplant list rates by country/NHS region of patient's residence are shown in **Table 6.3**. At 31 March 2024, the overall transplant list rate was 4.9 pmp and across NHS regions ranged from 3.4 to 6.3 pmp.

Table 6.3 Active pancreas, kidney/pancreas, and islet transplant list at 31 March, by Country/ NHS region of patient residence

Country/ NHS region of residence	Pancreas/Islet transplant list (pmp) 2024		2023	
North East and Yorkshire	47	(5.7)	42	(5.1)
North West	47	(6.3)	50	(6.6)
Midlands	41	(3.7)	59	(5.4)
East of England	22	(3.4)	11	(1.7)
London	39	(4.4)	30	(3.4)
South East	36	(3.8)	31	(3.3)
South West	22	(3.8)	16	(2.8)
England	**254**	**(4.4)**	**239**	**(4.2)**
Isle of Man	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**1**	**(5.9)**	**0**	**(0.0)**
Wales	**24**	**(7.7)**	**14**	**(4.5)**
Scotland	**51**	**(9.4)**	**32**	**(5.9)**
Northern Ireland	**3**	**(1.6)**	**3**	**(1.6)**
TOTAL[1]	**334**	**(4.9)**	**290**	**(4.3)**

[1]Includes patients in 2024 (2023) residing in: Unspecified UK 1 (2)

An indication of longer-term outcomes for patients listed for a pancreas or kidney/pancreas transplant is shown in **Figure 6.2**. This shows the proportion of patients transplanted or still waiting six months, one year, two years, and three years after joining the list. It also shows the proportion removed from the transplant list (typically because they become too unwell for transplant) and those dying while on the transplant list. 23% of patients are transplanted within one year, while three years after listing 65% of patients have received a transplant. The median (average) waiting time for a pancreas transplant is 431 days and is shown by blood group in **Table 6.4** and ethnicity in **Table 6.5**. 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.

Figure 6.2 **Post-registration outcome for 140 new pancreas only and kidney/pancreas registrations made in the UK, 1 April 2020 - 31 March 2021**

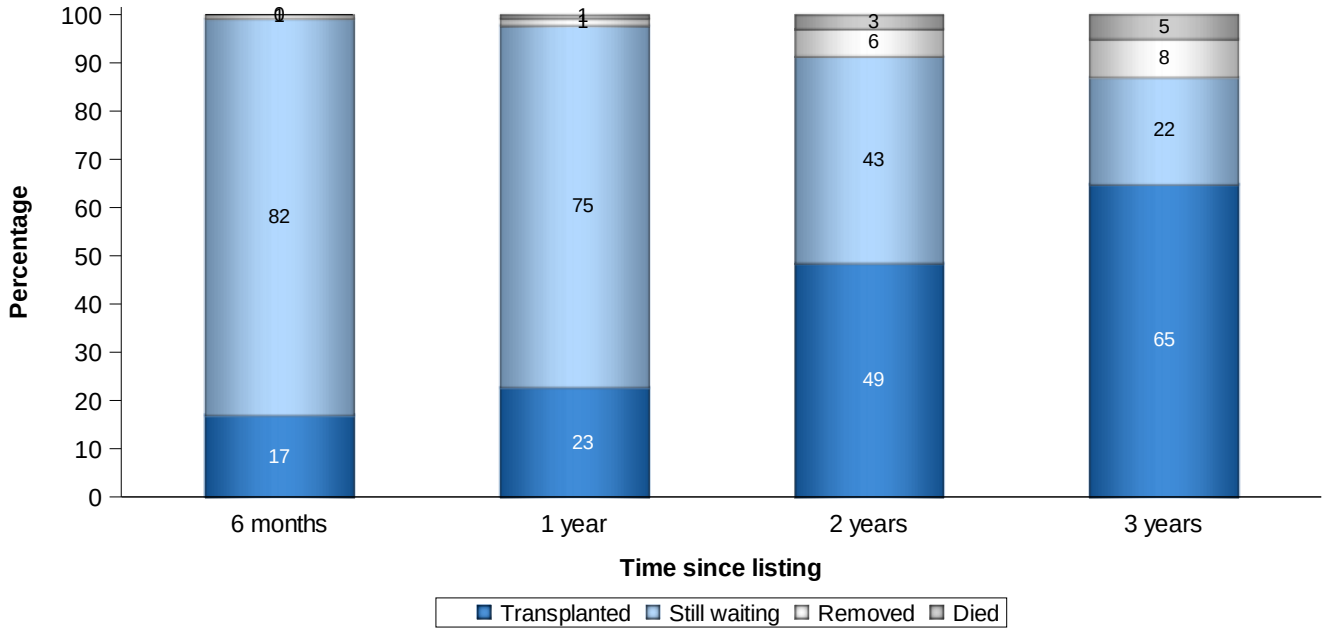


Table 6.4 **Median waiting time to pancreas only and kidney/pancreas transplant in the UK, for patients registered 1 April 2018 - 31 March 2022**

Blood group	Number of patients registered	Waiting time (days) Median	95% Confidence interval
Adult			
O	388	591	521 - 661
A	354	307	274 - 340
B	98	436	355 - 517
AB	34	130	109 - 151
TOTAL	**874**	**431**	**405 - 457**

Table 6.5 **Median waiting time to pancreas only and kidney/pancreas transplant in the UK, for patients registered 1 April 2018 - 31 March 2022**

Ethnicity	Number of patients registered	Waiting time (days) Median	95% Confidence interval
Adult			
White	752	436	409 - 463
Asian	59	449	264 - 634
Black	39	295	3 - 587
Other	18	418	209 - 627
TOTAL[1]	**874**	**431**	**405 - 457**

[1] Includes 6 recipients with unknown ethnicity

6.3 Donor and organ supply

Of the 772 organ donors after brain death in the UK in 2023-2024, 234 (30%) donated a pancreas. There were 116 pancreas donors after circulatory death in 2023-2024. **Table 6.6** shows this activity by country/NHS region of the donor's residence. No adjustments have been made for potential demographic differences in populations.

The overall rate for pancreas donors after brain death is 3.5 pmp, with rates ranging from 2.4 to 4.0 pmp across NHS regions and for donors after circulatory death is 1.7 pmp, with rates ranging from 1.1 to 2.0 pmp across NHS regions.

Table 6.6 Pancreas donation rates for deceased donors in the UK, 1 April 2023 - 31 March 2024, by Country/ NHS region

Country/ NHS region of residence	Pancreas donors (pmp)					
	DBD		DCD		**TOTAL**	
North East and Yorkshire	33	(4.0)	16	(1.9)	49	(6.0)
North West	20	(2.7)	12	(1.6)	32	(4.3)
Midlands	29	(2.6)	17	(1.6)	46	(4.2)
East of England	22	(3.4)	13	(2.0)	35	(5.5)
London	21	(2.4)	10	(1.1)	31	(3.5)
South East	36	(3.8)	13	(1.4)	49	(5.2)
South West	20	(3.5)	10	(1.7)	30	(5.2)
England	**181**	**(3.2)**	**91**	**(1.6)**	**272**	**(4.8)**
Isle of Man	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**10**	**(3.2)**	**2**	**(0.6)**	**12**	**(3.8)**
Scotland	**19**	**(3.5)**	**10**	**(1.8)**	**29**	**(5.3)**
Northern Ireland	**14**	**(7.3)**	**4**	**(2.1)**	**18**	**(9.4)**
TOTAL[1]	**234**	**(3.5)**	**116**	**(1.7)**	**350**	**(5.2)**

[1] Includes 19 donors with unknown UK postcode (10 DBD and 9 DCD)

6.4 Transplants

The number of pancreas and islet transplants by recipient country/NHS region of residence is shown in **Table 6.7**. No adjustments have been made for potential demographic differences in populations. For donors after brain death, the transplant rate ranged from 0.3 to 2.3 pmp across NHS regions and overall was 1.5 pmp. For donors after circulatory death, the overall rate was 0.9 pmp and ranged from 0.5 to 1.5 pmp across NHS regions.

Table 6.7 Pancreas and islet transplant rates per million population (pmp), in the UK, 1 April 2023 - 31 March 2024, by country and English NHS region

Country/ NHS region of residence	DBD		DCD		TOTAL	
	N	(pmp)	N	(pmp)	N	(pmp)
North East and Yorkshire	15	(1.8)	5	(0.6)	20	(2.4)
North West	10	(1.3)	8	(1.1)	18	(2.4)
Midlands	25	(2.3)	16	(1.5)	41	(3.7)
East of England	2	(0.3)	9	(1.4)	11	(1.7)
London	8	(0.9)	4	(0.5)	12	(1.4)
South East	11	(1.2)	7	(0.7)	18	(1.9)
South West	6	(1.0)	4	(0.7)	10	(1.7)
England	**77**	**(1.3)**	**53**	**(0.9)**	**130**	**(2.3)**
Isle of Man	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**6**	**(1.9)**	**3**	**(1.0)**	**9**	**(2.9)**
Scotland	**13**	**(2.4)**	**3**	**(0.6)**	**16**	**(2.9)**
Northern Ireland	**2**	**(1.0)**	**1**	**(0.5)**	**3**	**(1.6)**
TOTAL[1]	**99**	**(1.5)**	**60**	**(0.9)**	**159**	**(2.4)**

[1] Includes 1 DBD donor with unknown UK postcode

There were 159 deceased donor pancreas and islet transplants in 2023-2024, more than the 147 transplants performed in 2022-2023. Of these 159, 127 (80%) were SPK transplants, 11 (7%) were pancreas only transplants (pancreas alone (PTA) or pancreas after kidney (PAK)) and 21 (13%) were islet transplants (including 10 SIK). The number of transplants performed at each centre is shown in **Table 6.8** by transplant type and **Table 6.9** by transplant and donor type. Note that King's College and The Royal Free only perform islet transplants. Cambridge, Guy's, WLRTC and Cardiff only perform pancreas transplants.

The length of time that elapses between a pancreas being removed from the donor to its transplantation into the recipient is called the total preservation time. Generally, the shorter this time, the more likely the pancreas is to work immediately and the better the long-term outcome. In 2023-2024, the median time for a DBD donor whole pancreas transplant is 11.5 hours (Inter-Quartile (IQ) range 10.6 – 13.1) and for a DCD donor transplant is 10.8 hours (IQ range 9.1 – 12.6) and overall is 11.3 hours (IQ range 10.2 – 12.7).

At 31 March 2024, there were approximately 2,200 recipients with a functioning pancreas transplant (including multi-organ transplants) being followed-up, as reported to the UK Transplant Registry.

Table 6.8 Pancreas and islet transplants, 1 April 2023 - 31 March 2024 (2022-2023) by centre

Centre	Transplant type											
	SPK		SIK		PTA		PAK		Islet			
									Routine		Priority	
Cambridge	18	(15)	-	-	0	(0)	1	(0)	-	-	-	-
Cardiff	12	(7)	-	-	0	(0)	0	(2)	-	-	-	-
Edinburgh	8	(16)	4	(2)	0	(0)	0	(0)	4	(3)	2	(4)
Guy's	10	(21)	-	-	0	(0)	0	(0)	-	-	-	-
King's College	-	-	0	(0)	-	-	-	-	0	(0)	0	(0)
Manchester	26	(17)	5	(3)	0	(3)	3	(0)	1	(0)	1	(2)
Newcastle	7	(8)	0	(0)	1	(0)	0	(0)	0	(2)	1	(1)
Oxford	40	(32)	1	(0)	4	(2)	2	(1)	2	(1)	0	(0)
Royal Free	-	-	0	(0)	-	-	-	-	0	(0)	0	(0)
WLRTC	6	(5)	-	-	0	(0)	0	(0)	-	-	-	-
TOTAL	**127**	**(121)**	**10**	**(5)**	**5**	**(5)**	**6**	**(3)**	**7**	**(6)**	**4**	**(7)**

WLRTC - West London Renal and Transplant Centre

Table 6.9 Pancreas and islet transplants, 1 April 2023 - 31 March 2024 by centre and donor type

Centre	Transplant and donor type									
	SPK		SIK		PTA/PAK		Islet		TOTAL	
	DBD	DCD	DBD	DCD	DBD	DCD	DBD	DCD	DBD	DCD
Cambridge	6	12	-	-	1	0	-	-	**7**	**12**
Cardiff	8	4	-	-	0	0	-	-	**8**	**4**
Edinburgh	7	1	1	3	0	0	6	0	**14**	**4**
Guy's	5	5	-	-	0	0	-	-	**5**	**5**
King's College	-	-	0	0	-	-	0	0	**0**	**0**
Manchester	16	10	3	2	2	1	2	0	**23**	**13**
Newcastle	5	2	0	0	1	0	1	0	**7**	**2**
Oxford	22	18	1	0	6	0	2	0	**31**	**18**
Royal Free	-	-	0	0	-	-	0	0	**0**	**0**
WLRTC	4	2	-	-	0	0	-	-	**4**	**2**
TOTAL	**73**	**54**	**5**	**5**	**10**	**1**	**11**	**0**	**99**	**60**

WLRTC - West London Renal and Transplant Centre

6.5 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 6.10**.

Table 6.10 Demographic characteristics of deceased pancreas donors and transplant recipients, 1 April 2023 - 31 March 2024, and transplant list patients at 31 March

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	30	(9)	0	(0)	0	(0)
	18-34	110	(31)	26	(16)	79	(24)
	35-49	125	(36)	86	(54)	185	(55)
	50-59	80	(23)	38	(24)	65	(19)
	60-69	4	(1)	9	(6)	5	(1)
	70+	1	(0)	0	(0)	0	(0)
	Mean (SD)	37	(14)	44	(9)	41	(9)
Sex	Male	194	(55)	83	(52)	165	(49)
	Female	156	(45)	76	(48)	169	(51)
Ethnicity	White	322	(95)	133	(86)	287	(88)
	Asian	7	(2)	11	(7)	16	(5)
	Black	5	(1)	7	(5)	16	(5)
	Other	6	(2)	4	(3)	9	(3)
	Unknown	10	-	4	-	6	-
Blood group	O	170	(49)	60	(38)	201	(60)
	A	134	(39)	70	(44)	89	(27)
	B	32	(9)	22	(14)	39	(12)
	AB	12	(3)	7	(4)	5	(1)
	Unknown	2	-	0	-	0	-
Graft number	First graft	-	-	142	(89)	303	(91)
	Re-graft	-	-	17	(11)	31	(9)
TOTAL		**350**	**(100)**	**159**	**(100)**	**334**	**(100)**

Cardiothoracic Activity

Key messages

- **At 31 March 2024, there were 289 patients on the active heart transplant list, 267 on the lung list and 8 on the heart-lung list**
- **Of the 772 organ donors after brain death during 2023-2024, 172 (22%) donated their heart and 111 (14%) donated at least one lung**
- **The number of heart transplants increased by 11% to 237; 53% of these were urgent heart transplants, 22% were super-urgent, and 25% were non-urgent**
- **The number of lung and heart-lung transplants increased by 39% this year to 140; 18% of these were urgent lung transplants, 1% were super-urgent, and 78% were non-urgent.**
- **There were 65 DCD heart transplants in 2023-2024, 10 more than the previous year.**

7.1 Overview

Last year the number of heart transplants increased by 11% to 237 compared with 2022-2023, and the number of lung or heart-lung transplants increased by 39% to 140. There were decreases in both the lung transplant list and the heart transplant list compared with 2022-2023. The number of patients active on the heart transplant list at year end has increased by 8% since 2015, while the number of patients active on the lung or heart-lung transplant list has fallen by 19% since 2015.

A summary of the deceased donor cardiothoracic activity from 1 April 2014 to 31 March 2024 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**.

Figure 7.1 Deceased donor heart programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March

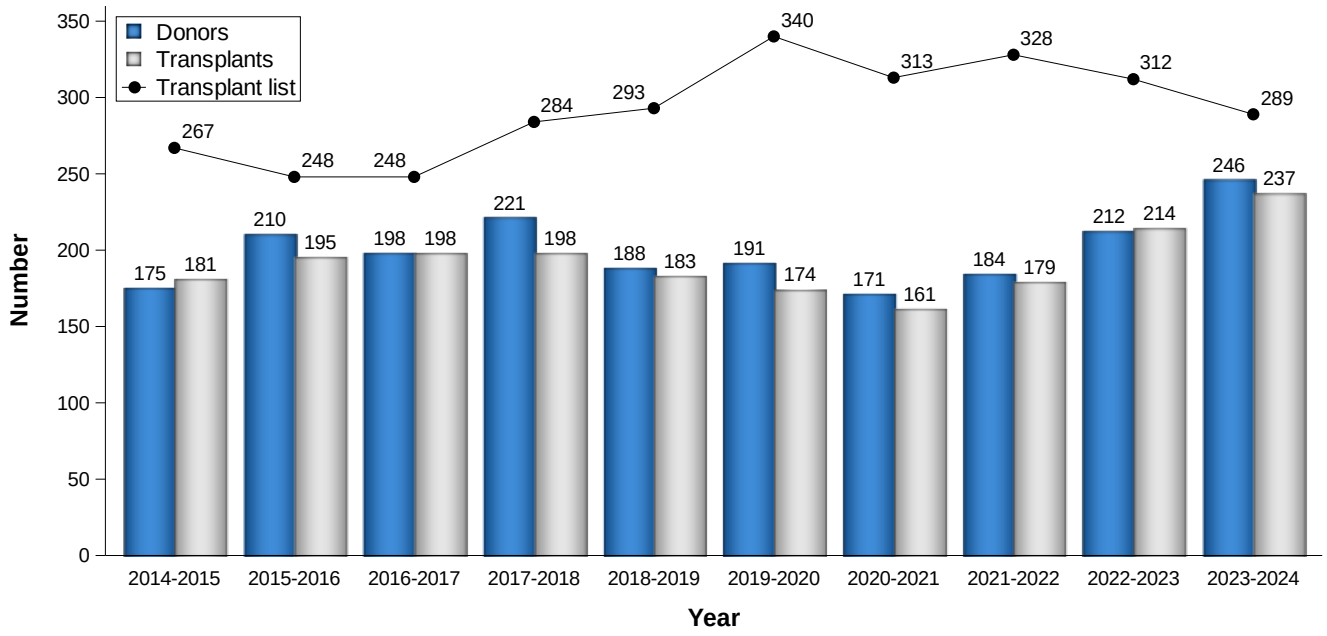
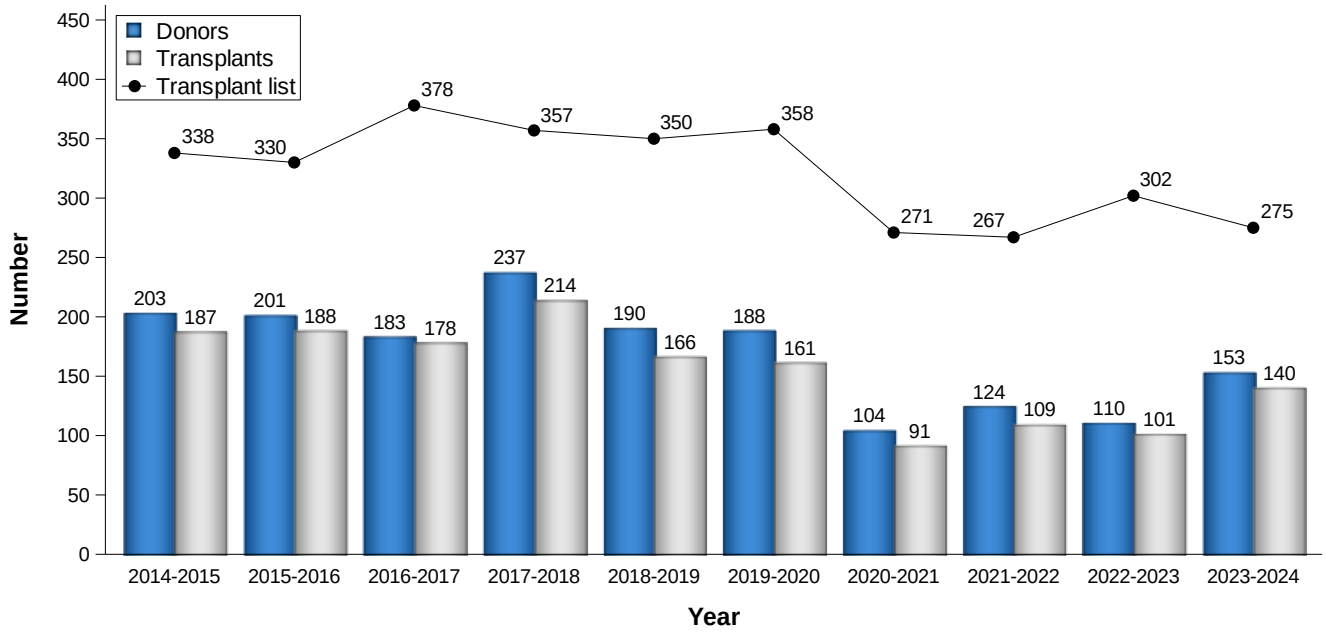


Figure 7.2 Deceased donor lung and heart-lung programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March



7.2 Transplant list

Table 7.1 shows the number of patients on the active transplant lists at 31 March 2024 by centre. There were six patients waiting on the super-urgent 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 2024.

Table 7.1 Patients on the cardiothoracic transplant lists at 31 March 2023 (2022) in the UK, by centre

Centre	Active transplant lists														TOTAL	
	Heart						Heart-lung		Lung							
	Non-urgent		Urgent		Super-urgent				Non-urgent		Urgent		Super-urgent			
Adult																
Birmingham	34	(38)	5	(3)	3	(0)	0	(3)	37	(37)	0	(0)	0	(0)	**79**	**(81)**
Glasgow	13	(15)	3	(4)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	**16**	**(19)**
Great Ormond Street	0	(1)	1	(1)	0	(0)	0	(0)	0	(0)	1	(0)	0	(0)	**2**	**(2)**
Harefield	47	(49)	3	(9)	1	(1)	0	(1)	54	(79)	1	(1)	0	(0)	**106**	**(140)**
Manchester	34	(29)	1	(2)	1	(0)	2	(0)	41	(34)	1	(1)	0	(0)	**80**	**(66)**
Newcastle	56	(62)	9	(12)	1	(0)	2	(2)	91	(80)	3	(2)	0	(0)	**162**	**(158)**
Papworth	40	(34)	3	(4)	0	(0)	2	(3)	28	(42)	0	(1)	0	(0)	**73**	**(84)**
TOTAL	**224**	**(228)**	**25**	**(35)**	**6**	**(1)**	**6**	**(9)**	**251**	**(272)**	**6**	**(5)**	**0**	**(0)**	**518**	**(550)**
Paediatric																
Great Ormond Street	12	(19)	5	(8)	0	(0)	1	(2)	7	(9)	1	(2)	0	(0)	**26**	**(40)**
Newcastle	12	(15)	5	(6)	0	(0)	1	(1)	2	(2)	0	(0)	0	(0)	**20**	**(24)**
TOTAL	**24**	**(34)**	**10**	**(14)**	**0**	**(0)**	**2**	**(3)**	**9**	**(11)**	**1**	**(2)**	**0**	**(0)**	**46**	**(64)**

During 2023-2024, there were 301 registrations onto the heart transplant list, 8 registrations onto the heart-lung transplant list and 200 onto the lung transplant list. Registration outcomes as at 31 March 2024 for patients on the list at 1 April 2023 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 2023 - 31 March 2024

Outcome of patient at 31 March 2024	Active and suspended patients at 1 April 2023		New registrations in 2023-2024[1]		TOTAL	
	N	%	N	%	N	%
Heart transplant list						
Remained active/suspended	252	66	123	41	375	55
Transplanted	89	23	145	48	234	34
Removed	36	9	24	8	60	9
Died	3	1	9	3	12	2
TOTAL	**380**		**301**		**681**	
Heart-lung transplant list						
Remained active/suspended	7	50	3	38	10	45
Transplanted[2]	2	14	3	38	5	23
Removed	3	21	2	25	5	23
Died	2	14	0	0	2	9
TOTAL	**14**		**8**		**22**	
Lung transplant list						
Remained active/suspended	163	55	116	58	279	56
Transplanted	74	25	60	30	134	27
Removed	37	12	7	4	44	9
Died	23	8	17	9	40	8
TOTAL	**297**		**200**		**497**	

[1] Includes re-registrations for second or subsequent transplant
[2] Patients may have received heart, lung, or heart-lung

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 2024 was 4.3 pmp and ranged from 2.8 to 5.1 across NHS regions. The overall UK lung transplant list rate was 4.1 pmp and ranged from 2.2 to 6.7 across NHS regions.

Table 7.3 Active cardiothoracic transplant list at 31 March, by country/NHS region of patient residence

Country/ NHS region of residence	Heart transplant list (pmp) 2024		2023		Lung transplant list (pmp) 2024		2023	
North East and Yorkshire	42	(5.1)	49	(6.0)	55	(6.7)	47	(5.7)
North West	29	(3.9)	32	(4.3)	36	(4.8)	30	(4.0)
Midlands	49	(4.5)	46	(4.2)	39	(3.6)	54	(4.9)
East of England	18	(2.8)	20	(3.1)	14	(2.2)	25	(3.9)
London	27	(3.0)	37	(4.2)	27	(3.0)	40	(4.5)
South East	43	(4.6)	43	(4.6)	24	(2.6)	29	(3.1)
South West	23	(4.0)	23	(4.0)	21	(3.6)	23	(4.0)
England	**231**	**(4.0)**	**250**	**(4.4)**	**216**	**(3.8)**	**248**	**(4.3)**
Isle of Man	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**1**	**(5.9)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**13**	**(4.2)**	**14**	**(4.5)**	**10**	**(3.2)**	**12**	**(3.8)**
Scotland	**24**	**(4.4)**	**29**	**(5.3)**	**33**	**(6.1)**	**29**	**(5.3)**
Northern Ireland	**19**	**(9.9)**	**17**	**(8.9)**	**15**	**(7.9)**	**12**	**(6.3)**
TOTAL[1,2]	**289**	**(4.3)**	**312**	**(4.6)**	**275**	**(4.1)**	**302**	**(4.5)**

[1]Includes heart patients in 2024 (2023) residing in: Republic of Ireland 2 (1)
[2]Includes lung patients in 2024 (2023) residing in: Unspecified UK 1 (1)

The transplant list outcomes for adult patients listed for a cardiothoracic organ transplant between 1 April 2020 and 31 March 2021 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, 14% of non-urgent heart patients were transplanted while 4% had died, compared with 49% transplanted and 7% died for urgent heart patients. Of those listed for a non-urgent lung transplant, 20% were transplanted within six months, rising to 36% 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.

Figure 7.3 **Post-registration outcome for 132 first non-urgent heart only registrations made in the UK, 1 April 2020 - 31 March 2021**

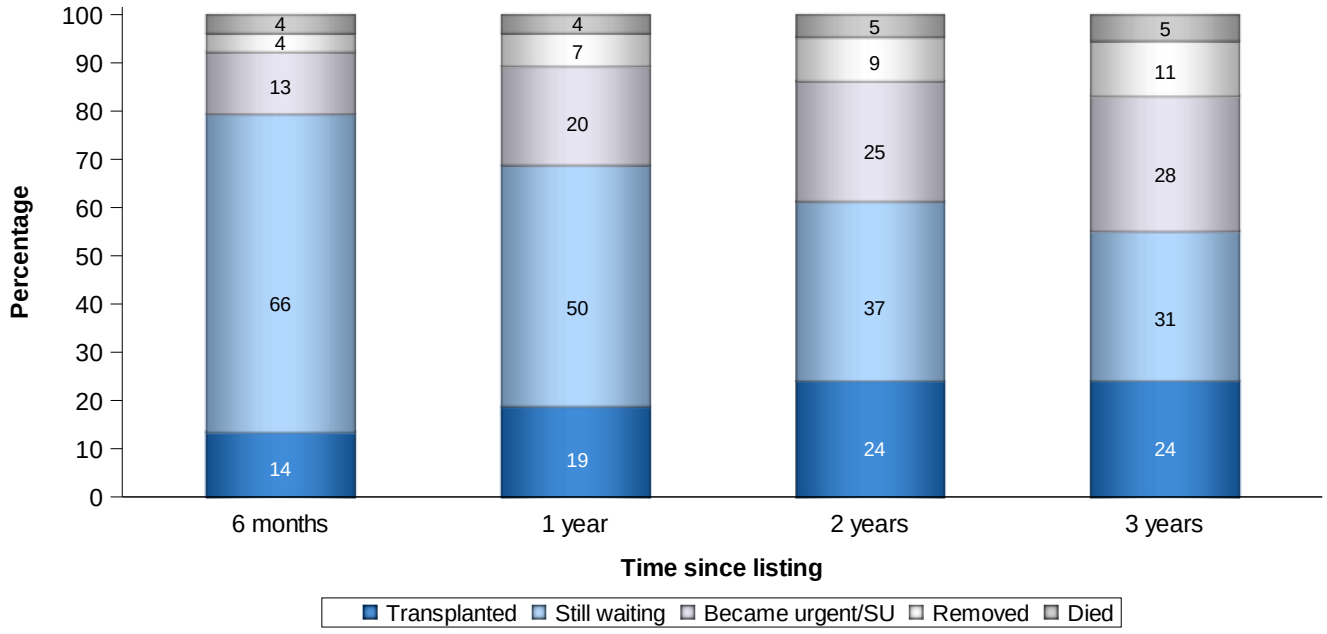


Figure 7.4 **Post-registration outcome for 144 first urgent heart only registrations made in the UK, 1 April 2020 - 31 March 2021**

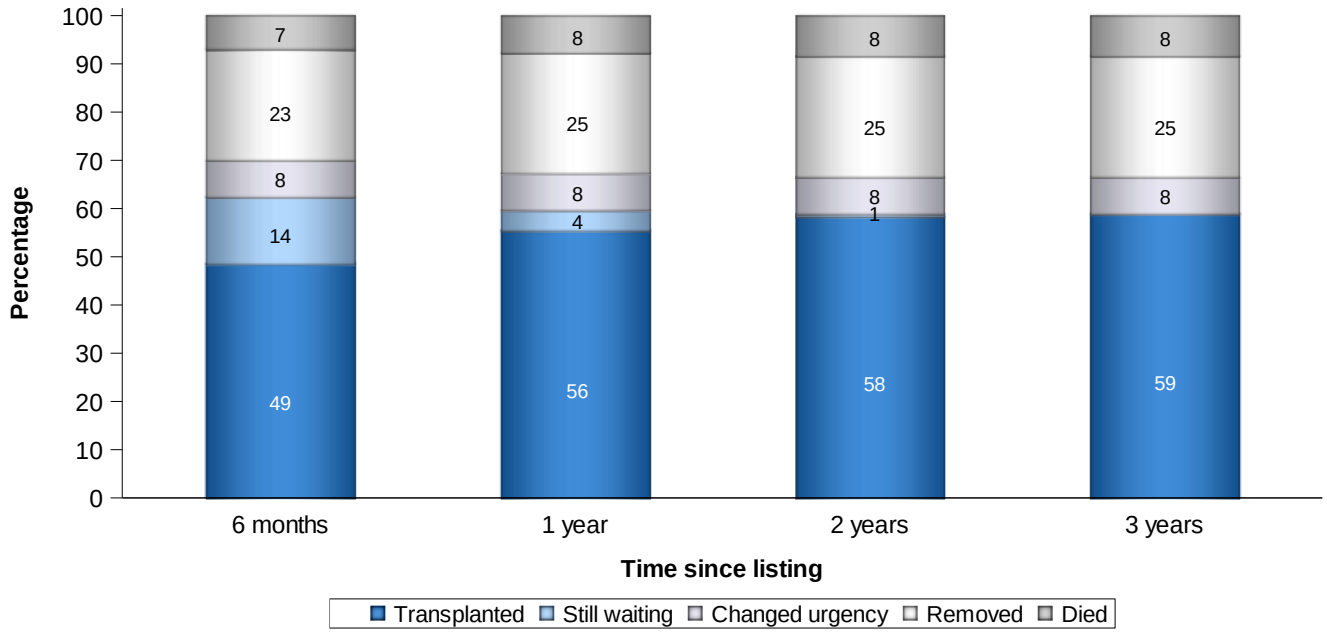


Figure 7.5 Post-registration outcome for 122 first non-urgent lung only registrations made in the UK, 1 April 2020 - 31 March 2021

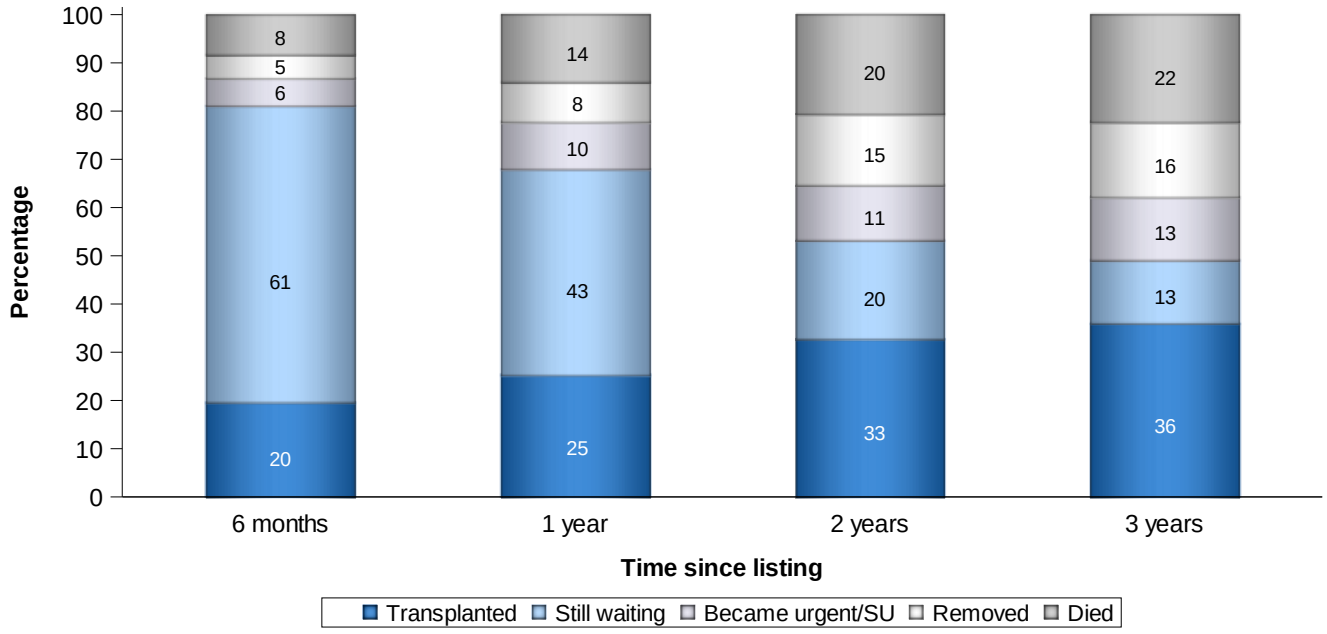


Table 7.4 and **Table 7.5** show the median waiting time to cardiothoracic organ transplant by blood group and ethnicity of patient, respectively, for patients registered between 1 April 2015 and 31 March 2021. The overall median waiting time to non-urgent heart transplantation for adult patients who 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 47 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 546 days, but for blood group O patients alone was longer, at 753 days. The overall median time to urgent lung transplant was 19 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 821 days for non-urgent registrations and 109 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 202 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.

Table 7.4 Median waiting time to cardiothoracic transplant in the UK, for patients registered 1 April 2015 - 31 March 2021

Blood group	Number of patients registered	Waiting time (days) Median	95% Confidence interval
Adult non-urgent heart[1]			
O	224	-	-
A	246	1434	873 - 1995
B	54	1828	759 - 2897
AB	17	693	63 - 1323
TOTAL	**541**	**2189**	**-**
Adult urgent heart[2]			
O	317	66	53 - 79
A	321	34	29 - 39
B	94	63	38 - 88
AB	40	30	19 - 41
TOTAL	**772**	**47**	**41 - 53**
Adult super-urgent heart	**187**	**13**	**9 - 17**
Paediatric non-urgent heart[1]	**60**	**821**	**446 - 1196**
Paediatric urgent heart[2]	**224**	**109**	**83 - 135**
Adult non-urgent lung[1]			
O	595	753	591 - 915
A	561	337	263 - 411
B	116	709	371 - 1047
AB	46	238	97 - 379
TOTAL	**1318**	**546**	**476 - 616**
Adult urgent lung[2]	**157**	**19**	**12 - 26**
Paediatric non-urgent lung[1]	**28**	**202**	**52 - 352**

- 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

Table 7.5 Median waiting time to cardiothoracic transplant in the UK, for patients registered 1 April 2015 - 31 March 2021

Ethnicity	Number of patients registered	Waiting time (days) Median	95% Confidence interval
Adult non-urgent heart[1]			
White	479	2082	-
Asian	40	-	-
Black	13	-	-
Other	0	-	-
TOTAL[3]	**541**	**2189**	-
Adult urgent heart[2]			
White	635	47	42 - 52
Asian	81	43	18 - 68
Black	42	32	0 - 69
Other	12	59	0 - 127
TOTAL[4]	**772**	**47**	**41 - 53**
Adult super-urgent heart	**187**	**13**	**9 - 17**
Paediatric non-urgent heart[1]	**60**	**821**	**446 - 1196**
Paediatric urgent heart	**224**	**109**	**83 - 135**
Adult non-urgent lung[1]			
White	1231	530	455 - 605
Asian	54	-	-
Black	23	1171	574 - 1768
Other	10	369	0 - 859
TOTAL	**1318**	**546**	**476 - 616**
Adult urgent lung[2]	**157**	**19**	**12 - 26**
Paediatric non-urgent lung[1]	**28**	**202**	**52 - 352**

- 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 9 patients whose ethnicity was not reported

[4] Includes 2 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 during 2023-2024, 172 (22%) donated their heart, resulting in 170 transplants. Of the 738 DCD donors, 74 (10%) donated their heart, resulting in 65 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, 111 (14%) donated at least one lung, with 108 proceeding to transplantation. Of the 738 DCD donors, 42 (6%) donated at least one lung, with 32 proceeding to transplantation.

Table 7.6 Heart organ donation and retrieval rates in the UK, 1 April 2023 - 31 March 2024, by heart allocation zone and donor type

Heart Allocation Zone	DBD Number of donors	DBD Number of heart donors (utilised)		DBD Number donated heart and lungs	DCD Number of donors	DCD Number of heart donors (utilised)		DCD Number donated heart and lungs
Birmingham	121	28	(28)	10	106	10	(10)	4
Glasgow	97	26	(25)	3	85	14	(12)	4
Harefield	179	28	(28)	11	180	11	(8)	1
Manchester	84	17	(17)	8	70	4	(4)	0
Newcastle	165	40	(39)	16	150	20	(19)	1
Papworth	126	33	(33)	8	147	15	(12)	5
TOTAL	**772**	**172**	**(170)**	**56**	**738**	**74**	**(65)**	**15**

Table 7.7 Lung organ donation and retrieval rates in the UK, 1 April 2023 - 31 March 2024, by lung allocation zone and donor type

Lung Allocation Zone	DBD Number of donors	DBD Number of lung donors (utilised)		DBD Number donated heart and lungs	DCD Number of donors	DCD Number of lung donors (utilised)		DCD Number donated heart and lungs
Birmingham	117	16	(15)	9	115	8	(6)	4
Harefield	173	21	(21)	11	174	9	(8)	2
Manchester	102	14	(14)	8	88	4	(2)	1
Newcastle	224	37	(36)	18	211	14	(11)	4
Papworth	156	23	(22)	10	149	7	(5)	4
TOTAL	**772**	**111**	**(108)**	**56**	**738**	**42**	**(32)**	**15**

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 3.6 pmp in 2023-2024 and varied across NHS regions from 2.0 pmp to 5.1 pmp. For lungs, the overall donor rate was 2.3 pmp in 2023-2024 and varied across NHS regions from 1.3 pmp to 3.0 pmp.

Table 7.8 Cardiothoracic donation rates for deceased donors in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region

Country/ NHS region of residence	Heart (pmp)						Lung(s) (pmp)					
	DBD		DCD		**TOTAL**		DBD		DCD		**TOTAL**	
North East and Yorkshire	31	(3.8)	11	(1.3)	42	(5.1)	21	(2.6)	4	(0.5)	25	(3.0)
North West	10	(1.3)	5	(0.7)	15	(2.0)	8	(1.1)	2	(0.3)	10	(1.3)
Midlands	20	(1.8)	10	(0.9)	30	(2.7)	15	(1.4)	5	(0.5)	20	(1.8)
East of England	14	(2.2)	7	(1.1)	21	(3.3)	9	(1.4)	3	(0.5)	12	(1.9)
London	15	(1.7)	6	(0.7)	21	(2.4)	8	(0.9)	5	(0.6)	13	(1.5)
South East	24	(2.6)	5	(0.5)	29	(3.1)	18	(1.9)	6	(0.6)	24	(2.6)
South West	12	(2.1)	10	(1.7)	22	(3.8)	7	(1.2)	7	(1.2)	14	(2.4)
England	**126**	**(2.2)**	**54**	**(0.9)**	**180**	**(3.2)**	**86**	**(1.5)**	**32**	**(0.6)**	**118**	**(2.1)**
Isle of Man	**0**	**(0.0)**	**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)**	**0**	**(0.0)**
Wales	**8**	**(2.6)**	**2**	**(0.6)**	**10**	**(3.2)**	**6**	**(1.9)**	**1**	**(0.3)**	**7**	**(2.2)**
Scotland	**19**	**(3.5)**	**7**	**(1.3)**	**26**	**(4.8)**	**9**	**(1.7)**	**7**	**(1.3)**	**16**	**(2.9)**
Northern Ireland	**10**	**(5.2)**	**6**	**(3.1)**	**16**	**(8.4)**	**5**	**(2.6)**	**2**	**(1.0)**	**7**	**(3.7)**
TOTAL[1]	**172**	**(2.5)**	**74**	**(1.1)**	**246**	**(3.6)**	**111**	**(1.6)**	**42**	**(0.6)**	**153**	**(2.3)**

[1] Includes 14 heart (9 DBD and 5 DCD) and 5 lung (5 DBD) with an unknown UK postcode

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 2.5 to 3.8 pmp across NHS regions and overall was 3.5 pmp. The lung transplant rate ranged from 1.1 to 2.7 pmp across NHS regions and overall was 2.1 pmp. Lung transplant rates include the small number of heart-lung transplants.

Table 7.9 Cardiothoracic transplant rates per million population (pmp) in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region

Country/ NHS region of residence	Heart (pmp)						Lung(s) (pmp)					
	DBD		DCD		**TOTAL**		DBD		DCD		**TOTAL**	
North East and Yorkshire	18	(2.2)	6	(0.7)	24	(2.9)	7	(0.9)	5	(0.6)	12	(1.5)
North West	21	(2.8)	4	(0.5)	25	(3.3)	14	(1.9)	5	(0.7)	19	(2.5)
Midlands	31	(2.8)	8	(0.7)	39	(3.6)	26	(2.4)	4	(0.4)	30	(2.7)
East of England	8	(1.3)	8	(1.3)	16	(2.5)	11	(1.7)	4	(0.6)	15	(2.3)
London	21	(2.4)	13	(1.5)	34	(3.8)	8	(0.9)	2	(0.2)	10	(1.1)
South East	23	(2.5)	3	(0.3)	26	(2.8)	15	(1.6)	4	(0.4)	19	(2.0)
South West	11	(1.9)	5	(0.9)	16	(2.8)	9	(1.6)	3	(0.5)	12	(2.1)
England	**133**	**(2.3)**	**47**	**(0.8)**	**180**	**(3.2)**	**90**	**(1.6)**	**27**	**(0.5)**	**117**	**(2.0)**
Isle of Man	**1**	**(12.5)**	**0**	**(0.0)**	**1**	**(12.5)**	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**1**	**(5.9)**	**0**	**(0.0)**	**1**	**(5.9)**	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**9**	**(2.9)**	**1**	**(0.3)**	**10**	**(3.2)**	**7**	**(2.2)**	**3**	**(1.0)**	**10**	**(3.2)**
Scotland	**21**	**(3.9)**	**12**	**(2.2)**	**33**	**(6.1)**	**6**	**(1.1)**	**2**	**(0.4)**	**8**	**(1.5)**
Northern Ireland	**3**	**(1.6)**	**5**	**(2.6)**	**8**	**(4.2)**	**4**	**(2.1)**	**1**	**(0.5)**	**5**	**(2.6)**
TOTAL[1,2]	**172**	**(2.5)**	**65**	**(1.0)**	**237**	**(3.5)**	**107**	**(1.6)**	**33**	**(0.5)**	**140**	**(2.1)**

[1] Excludes 3 heart recipients 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 2023-2024, a total of 377 transplants were carried out; an increase of 20% on 2022-2023. Of these, 237 were heart transplants, of which 177 (75%) were urgent or super-urgent and additionally. There was a total of 140 lung or heart-lung transplants, of which 26 (19%) were urgent or super-urgent transplants. Of the 237 heart transplants, 172 (73%) were achieve from donors after brain stem death and 65 (27%) from donors after circulatory death. Of the total number of lung or heart-lung transplants, 107 (76%) were from donors after brain stem death and 33 (24%) from donors after circulatory death.

Table 7.10 Cardiothoracic transplants from deceased donors, 1 April 2023 - 31 March 2024 (2022 - 2023) by age group, centre, transplant type and urgency

Transplant centre	Transplant type: Heart Non-urgent		Heart Urgent		Heart Super-urgent		Heart-lung		Lung Non-urgent		Lung Urgent		Lung Super-urgent		TOTAL	
Adult																
Birmingham	9	(7)	15	(14)	11	(8)	1	(0)	12	(8)	4	(1)	0	(1)	**52**	**(39)**
Glasgow	9	(10)	16	(19)	7	(11)	0	(0)	0	(0)	0	(0)	0	(0)	**32**	**(40)**
Great Ormond Street	1	(0)	1	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	**2**	**(0)**
Harefield	7	(5)	26	(23)	11	(10)	1	(0)	24	(13)	4	(2)	0	(1)	**73**	**(54)**
Manchester	4	(3)	6	(10)	9	(3)	0	(0)	20	(9)	4	(4)	0	(0)	**43**	**(29)**
Newcastle	4	(2)	24	(21)	4	(5)	1	(0)	16	(17)	7	(8)	0	(0)	**56**	**(53)**
Papworth	16	(11)	16	(12)	6	(12)	1	(1)	35	(28)	4	(6)	1	(1)	**79**	**(71)**
TOTAL	**50**	**(38)**	**104**	**(97)**	**48**	**(49)**	**4**	**(1)**	**107**	**(75)**	**23**	**(21)**	**1**	**(3)**	**337**	**(286)**
Paediatric[1]																
Great Ormond Street	7	(1)	11	(11)	3	(3)	1	(0)	2	(0)	2	(1)	0	(0)	**26**	**(16)**
Newcastle	3	(1)	10	(10)	1	(2)	0	(0)	0	(0)	0	(0)	0	(0)	**14**	**(13)**
TOTAL	**10**	**(2)**	**21**	**(21)**	**4**	**(5)**	**1**	**(0)**	**2**	**(0)**	**2**	**(1)**	**0**	**(0)**	**40**	**(29)**

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

Table 7.11 Cardiothoracic transplants from deceased donors, 1 April 2023 - 31 March 2024 (2022 - 2023) by age group, centre, transplant type and donor type

Transplant centre	Transplant type: Heart DBD		Heart DCD		Heart-lung DBD		Heart-lung DCD		Lung DBD		Lung DCD		TOTAL	
Adult														
Birmingham	26	(23)	9	(6)	1	(0)	0	(0)	12	(9)	4	(1)	**52**	**(39)**
Glasgow	21	(32)	11	(8)	0	(0)	0	(0)	0	(0)	0	(0)	**32**	**(40)**
Great Ormond Street	0	(0)	2	(0)	0	(0)	0	(0)	0	(0)	0	(0)	**2**	**(0)**
Harefield	34	(22)	10	(16)	1	(0)	0	(0)	20	(10)	8	(6)	**73**	**(54)**
Manchester	16	(10)	3	(6)	0	(0)	0	(0)	20	(8)	4	(5)	**43**	**(29)**
Newcastle	20	(24)	12	(4)	1	(0)	0	(0)	14	(13)	9	(12)	**56**	**(53)**
Papworth	25	(22)	13	(13)	1	(1)	0	(0)	33	(22)	7	(13)	**79**	**(71)**
TOTAL	**142**	**(133)**	**60**	**(53)**	**4**	**(1)**	**0**	**(0)**	**99**	**(62)**	**32**	**(37)**	**337**	**(286)**
Paediatric[1]														
Great Ormond Street	17	(14)	4	(1)	1	(0)	0	(0)	3	(0)	1	(1)	**26**	**(16)**
Newcastle	13	(12)	1	(1)	0	(0)	0	(0)	0	(0)	0	(0)	**14**	**(13)**
TOTAL	**30**	**(26)**	**5**	**(2)**	**1**	**(0)**	**0**	**(0)**	**3**	**(0)**	**1**	**(1)**	**40**	**(29)**

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

At 31 March 2024 there were approximately 4,200 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 preservation time. 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 2024-2025, the median total preservation time for a DBD heart transplant was 3.6 hours (Inter-Quartile (IQ) range 3.0 – 4.0) and for a DCD heart transplant was 5.5 hours (IQ range 4.9 – 6.0) and overall was 3.9 hours (IQ range 3.3 – 4.8).

The median total preservation time for a DBD donor lung transplant was 7.2 hours (IQ range 5.9 – 9.3) and for a DCD donor lung transplant was 8.8 hours (IQ range 7.4 – 10.1) and overall was 7.6 hours (IQ range 6.2 – 9.7).

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 donors and transplant recipients, 1 April 2023 - 31 March 2024, and transplant list patients at 31 March

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	25	(8)	51	(14)	50	(9)
	18-34	107	(33)	39	(10)	49	(9)
	35-49	110	(34)	90	(24)	136	(24)
	50-59	62	(19)	119	(32)	163	(29)
	60-69	24	(7)	78	(21)	160	(28)
	70+	0	(0)	0	(0)	6	(1)
	Mean (SD)	38	(15)	45	(17)	48	(17)
Sex	Male	189	(58)	263	(70)	355	(63)
	Female	139	(42)	114	(30)	209	(37)
Ethnicity	White	290	(91)	304	(81)	457	(83)
	Asian	14	(4)	41	(11)	65	(12)
	Black	5	(2)	22	(6)	24	(4)
	Other	9	(3)	7	(2)	5	(1)
	Unknown	10	-	3	-	13	-
Blood group	O	175	(53)	146	(39)	333	(59)
	A	116	(35)	167	(44)	161	(29)
	B	30	(9)	48	(13)	61	(11)
	AB	7	(2)	16	(4)	9	(2)
Graft number	First graft	-	-	373	(99)	554	(98)
	Re-graft	-	-	4	(1)	10	(2)
TOTAL		**328**	**(100)**	**377**	**(100)**	**564**	**(100)**

Liver Activity

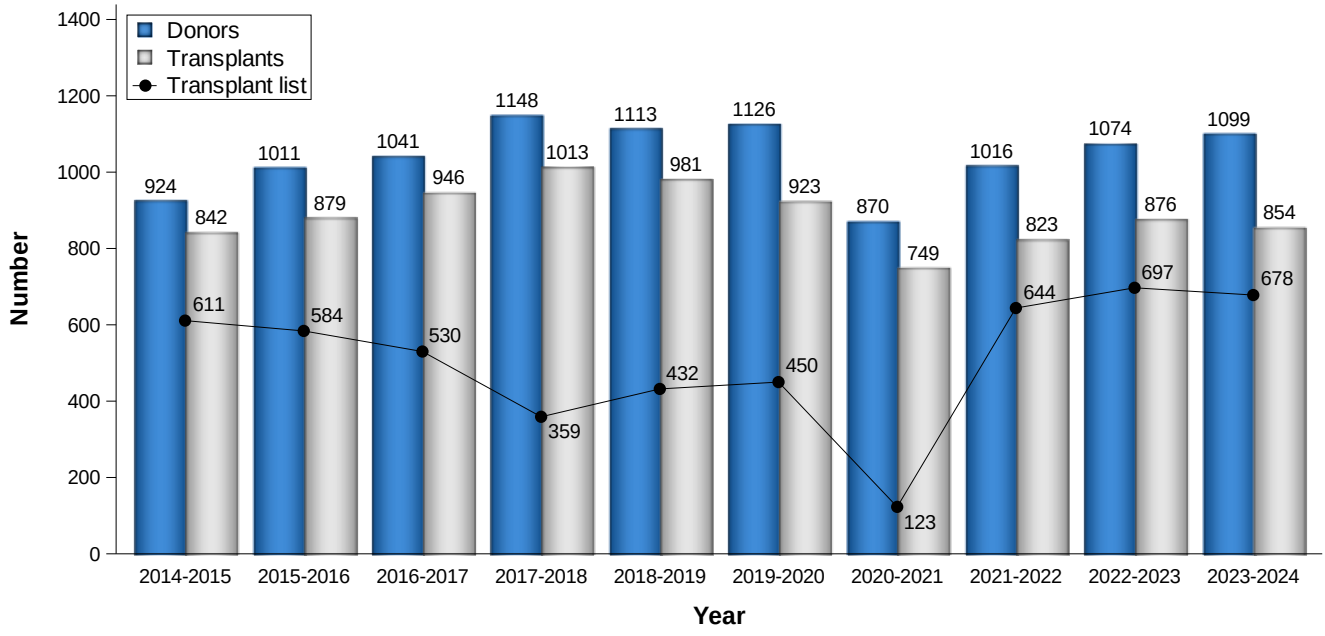
Key messages

- **The number of patients on the active liver transplant list at 31 March 2024 was 678, a decrease of 3% from 2023.**
- **The number of liver donors after brain death fell by 1% to 691, while transplants from donors after brain death fell by 6% to 587**
- **The number of liver donors after circulatory death increased by 9% to 408, while transplants from donors after circulatory death increased by 6% to 267 which was the highest ever number of DCD liver transplants performed in a financial year**

8.1 Overview

The number of deceased liver donors and transplants in the UK in the last ten years is shown in **Figure 8.1**. There has been a decrease in the number of patients registered on the active liver transplant list between 2014-2015 and 2020-2021. However, this number has increased to 678 patients active in March 2024, higher than pre-pandemic levels. The numbers of donors has steadily increased over the last three years.

Figure 8.1 Deceased donor liver programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March



Intestinal transplants that used a liver are not included in the liver transplant activity reported. However, any livers retrieved and used for such transplants are included in the liver donor activity. Liver only transplants in intestinal failure patients are included in the liver transplant activity. Intestinal transplant activity is reported in Chapter 9.

The number of deceased donors, deceased and living donor transplants, and patients on the active transplant list, by centre, is shown in **Table 8.1**. The numbers of liver donors reflect the number of organs retrieved from within each centre's allocation zone (by any retrieval team) rather than the number of retrievals made by that centre. In 2023-2024, 1099 organ donors donated their liver for transplant: 691 donors after brain death and 408 donors after circulatory death. There were 678 patients on the active transplant list at 31 March 2024, a decrease of 3% from 31 March 2023.

Overall, the number of liver transplants (either whole liver or liver lobe transplants) from donors after brain death fell by 6% to 587 whilst the number of liver transplants from donors after circulatory death increased by 6% to 267, compared with the previous financial year. Additionally, there were 31 living liver lobe donor transplants (NHS Group 1: 21 and Group 2: 10).

Patients are prioritised as super-urgent if they require a new liver as soon as possible due to rapid failure of the native organ. Other patients are referred to as elective. In 2023-2024, there were 81 deceased donor adult super-urgent transplants, representing 10% of all adult deceased donor transplants and 15 deceased donor paediatric super-urgent transplants, representing 24% of all paediatric deceased donor transplants.

Table 8.1 Deceased and living liver donors and transplants, 1 April 2023 - 31 March 2024 (2022-2023) and transplant list patients at 31 March 2024 (2023) in the UK, by age group and centre

Allocation zone/ transplant centre	Deceased donors[1]						Deceased donor transplants						Living donor transplants		Active transplant list	
	DBD		DCD		**TOTAL**		DBD		DCD		**TOTAL**					
Adult																
Birmingham	122	(134)	57	(79)	179	(213)	127	(136)	32	(57)	159	(193)	0	(0)	187	(189)
Cambridge	63	(64)	56	(55)	119	(119)	64	(55)	52	(55)	116	(110)	0	(0)	45	(57)
Edinburgh	92	(85)	58	(46)	150	(131)	43	(45)	33	(26)	76	(71)	0	(0)	48	(51)
King's College	181	(162)	106	(86)	287	(248)	112	(115)	55	(51)	167	(166)	1	(1)	182	(195)
Leeds	130	(141)	79	(59)	209	(200)	79	(86)	36	(26)	115	(112)	2	(6)	88	(91)
Newcastle	35	(35)	20	(14)	55	(49)	22	(22)	25	(14)	47	(36)	0	(0)	11	(24)
Royal Free	52	(63)	28	(25)	80	(88)	80	(86)	31	(17)	111	(103)	0	(1)	53	(50)
TOTAL	**675**	**(684)**	**404**	**(364)**	**1079**	**(1048)**	**527**	**(545)**	**264**	**(246)**	**791**	**(791)**	**6[2,6]**	**(15)[3,7]**	**614**	**(657)**
Paediatric																
Birmingham	4	(5)	0	(4)	4	(9)	20	(27)	1	(1)	21	(28)	0	(0)	19	(10)
Cambridge	0	(4)	0	(0)	0	(4)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
Edinburgh	5	(2)	1	(1)	6	(3)	1	(1)	0	(0)	1	(1)	0	(0)	0	(0)
King's College	2	(4)	1	(5)	3	(9)	26	(33)	2	(5)	28	(38)	14	(13)	33	(23)
Leeds	1	(1)	1	(0)	2	(1)	12	(18)	0	(0)	12	(18)	11	(7)	12	(6)
Newcastle	1	(0)	0	(0)	1	(0)	1	(0)	0	(0)	1	(0)	0	(0)	0	(1)
Royal Free	3	(0)	1	(0)	4	(0)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
TOTAL	**16**	**(16)**	**4**	**(10)**	**20**	**(26)**	**60**	**(79)**	**3**	**(6)**	**63**	**(85)**	**25[4]**	**(20)[5]**	**64**	**(40)**

[1] Includes donors whose livers were retrieved by other teams
[2] Includes 2 and 4 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively
[3] Includes 8 and 7 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively
[4] Includes 19 and 6 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively
[5] Includes 13 and 7 living liver lobe transplants in NHS Group 1 and Group 2 recipients, respectively
[6] Includes 1 transplants at London Cromwell and 2 transplants at London Bridge involving private patients
[7] Includes 4 transplants at London Cromwell and 3 transplants at London Bridge involving private patients

8.2 Transplant list

During 2023-2024, 1,148 patients joined the liver transplant list. Outcomes for patients on the list at 1 April 2023 and those joining the list during the year are shown in **Table 8.2**. There have been 120 (10%) new registrations that were super-urgent.

Table 8.2 Liver transplant list and new registrations in the UK, 1 April 2023 - 31 March 2024

Outcome of patient at 31 March 2024	Active and suspended patients at 1 April 2023		New registrations in 2023-2024[1]		TOTAL	
	N	%	N	%	**N**	**%**
Remained active/suspended	327	40	478	42	805	41
Transplanted	319	39	565	49	884	45
Removed[2]	138	17	67	6	205	10
Died[3]	31	4	38	3	69	4
TOTAL	**815**		**1148**		**1963**	

[1] Includes re-registrations for second or subsequent transplant
[2] Includes 16 patients removed and re-registered at a different centre or on different pathway
[3] Includes patients removed due to deteriorating condition

Table 8.3 shows the active transplant list in the UK at 31 March 2024 and 2023 by country/NHS region of patient's residence. At 31 March 2024, the overall rate was 10.0 pmp and ranged from 7.5 to 11.8 pmp across English NHS regions.

Table 8.3 Active liver transplant list at 31 March by Country/NHS region of patient residence

Country/ NHS region of residence	Liver transplant list (pmp) 2024		2023	
North East and Yorkshire	68	(8.3)	73	(8.9)
North West	84	(11.2)	78	(10.4)
Midlands	129	(11.8)	121	(11.0)
East of England	54	(8.4)	64	(10.0)
London	86	(9.7)	84	(9.5)
South East	70	(7.5)	73	(7.8)
South West	56	(9.7)	70	(12.2)
England	**547**	**(9.6)**	**563**	**(9.9)**
Isle of Man	**0**	**(0.0)**	**1**	**(12.5)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**31**	**(9.9)**	**32**	**(10.2)**
Scotland	**51**	**(9.4)**	**55**	**(10.1)**
Northern Ireland	**40**	**(20.9)**	**38**	**(19.9)**
TOTAL[1]	**678**	**(10.0)**	**697**	**(10.3)**

[1]Includes patients in 2024 (2023) residing in: Unspecified UK 1 (1); Republic of Ireland 6 (5); Overseas 2 (2)

An indication of longer term outcomes for patients listed for a liver transplant is summarised in **Figure 8.2**. This shows the proportion of patients transplanted or still waiting six months, one year and two years after joining the transplant list. It also shows the proportion removed from the transplant list and those dying while on the transplant list (which includes those patients removed due to condition deteriorated). At one year post-registration, 60% of patients had received a liver transplant while 8% of patients had died whilst waiting or had been removed due to their condition deteriorating. 4% had been removed for other reasons such as the patient's condition improving, or as a result of non-compliance or at the request of the patient or family.

Figure 8.2 **Post-registration outcome for 1113 new elective liver only registrations made in the UK, 1 April 2021 - 31 March 2022**

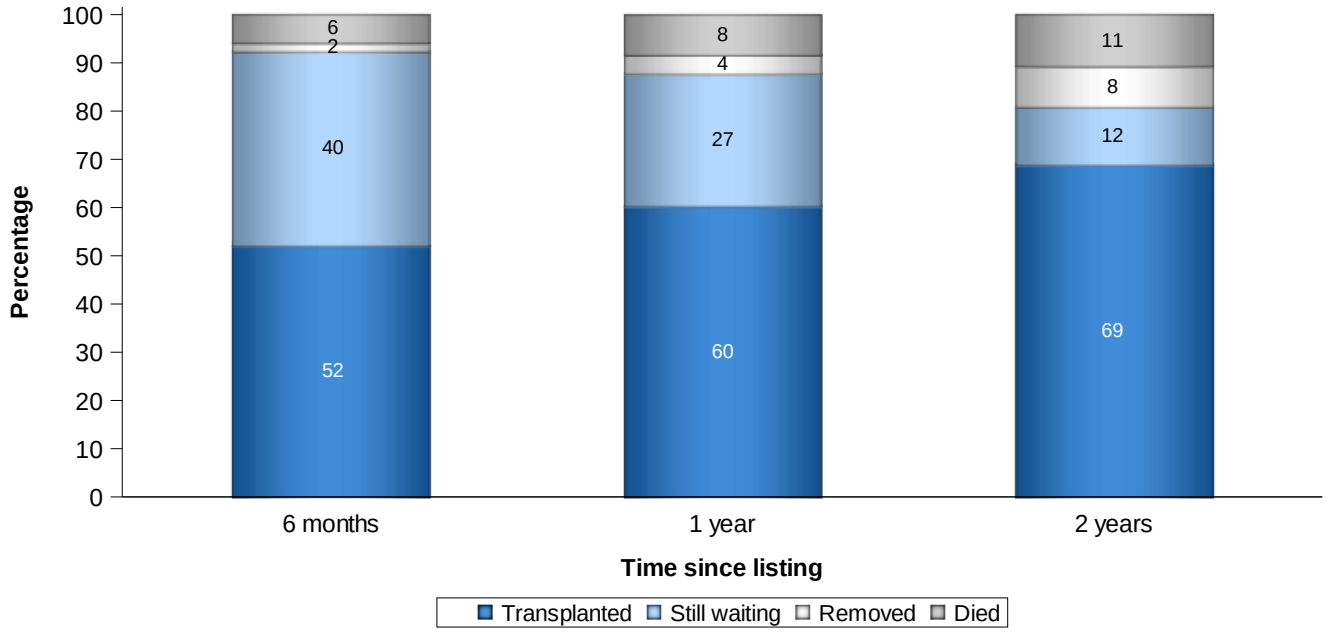


Table 8.4 and **Table 8.5** show the median waiting time to liver transplant for adult and paediatric elective registrations, separately, including a breakdown by blood group and ethnicity for adult elective registrations only. On average, adult patients wait 146 days for a transplant while paediatric patients wait an average of 108 days. Note that these waiting times are not adjusted for other relevant factors which may be influential and differ across blood or ethnic groups.

Table 8.4 **Median waiting time to liver transplant in the UK, for patients registered 1 April 2021 - 31 March 2023**

Blood group	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult			
O	914	238	203 - 273
A	798	90	74 - 106
B	246	154	101 - 207
AB	63	21	8 - 34
TOTAL	**2021**	**146**	**129 - 163**
Paediatric	**145**	**108**	**66 - 150**

Table 8.5 Median waiting time to liver transplant in the UK, for patients registered 1 April 2021 - 31 March 2023

Ethnicity	Number of patients registered	Waiting time (days)	
		Median	95% Confidence interval
Adult			
White	1658	141	124 - 158
Asian	167	100	48 - 152
Black	58	243	118 - 368
Other	36	500	209 - 791
TOTAL[1]	**2021**	**146**	**129 - 163**
Paediatric	**145**	**108**	**66 - 150**

[1] Includes 102 patients whose ethnicity was not reported

8.3 Donor and organ supply

Of the 1,510 actual organ donors, 1,099 (73%) donated their liver and 826 (75%) of these donated livers were used; see **Table 8.6**. Of livers retrieved from donors after brain death and donors after circulatory death, 81% and 64% were transplanted, respectively. Segments from one liver can be used in more than one transplant, see **Table 8.9**.

Table 8.6 Deceased liver donation and retrieval in the UK, 1 April 2023 - 31 March 2024, by allocation zone

Allocation zone	Number of donors						Number of livers retrieved (used)					
	Solid organ			Liver								
	DBD	DCD	**TOTAL**	DBD	DCD	**TOTAL**	DBD		DCD		**TOTAL**	
Birmingham	144	126	**270**	126	57	**183**	126	(104)	57	(40)	**183**	**(144)**
Cambridge	65	86	**151**	63	56	**119**	63	(52)	56	(41)	**119**	**(93)**
Edinburgh	108	100	**208**	97	59	**156**	97	(78)	59	(39)	**156**	**(117)**
King's College	207	195	**402**	183	107	**290**	183	(154)	107	(62)	**290**	**(216)**
Leeds	145	126	**271**	131	80	**211**	131	(104)	80	(50)	**211**	**(154)**
Newcastle	41	35	**76**	36	20	**56**	36	(27)	20	(13)	**56**	**(40)**
Royal Free	62	70	**132**	55	29	**84**	55	(44)	29	(18)	**84**	**(62)**
TOTAL	**772**	**738**	**1510**	**691**	**408**	**1099**	**691**	**(563)**	**408**	**(263)**	**1099**	**(826)**

The rates per million population (pmp) for liver donors are shown in **Table 8.7** by donor country/NHS region of residence. No adjustments have been made for potential demographic differences in populations. The overall deceased liver donor rate was 16.3 pmp in 2023-2024 and ranged from 10.8 pmp to 20.3 pmp across English NHS regions.

Table 8.7 Liver donation rates for deceased donors in the UK, 1 April 2023 - 31 March 2024, by Country/ NHS region

Country/ NHS region of residence	Liver donors (pmp) DBD		DCD		TOTAL	
North East and Yorkshire	99	(12.0)	68	(8.3)	167	(20.3)
North West	62	(8.2)	27	(3.6)	89	(11.8)
Midlands	87	(7.9)	49	(4.5)	136	(12.4)
East of England	65	(10.2)	57	(8.9)	122	(19.1)
London	59	(6.7)	37	(4.2)	96	(10.8)
South East	103	(11.0)	55	(5.9)	158	(16.8)
South West	62	(10.8)	36	(6.3)	98	(17.0)
England	**537**	**(9.4)**	**329**	**(5.8)**	**866**	**(15.2)**
Isle of Man	**1**	**(12.5)**	**0**	**(0.0)**	**1**	**(12.5)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**32**	**(10.2)**	**12**	**(3.8)**	**44**	**(14.1)**
Scotland	**56**	**(10.3)**	**34**	**(6.2)**	**90**	**(16.5)**
Northern Ireland	**28**	**(14.7)**	**12**	**(6.3)**	**40**	**(20.9)**
TOTAL[1]	**691**	**(10.2)**	**408**	**(6.0)**	**1099**	**(16.3)**

[1] Includes 48 donors (37 DBD and 21 DCD) with unknown UK postcode

8.4 Transplants

The number of liver transplants by recipient country/NHS region of residence are shown in **Table 8.8**. No adjustments have been made for potential demographic differences in populations. The deceased donor transplant rate ranged from 9.7 to 17.0 pmp across English NHS regions and overall was 12.6 pmp.

Table 8.8 Liver transplant rates per million population (pmp), in the UK, 1 April 2023 - 31 March 2024, by country and English NHS region

Country/ NHS region of residence	DBD		DCD		**TOTAL**		Living	
	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
North East and Yorkshire	73	(8.9)	42	(5.1)	115	(14.0)	4	(0.5)
North West	55	(7.3)	18	(2.4)	73	(9.7)	6	(0.8)
Midlands	104	(9.5)	32	(2.9)	136	(12.4)	2	(0.2)
East of England	66	(10.3)	43	(6.7)	109	(17.0)	2	(0.3)
London	79	(8.9)	33	(3.7)	112	(12.6)	1	(0.1)
South East	62	(6.6)	30	(3.2)	92	(9.8)	3	(0.3)
South West	54	(9.4)	19	(3.3)	73	(12.7)	0	(0.0)
England	**493**	**(8.6)**	**217**	**(3.8)**	**710**	**(12.4)**	**18**	**(0.3)**
Isle of Man	**3**	**(37.5)**	**1**	**(12.5)**	**4**	**(50.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**25**	**(8.0)**	**6**	**(1.9)**	**31**	**(9.9)**	**0**	**(0.0)**
Scotland	**50**	**(9.2)**	**34**	**(6.2)**	**84**	**(15.4)**	**1**	**(0.2)**
Northern Ireland	**10**	**(5.2)**	**9**	**(4.7)**	**19**	**(9.9)**	**0**	**(0.0)**
TOTAL[1,2]	**582**	**(8.6)**	**267**	**(3.9)**	**849**	**(12.6)**	**20**	**(0.3)**

[1] Excludes 16 recipients who reside outside the UK (5 DBD, 11 Living)
[2] Includes 2 (1 DBD and 1 living) recipients with an unknown UK postcode

The number of whole, reduced and split liver transplants by urgency status of the transplant (elective, super-urgent) in 2023-2024 is shown in **Table 8.9**. 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 donor liver transplants decreased by 3% in 2023-2024. There were 854 deceased donor liver transplants performed in 2023-2024: 844 liver only transplants (769 whole liver, 56 split liver and 19 reduced liver lobes) and 10 simultaneous liver and kidney. Split liver transplants accounted for 75% of liver only lobe transplant activity.

Table 8.9 Deceased liver transplants performed in the UK, 1 April 2022 - 31 March 2024

Transplant centre	2022-2023								2023-2024							
	Whole liver		Reduced liver		Split liver		TOTAL		Whole liver		Reduced liver		Split liver		TOTAL	
	E	SU	E	SU	E	SU	E	SU	E	SU	E	SU	E	SU	E	SU
Birmingham	174	25	5	4	11	2	**190**	**31**	140	19	5	2	14	0	**159**	**21**
Cambridge	91	16	0	0	3	0	**94**	**16**	99	13	0	0	4	0	**103**	**13**
Edinburgh	66	6	0	0	0	0	**66**	**6**	63	14	0	0	0	0	**63**	**14**
King's College	149	14	6	11	21	3	**176**	**28**	156	9	4	4	18	4	**178**	**17**
Leeds	101	11	4	2	10	2	**115**	**15**	100	12	3	1	11	0	**114**	**13**
Newcastle	29	7	0	0	0	0	**29**	**7**	42	6	0	0	0	0	**42**	**6**
Royal Free	75	18	0	0	10	0	**85**	**18**	94	12	0	0	5	0	**99**	**12**
TOTAL	**685**	**97**	**15**	**17**	**55**	**7**	**755**	**121**	**694**	**85**	**12**	**7**	**52**	**4**	**758**	**96**

E=Elective, SU=Super-urgent
Birmingham, King's College and Leeds transplant paediatric patients

The length of time that elapses between a liver being removed from the donor to its transplantation into the recipient is called the total preservation time. Generally, the shorter this time, the more likely the liver is to work immediately and the better the long-term outcome. In 2023-2024, the median total preservation time for a DBD donor whole liver only transplant was 8.9 hours (Inter-Quartile (IQ) range 7.5 – 10.5) and for a DCD donor whole liver only transplant was 7.5 hours (IQ range 5.9 – 9.0) and overall was 8.5 hours (IQ range 6.8 – 10.1). Please note some of the reported total preservation times may include the use of donor organ maintenance systems.

At 31 March 2024 there were approximately 12,000 recipients with a functioning liver transplant (or multi-organ including the liver) being followed-up as reported to the UK Transplant Registry.

8.5 Demographic characteristics

The age group, sex, ethnicity and blood group of liver donors, transplant recipients and transplant list patients are shown in **Table 8.10** along with the liver graft number for transplant recipients and patients active on the transplant list.

Table 8.10 Demographic characteristics of deceased liver donors and transplant recipients, 1 April 2023 - 31 March 2024, and transplant list patients at 31 March

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	33	(3)	64	(7)	68	(10)
	18-34	160	(15)	94	(11)	103	(15)
	35-49	254	(23)	155	(18)	183	(27)
	50-59	260	(24)	234	(27)	175	(26)
	60-69	257	(23)	292	(34)	137	(20)
	70+	135	(12)	15	(2)	12	(2)
	Mean (SD)	51	(17)	49	(17)	44	(18)
Sex	Male	626	(57)	540	(63)	374	(55)
	Female	473	(43)	314	(37)	304	(45)
Ethnicity	White	997	(93)	699	(85)	523	(81)
	Asian	44	(4)	76	(9)	78	(12)
	Black	17	(2)	31	(4)	28	(4)
	Other	11	(1)	15	(2)	17	(3)
	Unknown	30	-	33	-	32	-
Blood group	O	568	(52)	399	(47)	344	(51)
	A	393	(36)	320	(37)	229	(34)
	B	108	(10)	104	(12)	93	(14)
	AB	29	(3)	31	(4)	12	(2)
	Unknown	1	-	0	-	0	-
Graft number	First graft	-	-	788	(92)	612	(90)
	Re-graft	-	-	66	(8)	66	(10)
TOTAL		**1099**	**(100)**	**854**	**(100)**	**678**	**(100)**

Intestinal Activity

Key messages

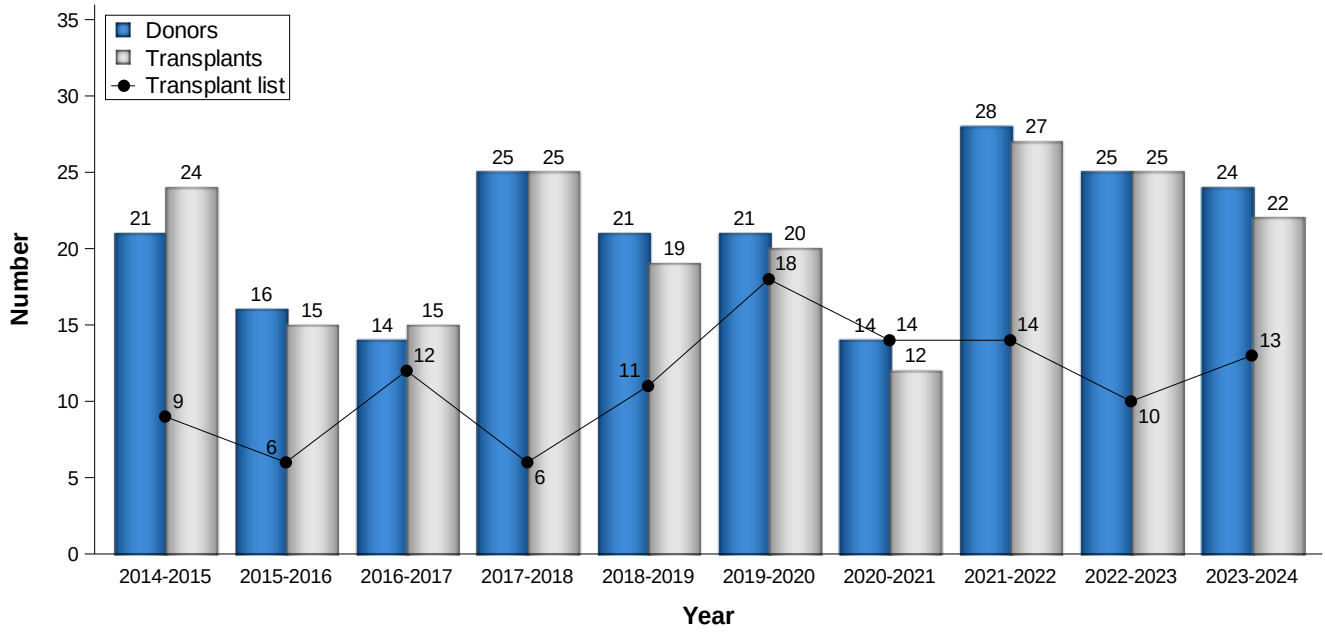
- **There were 13 patients on the active intestinal transplant list at 31 March 2024 in total**
- **There were 31 registrations for an intestinal transplant during 2023-2024**
- **22 intestinal transplants were carried out in 2023-2024 (25 in the previous year)**
- **On average, patients wait 6 months for a transplant**

9.1 Overview

Patients waiting for an intestinal transplant are prioritised according to a points system based on a range of clinical factors including donor-recipient age matching, loss of intravenous line access, liver failure, diagnosis of malignancy, in-hospital status, additional organs required, sensitisation and waiting time. A score is calculated for every potentially suitable patient on the national active transplant list and donor organs are allocated preferentially to the patient with the most points.

A summary of activity for deceased donor intestinal transplants and the transplant list at year end for the last ten years is shown in **Figure 9.1**. The number of patients registered on the active transplant list for an intestinal transplant has increased to 13. The number of donors and transplants has slightly decreased over the last three years.

Figure 9.1 Deceased donor intestinal programme in the UK, 1 April 2014 - 31 March 2024, Number of donors, transplants and patients on the active transplant list at 31 March



9.2 Transplant list

In 2023-2024, there were 31 registrations for an intestinal transplant corresponding to 31 patients. The outcome of these registrations for paediatric (aged <18 years) and adult patients, as at 31 March 2024, broken down by transplant centre, can be found in **Table 9.1**. Overall, 8 (26%) were active/suspended on 31 March 2024, 20 (65%) resulted in a transplant, and 3 (10%) died or were removed. Note that removals due to condition deterioration are included in the removal group.

Table 9.1 Outcome of intestinal registrations in the UK, 1 April 2023 and 31 March 2024

Transplant centre	Outcome of registrations as at 31 March 2024								
	Transplanted		Died		Removed[1]		Active/Susp		TOTAL
	N	%	N	%	N	%	N	%	
Adult									
Cambridge	10	71	0	0	0	0	4	29	**14**
Oxford	5	100	0	0	0	0	0	0	**5**
TOTAL	**15**	**79**	**0**	**0**	**0**	**0**	**4**	**21**	**19**
Paediatric									
Birmingham	2	40	0	0	1	20	2	40	**5**
King's College	3	43	1	14	1	14	2	29	**7**
TOTAL	**5**	**42**	**1**	**8**	**2**	**17**	**4**	**33**	**12**

[1] Includes removals due to condition deteriorated

Table 9.2 shows the active intestinal transplant list in the UK at 31 March 2024 and 2023 by country/NHS region of patient's residence. At 31 March 2024, the overall transplant list rate was 0.2 pmp and ranged from 0.0 to 0.6 pmp across NHS regions, although these numbers are very small, so these are not meaningful differences.

Table 9.2 Active intestinal transplant list at 31 March by Country/NHS region of patient residence

Country/ NHS region of residence	Intestinal transplant list (pmp) 2024		2023	
North East and Yorkshire	2	(0.2)	3	(0.4)
North West	2	(0.3)	0	(0.0)
Midlands	0	(0.0)	1	(0.1)
East of England	4	(0.6)	1	(0.2)
London	0	(0.0)	1	(0.1)
South East	2	(0.2)	2	(0.2)
South West	0		0	
England	**10**	**(0.2)**	**8**	**(0.1)**
Isle of Man	**0**	**(0.0)**	**0**	**(0.0)**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**
Wales	**0**	**(0.0)**	**0**	**(0.0)**
Scotland	**1**	**(0.2)**	**2**	**(0.4)**
Northern Ireland	**0**	**(0.0)**	**0**	**(0.0)**
TOTAL[1]	**13**	**(0.2)**	**10**	**(0.1)**

[1] Includes 2 patients in 2024 residing overseas

Table 9.3 shows median waiting time to elective intestinal transplant by registration type. On average, patients wait 175 days for a transplant with patients requiring a liver on the transplant list for slightly longer than patients who do not require a liver. Note that these waiting times are not adjusted for other relevant factors which may be influential.

Table 9.3 Median waiting time to intestinal transplant in the UK, for patients registered 1 April 2019 - 31 March 2023, by registration type

Registration type	Number of patients registered	Waiting time (days) Median	95% Confidence interval
Bowel only[1]	15	176	33 - 319
Liver, bowel and pancreas[1]	56	179	74 - 284
Bowel and pancreas[1]	41	160	92 - 228
TOTAL	**112**	**175**	**140 - 210**

[1] May also include any of: stomach, spleen, abdominal wall, kidney

9.3 Donor and organ supply

The rates per million population (pmp) for intestinal donors are shown in **Table 9.4** by donor country/NHS region of residence. The overall DBD intestinal donor rate was 0.4 pmp and ranged from 0.1 to 0.9 pmp across NHS regions. Of the 772 DBD solid organ donors, 24 (3%) donated their small bowel. The majority of DBD solid organ donors are not offered to intestinal patients because they are outside of the age and weight criteria for bowel donation. The next most common reason for non-offering is lack of consent for bowel donation. Of those donors with consent for bowel donation, the most common reason for non-offering is no suitable recipient on the transplant list followed by donor history. Of those donors that are offered, a large number are not accepted, most commonly, due to donor virology, donor history and unsuitable size.

Table 9.4 Intestinal donation rates for deceased donors after brain death, in the UK, 1 April 2023 - 31 March 2024, by Country/ NHS region

Country/ NHS region of residence	Solid organ donors (pmp)		Intestinal donors (pmp)		% of solid organ donors	Organs used
North East and Yorkshire	112	(13.6)	4	(0.5)	3.6	4
North West	70	(9.3)	1	(0.1)	1.4	0
Midlands	92	(8.4)	5	(0.5)	5.4	5
East of England	66	(10.3)	6	(0.9)	9.1	5
London	70	(7.9)	2	(0.2)	2.9	2
South East	115	(12.3)	4	(0.4)	3.5	4
South West	72	(12.5)	2	(0.3)	2.8	2
England	**597**	**(10.5)**	**24**	**(0.4)**	**4**	**22**
Isle of Man	**1**	**(12.5)**	**0**	**(0.0)**	**0**	**0**
Channel Islands	**0**	**(0.0)**	**0**	**(0.0)**	**0**	**0**
Wales	**38**	**(12.1)**	**0**	**(0.0)**	**0**	**0**
Scotland	**60**	**(11.0)**	**0**	**(0.0)**	**0**	**0**
Northern Ireland	**34**	**(17.8)**	**0**	**(0.0)**	**0**	**0**
TOTAL[1]	**772**	**(11.4)**	**24**	**(0.4)**	**3.1**	**22**

[1] Includes 42 donors with unknown UK postcode

9.4 Transplants

Table 9.5 shows intestinal transplant activity by transplant centre and transplant type for financial years 2022-2023 and 2023-2024. In 2023-2024, there were a total of 22 transplants, 17 adult and 5 paediatric transplants.

At 31 March 2024 there were approximately 180 recipients with a functioning intestinal transplant (or multi-organ including intestine) being followed-up as reported to the UK Transplant Registry.

Table 9.5 Intestinal transplants in the UK, by age group, centre and type, 1 April 2023 - 31 March 2024 (2022 - 2023)

Transplant centre	Transplant type											
	BO		LBP		MV		MMV		LB		**TOTAL**	
Adult												
Cambridge	0	(1)	0	(1)	3	(9)	9	(7)	0	(0)	**12**	**(18)**
Oxford	3	(3)	0	(0)	0	(0)	2	(0)	0	(0)	**5**	**(3)**
TOTAL	**3**	**(4)**	**0**	**(1)**	**3**	**(9)**	**11**	**(7)**	**0**	**(0)**	17	(21)
Paediatric												
Birmingham	0	(0)	0	(0)	1	(2)	1	(0)	0	(0)	**2**	**(2)**
King's College	1	(1)	0	(0)	2	(1)	0	(0)	0	(0)	**3**	**(2)**
TOTAL	**1**	**(1)**	**0**	**(0)**	**3**	**(3)**	**1**	**(0)**	**0**	**(0)**	5	(4)

BO = Bowel only (may also include stomach/spleen/abdominal wall/kidney/colon)
LBP = Liver, bowel and pancreas
MV = Multivisceral – liver, bowel and pancreas plus stomach/spleen/abdominal wall/kidney/colon
MMV = Modified multivisceral – bowel and pancreas plus stomach/spleen/abdominal wall/kidney/colon
LB = Liver and bowel

9.5 Demographic characteristics

The age group, sex, ethnicity and blood group of intestinal donors, transplant recipients and transplant list patients are shown in **Table 9.6**.

Table 9.6 Demographic characteristics of deceased intestinal donors and transplant recipients, 1 April 2023 - 31 March 2024, and transplant list patients at 31 March

		Donors		Transplant recipients		Active transplant list patients	
		N	(%)	N	(%)	N	(%)
Age (years)	0-17	11	(46)	5	(23)	8	(62)
	18-34	4	(17)	5	(23)	3	(23)
	35-49	7	(29)	4	(18)	0	(0)
	50-59	2	(8)	5	(23)	2	(15)
	60-69	0	(0)	3	(14)	0	(0)
	mean (SD)	27	(17)	37	(21)	18	(19)
Sex	Male	4	(17)	14	(64)	3	(23)
	Female	20	(83)	8	(36)	10	(77)
Ethnicity	White	21	(91)	19	(86)	12	(92)
	Asian	1	(4)	1	(5)	0	(0)
	Black	1	(4)	0	(0)	1	(8)
	Other	0	(0)	2	(9)	0	(0)
	Unknown	1	-	0	-	0	-
Blood group	O	18	(75)	9	(41)	7	(54)
	A	4	(17)	10	(45)	4	(31)
	B	2	(8)	3	(14)	1	(8)
	AB	0	(0)	0	(0)	1	(8)
Graft number	First graft	-	-	20	(91)	11	(85)
	Re-graft	-	-	2	(9)	2	(15)
TOTAL		**24**	**(100)**	**22**	**(100)**	**13**	**(100)**

Cornea Activity

Key messages

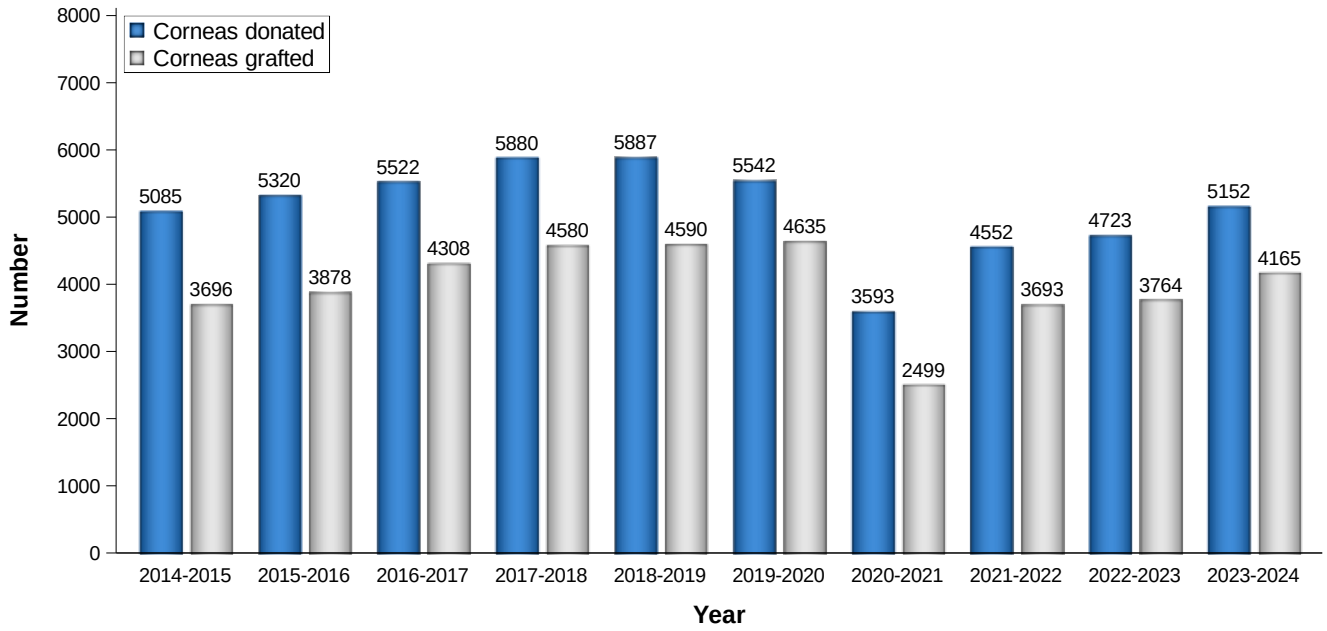
- **5,152 corneas were supplied to NHSBT Eye Banks**
- **Corneas were retrieved from 2,154 cornea-only donors and from 435 solid organ donors after brain death (49%) or after circulatory death (51%)**
- **The number of transplants increased by 11% to 4,165, although figures are an underestimate due to delays in reporting**
- **10%, 35% and 14% of corneal transplants were for keratoconus, Fuchs endothelial dystrophy and pseudophakic bullous keratopathy patients, respectively**
- **Descemet membrane endothelial keratoplasty transplants are the most popular technique for corneal transplantation (33% of all transplants)**
- **540 (10%) corneas were issued for non-clinical use to support research or training from corneas that were considered unsuitable for transplantation**

10.1 Overview

As a result of the COVID-19 pandemic, the number of corneas transplanted (N=2,499) decreased by 46% in 2020-2021 compared with the previous year. In 2021-2022, corneal transplants rose to 3,693, and in the last year, the number of transplants has increased further by 11% to 4,165. These figures are an underestimate due to delays in reporting the transplant outcome to NHSBT. The number of corneas donated in 2023-2024 was 5,152, representing an increase of 9% compared with the previous year as shown in **Figure 10.1**. Overall, corneal donation and transplantation figures have not fully recovered to pre-pandemic levels.

It should be noted that not all corneas donated or transplanted in the UK are reported to NHSBT and thus the donation data reported are not the full national data.

Figure 10.1 Cornea programme in the UK, 1 April 2014 - 31 March 2024, Number of corneas retrieved to NHSBT Eye Banks and corneas grafted



In 2023-2024, of 2,589 donors whose corneas were retrieved to NHSBT Eye Banks, 2,154 were cornea-only donors and 435 were cornea and solid organ donors: see **Table 10.1**. Compared to 2022-2023, the number of cornea-only donors increased by 12%, and the number of cornea and solid organ donors fell by 3%. In 2023-2024, corneas were retrieved from 215 organ donors after brain death and 220 organ donors after circulatory death.

Table 10.1 also shows the number and rate per million population (pmp) of donors whose corneas were retrieved to NHSBT Eye Banks in 2023-2024, by country and NHS region. Information for 2022-2023 is shown for comparison. No adjustments have been made for potential demographic differences in populations.

In 2023-2024, the corneal donor rate increased across England and Scotland. England (42.6 pmp) had the highest corneal donor rate of countries in the UK (38.3 pmp). Across the NHS regions, the corneal donor rate ranged from 17.1 pmp to 71.2 pmp. This variation is largely attributed to the location of NHSBT Eye Retrieval Schemes, NHSBT Eye Banks and non-NHSBT Eye Banks (East Grinstead).

Table 10.1 Corneal donation rates per million population (pmp) in the UK, 1 April 2023 - 31 March 2024 (2022 - 2023), by country/ NHS region for donors whose corneas were retrieved to NHSBT Eye Banks

Country of residence/ NHS region	Cornea-only		Solid organ and cornea		TOTAL		TOTAL pmp	
North East and Yorkshire	314	(274)	62	(58)	376	(332)	45.7	(40.4)
North West	448	(338)	38	(54)	486	(392)	64.6	(52.1)
Midlands	292	(273)	60	(63)	352	(336)	32.1	(30.7)
East of England	223	(221)	48	(40)	271	(261)	42.3	(40.8)
London	101	(131)	49	(61)	150	(192)	16.9	(21.6)
South East	105	(83)	74	(77)	179	(160)	19.1	(17.1)
South West	360	(358)	60	(52)	420	(410)	72.9	(71.2)
England	**2042**	**(1814)**	**391**	**(405)**	**2433**	**(2219)**	**42.6**	**(38.9)**
Isle of Man	**0**	**(0)**	**0**	**(0)**	**0**	**(0)**	**0.0**	**(0.0)**
Channel Islands	**0**	**(0)**	**0**	**(0)**	**0**	**(0)**	**0.0**	**(0.0)**
Wales	**62**	**(67)**	**16**	**(19)**	**78**	**(86)**	**24.9**	**(27.5)**
Scotland	**38**	**(25)**	**21**	**(18)**	**59**	**(43)**	**10.8**	**(7.9)**
Northern Ireland	**12**	**(16)**	**7**	**(7)**	**19**	**(23)**	**9.9**	**(12.0)**
TOTAL[1]	**2154**	**(1922)**	**435**	**(449)**	**2589**	**(2371)**	**38.3**	**(35.1)**

[1] Includes UK donors where the hospital/hospice postcode was unspecified

10.2 NHSBT Eye Bank activity

NHSBT Eye Bank activity levels for Filton (Bristol) and David Lucas (in Liverpool) Eye Banks are shown in **Table 10.2**. In 2023-2024, a total of 5,152 corneas were retrieved to NHSBT, of which 3,875 (75%) were subsequently issued for transplantation. Filton Eye Bank (in Bristol) processed 58% of corneas retrieved in the last financial year.

Of 1,277 corneas not issued for transplantation, 540 (42%) were issued for non-clinical use to support research or training. These corneas were primarily unsuitable for transplantation due to a low endothelial cell density or dead cells.

Table 10.2 Corneas retrieved into NHSBT Eye Banks, by year 1 April 2023 - 31 March 2024 (2022-2023)

Eye bank	Total retrieved		Number issued[1]		% issued		Difference between number retrieved and issued	
Filton	2963	(2674)	2309	(2086)	78	(78)	654	(588)
David Lucas	2189	(2049)	1566	(1576)	72	(77)	623	(473)
Total	**5152**	**(4723)**	**3875**	**(3662)**	**75**	**(78)**	**1277**	**(1061)**

[1] Number issued of those retrieved in each year

10.3 Transplants

Corneal transplant activity in the UK by country of residence and NHS regions for the years 2022-2023 and 2023-2024 is detailed in **Table 10.3**. Corneas were supplied by NHSBT and non-NHSBT Eye Banks for corneal transplants in the UK. No adjustments have been made for potential demographic differences in populations.

The overall transplant rate was 55.7 pmp in 2022-2023 which increased to 61.6 pmp in 2023-2024. Transplant rates increased in England, Wales, Scotland and Northern Ireland. England had the highest transplant rate in the UK: 64.9 pmp, and this ranged from 46.9 pmp to 84.0 pmp across the NHS regions.

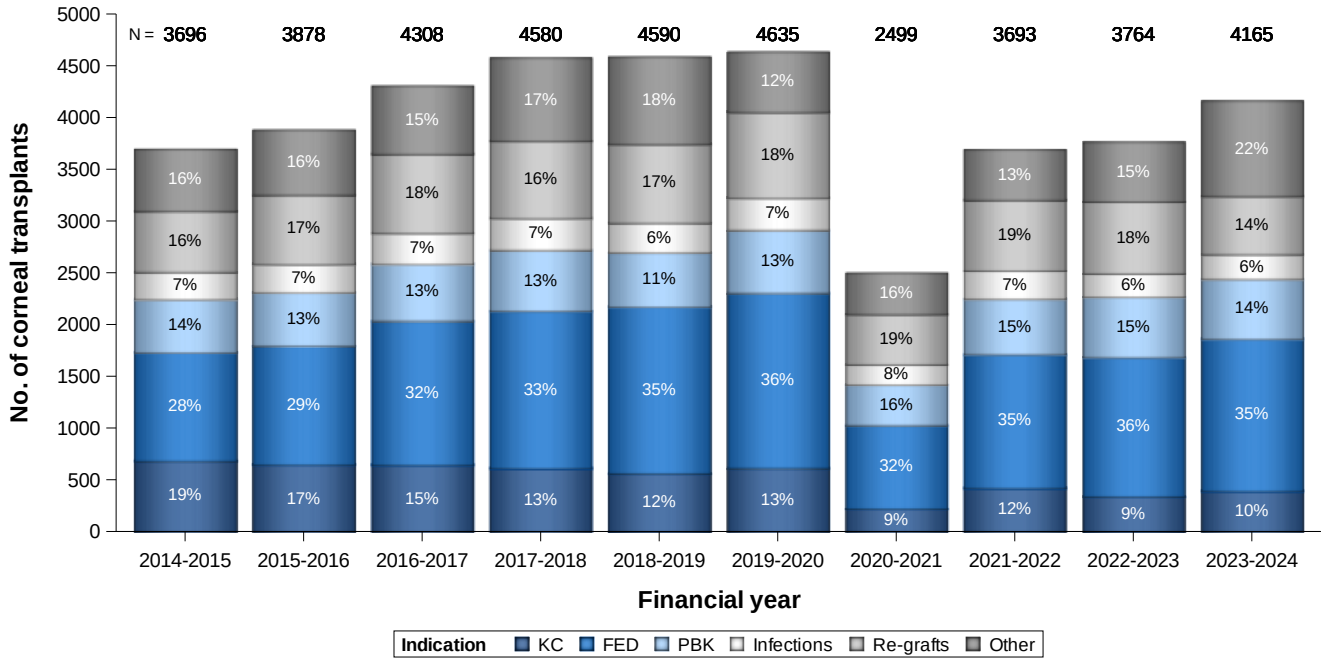
Table 10.3 Cornea transplants performed per million population (pmp) in the UK, 1 April 2022 - 31 March 2024, by country/NHS region

Country of residence/ NHS region	Number of transplants (pmp) 2022-2023		2023-2024	
North East and Yorkshire	428	(52.1)	482	(58.6)
North West	453	(60.2)	568	(75.5)
Midlands	453	(41.3)	579	(52.8)
East of England	247	(38.6)	300	(46.9)
London	967	(109.0)	745	(84.0)
South East	434	(46.3)	612	(65.2)
South West	386	(67.0)	423	(73.4)
England	**3368**	**(59.0)**	**3709**	**(64.9)**
Isle of Man	**0**	**(0)**	**0**	**(0)**
Channel Islands	**0**	**(0)**	**0**	**(0)**
Wales	**98**	**(31.3)**	**130**	**(41.5)**
Scotland	**218**	**(40.0)**	**226**	**(41.5)**
Northern Ireland	**65**	**(34.0)**	**84**	**(44.0)**
TOTAL[1]	**3764**	**(55.7)**	**4165**	**(61.6)**

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

Figure 10.2 shows the number of corneal transplants in the UK by indication for transplant from 1 April 2014 to 31 March 2024. For corneas transplanted in 2022-2023 and 2023-2024, a further breakdown by indication is shown in **Table 10.4**.

Figure 10.2 Number of corneal transplants in the UK by indication, 1 April 2014 - 31 March 2024



The most common indication for transplantation is FED, representing 35% of corneal transplants in 2023-2024.

Table 10.4 Corneal transplants in the UK by indication and financial year, 1 April 2022 - 31 March 2024

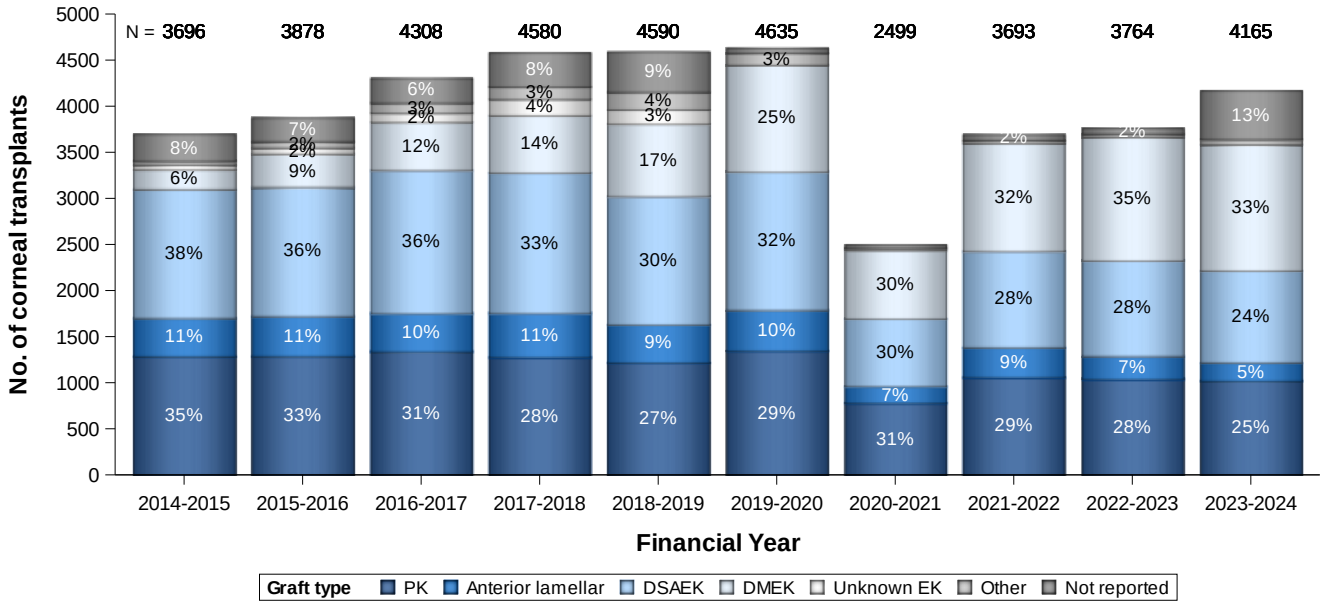
Indication for transplant	2022 - 2023		2023 - 2024	
	N	%	N	%
Keratoconus (KC)	**345**	**9.2**	**398**	**9.6**
Fuchs endothelial dystrophy (FED)	**1341**	**35.6**	**1469**	**35.3**
Pseudophakic bullous keratopathy (PBK)	**583**	**15.5**	**577**	**13.9**
Infections	**226**	**6.0**	**236**	**5.7**
Re-grafts	**696**	**18.5**	**565**	**13.6**
Other (listed below)	**573**	**15.2**	**920**	**22.1**
Ectasias	23	0.6	15	0.4
Dystrophies	65	1.7	60	1.4
Previous ocular surgery	115	3.1	85	2.0
Injury	62	1.6	49	1.2
Ulcerative keratitis	44	1.2	41	1.0
Opacification	82	2.2	73	1.8
Miscellaneous	153	4.1	103	2.5
Not reported	29	0.8	494	11.9
Total	**3764**	**100.0**	**4165**	**100.0**

Figure 10.3 shows the number of corneal transplants in the UK by graft type from 1 April 2014 to 31 March 2024. Over the last 10 years, the proportion of penetrating keratoplasty (PK) grafts has reduced by nearly a third. Descemet Membrane Endothelial Keratoplasty (DMEK) transplants are now the most popular technique for corneal transplantation.

Note that Endothelial Keratoplasty (EK) procedures were first specified on the Ocular Tissue Outcome and Transplant Record form reported to the UK Transplant Registry on 5 May 2010. The type of EK graft, Descemet Stripping Automated EK (DSAEK) and DMEK transplants, were first collected as free text on the form. This meant that all EK transplants were often reported as EK unknown. In April 2019, the form changed so that ‘EK unknown’ was no longer specified.

All unknown EK grafts prior to 2014 are assumed to be DSEK transplants as DMEK transplantation was not a routine form of transplantation at this time. Between January 2014 and April 2019, unknown EK graft types have been imputed such that grafts by surgeons that have never reported a DMEK transplant are assumed to be Descemet Stripping Automated EK (DSAEK) transplants and all transplants prior to the first reported DMEK are considered DSAEK transplants. A further breakdown by graft type for corneas transplanted in 2022-2023 and 2023-2024 is shown in **Table 10.5**.

Figure 10.3 Number of corneal transplants in the UK by graft type, 1 April 2014 - 31 March 2024



Between April 2013 to March 2019, unknown EK grafts have been imputed such that historic grafts and grafts by surgeons that have never reported a DMEK transplant are assumed to be DSAEK transplants

In 2023-2024, 24% of grafts were DSAEK and 33% were DMEK grafts. PK grafts are still a popular choice for corneal transplantation accounting for 25% of all transplants in 2023-2024. The proportion of anterior lamellar transplants has declined from 7% in 2022-2023 to 5% in 2023-2024.

Table 10.5 Corneal transplants in the UK by graft type and financial year, 1 April 2022 - 31 March 2024

Graft type	2022 - 2023		2023 - 2024	
	N	%	N	%
PK	1045	27.8	1023	24.6
Anterior lamellar	248	6.6	199	4.8
DSAEK	1043	27.7	997	23.9
DMEK	1335	35.5	1367	32.8
Other	34	0.9	58	1.4
Not reported	59	1.6	521	12.5
All grafts	**3764**	**100.0**	**4165**	**100.0**

10.4 Demographic characteristics

The age, sex and ethnicity of cornea donors and transplant recipients are shown in **Table 10.6**.

Table 10.6 Demographic characteristics of donors whose corneas were retrieved to NHSBT Eye Banks and transplant recipients in the UK, 1 April 2023 - 31 March 2024

	Cornea-only donors		Solid organ and cornea donors		Transplant recipients	
	N	%	N	%	N	%
Age group (years)						
0 - 17	4	0.2	10	2.3	19	0.5
18 - 34	29	1.3	32	7.4	301	7.2
35 - 49	107	5.0	87	20.0	388	9.3
50 - 59	248	11.5	103	23.7	466	11.2
60 - 69	478	22.2	126	29.0	770	18.5
70 - 79	780	36.2	72	16.6	1330	31.9
80+	508	23.6	5	1.1	891	21.4
Mean (SD)	70	(12)	55	(15)	66	(17)
Sex						
Male	1262	58.6	254	58.4	2083	50.0
Female	892	41.4	181	41.6	2081	50.0
Ethnicity						
White	83	3.9	406	93.3	3139	75.4
Asian	2	0.1	13	3.0	284	6.8
Black	1	0.0	2	0.5	125	3.0
Other	0	0.0	3	0.7	39	0.9
Not reported	2068	96.0	11	2.5	578	13.9
TOTAL	**2154**	**100.0**	**435**	**100.0**	**4165**	**100.0**

Survival Rates Following Transplantation

This chapter shows graft survival rates over time for kidney, pancreas and corneal transplants, and patient survival estimates for kidney, pancreas, cardiothoracic, liver, and intestinal transplants, performed in the UK. Separate estimates are presented for adult and paediatric patients (using organ-specific age definitions) and for transplants from donors after brain death and donors after circulatory death.

In all cases, the Kaplan-Meier estimate of the survivor function was used to provide the survival rate and groups (years) 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. Both analyses consider only first transplants.

11.1 Kidney graft and patient survival

11.1.1 Adult kidney recipients – donor after brain death (DBD)

Figure 11.1 shows long-term graft survival in adult (≥18 years) recipients for first kidney only transplant from donors after brain death. **Table 11.1** shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There have been significant improvements in one and two-year survival over the time periods shown, ($p<0.05$). **Table 11.2** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time ($p>0.07$).

Figure 11.1 Long-term graft survival after first adult kidney only transplant from donors after brain death, 1 January 2010 – 31 December 2022

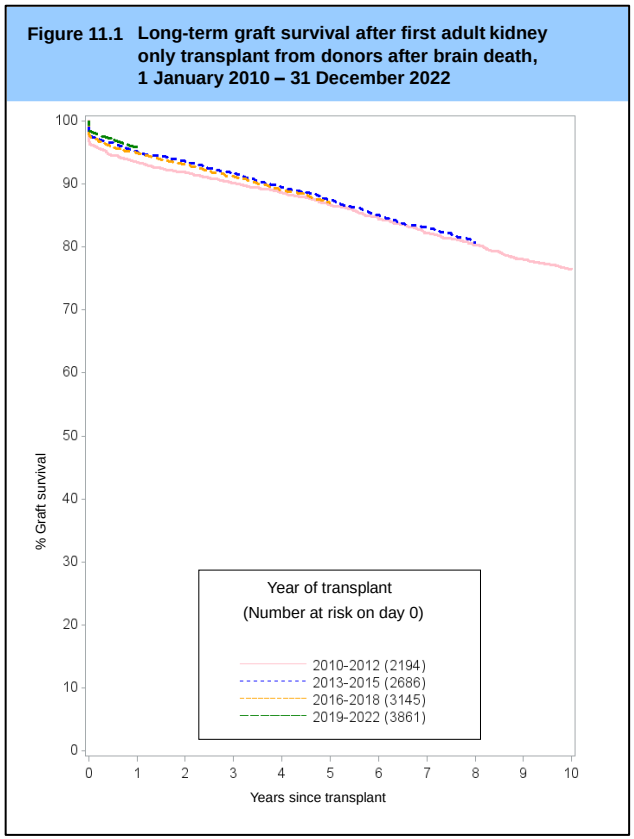


Table 11.1 Graft survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	2194	93	(92-94)	92	(91-93)	87	(85-88)	77	(75-78)
2013-2015	2686	95	(94-96)	94	(93-94)	87	(86-89)		
2016-2018	3145	95	(94-96)	93	(92-94)	87	(86-88)		
2019-2022	3861	96	(95-96)						

Table 11.2 Patient survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	2196	96	(96-97)	94	(93-95)	89	(87-90)	73	(71-75)
2013-2015	2687	97	(96-97)	95	(94-96)	89	(87-90)		
2016-2018	3146	97	(96-98)	95	(94-96)	87	(85-88)		
2019-2022	3862	96	(95-97)						

11.1.2 Adult kidney recipients – donor after circulatory death (DCD)

Long-term graft survival in adult recipients for kidney transplants from donors after circulatory death is shown in **Figure 11.2**. **Table 11.3** shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been significant variation in one-year survival over the time periods shown, p=0.002 **Table 11.4** shows the patient survival estimates and confidence intervals for each time period analysed. There was a statistically significant difference in patient survival over time at one- and five-year post-transplant (p=0.01).

Figure 11.2 Long-term graft survival after first adult kidney only transplant from donors after circulatory death, 1 January 2010 – 31 December 2022

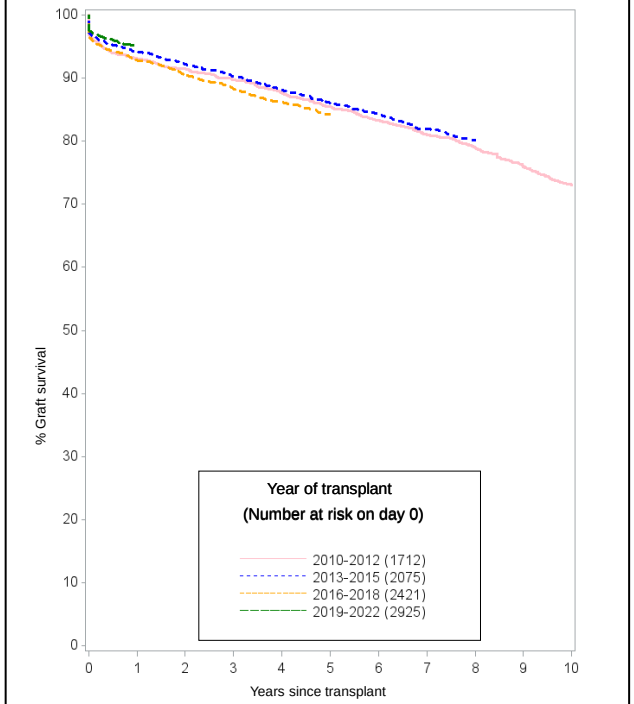


Table 11.3 Graft survival after first adult kidney only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	1712	93	(92-94)	91	(90-93)	85	(84-87)	73	(71-75)
2013-2015	2075	94	(93-95)	92	(91-93)	86	(84-88)		
2016-2018	2421	93	(92-94)	90	(89-92)	84	(83-86)		
2019-2022	2925	95	(94-96)						

Table 11.4 Patient survival after first adult kidney only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	1712	95	(94-96)	93	(92-94)	85	(83-87)	66	(64-69)
2013-2015	2076	96	(96-97)	95	(93-95)	86	(85-88)		
2016-2018	2422	97	(96-98)	95	(94-96)	83	(81-84)		
2019-2022	2926	96	(95-97)						

11.1.3 Adult kidney recipients – living donor

Long-term graft survival in adult recipients for living donor kidney transplants in the UK is shown in **Figure 11.3**. **Table 11.5** shows graft survival estimates and confidence intervals for each time period analysed. There has been a significant improvement in one-, two-, and five-year survival over the time periods shown (p<0.0001, p=0.001 and p=0.002, respectively). **Table 11.6** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.3).

Figure 11.3 Long-term graft survival after first adult living donor kidney only transplant in the UK, 1 January 2010 – 31 December 2022

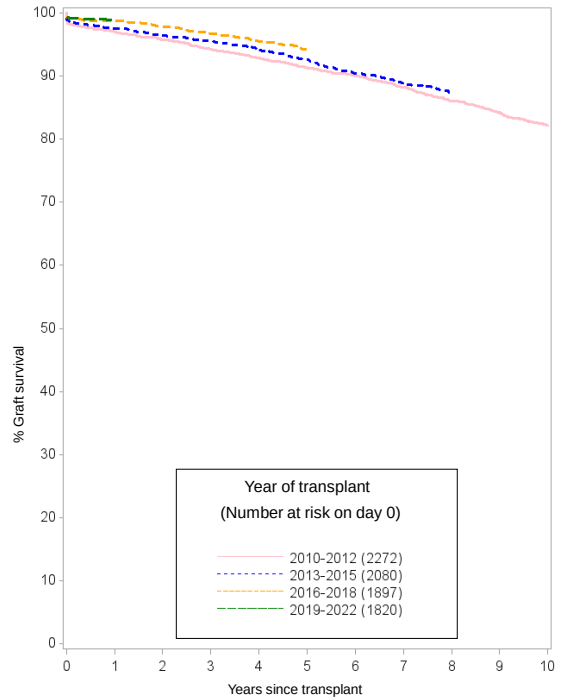


Table 11.5 Graft survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	2272	97	(96-98)	96	(95-97)	91	(90-92)	82	(80-84)
2013-2015	2080	98	(97-98)	96	(95-97)	93	(91-94)		
2016-2018	1897	99	(98-99)	98	(97-98)	94	(93-95)		
2019-2022	1820	99	(98-99)						

Table 11.6 Patient survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	2272	99	(98-99)	98	(97-98)	94	(93-95)	85	(83-86)
2013-2015	2080	99	(98-99)	98	(98-99)	95	(94-96)		
2016-2018	1899	99	(99-100)	98	(98-99)	94	(93-95)		
2019-2022	1821	99	(99-99)						

11.1.4 Paediatric kidney recipients – donor after brain death (DBD)

Figure 11.4 shows long-term graft survival in paediatric (<18 years) recipients for first kidney only transplants from donors after brain death. Graft survival estimates and confidence intervals are shown for each time period analysed in **Table 11.7**. There were no statistically significant changes in graft survival over time (p>0.8). **Table 11.8** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.4). There were insufficient paediatric recipients of first kidney only transplants from donors after circulatory death to permit reliable analysis.

Figure 11.4 Long-term graft survival after first paediatric kidney only transplant from donors after brain death, 1 January 2010 – 31 December 2022

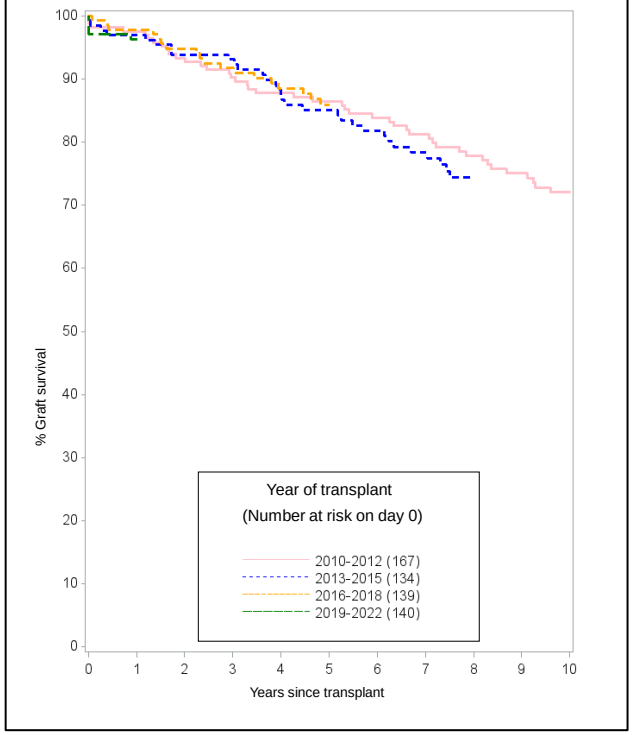


Table 11.7 Graft survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	167	98	(94-99)	93	(88-96)	86	(80-91)	72	(64-79)
2013-2015	134	97	(92-99)	94	(88-97)	85	(78-90)		
2016-2018	139	98	(93-99)	95	(89-97)	86	(79-91)		
2019-2022	140	96	(91-98)						

Table 11.8 Patient survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	167	99	(96-100)	99	(95-100)	96	(91-98)	93	(88-96)
2013-2015	134	99	(95-100)	99	(95-100)	99	(95-100)		
2016-2018	139	99	(95-100)	99	(95-100)	99	(95-100)		
2019-2022	140	100	-						

11.1.5 Paediatric kidney recipients - living donor

Long-term graft survival in paediatric recipients for living donor kidney transplants in the UK is shown in **Figure 11.5**. **Table 11.9** shows graft survival estimates and confidence intervals for each time period analysed. There has been a significant improvement in five-year survival over the time periods shown (p=0.03). **Table 11.10** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.3).

Figure 11.5 Long-term graft survival after first paediatric living donor kidney only transplant in the UK, 1 January 2010 – 31 December 2022

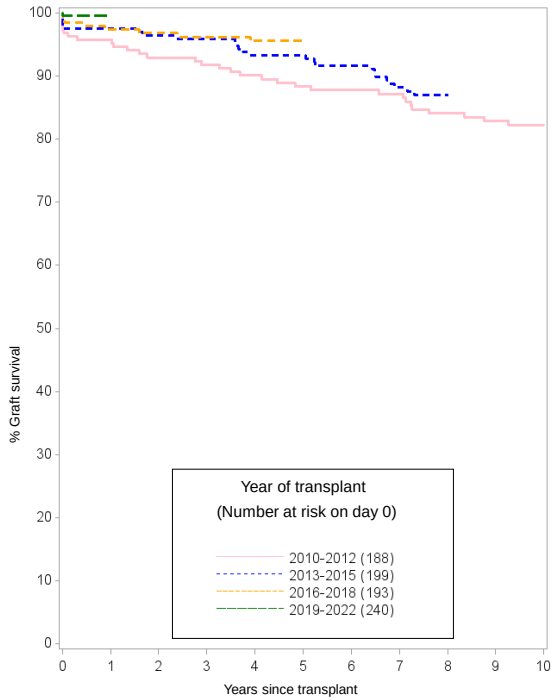


Table 11.9 Graft survival after first paediatric living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	188	96	(92-98)	93	(88-96)	88	(83-92)	82	(76-87)
2013-2015	199	97	(94-99)	96	(93-98)	93	(89-96)		
2016-2018	193	97	(94-99)	97	(93-99)	96	(91-98)		
2019-2022	240	100	(97-100)						

Table 11.10 Patient survival after first paediatric living donor kidney transplant

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	189	99	(96-100)	99	(96-100)	99	(96-100)	97	(93-99)
2013-2015	199	99	(96-100)	99	(96-100)	98	(95-100)		
2016-2018	193	99	(96-100)	98	(95-99)	97	(93-99)		
2019-2022	240	99	(96-100)						

11.2 Pancreas graft and patient survival

11.2.1 Simultaneous pancreas/kidney transplants - donor after brain death (DBD)

Figure 11.6 shows long-term graft survival in recipients receiving their first simultaneous pancreas/kidney (SPK) transplant performed from donors after brain death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years post-transplant in **Table 11.11** and **Table 11.12** respectively. Results relate to adults only as there are no paediatric pancreas transplant recipients. There were no statistically significant changes in graft survival over time (p>0.2). Differences in patient survival are not significant over time (p>0.07).

Figure 11.6 Long-term graft survival after first SPK transplant from donors after brain death, 1 January 2010 – 31 December 2022

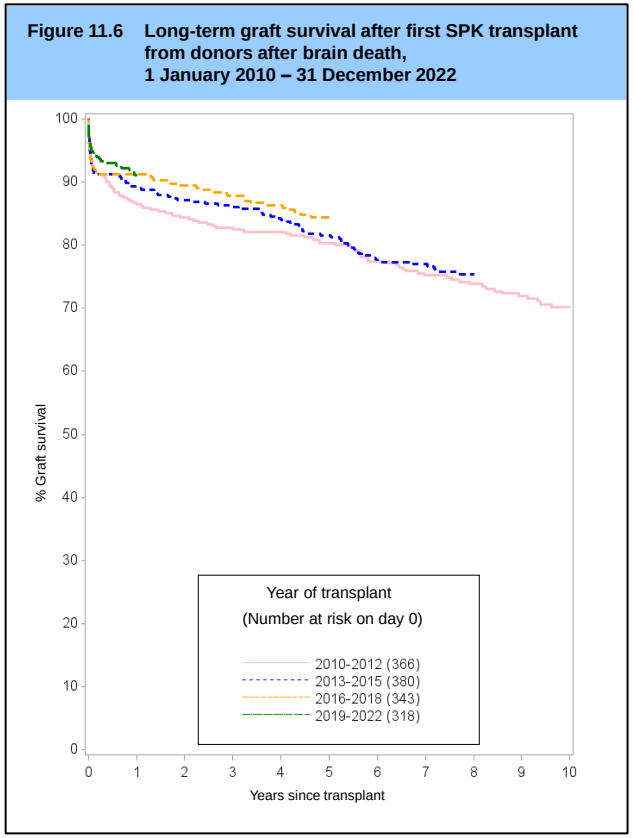


Table 11.11 Graft survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	366	86	(82-90)	84	(80-88)	80	(76-84)	70	(65-75)
2013-2015	380	89	(86-92)	87	(83-90)	82	(77-85)		
2016-2018	343	91	(88-94)	89	(86-92)	84	(80-88)		
2019-2022	318	91	(87-94)						

Table 11.12 Patient survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	366	96	(94-98)	94	(91-96)	88	(84-91)	73	(68-78)
2013-2015	381	97	(95-98)	97	(95-98)	90	(86-92)		
2016-2018	345	99	(97-100)	97	(94-98)	92	(88-95)		
2019-2022	320	97	(94-98)						

11.2.2 Simultaneous pancreas/kidney transplants - donor after circulatory death (DCD)

Figure 11.7 shows pancreas graft survival in recipients receiving their first SPK transplant performed from donors after circulatory death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years in **Table 11.13** and **Table 11.14** respectively. Results are for adult patients only. There has been a significant improvement in one-, two- and five-year graft survival over the time periods shown, $p<0.05$. Differences in patient survival are not significant over time ($p>0.2$).

Figure 11.7 Pancreas graft survival after first SPK transplant from donors after circulatory death, 1 January 2010 – 31 December 2022

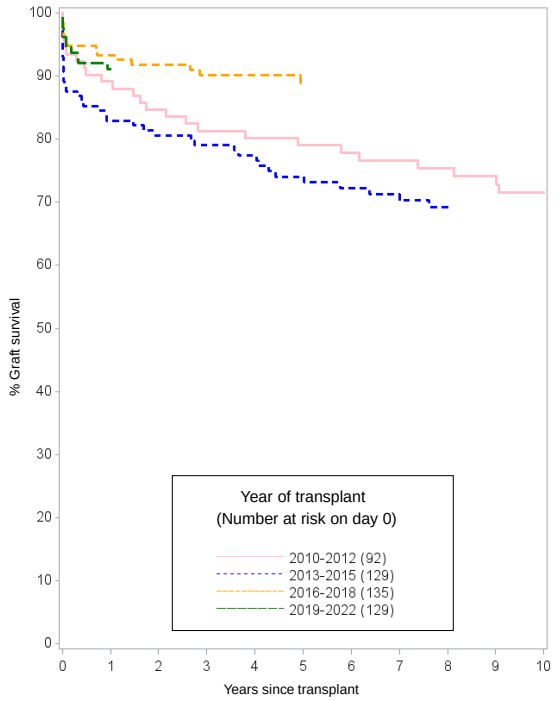


Table 11.13 Graft survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	92	89	(81-94)	85	(76-91)	79	(69-86)	72	(61-80)
2013-2015	129	83	(75-88)	81	(73-86)	74	(65-81)		
2016-2018	135	93	(88-96)	92	(86-95)	89	(82-93)		
2019-2022	129	91	(84-95)						

Table 11.14 Patient survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	92	98	(92-99)	94	(87-98)	91	(83-95)	79	(69-87)
2013-2015	130	100	-	98	(93-100)	94	(87-97)		
2016-2018	136	98	(94-100)	98	(93-99)	94	(88-97)		
2019-2022	130	97	(91-99)						

11.2.3 Pancreas only transplants - donor after brain death (DBD)

Figure 11.8 shows long-term graft survival in recipients receiving their first pancreas only transplant performed from donors after brain death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years in **Table 11.15** and **Table 11.16** respectively. Results are for adult patients only. There were no statistically significant changes in graft or patient survival over time (p>0.1).

Figure 11.8 Long-term graft survival after pancreas only transplant from donors after brain death, 1 January 2010 – 31 December 2022

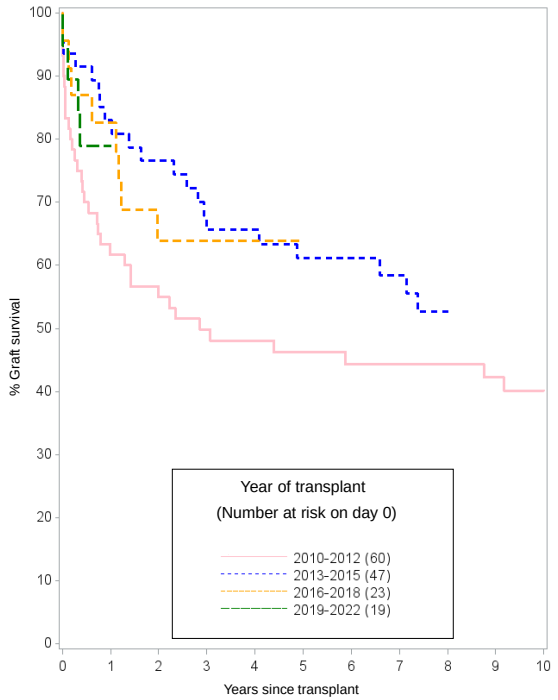


Table 11.15 Graft survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	60	62	(48-73)	55	(42-66)	46	(33-58)	40	(27-53)
2013-2015	47	83	(69-91)	77	(62-86)	61	(46-73)		
2016-2018	23	83	(60-93)	64	(41-80)	64	(41-80)		
2019-2022	19	79	(53-92)						

Table 11.16 Patient survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	60	98	(86-100)	96	(84-99)	77	(61-87)	60	(43-74)
2013-2015	47	98	(86-100)	98	(86-100)	90	(76-96)		
2016-2018	23	95	(72-99)	85	(60-95)	79	(53-92)		
2019-2022	19	94	(65-99)						

11.2.4 Pancreas only transplants - donor after circulatory death (DCD)

Figure 11.9 shows pancreas graft survival in recipients receiving their first pancreas only transplant performed from donors after circulatory death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years in **Table 11.17** and **Table 11.18** respectively. Results are for adult patients only and are based on small numbers so should be interpreted with caution.

Figure 11.9 Pancreas graft survival after pancreas only transplant from donors after circulatory death, 1 January 2010 – 31 December 2022

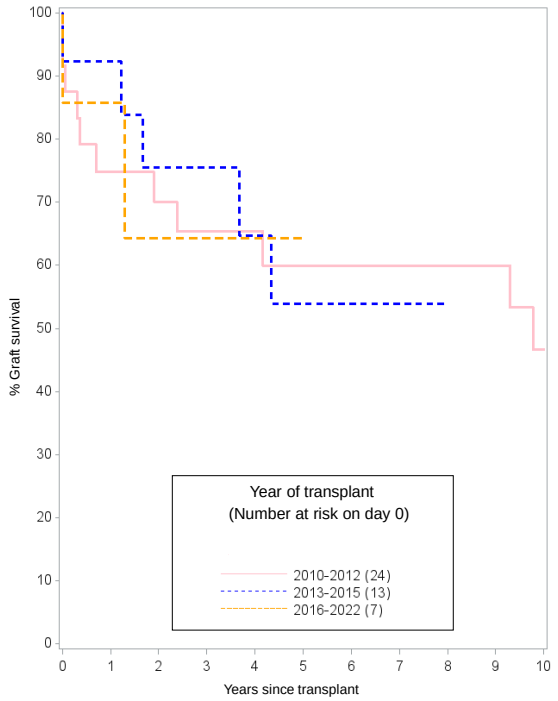


Table 11.17 Graft survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	24	75	(52-88)	70	(47-85)	60	(37-77)	47	(23-67)
2013-2015	13	92	(57-99)	76	(42-91)	54	(21-78)		
2016-2022	7	86	(33-98)	64	(15-90)	64	(15-90)		

Table 11.18 Patient survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	24	96	(73-99)	96	(73-99)	79	(53-92)	73	(47-88)
2013-2015	13	100	-	100	-	75	(41-91)		
2016-2022	7	100	-						

11.3 Cardiothoracic patient survival

11.3.1 Adult heart recipients – donors after brain death (DBD)

Long-term patient survival for adult (≥16 years) recipients after first heart only transplant performed from donors after brain death is shown in **Figure 11.10**. Super-urgent, urgent and non-urgent patients are included. **Table 11.19** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant for each transplant era. There were no statistically significant differences in patient survival across eras (p>0.07).

Figure 11.10 Long-term patient survival after first adult heart only transplant from donors after brain death, 1 January 2010 – 31 December 2022

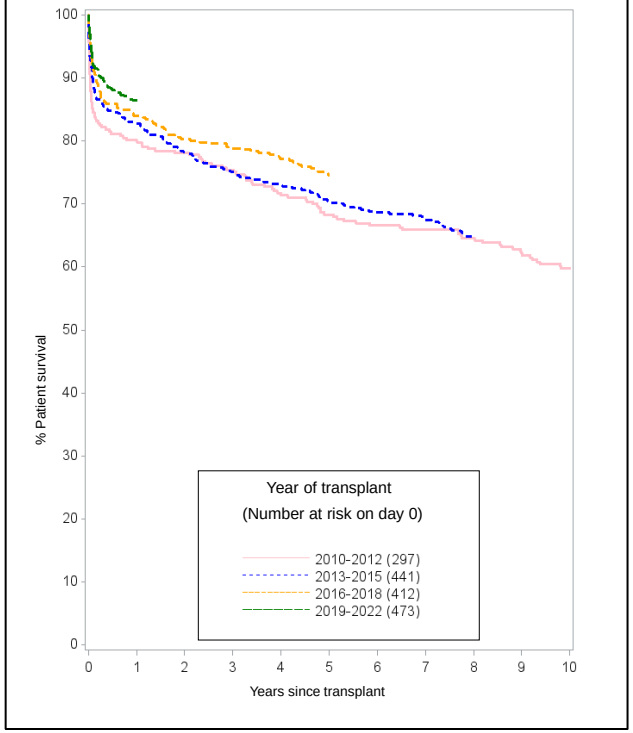


Table 11.19 Patient survival after first adult heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	297	80	(75-84)	78	(73-82)	68	(63-73)	60	(54-65)
2013-2015	441	83	(79-86)	78	(74-82)	70	(66-74)		
2016-2018	412	84	(80-87)	80	(76-84)	75	(70-79)		
2019-2022	473	86	(83-89)						

11.3.2 Adult heart recipients – donors after circulatory death (DCD)

Long-term patient survival for adult (≥16 years) recipients after first heart only transplant performed from donors after circulatory death is shown in **Figure 11.11**. Super-urgent, urgent, and non-urgent patients are included. **Table 11.20** shows the patient survival estimates and confidence intervals for one, two, and three years post-transplant for each transplant era.

Figure 11.11 Long-term patient survival after first adult heart only transplant from donors after circulatory death, 1 January 2016 – 31 December 2022

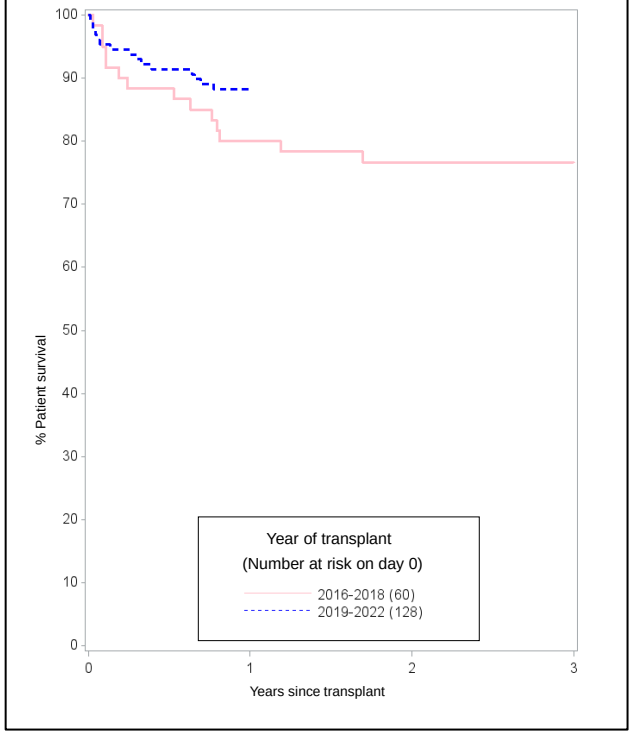


Table 11.20 Patient survival after first adult heart only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2016-2018	60	80	(67-88)	77	(64-85)	77	(64-85)
2019-2022	128	88	(81-93)				

11.3.3 Adult heart-lung block recipients – donors after brain death (DBD)

Patient survival for adult recipients after first heart-lung block transplant from donors after brain death is shown in **Figure 11.12**. Patient survival estimates and confidence intervals for each time period analysed are shown in **Table 11.21**. The number of transplants is small and thus confidence intervals for survival estimates are wide and overlap between eras indicating no statistically significant difference (p>0.1).

Figure 11.12 Long-term patient survival after first adult heart-lung block transplant from donors after brain death, 1 January 2010 – 31 December 2022

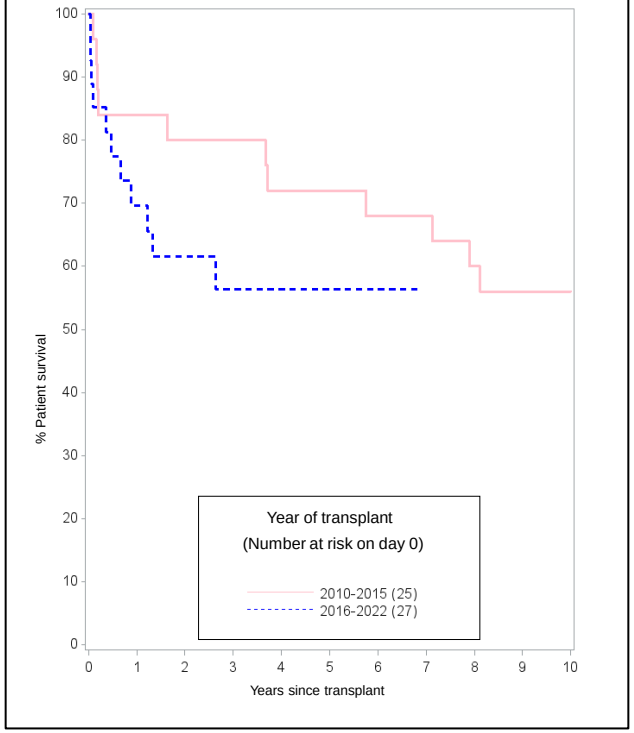


Table 11.21 Patient survival after first adult heart-lung block transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2015	25	84	(63-94)	80	(58-91)	72	(50-86)	56	(35-73)
2016-2022	27	70	(48-84)	61	(40-77)	56	(35-73)		

11.3.4 Adult lung recipients - donors after brain death (DBD)

Patient survival for adult recipients after first lung only transplant from donors after brain death is shown in **Figure 11.13**, with survival estimates and confidence intervals shown in **Table 11.22**. Super-urgent, urgent and non-urgent patients are included. There were no statistically significant differences in patient survival across eras (p>0.7).

Figure 11.13 Long-term patient survival after first adult lung only transplant from donors after brain death, 1 January 2010 – 31 December 2022

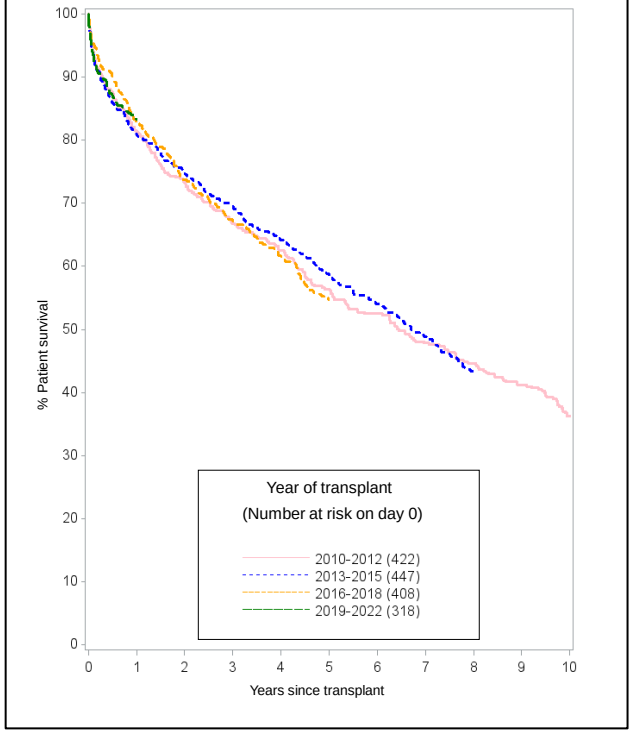


Table 11.22 Patient survival after first adult lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	422	81	(77-85)	73	(69-77)	56	(51-61)	36	(32-41)
2013-2015	447	81	(77-84)	75	(70-78)	58	(54-63)		
2016-2018	408	83	(79-86)	74	(69-78)	55	(50-59)		
2019-2022	318	83	(79-87)						

11.3.5 Adult lung recipients - donors after circulatory death (DCD)

Patient survival for adult recipients after first lung only transplant from donors after circulatory death is shown in **Figure 11.14**, by era, with survival estimates and confidence intervals shown in **Table 11.23**. Super-urgent, urgent and non-urgent patients are included.

Figure 11.14 Patient survival after first adult lung only transplant from donors after circulatory death, 1 January 2010 – 31 December 2022

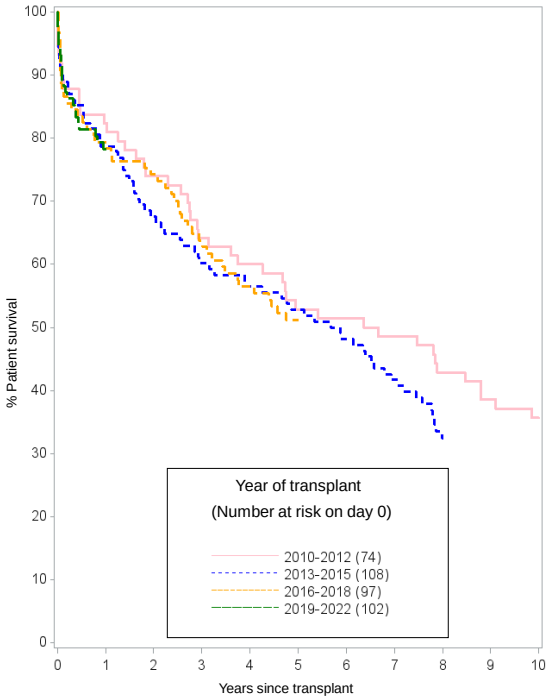


Table 11.23 Patient survival after first adult lung only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2010-2012	74	82	(72-89)	74	(62-83)	53	(41-64)
2013-2015	108	79	(70-85)	68	(58-76)	53	(43-62)
2016-2018	97	79	(70-86)	74	(64-82)	51	(41-61)
2019-2022	102	78	(69-85)				

11.3.6 Paediatric heart recipients – donors after brain death (DBD)

Long-term patient survival for paediatric recipients after first heart only transplant from donors after brain death is shown in **Figure 11.15**. Super-urgent, urgent and non-urgent patients are included. **Table 11.24** 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 eras (p>0.7). The number of heart-lung transplant recipients was too small to analyse.

Figure 11.15 Long-term patient survival after first paediatric heart only transplant from donors after brain death, 1 January 2010 – 31 December 2022

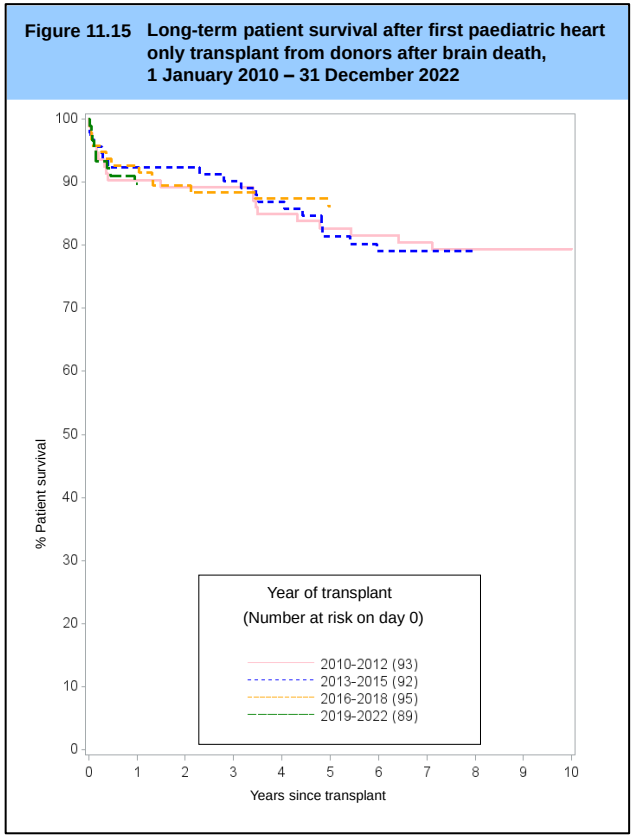


Table 11.24 Patient survival after first paediatric heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
2010-2012	93	90	(82-95)	89	(81-94)	83	(73-89)	79	(70-86)
2013-2015	92	92	(85-96)	92	(85-96)	81	(72-88)		
2016-2018	95	93	(85-96)	89	(81-94)	86	(77-92)		
2019-2022	89	90	(81-95)						

11.3.7 Paediatric lung recipients - donors after brain death (DBD)

Long-term patient survival for paediatric recipients after first lung only transplant from donors after brain death is shown in **Figure 11.16**. Super-urgent, urgent and non-urgent patients are included. **Table 11.25** 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 eras (p>0.2).

Figure 11.16 Long-term patient survival after first paediatric lung only transplant from donors after brain death, 1 January 2010 – 31 December 2022

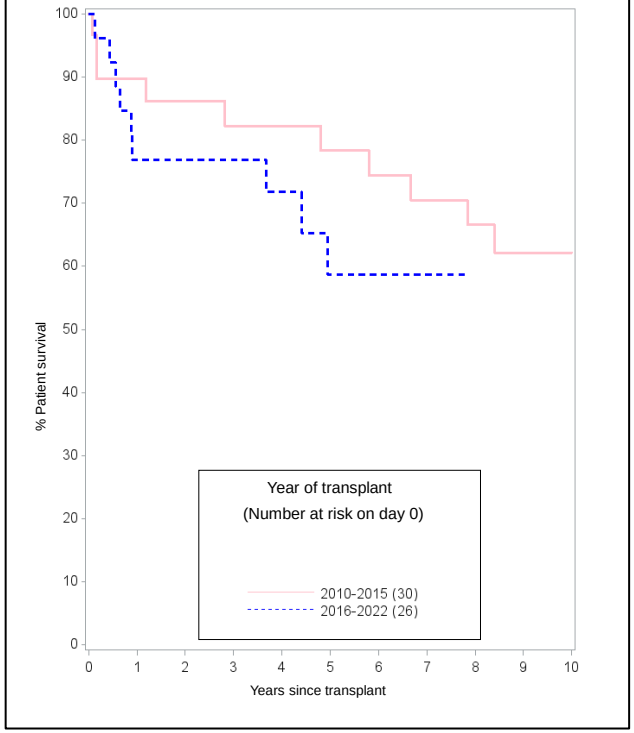


Table 11.25 Patient survival after first paediatric lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2015	30	90	(72-97)	86	(67-95)	78	(58-90)	62	(41-78)
2016-2022	26	77	(56-89)	77	(56-89)	59	(34-77)		

11.4 Liver patient survival

11.4.1 Adult liver recipients - donor after brain death (DBD)

Long-term patient survival for adult (≥17 years) recipients after first elective NHS Group 1 liver only transplants from donors after brain death is shown in **Figure 11.17**. **Table 11.26** shows patient survival estimates at one, two, five, and ten years post-transplant. There were no statistically significant differences in patient survival across eras (p>0.09). Whole liver transplants are included as well as reduced and split liver transplants.

Figure 11.17 Long-term patient survival after first elective adult liver only transplant from donors after brain death, 1 January 2010 – 31 December 2022

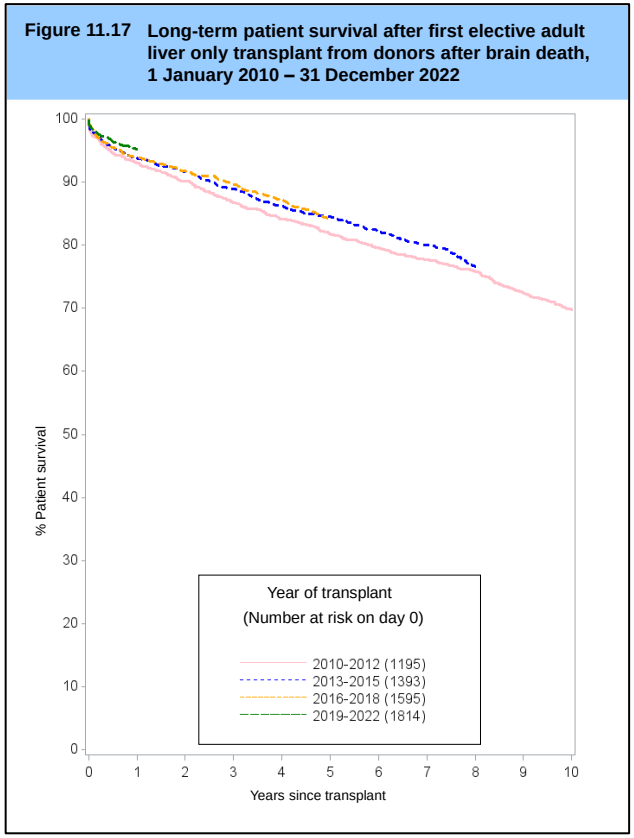


Table 11.26 Patient survival after first elective adult NHS Group 1 liver only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	1195	93	(91-94)	90	(88-92)	82	(79-84)	70	(67-72)
2013-2015	1393	94	(92-95)	92	(90-93)	84	(82-86)		
2016-2018	1595	94	(93-95)	92	(90-93)	84	(82-86)		
2019-2022	1814	95	(94-96)						

11.4.2 Adult liver recipients - donor after circulatory death (DCD)

Patient survival for adult (≥17 years) recipients after first elective NHS Group 1 liver only transplants from donors after circulatory death is shown in **Figure 11.18**. **Table 11.27** shows patient survival estimates at one, two and five years post-transplant. There is evidence of a change in one- and two-year patient survival over time (p<0.001).

Figure 11.18 Long-term patient survival after first elective adult liver only transplant from donors after circulatory death, 1 January 2010 – 31 December 2022

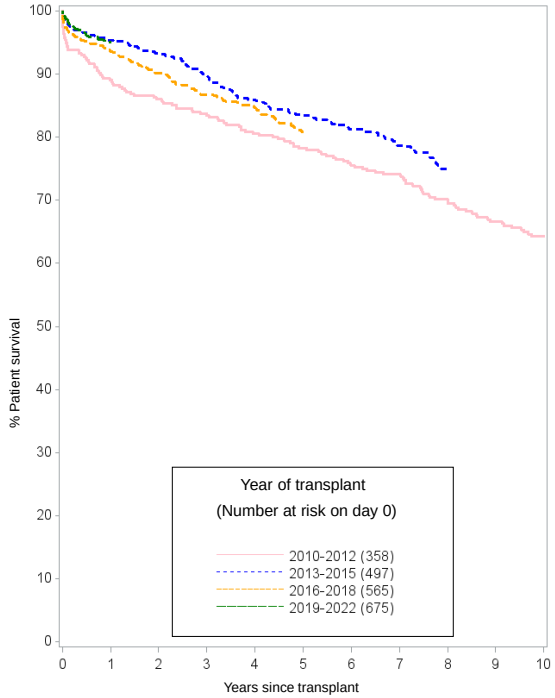


Table 11.27 Patient survival after first elective adult NHS Group 1 liver only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	358	89	(85-92)	86	(82-89)	78	(74-82)	64	(59-69)
2013-2015	497	95	(93-97)	93	(91-95)	83	(80-86)		
2016-2018	565	94	(91-95)	90	(87-92)	81	(77-84)		
2019-2022	675	95	(93-96)						

11.4.3 Paediatric liver recipients – donor after brain death (DBD)

Figure 11.19 and **Table 11.28** show long-term patient survival estimates for first elective liver only transplants from donors after brain death in paediatric (<17 years) recipients. There have been no statistically significant changes in one-, two- or five-year patient survival over the time period analysed (p>0.1). The number of paediatric transplants from donors after circulatory death was too small to estimate meaningful patient survival.

Figure 11.19 Long-term patient survival after first elective paediatric liver only transplant from donors after brain death, 1 January 2010 – 31 December 2022

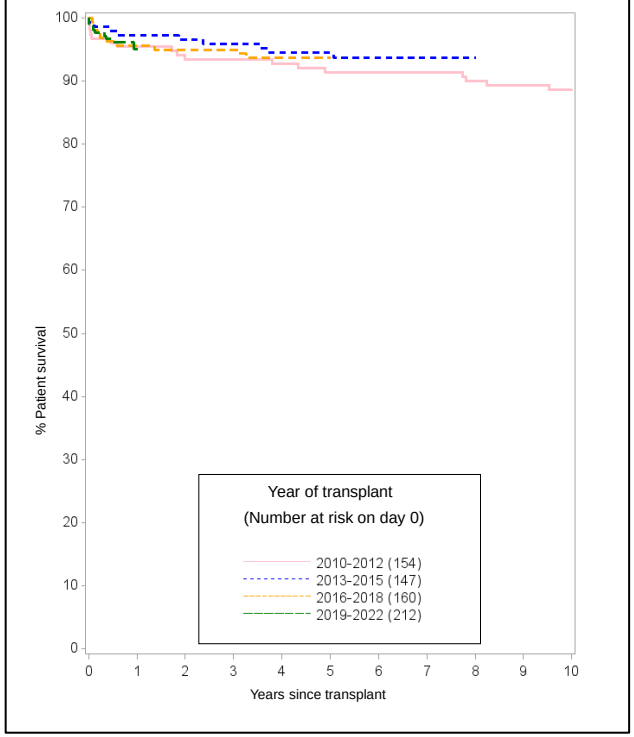


Table 11.28 Patient survival after first elective paediatric liver only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2010-2012	154	95	(91-98)	93	(88-96)	91	(86-95)	89	(82-93)
2013-2015	147	97	(93-99)	97	(92-99)	94	(89-97)		
2016-2018	160	96	(91-98)	95	(90-97)	94	(89-97)		
2019-2022	212	95	(91-97)						

11.5 Intestinal patient survival

Figure 11.20 and **Table 11.29** show patient survival estimates for recipients receiving their first intestinal transplant, by recipient age group (adults aged ≥ 18 years) and transplant era. Results should be interpreted cautiously due to the small cohort and the heterogeneity of transplant types (both transplants that involve and do not involve the liver are included).

Figure 11.20 Patient survival after first intestinal graft in the UK, 1 January 2015 – 31 December 2022

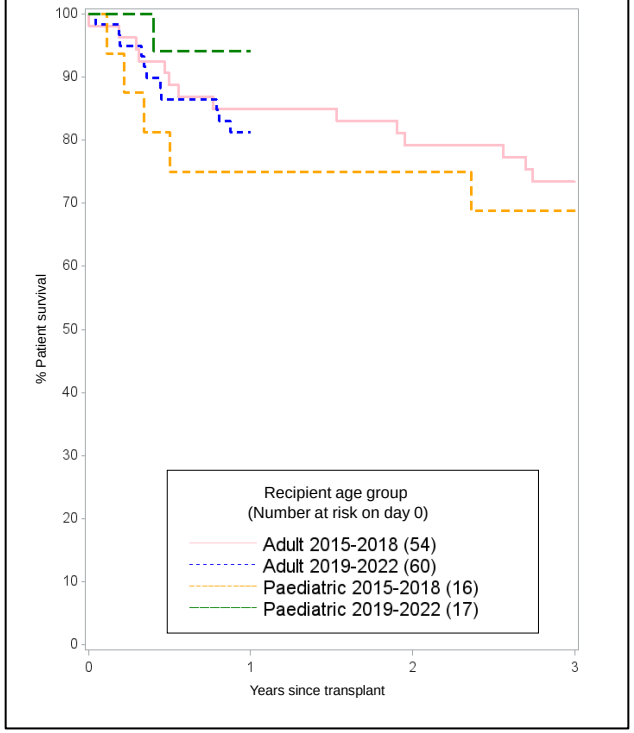


Table 11.29 Patient survival after first intestinal transplant

Recipient age group	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
Adult							
2015-2018	54	85	(72-92)	79	(66-88)	73	(59-83)
2019-2022	60	81	(69-89)				
Paediatric							
2015-2018	16	75	(46-90)	75	(46-90)	69	(40-86)
2019-2022	17	94	(65-99)				

11.6 Corneal graft survival

11.6.1 Cornea grafts for keratoconus

Figure 11.21 shows graft survival estimates for first corneal transplant for keratoconus (KC) for grafts in 2010-2012, 2013-2015, 2016-2018 and 2019-2022. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.30**.

Figure 11.21 Graft survival after first corneal graft for KC in the UK, 1 January 2010 – 31 December 2022

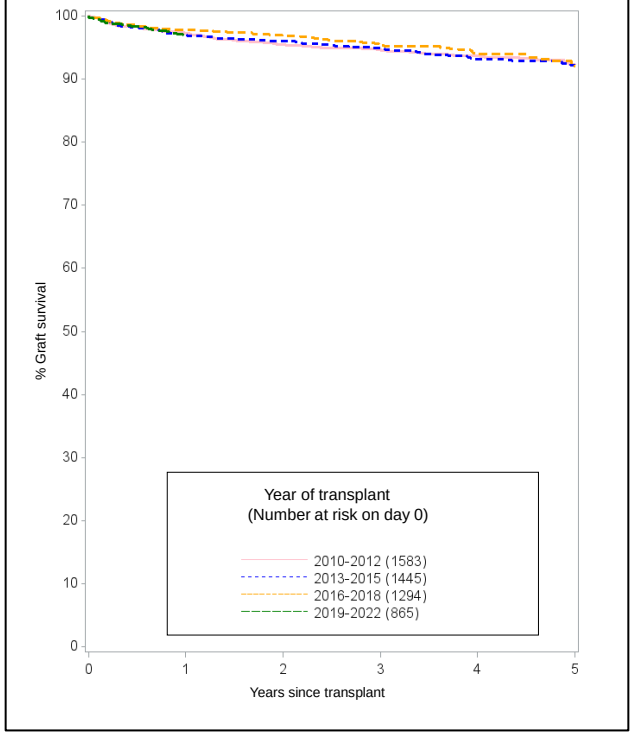


Table 11.30 Graft survival after first corneal graft for KC

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2010-2012	1583	97	(96-98)	95	(94-96)	92	(91-94)
2013-2015	1445	97	(96-98)	96	(95-97)	92	(90-94)
2016-2018	1294	98	(97-99)	97	(96-98)	92	(90-94)
2019-2022	865	97	(95-98)				

11.6.2 Cornea grafts for Fuchs endothelial dystrophy

Figure 11.22 shows graft survival estimates for first corneal transplant for Fuchs endothelial dystrophy (FED) for grafts in 2010-2012, 2013-2015, 2016-2018 and 2019-2022. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.31**.

Figure 11.22 Graft survival after first corneal graft for FED in the UK, 1 January 2010 – 31 December 2022

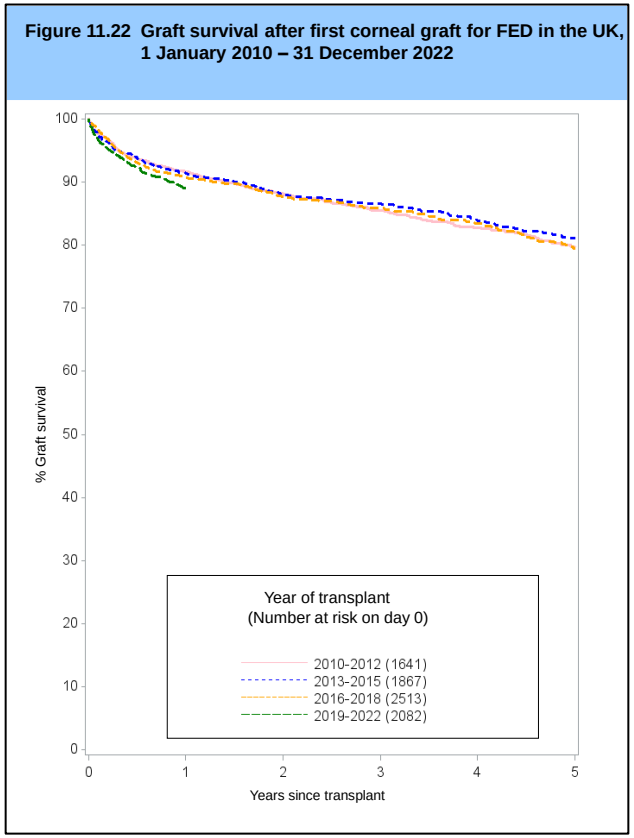


Table 11.31 Graft survival after first corneal graft for FED

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2010-2012	1641	92	(90-93)	88	(86-90)	80	(77-82)
2013-2015	1867	91	(90-93)	88	(86-90)	81	(79-83)
2016-2018	2513	91	(89-92)	88	(86-89)	79	(77-82)
2019-2022	2082	89	(88-90)				

11.6.3 Cornea grafts for pseudophakic bullous keratopathy

Figure 11.23 shows graft survival estimates for first corneal transplant for pseudophakic bullous keratopathy (PBK) for in 2010-2012, 2013-2015, 2016-2018 and 2019-2022. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.32**.

Figure 11.23 Graft survival after first corneal graft for PBK in the UK, 1 January 2010 – 31 December 2022

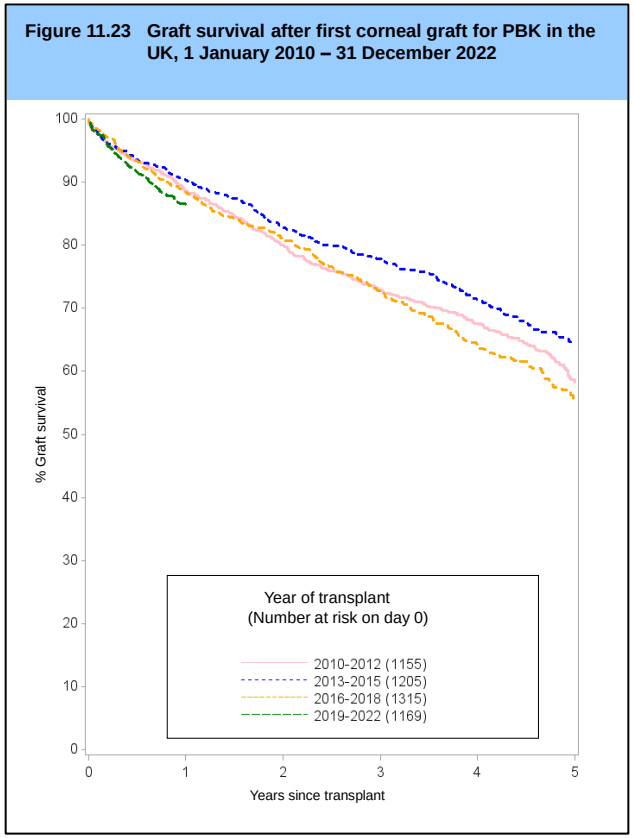


Table 11.32 Graft survival after first corneal graft for PBK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2010-2012	1155	89	(87-90)	80	(77-82)	58	(54-62)
2013-2015	1205	90	(88-92)	83	(80-85)	64	(61-68)
2016-2018	1315	88	(87-90)	81	(78-83)	56	(51-60)
2019-2022	1169	86	(84-88)				

NHS Organ Donor Register (ODR)

Key messages

- **Opt out legislation has been implemented in Wales (2015), Jersey (2019), England (2020), Scotland (2021), Guernsey (2023) and most recently Northern Ireland on 1 June 2023**
- **28.1 million people were on the opt-in ODR at March 2024 (42% of the population)**
- **2.6 million people were on the opt-out ODR at March 2024**
- **182 people were appointed representative registrations on the ODR at March 2024**
- **56% of the 1,510 deceased organ donors last year were on the opt-in ODR**
- **5% of ODR registrations last year were through the NHS App**

It should be noted that an improved method of recording registrant deaths was implemented in 2023, resulting in a significant reduction in the number of registrants recorded on the NHS Organ Donor Register, but more accurately reflecting the number of living registrants.

By the end of March 2024, the NHS Organ Donor Register (ODR) held just over 28.1 million opt-in registrations. A summary of the number of registrations at the end of each financial year from 31 March 2015 to 31 March 2024, is shown in **Figure 12.1**.

By the end of March 2024, the NHS Organ Donor Register (ODR) held just under 2.6 million opt-out registrations. A summary of the number of opt-out registrations at the end of each financial year from 31 March 2016 to 31 March 2024 is shown in **Figure 12.2**.

Of the 1,510 deceased organ donors in 2023-2024, 56% were registered on the ODR, representing an increase of 3% from 2022-2023.

Figure 12.1 Number opted-in on the NHS Organ Donor Register at 31 March

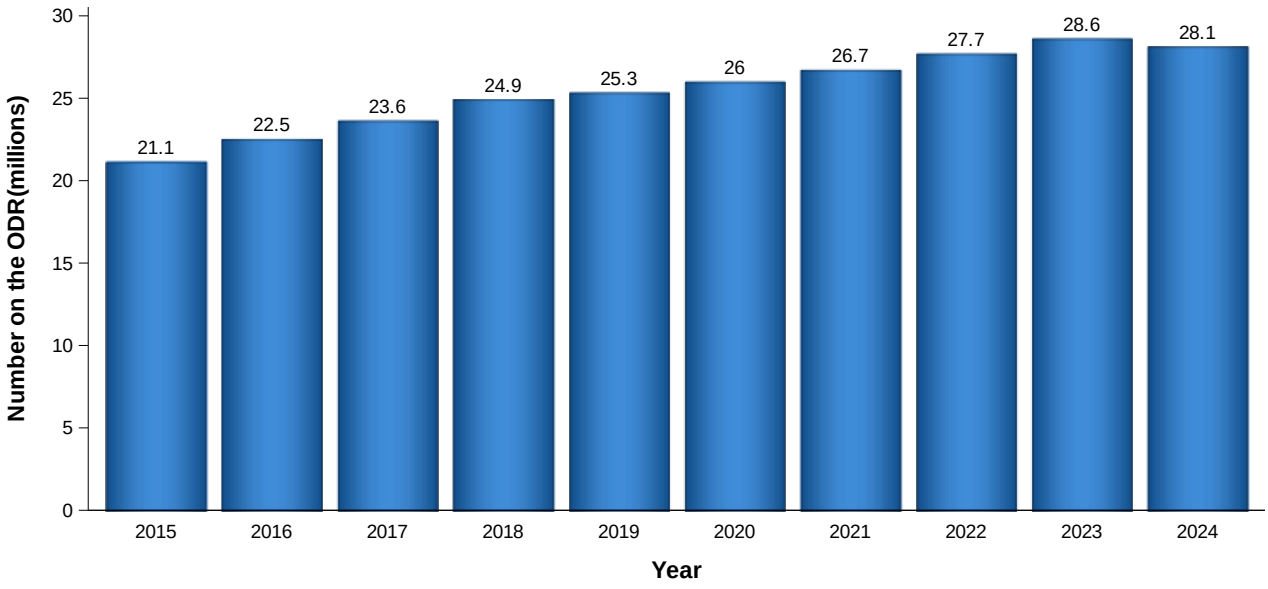
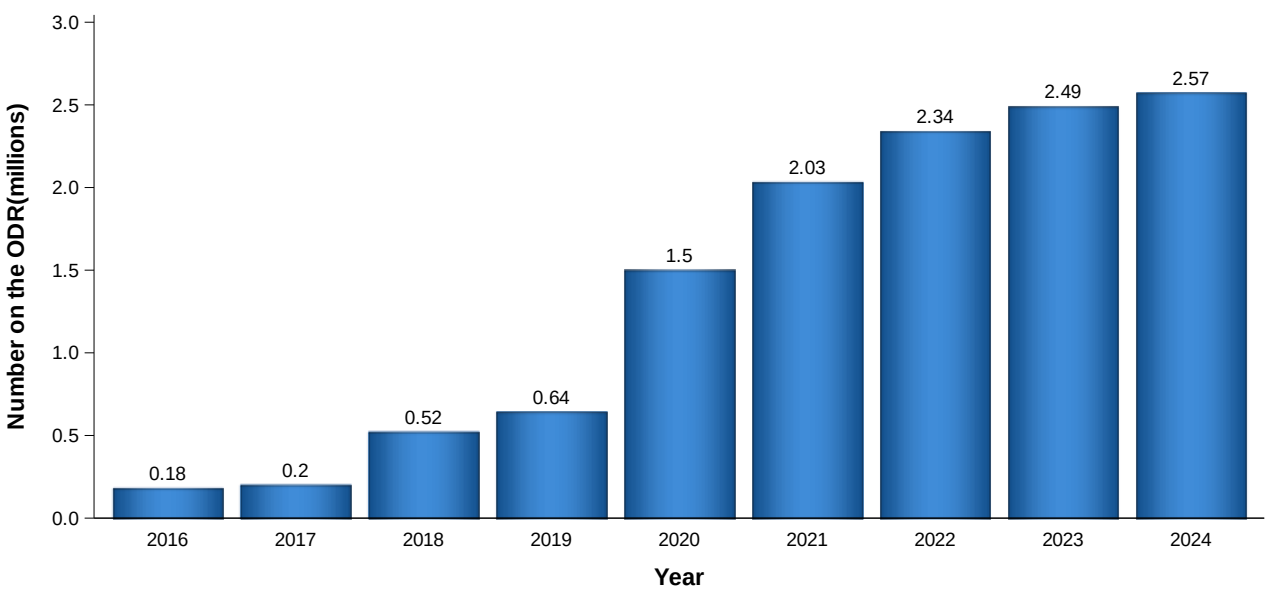


Figure 12.2 Number opted-out on the NHS Organ Donor Register at 31 March



Those registered on the ODR come from all parts of the UK. **Table 12.1** shows the percentage of the population registered (opt-in) in each country/NHS region at 31 March 2024, and the number of opt-in registrants. No adjustment has been made for any differences in demographics of the populations.

Table 12.2 shows the number of opt-out registrants in each country/NHS region at 31 March 2024. The proportion of the population that registered an opt-out was 6.0% in Wales, and less for other countries and NHS regions. In the time period, Wales, England, Scotland, Guernsey and Northern Ireland have opt-out legislation in place, but it is possible for people anywhere in the UK to opt-out. There has been an increase in opt-out registrations from across the UK ahead of the implementation of opt-out. In addition, there have been 182 appointed representative registrations. An appointed representative(s), in circumstances where donation is possible, will be asked if organs should be donated.

Table 12.1. Opt-in registrations on the NHS Organ Donor Register by 31 March 2024, by country/ NHS region

Country/ NHS region of residence	Registrants N	Registrants pmp	Proportion registered
North East and Yorkshire	3,517,089	427,870	43%
North West	2,655,632	353,143	35%
Midlands	3,903,255	356,136	36%
East of England	2,801,577	437,746	44%
London	2,833,568	319,455	32%
South East	4,114,588	438,655	44%
South West	2,868,440	497,993	50%
England	**22,694,149**	**397,376**	**40%**
Isle of Man	**56,399**	**704,988**	**70%**
Channel Islands	**30,109**	**177,112**	**18%**
Wales	**1,378,464**	**440,404**	**44%**
Scotland	**2,884,003**	**529,175**	**53%**
Northern Ireland	**1,048,273**	**548,834**	**55%**
TOTAL[1]	**28,147,817**	**416,388**	**42%**

[1] Includes 56,420 registrants where the postcode was unknown

Table 12.2. Opt-out registrations on the NHS Organ Donor Register by 31 March 2023, by country/ NHS region

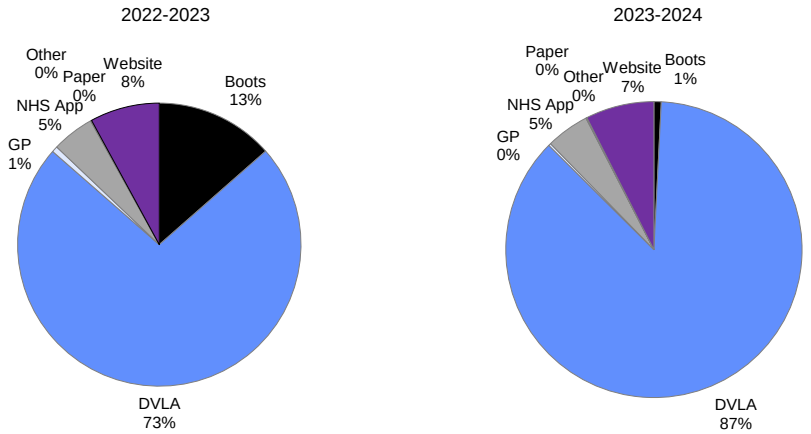
Country/ NHS region of residence	Registrants N	Registrants pmp	Proportion registered
North East and Yorkshire	303,351	36,904	3.7%
North West	281,256	37,401	3.7%
Midlands	450,332	41,089	4.1%
East of England	203,014	31,721	3.2%
London	593,659	66,929	6.7%
South East	226,166	24,112	2.4%
South West	117,373	20,377	2.0%
England	**2,175,151**	**38,087**	**3.8%**
Isle of Man	**681**	**8,513**	**0.9%**
Channel Islands	**2,328**	**13,694**	**1.4%**
Wales	**188,578**	**60,249**	**6.0%**
Scotland	**179,168**	**32,875**	**3.3%**
Northern Ireland	**22,330**	**11,691**	**1.2%**
TOTAL[1]	**2,568,480**	**37,995**	**3.8%**

[1] Includes 244 registrants where the postcode was unknown

There are a number of registration routes to opt-in on the ODR: when registering as a patient with a General Practitioner (via the GMS1 paper form); with driving licence applications and other driving services (via the Driver and Vehicle Licensing Agency (DVLA)); the NHS App, when applying for a Boots Advantage Card; online registrations via the NHSBT Organ Donation website (www.organdonation.nhs.uk); Wales and Scotland organ donation websites, NHSBT paper forms and by telephone. There are also various external links delivering traffic to the NHSBT Organ Donation website (such as in newspapers and radio).

The source of applications for opt-in registration on the ODR is illustrated in **Figure 12.3**. This figure shows that 87% of registrations in 2023-2024 arrived by means of registering through driving licence applications and reminders through the DVLA and 7% online through the Organ Donation website. There has been no change in applications for opt-in registrations through the NHS App, 5% in 2023-2024 and in 2022-2023.

Figure 12.3 Source of applications for opt-in registration on the NHS Organ Donor Register, 1 April 2022 - 31 March 2024



At the end of March 2024, 81% 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 (64%) did not wish to donate their corneas. Of the restricted registrations, only 6% (1% of the total register) did not wish to donate their kidneys. Willingness to donate, by organ type, is shown in **Table 12.3**.

Table 12.3 Preparedness of those opted-in on the NHS Organ Donor Register at 31 March 2024 to donate different organs[1]

Registrants prepared to donate all organs 81%

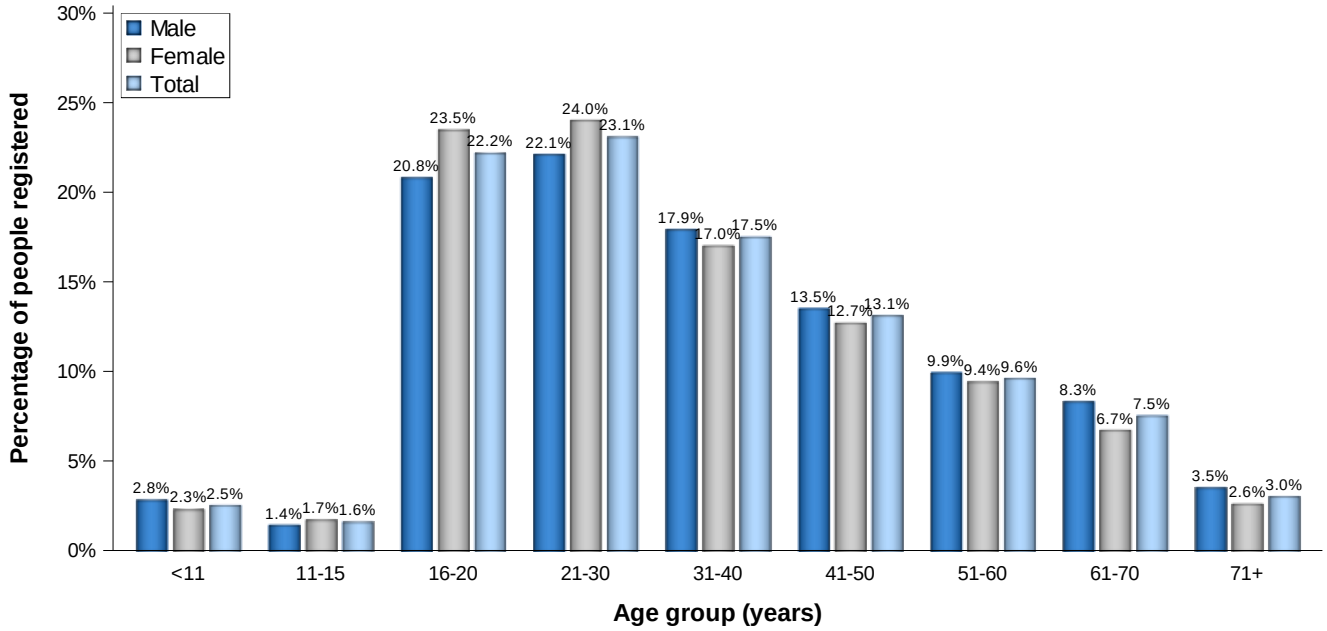
Of those not prepared to donate all organs ('restricted donors'):

Not prepared to donate:	% of 'Restricted donors'	% of all registrants
Kidney	6	0.8
Pancreas	15	2.3
Heart	15	2.3
Lungs	15	2.2
Liver	9	1.4
Corneas	64	9.5

[1] Complete information was not available for approximately 4% of the total register

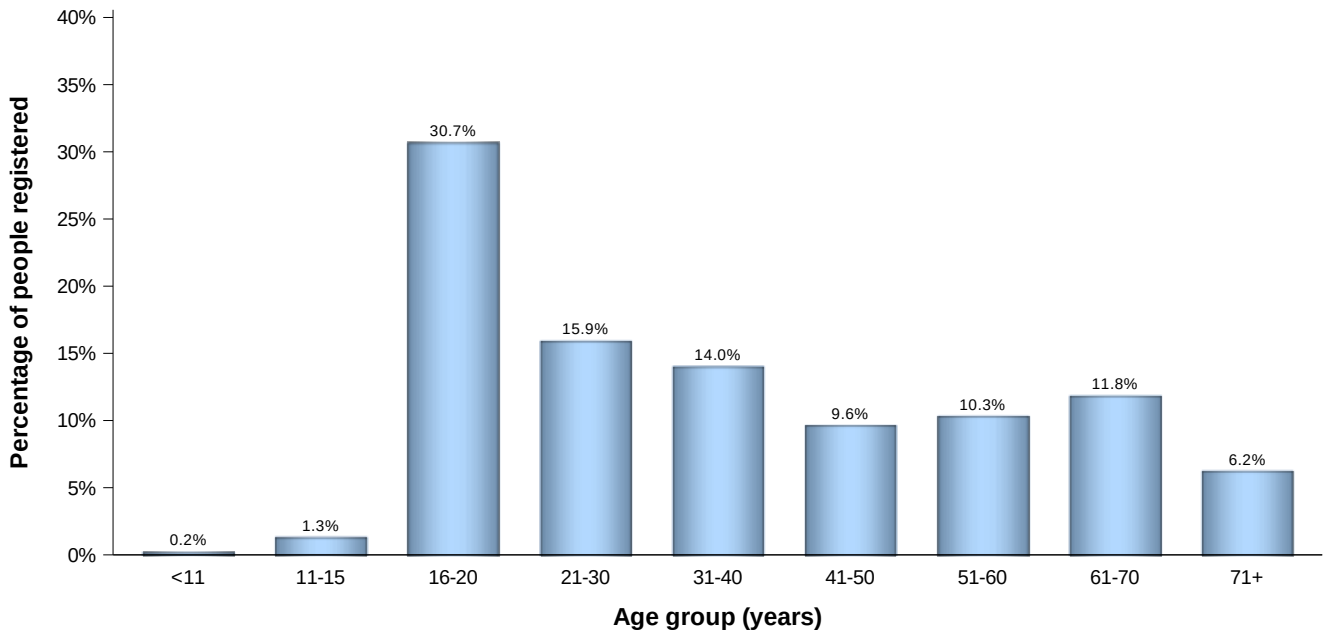
People of all ages are eligible for organ donor registration: the distribution of age by sex at time of opt-in registration is shown in **Figure 12.4**. The highest proportion of registrations (22.1% of males and 24.0% of females) are in the 21-30 years age group. The lowest proportions are in the under 16 age groups. Of all people registered on the NHS Organ Donor Register, 46% are male and 53% are female (1% unknown).

Figure 12.4 **Age and gender at registration of total people registered as opt-in on the NHS Organ Donor Register by 31 March 2024**



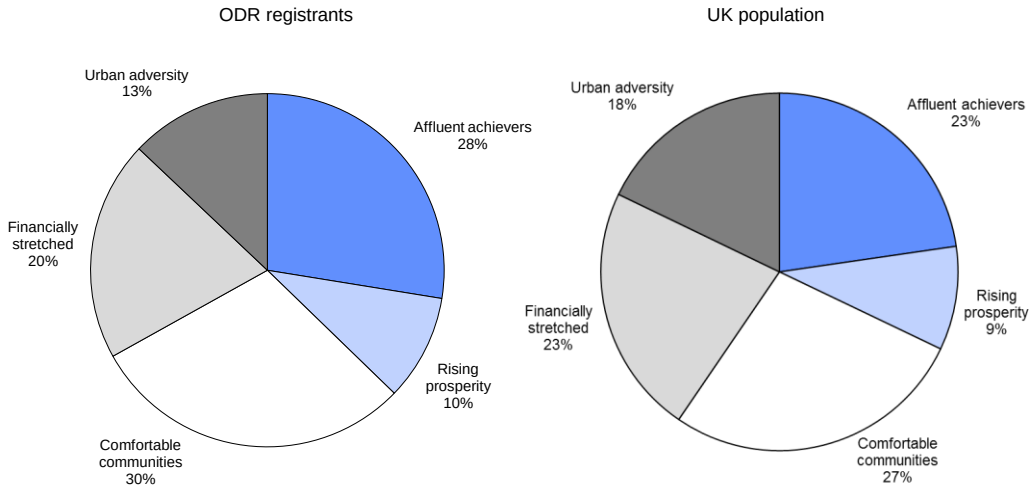
The distribution of age of people registering an opt-in on the ODR during the latest financial year, 2023-2024, is shown in **Figure 12.5**. The highest proportion of registrations in this year were in the 16-20 years age group. Of the registrants in 2023-2024, 49% were male and 51% were female (<1% unknown).

Figure 12.5 **Age of people registering as opt-in on the NHS Organ Donor Register between 1 April 2023 and 31 March 2024**



The breakdown of opt-in registrants on the ODR during 2023-2024 by socio-economic group (using the ACORN[1] classification, based on postcode) is shown in **Figure 12.6**, where it is compared with the general UK population. Though having similar distributions, there were proportionately more 'affluent achievers' and less 'urban adversity' or 'financially stretched' on the ODR than in the general population.

Figure 12.6 **Opt-in registrants on the NHS Organ Donor Register, 1 April 2023 - 31 March 2024, and the general population, by socio-economic group**



[1] ACORN data supplied by CACI Ltd.

National Potential Donor Audit

Key messages

- **There were 38,086 audited deaths reported through the Potential Donor Audit in the financial year to 31 March 2024, including 1,498 (99.2%) of the 1,510 deceased organ donors.**
- **Compared to the previous financial year, the overall referral rate of potential donors has remained high, 94% in both 2022/23 and 2023/24. The proportion of donation decision conversations where a Specialist Nurse – Organ Donation was present has remained at 93%, however the overall consent/authorisation rate has decreased in 2023/24, from 62% to 61%.**
- **The consent/authorisation rate was 89% when a patient had expressed an opt in decision, but 140 families overruled their loved one's decision to be an organ donor**
- **A significant difference is still apparent in the consent/authorisation rates for white patients and patients from ethnic minority groups (65% and 32% respectively).**

13.1 Introduction

In this chapter, summary data from the National Potential Donor Audit (PDA) are shown for 1 April 2023 to 31 March 2024 and data from the previous three financial years are also provided for comparison purposes. The data comprise all audited patient deaths in UK Intensive Care Units (ICUs) and emergency departments, excluding wards and patients over 80 years of age, in the time period. Paediatric ICU data are included however neonatal ICU data have been excluded. The data are based on information received by 8 May 2024. **The number of solid organ donors reported in this chapter will differ from that shown in the rest of the report, due to the national PDA excluding specific patients**.

13.2 Definitions

All data shown in this chapter use the following definitions.

Eligible donors after brain death (DBD) are defined as patients for whom death was confirmed following neurological tests and who had no absolute medical contraindications to solid organ donation.

Eligible donors after circulatory death (DCD) are defined as patients who had treatment withdrawn and death was anticipated, with no absolute medical contraindications to solid organ donation.

Absolute medical contraindications to organ donation are listed here: https://nhsbtdbe.blob.core.windows.net/umbraco-assets-corp/32650/pol188.pdf

Imminent death anticipated patients who are not confirmed dead using neurological criteria, receiving invasive ventilation, a clinical decision to withdraw treatment has been made and a controlled death is anticipated within a time frame to allow donation to occur.

Neurological death suspected patients who meet all of the following criteria: invasive ventilation, Glasgow Coma Scale 3 not explained by sedation, no respiratory effort, fixed pupils, no cough or gag reflex. Excluding those not tested as cardiac arrest occurred despite resuscitation, brain stem reflexes returned, or neonates less than 2 months post term.

Neurological death testing rate is the percentage of patients for whom neurological death was suspected who were tested.

Referral rate is the percentage of patients for whom neurological death was suspected or imminent death was anticipated, who were referred to the Specialist Nurse - Organ Donation (SN-OD).

Donation decision conversation is where the family of eligible donors are asked to make or support patient's organ donation decision, this includes clarifying an opt out decision.

SN-OD presence rate is the percentage of eligible donor donation decision conversations where a SN-OD was present (includes telephone and video call conversations).

Deemed consent applies if a person who died in Wales, England, Jersey or Guernsey meets deemed consent criteria: aged 18 or over, has not expressed an organ donation decision either to opt in, opt out or appoint a representative, has lived for longer than 12 months and is ordinarily resident in the country in which they died, and had the capacity to understand the notion of deemed consent for a significant period before their death. Note that where a patient has verbally expressed an opt out or opt in decision deemed consent does not apply.

Deemed authorisation applies if a person, who died in Scotland, meets deemed authorisation criteria: aged 16 or over, has not registered or expressed, in writing, an organ donation decision either to opt in or opt out, has lived for longer than 12 months and is ordinarily resident in Scotland, and had the capacity to understand the notion of deemed authorisation for a significant period before their death. Note that, in Scotland, a patient who has verbally expressed an opt in decision is included as a deemed authorisation, whereas a patient who has verbally expressed an opt out decision is not included.

Consent/authorisation rate is the percentage of eligible donor donation decision conversations where consent/authorisation was ascertained. Note that consent/authorisation rates have not been provided where the number of donation decision conversations is less than ten.

13.3 Breakdown of audited deaths in ICUs and emergency departments, 1 April 2023 – 31 March 2024

In the 12-month period there were a total of 36,086 audited patient deaths in the UK. **Figures 13.1 and 13.2** show a detailed breakdown from the number of audited patient deaths to the number of solid organ donors for potential DBD and DCD donors, respectively. In total there were 1,498 solid organ donors reported through the PDA, 99.2% of the total 1,510 deceased solid organ donors.

Table 13.1 shows the key percentages calculated from the flow chart information and **Table 13.2** provides a breakdown by Organ Donation Services Team (ODST). Consent/authorisation rates have also been provided, in **Table 13.1**, for cases where the SN-OD was/was not present for the donation decision conversation and by whether there was an expressed opt in decision or consent/authorisation was deemed. Details of expressed opt in decision and deemed consent/authorisation overrides are included in the footnote of the table.

An expressed opt in decision override is a case where the family overruled their loved one's known decision to donate and includes decisions registered on the ODR, those expressed verbally, or via an appointed/nominated representative. A deemed consent/authorisation override is a case where the family did not support deemed consent/authorisation.

Figure 13.1 Donation after brain death

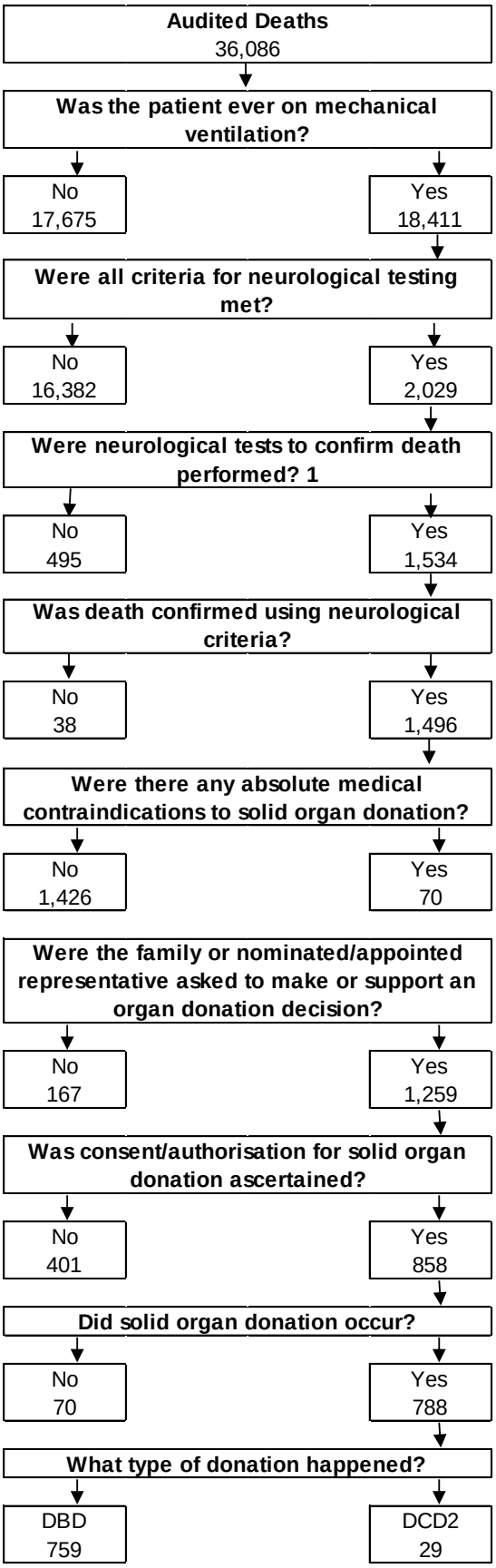
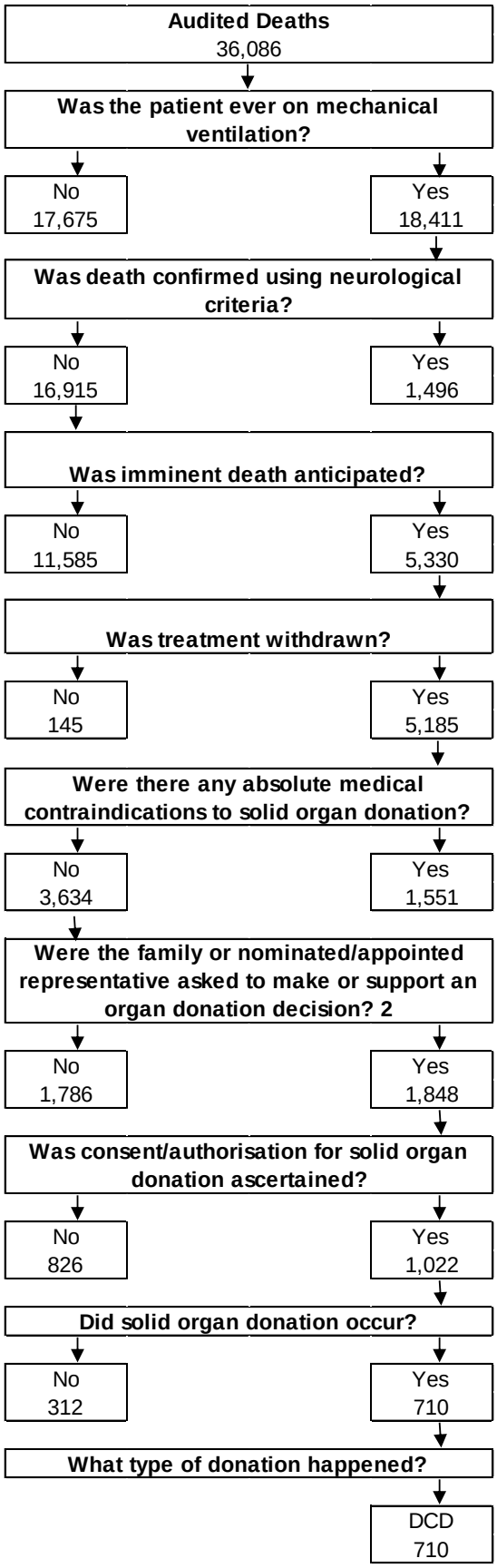


Figure 13.2 Donation after circulatory death



1 Patients for whom tests were not performed due to; cardiac arrest despite resuscitation occurred or brainstem reflexes returned are excluded from the calculation of the neurological death testing rate

2 A large number of DCD donors are not approached due to the DCD screening process which precludes them from solid organ donation

Table 13.1 Summary of key percentages, 1 April 2023 to 31 March 2024

	DBD	DCD	ALL
Neurological death testing rate	75.6		
Referral rate	99.4	92.8	94.4
SN-OD presence rate	96.5	90.4	92.9
Consent/authorisation rate	68.1	55.3	60.5
- SN-OD present for donation decision conversation	69.8	59.7	64.0
- SN-OD not present for donation decision conversation	22.7	13.6	15.4
- Expressed opt in*	95.3	84.8	89.3
- Deemed consent/authorisation**	58.2	47.1	51.3
- Other***	52.0	34.4	42.3

* 140 families overruled their loved one's expressed opt in decision to be an organ donor
** There were 1109 cases where deemed consent/authorisation applied and in 540 cases the family did not support deemed consent/authorisation
*** Includes patients where nation specific deemed criteria are not met and the patient has not expressed a donation decision in accordance with relevant legislation

Table 13.2 Summary of all deceased donor key percentages by Organ Donation Services Team (ODST), 1 April 2023 to 31 March 2024

ODST	Testing rate	Referral rate	SN-OD presence rate	Consent/ authorisation rate
Eastern	68.9	92.8	93.0	56.2
London	79.1	92.2	93.4	52.4
Midlands	75.3	92.9	91.9	53.0
North West	76.7	93.8	95.2	64.7
Northern	82.7	98.7	95.5	65.0
Northern Ireland	76.5	97.6	97.3	66.4
Scotland	79.0	97.8	88.2	61.0
South Central	76.8	93.3	92.2	63.5
South East	74.0	91.0	95.7	66.3
South Wales	81.8	97.5	81.9	52.6
South West	71.4	95.9	94.5	76.4
Yorkshire	70.3	98.4	92.6	60.5
TOTAL	**75.6**	**94.4**	**92.9**	**60.5**

13.4 Eligible donors

The number of eligible donors (as defined earlier) and rates per million population (pmp) are shown in **Table 13.3**, by NHS region. The number of actual donors pmp can be found in Table 3.2 of Chapter 3. Eligible DBD ranged from 15.9 pmp in the East of England to 32.5 pmp in London. Eligible DCD ranged from 43.8 pmp in the South West to 63.0 pmp in the North West.

Across the countries, there was a range of 55.8 eligible donors pmp in Scotland to 76.7 eligible donors pmp in England. Overall, there were 1,426 eligible DBD (21.1 pmp) and 3,634 eligible DCD (53.8 pmp) in the UK, resulting in a total of 74.9 eligible donors per million population. **Tables 13.4** and **13.5** show more detailed information by country/NHS region for DBD and DCD data, respectively.

Table 13.3 Eligible donor rates per million population (pmp), in the UK, 1 April 2023 to 31 March 2024, by country and NHS region

	Eligible DBD		Eligible DCD		**TOTAL**	
Country/ NHS region of donation	N	(pmp)	N	(pmp)	**N**	**(pmp)**
North East and Yorkshire	197	(24.0)	501	(60.9)	**698**	**(84.9)**
North West	145	(19.3)	474	(63.0)	**619**	**(82.3)**
Midlands	208	(19.0)	552	(50.4)	**760**	**(69.3)**
East of England	102	(15.9)	397	(62.0)	**499**	**(78.0)**
London	288	(32.5)	524	(59.1)	**812**	**(91.5)**
South East	152	(16.2)	488	(52.0)	**640**	**(68.2)**
South West	102	(17.7)	252	(43.8)	**354**	**(61.5)**
England	**1194**	**(20.9)**	**3188**	**(55.8)**	4382	(76.7)
Isle of Man	**2**	**(25.0)**	**3**	**(37.5)**	**5**	**(62.5)**
Channel Islands	**1**	**(5.9)**	**1**	**(5.9)**	**2**	**(11.8)**
Wales	**67**	**(21.4)**	**172**	**(55.0)**	239	(76.4)
Scotland	**105**	**(19.3)**	**199**	**(36.5)**	304	(55.8)
Northern Ireland	**57**	**(29.8)**	**71**	**(37.2)**	128	(67.0)
TOTAL	**1426**	**(21.1)**	**3634**	**(53.8)**	5060	(74.9)

Table 13.4 DBD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by country and NHS region

Country/ NHS region of donation	Number of patients where neurological death was suspected	Neurological death testing rate (%)	DBD referral rate (%)	Number of eligible DBD donors	Number of eligible DBD donation decision conversations	DBD SN-OD presence rate (%)	DBD consent/ authorisation rate (%)
North East and Yorkshire	289	73.7	99.7	197	173	96.0	71.7
North West	207	75.8	100.0	145	110	97.3	71.8
Midlands	285	77.9	99.6	208	183	95.6	60.1
East of England	158	68.4	96.8	102	96	97.9	68.8
London	407	77.1	99.8	288	243	97.5	56.4
South East	222	74.3	99.5	152	143	99.3	76.9
South West	146	72.6	100.0	102	96	96.9	86.5
England	**1714**	**75.0**	**99.5**	**1194**	**1044**	**97.1**	**67.9**
Isle of Man	**2**	**100.0**	**100.0**	**2**	**1**	**100.0**	**100.0**
Channel Islands	**2**	**50.0**	**100.0**	**1**	**1**	**100.0**	**100.0**
Wales	**87**	**81.6**	**98.9**	**67**	**63**	**90.5**	**63.5**
Scotland	**143**	**79.0**	**99.3**	**105**	**95**	**92.6**	**73.7**
Northern Ireland	**81**	**76.5**	**98.8**	**57**	**55**	**98.2**	**67.3**
TOTAL	**2029**	**75.6**	**99.4**	**1426**	**1259**	**96.5**	**68.1**

Table 13.5 DCD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by country and NHS region

Country/ NHS region of donation	Number of patients for whom imminent death was anticipated	DCD referral rate (%)	Number of eligible DCD donors	Number of eligible DCD donation decision conversations	DCD SN-OD presence rate (%)	DCD consent/ authorisation rate (%)
North East and Yorkshire	847	98.1	501	253	93.3	59.7
North West	765	92.7	474	159	93.1	57.2
Midlands	770	91.6	552	310	89.7	47.7
East of England	662	92.0	397	222	90.5	54.1
London	698	90.4	524	265	90.6	49.8
South East	707	87.7	488	234	89.7	59.8
South West	310	94.8	252	149	93.3	68.5
England	**4759**	**92.4**	**3188**	**1592**	**91.2**	**55.5**
Isle of Man	**3**	**100.0**	**3**	**0**		
Channel Islands	**5**	**100.0**	**1**	**1**	**100.0**	**0.0**
Wales	**215**	**94.9**	**172**	**67**	**77.6**	**49.3**
Scotland	**254**	**97.2**	**199**	**133**	**85.0**	**51.9**
Northern Ireland	**94**	**95.7**	**71**	**55**	**96.4**	**65.5**
TOTAL	**5330**	**92.8**	**3634**	**1848**	**90.4**	**55.3**

Tables 13.6 and **13.7** show more detailed information on the key metrics by Organ Donation Services Team (ODST) for DBD and DCD data, respectively. Specialist Nurses for Organ Donation (SN-ODs) work within an ODST, which covers an area of the UK. As seen in **Table 13.6**, the neurological death testing rate was highest for the Northern team and the DBD referral rate was 100% for 4 teams. The SN-OD presence rate was highest for the South East team, where a SNOD was present for 99.1% of DBD donation decision conversations.

Table 13.6 DBD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by Organ Donation Services Team (ODST)

ODST	Number of patients where neurological death was suspected	Neurological death testing rate (%)	DBD referral rate (%)	Number of eligible DBD donors	Number of eligible DBD donation decision conversations	DBD SN-OD presence rate (%)	DBD consent/ authorisation rate (%)
Eastern	193	68.9	97.4	126	115	98.3	64.3
London	292	79.1	99.7	211	181	97.2	55.8
Midlands	243	75.3	99.6	172	151	95.4	61.6
North West	227	76.7	100.0	160	124	97.6	73.4
Northern	110	82.7	99.1	84	75	97.3	72.0
Northern Ireland	81	76.5	98.8	57	55	98.2	67.3
Scotland	143	79.0	99.3	105	95	92.6	73.7
South Central	142	76.8	100.0	100	96	99.0	77.1
South East	196	74.0	99.5	133	116	99.1	71.6
South Wales	77	81.8	98.7	60	54	88.9	59.3
South West	133	71.4	100.0	92	87	96.6	86.2
Yorkshire	192	70.3	100.0	126	110	94.5	67.3
TOTAL	**2029**	**75.6**	**99.4**	**1426**	**1259**	**96.5**	**68.1**

Table 13.7 indicates that for DCD patients, the highest referral rate was 98.7% for the Northern team and the highest proportion of DCD donation decision conversations for which a SN-OD was present was 96.4% for the Northern Ireland team. No account has been taken of the demographics of the populations within the teams which may impact on the rates presented.

Table 13.7 DCD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by Organ Donation Services Team (ODST)

ODST	Number of patients for whom imminent death was anticipated	DCD referral rate (%)	Number of eligible DCD donors	Number of eligible DCD donation decision conversations	DCD SN-OD presence rate (%)	DCD consent/ authorisation rate (%)
Eastern	750	91.9	460	255	90.6	52.5
London	474	88.6	360	180	89.4	48.9
Midlands	686	91.1	499	281	90.0	48.4
North West	857	92.5	547	168	93.5	58.3
Northern	311	98.7	220	102	94.1	59.8
Northern Ireland	94	95.7	71	55	96.4	65.5
Scotland	254	97.2	199	133	85.0	51.9
South Central	417	91.6	296	134	87.3	53.7
South East	524	88.4	366	184	93.5	63.0
South Wales	135	96.3	109	62	75.8	46.8
South West	258	94.2	211	133	93.2	69.9
Yorkshire	570	98.1	296	161	91.3	55.9
TOTAL	**5330**	**92.8**	**3634**	**1848**	**90.4**	**55.3**

Table 13.8 shows key metrics separately for patients meeting the PDA criteria who were referred in an ICU or an emergency department (irrespective of where the patient died), for DBD and DCD, respectively. Note that the total number of patients in this table and the associated rates do not match the other tables throughout this chapter as Table 13.8 is based on the subset of patients who were referred to the ODST.

Table 13.9 shows key metrics separately for adult and paediatric patients, for DBD and DCD, respectively. Note that, of the 106 paediatric patients for whom neurological death was suspected, tests were not performed on 34 patients.

Table 13.8 DBD and DCD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by unit where patient referred from, for patients who met the PDA criteria and were referred

Eligible donor type	Unit where patient was referred from	Number of patients who were referred[1]	Neurological death testing rate (%)	Number of eligible donors	Number of eligible donor donation decision conversations	SN-OD presence rate (%)	Consent/ authorisation rate (%)	Number of actual donors[2]
DBD	Critical care	1975	76.3	1404	1240	96.5	68.1	777
	Emergency dept.	30	56.7	15	14	100.0	71.4	8
	Other	12	58.3	6	5	80.0	80.0	3
	TOTAL	**2017**	**75.9**	**1425**	**1259**	**96.5**	**68.1**	**788**
DCD	Critical care	4824		3315	1788	91.2	55.8	694
	Emergency dept.	94		68	43	79.1	39.5	12
	Other	30		23	9	77.8	77.8	4
	TOTAL	**4948**		**3406**	**1840**	**90.8**	**55.5**	**710**

[1] DBD referral criteria: patients where neurological death was suspected; DCD referral criteria: patients for whom imminent death was anticipated
[2] Actual donors resulting from eligible DBD donors includes 27 DCD donors referred from critical care and 2 DCD donors referred from emergency departments

Table 13.9 DBD and DCD key metrics from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by age group

Eligible donor type	Age group	Number of patients who met referral criteria[1]	Neurological death testing rate (%)	Referral rate (%)	Number of eligible donors	Number of eligible donor donation decision conversations	SN-OD presence rate (%)	Consent/ authorisation rate (%)	Number of actual donors[2]
DBD	Adult (>=18)	1923	76.0	99.4	1360	1202	96.8	68.6	757
	Paediatric (<18)	106	67.9	99.1	66	57	89.5	57.9	31
	TOTAL	**2029**	**75.6**	**99.4**	**1426**	**1259**	**96.5**	**68.1**	**788**
DCD	Adult (>=18)	5127		92.7	3473	1794	91.1	56.5	702
	Paediatric (<18)	203		95.6	161	54	66.7	16.7	8
	TOTAL	**5330**		**92.8**	**3634**	**1848**	**90.4**	**55.3**	**710**

[1] DBD referral criteria: patients where neurological death was suspected; DCD referral criteria: patients for whom imminent death was anticipated
[2] Actual donors resulting from eligible DBD donors includes 3 DCD donors under 18 and 26 DCD donors aged 18 and over

13.5 Consent/ authorisation rates

The overall DBD consent/authorisation rate was 68% and the 95% confidence limits for this percentage are 66% - 71%. For DCD, the overall rate was 55% and the 95% confidence limits are 53% - 58%.

Across the country/NHS region, the DBD consent/authorisation rates range from 56% in London to 87% in the South West. DCD consent/authorisation rates range from 48% in the Midlands to 69% in the South West (**Tables 13.4** and **13.5**).

The overall consent/authorisation rates (combining DBD and DCD) for England, Wales, Scotland and Northern Ireland were 60%, 56%, 61% and 66% respectively.

Consent/authorisation rates by Organ Donation Services Team are illustrated in **Figure 13.3** for both DBD and DCD. Caution should be applied when interpreting these consent/authorisation rates as no adjustment has been made for the mix of patients in terms of age, prior opt in decision and ethnicity.

Across the Organ Donation Services Teams, the DBD consent/authorisation rates range from 56% in the London team to 86% in the South West team. DCD consent/authorisation rates range from 47% in the South Wales team to 70% in the South West team.

Figure 13.3 Consent/authorisation rates by Organ Donation Services Team

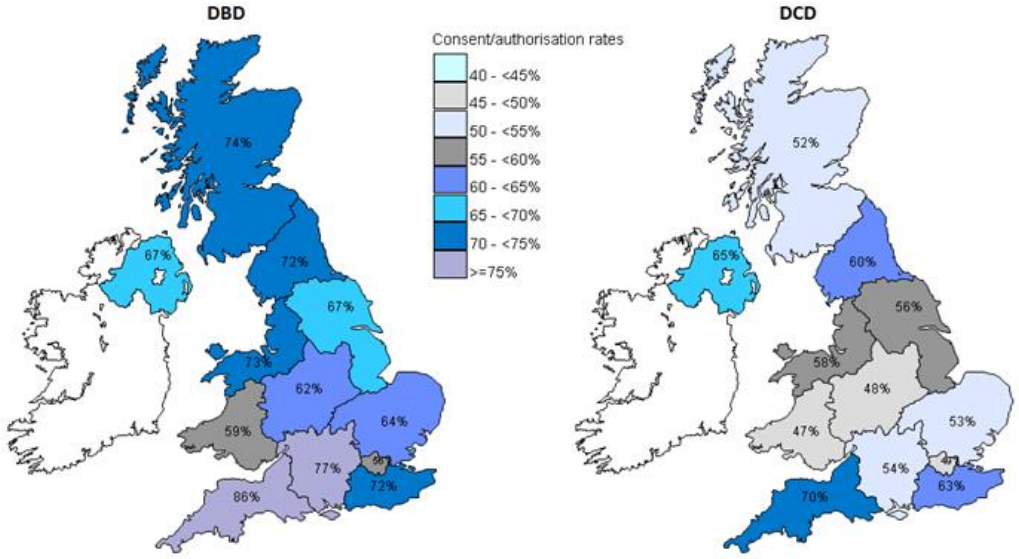


Table 13.10 shows the consent/authorisation rate separately for white patients and patients from ethnic minority groups. The national DBD consent/authorisation rates for white patients and patients from ethnic minority groups were 75% and 34%, respectively. A similar difference was observed for DCD consent/authorisation rates: 58% and 30%, respectively. Overall consent/authorisation rates were 32% for ethnic minority patients, and 65% for white patients. Note that there were an additional 33 DCD donation decision conversations where the ethnicity was not known or not reported.

The Northern, Northern Ireland, Scotland, South Wales, and South West teams each accounted for only 2% or less donation decision conversations where patients are from ethnic minority groups, whereas London accounted for 35%. Most teams had a very small proportion, therefore accounting for some of the variation observed in overall consent/authorisation rates between teams. Note that consent/authorisation rates have not been provided where the number of donation decision conversations is less than ten.

Table 13.10 DBD and DCD consent/authorisation rates from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by Organ Donation Services Team (ODST) and ethnicity

	White eligible donors					Eligible donors from ethnic minority groups					All
ODST	Number of eligible DBD donation decision conversations	DBD consent/ authorisation rate (%)	Number of eligible DCD donation decision conversations	DCD consent/ authorisation rate (%)	Overall consent/ authorisation rate (%)	Number of eligible DBD donation decision conversations	DBD consent/ authorisation rate (%)	Number of eligible DCD donation decision conversations	DCD consent/ authorisation rate (%)	Overall consent/ authorisation rate (%)	Overall consent/ authorisation rate (%) [1]
Eastern	99	68.7	231	54.5	**58.8**	15	33.3	22	36.4	**35.1**	**56.2**
London	103	74.8	125	58.4	**65.8**	73	28.8	49	28.6	**28.7**	**52.4**
Midlands	118	64.4	251	51.0	**55.3**	32	53.1	28	28.6	**41.7**	**53.0**
North West	111	80.2	156	61.5	**69.3**	13	15.4	9	-	**18.2**	**64.7**
Northern	72	72.2	101	60.4	**65.3**	3	-	1	-	**-**	**65.0**
Northern Ireland	53	67.9	55	65.5	**66.7**	2	-	0	-	**-**	**66.4**
Scotland	86	75.6	125	52.8	**62.1**	6	-	2	-	**-**	**61.0**
South Central	83	83.1	123	56.1	**67.0**	13	38.5	11	27.3	**33.3**	**63.5**
South East	94	81.9	164	64.6	**70.9**	22	27.3	20	50.0	**38.1**	**66.3**
South Wales	48	64.6	61	47.5	**55.0**	6	-	1	-	**-**	**52.6**
South West	81	86.4	127	73.2	**78.4**	6	-	4	-	**50.0**	**76.4**
Yorkshire	101	72.3	153	58.2	**63.8**	9	-	6	-	**6.7**	**60.5**
TOTAL	**1049**	**74.6**	**1672**	**58.1**	**64.5**	**200**	**34.0**	**153**	**30.1**	**32.3**	**60.5**

[1] Includes 33 donation decision conversations where the ethnicity was not known or not reported

Table 13.11 shows the reasons why the family did not give consent/authorisation, by donor type. The most common reason reported for why the families of both eligible DBD and DCD families did not give consent/authorisation was that the patient had previously expressed a decision not to donate. Overall, this reason was reported in 21% of cases. In DCD donation, families also commonly cited the long length of the donation process as the reason for not supporting organ donation, accounting for a further 20% of DCD cases.

Table 13.11 Reasons why the family did not support organ donation, 1 April 2023 to 31 March 2024, by donor type

	Donor type					
	DBD		DCD		Total	
Primary reason why family did not support organ donation	**N**	**%**	**N**	**%**	**N**	**%**
Patient had registered a decision to Opt Out	21	5.2	43	5.2	64	5.2
Patient had previously expressed a wish not to donate	94	23.4	167	20.2	261	21.3
Family were not sure whether the patient would have agreed to donation	49	12.2	113	13.7	162	13.2
Family did not believe in donation	5	1.2	9	1.1	14	1.1
Family felt it was against their religious/cultural beliefs	49	12.2	28	3.4	77	6.3
Family divided over the decision	12	3.0	20	2.4	32	2.6
Family felt patient had suffered enough	24	6.0	78	9.4	102	8.3
Family did not want surgery to the body	42	10.5	57	6.9	99	8.1
Family wanted to stay with the patient after death	5	1.2	17	2.1	22	1.8
Family had difficulty understanding/accepting neurological testing	3	0.7	0	0.0	3	0.2
Family felt the length of time for the donation process was too long	30	7.5	167	20.2	197	16.1
Family concerned other people may disapprove/be offended	3	0.7	4	0.5	7	0.6
Family felt that the body should be buried whole (unrelated to religious/cultural reasons)	13	3.2	17	2.1	30	2.4
Family believe patient's treatment may have been limited to facilitate organ donation	0	0.0	1	0.1	1	0.1
Family concerned that organs may not be transplantable	2	0.5	8	1.0	10	0.8
Strong refusal - probing not appropriate	25	6.2	39	4.7	64	5.2
Other	24	6.0	57	6.9	81	6.6
Missing	0	0.0	1	0.1	1	0.1
TOTAL	**401**	**100**	**826**	**100**	**1227**	**100**

13.6 Specialist Nurse - Organ Donation (SN-OD) presence

Table 13.12 shows the proportion of donation decision conversations where a SN-OD was present, for DBD and DCD separately, and overall. Nationally, 97% of DBD and 90% of DCD donation decision conversation had a SN-OD present. There is some variation between teams in the percentage of DCD donation decision conversations where a SN-OD was present, however SN-OD presence rates are good across all teams for DBD donation decision conversations.

Table 13.12 Donation decision conversations where a Specialist Nurse - Organ Donation (SN-OD) was present from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by Organ Donation Services Team (ODST)

ODST	Number of eligible DBD donation decision conversations	Number of eligible DBD donation decision conversations where SN-OD present	DBD SN-OD presence rate (%)	Number of eligible DCD donation decision conversations	Number of eligible DCD donation decision conversations where SN-OD present	DCD SN-OD presence rate (%)	Overall SN-OD presence rate (%)
Eastern	115	113	98.3	255	231	90.6	**93.0**
London	181	176	97.2	180	161	89.4	**93.4**
Midlands	151	144	95.4	281	253	90.0	**91.9**
North West	124	121	97.6	168	157	93.5	**95.2**
Northern	75	73	97.3	102	96	94.1	**95.5**
Northern Ireland	55	54	98.2	55	53	96.4	**97.3**
Scotland	95	88	92.6	133	113	85.0	**88.2**
South Central	96	95	99.0	134	117	87.3	**92.2**
South East	116	115	99.1	184	172	93.5	**95.7**
South Wales	54	48	88.9	62	47	75.8	**81.9**
South West	87	84	96.6	133	124	93.2	**94.5**
Yorkshire	110	104	94.5	161	147	91.3	**92.6**
TOTAL	**1259**	**1215**	**96.5**	**1848**	**1671**	**90.4**	**92.9**

Table 13.13 shows the effect on the consent/authorisation rate when a SN-OD is present or not present for the donation decision conversation. Evidence shows that the family is more likely to support organ donation when a trained SN-OD is present for the donation decision conversation, and this is particularly apparent for eligible DCD donors. Again, there is wide variation between teams.

Caution should be applied when interpreting these rates as numbers of donation decision conversations are very small where a SN-OD is not present and no account has been taken of donation decisions which were initiated by the family, a patient's prior opt in decision or ethnicity.

Table 13.13 DBD and DCD consent/authorisation rates with/without a SN-OD present from the Potential Donor Audit, 1 April 2023 to 31 March 2024, by Organ Donation Services Team (ODST)

	SN-OD present for donation decision conversation					SN-OD not present for donation decision conversation					All
ODST	Number of eligible DBD donation decision conversations	DBD consent/ authorisation rate (%)	Number of eligible DCD donation decision conversations	DCD consent/ authorisation rate (%)	Overall consent/ authorisation rate (%)	Number of eligible DBD donation decision conversations	DBD consent/ authorisation rate (%)	Number of eligible DCD donation decision conversations	DCD consent/ authorisation rate (%)	Overall consent/ authorisation rate (%)	Overall consent/ authorisation rate (%)
Eastern	113	65.5	231	57.1	**59.9**	2	0.0	24	8.3	**7.7**	**56.2**
London	176	56.8	161	53.4	**55.2**	5	20.0	19	10.5	**12.5**	**52.4**
Midlands	144	63.2	253	50.6	**55.2**	7	28.6	28	28.6	**28.6**	**53.0**
North West	121	75.2	157	61.8	**67.6**	3	0.0	11	9.1	**7.1**	**64.7**
Northern	73	74.0	96	63.5	**68.0**	2	0.0	6	0.0	**0.0**	**65.0**
Northern Ireland	54	68.5	53	67.9	**68.2**	1	0.0	2	0.0	**0.0**	**66.4**
Scotland	88	77.3	113	59.3	**67.2**	7	28.6	20	10.0	**14.8**	**61.0**
South Central	95	77.9	117	61.5	**68.9**	1	0.0	17	0.0	**0.0**	**63.5**
South East	115	72.2	172	66.9	**69.0**	1	0.0	12	8.3	**7.7**	**66.3**
South Wales	48	62.5	47	59.6	**61.1**	6	33.3	15	6.7	**14.3**	**52.6**
South West	84	86.9	124	72.6	**78.4**	3	66.7	9	33.3	**41.7**	**76.4**
Yorkshire	104	70.2	147	58.5	**63.3**	6	16.7	14	28.6	**25.0**	**60.5**
TOTAL	**1215**	**69.8**	**1671**	**59.7**	**64.0**	**44**	**22.7**	**177**	**13.6**	**15.4**	**60.5**

13.7 Comparison with previous years

Table 13.14 and **Figure 13.4** show the key metrics from the PDA for the last four financial years.

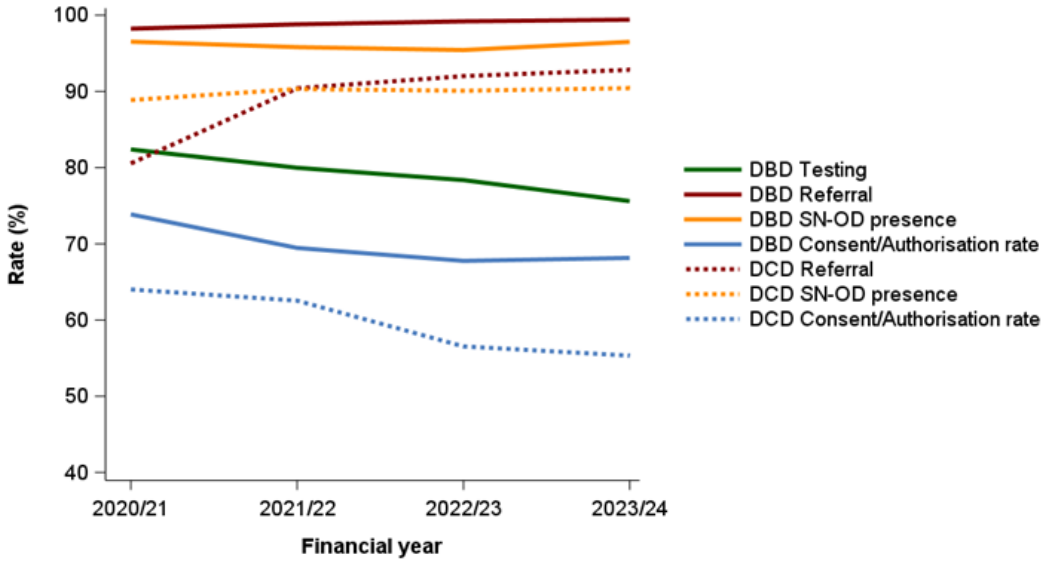
Table 13.14 DBD and DCD key metrics from the Potential Donor Audit, by financial year

Eligible donor type	Financial year	Number of patients who met referral criteria [1]	Neurological death testing rate (%)	Referral rate (%)	Number of eligible donors	Number of eligible donor donation decision conversations	SN-OD presence rate (%)	Number of families who consented to/ authorised donation	Consent/ authorisation rate (%)	Number of actual donors [2]
DBD	**2020-2021**	1811	82.4	98.2	1353	1209	96.5	893	73.9	779
	2021-2022	1918	80.0	98.8	1375	1241	95.8	862	69.5	787
	2022-2023	1992	78.4	99.2	1442	1247	95.4	845	67.8	782
	2023-2024	2029	75.6	99.4	1426	1259	96.5	858	68.1	788
DCD	**2020-2021**	5938		80.5	2851	1042	88.9	667	64.0	402
	2021-2022	5234		90.4	2993	1455	90.3	910	62.5	604
	2022-2023	5343		92.0	3491	1705	90.1	964	56.5	637
	2023-2024	5330		92.8	3634	1848	90.4	1022	55.3	710
TOTAL	**2020-2021**	7466		84.4	4204	2251	93.0	1560	69.3	1182
	2021-2022	6802		92.5	4368	2696	92.8	1772	65.7	1391
	2022-2023	6953		93.7	4933	2952	92.3	1809	61.3	1419
	2023-2024	6910		94.4	5060	3107	92.9	1880	60.5	1498

[1] DBD referral criteria: patients where neurological death was suspected (excluding those for which cardiac arrest occurred despite resuscitation or brain stem reflexes returned); DCD referral criteria: patients for whom imminent death was anticipated
[2] Actual donors resulting from eligible DBD donors includes 12 DCD donors in 2020-2021, 6 DCD donors in 2021-2022, 21 DCD donors in 2022-2023 and 29 DCD donors in 2023-2024

DBD referral rates have remained unchanged, with DCD referral rates having risen since 2020/21. The DBD testing rate has been slowly decreasing whilst the SN-OD presence rate has remained unchanged in both DBD and DCD. The consent/authorisation rate for both DBD and DCD has fallen slightly.

Figure 13.4 DBD and DCD key metrics from the Potential Donor Audit



13.8 Consented/authorised cases not proceeding to solid organ donation

Consent/authorisation for donation was ascertained for 858 eligible DBD donors and 1,022 eligible DCD donors; 788 (92%) and 710 (69%) of these cases proceeded to donate at least one solid organ, respectively. **Table 13.15** shows the reasons why donation did not proceed for the 70 eligible DBD and 312 eligible DCD cases where consent/authorisation was ascertained. The main reasons reported for consented/authorised eligible DBD donors not proceeding to donate was that the organs were deemed to be medically unsuitable by transplant centres or there was Coroner/Procurator fiscal refusal to organ donation. The main reason for consented/authorised DCD donors was prolonged time to asystole, meaning that the donor did not die in a timeframe suitable for organ donation.

Table 13.15 Reasons why consented/authorised eligible donors did not proceed to donate, 1 April 2023 to 31 March 2024, by donor type

	Donor type					
	DBD		DCD		Total	
Primary reason why donation did not proceed	**N**	**%**	**N**	**%**	**N**	**%**
Clinical - Absolute contraindication to organ donation	3	4.3	5	1.6	8	2.1
Clinical - No transplantable organ	7	10.0	12	3.8	19	5.0
Clinical - Patient's general medical condition	1	1.4	6	1.9	7	1.8
Clinical - Patient actively dying	4	5.7	7	2.2	11	2.9
Clinical - Considered high risk donor	4	5.7	8	2.6	12	3.1
Clinical - DCD clinical exclusion	0	-	2	0.6	2	0.5
Clinical - Patient asystolic	3	4.3	1	0.3	4	1.0
Clinical - Predicted PTA therefore not attended	0	-	1	0.3	1	0.3
Clinical - PTA post WLST	0	-	164	52.6	164	42.9
Clinical - Organs deemed medically unsuitable by recipient centres	17	24.3	58	18.6	75	19.6
Clinical - Organs deemed medically unsuitable on surgical inspection	9	12.9	6	1.9	15	3.9
Clinical - Positive virology	2	2.9	0	-	2	0.5
Clinical - Other	3	4.3	7	2.2	10	2.6
Consent / Auth - Coroner/Procurator fiscal refusal	10	14.3	8	2.6	18	4.7
Consent / Auth - NOK declined organ donation	1	1.4	0	-	1	0.3
Consent / Auth - NOK withdraw consent / authorisation	6	8.6	22	7.1	28	7.3
Consent / Auth - Family placed conditions on donation	0	-	1	0.3	1	0.3
Consent / Auth - Other	0	-	1	0.3	1	0.3
Logistical - Unit unable to maintain patient	0	-	1	0.3	1	0.3
Logistical - Retrieval team not available	0	-	1	0.3	1	0.3
Logistical - Other	0	-	1	0.3	1	0.3
TOTAL	**70**	**100**	**312**	**100**	**382**	**100**

PTA = Prolonged time to asystole, WLST = Withdrawal of life sustaining treatment, NOK = Next of kin

Appendices

Appendix I provides details of the 1,510 deceased solid organ donors reported in 2023-2024. Details are given for each donating hospital and the hospitals have been grouped by NHS Region and country.

The number of donors by donor country/ NHS Region of residence is given for donors after brain death in **Appendix IIA** and donors after circulatory death in **Appendix IIB**.

The populations used for country / NHS Region per million population are given in **Appendix III** these populations are mid-2022 estimates based on ONS 2021 Census figures.

Appendix IV shows the import and export of organs to and from the UK in the last three financial years. **Appendix IVA** shows the number and type of transplants in the UK into non-UK residents. **Appendix IVB** and **Appendix IVC** show the number and type of transplants resulting from the import to and export from the UK, respectively. When organs are donated from deceased donors and cannot be used in that country, the organs are offered for use in other countries. This is usually because there is no suitable recipient because of blood group or size. The current EU Directive ensures that all organs that are imported into the UK are evaluated to the same high standards as in the UK. The UK has special arrangements with the Republic of Ireland so that some patients from Ireland will come to the UK for the transplant procedure where units in the UK have particular expertise. For those with fulminant hepatic failure, the UK and Ireland will also share livers. International sharing of organs represents a very small proportion of the UK transplant activity and is set up to ensure that all donated organs are used whenever appropriate.

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital

Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
South West														
Barnstaple, North Devon District Hospital	2	(2)	0	(0)	2	(2)	2	(2)	2	0	2	0	0	0
Bath, Royal United Hospital	0	(7)	4	(1)	4	(8)	0	(6)	4	0	0	0	0	0
Bournemouth, Royal Bournemouth General Hospital	5	(4)	3	(5)	8	(9)	6	(7)	8	2	6	0	1	0
Bristol, Bristol Royal Hospital For Children	2	(0)	1	(2)	3	(2)	3	(1)	3	2	2	0	2	1
Bristol, Bristol Royal Infirmary	6	(5)	11	(6)	17	(11)	7	(7)	16	3	7	0	1	2
Bristol, Southmead Hospital	18	(14)	23	(13)	41	(27)	31	(18)	38	11	30	1	8	2
Cheltenham, Cheltenham General Hospital	1	(1)	2	(2)	3	(3)	2	(3)	3	0	2	0	0	0
Dorchester, Dorset County Hospital	1	(2)	1	(0)	2	(2)	1	(1)	2	0	1	0	0	0
Exeter, Royal Devon And Exeter Hospital (Wonford)	5	(6)	2	(1)	7	(7)	5	(7)	7	1	5	0	1	1
Gloucester, Gloucestershire Royal Hospital	3	(2)	1	(1)	4	(3)	2	(2)	4	0	2	0	1	0
Plymouth, Derriford Hospital	19	(8)	15	(6)	34	(14)	28	(11)	34	8	26	0	6	7
Poole, Poole General Hospital	4	(0)	3	(1)	7	(1)	6	(1)	6	0	4	0	2	1
Salisbury, Salisbury District Hospital	2	(0)	2	(1)	4	(1)	4	(1)	4	3	3	0	0	0
Swindon, Great Western Hospital	2	(4)	1	(3)	3	(7)	3	(4)	3	1	3	0	0	0
Taunton, Taunton And Somerset Hospital (Musgrove Park)	1	(4)	4	(4)	5	(8)	4	(6)	4	0	5	0	0	0
Torquay, Torbay Hospital	1	(2)	3	(1)	4	(3)	3	(2)	4	1	3	0	1	1
Truro, Royal Cornwall Hospital (Treliske)	4	(3)	1	(2)	5	(5)	4	(4)	5	2	4	1	0	0
Weston-Super-Mare, Weston General Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Yeovil, Yeovil District Hospital	1	(1)	2	(2)	3	(3)	3	(2)	3	0	3	0	0	0
TOTAL	**77**	**(66)**	**79**	**(51)**	**156**	**(117)**	**114**	**(86)**	**150**	**34**	**108**	**2**	**23**	**15**
South East														
Ashford, William Harvey Hospital	4	(5)	5	(3)	9	(8)	8	(7)	9	3	7	0	2	1
Aylesbury, Stoke Mandeville Hospital	0	(2)	3	(1)	3	(3)	1	(1)	3	0	1	0	0	0
Basingstoke, North Hampshire Hospital	2	(2)	3	(2)	5	(4)	2	(4)	3	0	4	0	1	1
Brighton, Royal Sussex County Hospital	13	(10)	17	(12)	30	(22)	23	(15)	30	3	23	0	4	2
Camberley, Frimley Park Hospital	3	(5)	6	(2)	9	(7)	4	(6)	9	1	4	0	0	0
Canterbury, Kent And Canterbury Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Chertsey, St Peter's Hospital	2	(5)	6	(4)	8	(9)	6	(6)	8	1	6	0	0	1
Chichester, St Richard's Hospital	2	(2)	2	(2)	4	(4)	2	(3)	4	1	2	0	1	0
Dartford, Darent Valley Hospital	0	(6)	0	(4)	0	(10)	0	(6)	0	0	0	0	0	0
Eastbourne, Eastbourne District General Hospital	2	(0)	1	(2)	3	(2)	2	(1)	3	0	2	0	1	0
Gillingham, Medway Hospital	7	(4)	8	(4)	15	(8)	9	(5)	13	2	10	0	4	1
Guildford, Royal Surrey County Hospital	1	(1)	0	(1)	1	(2)	1	(1)	1	1	1	0	0	0
Hastings, Conquest Hospital	2	(3)	2	(1)	4	(4)	3	(3)	4	0	3	0	0	0
Haywards Heath, Princess Royal Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital

Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
Maidstone, Maidstone Hospital	0	(0)	2	(3)	2	(3)	0	(3)	2	0	0	0	0	0
Margate, The Queen Elizabeth The Queen Mother Hospital	0	(1)	3	(0)	3	(1)	1	(0)	3	1	1	0	0	1
Newport, St Mary's Hospital	4	(4)	2	(0)	6	(4)	3	(3)	5	0	4	0	0	1
Oxford, John Radcliffe Hospital	14	(16)	9	(20)	23	(36)	19	(29)	21	3	21	0	5	4
Portsmouth, Queen Alexandra Hospital	4	(4)	3	(7)	7	(11)	4	(5)	6	1	5	1	1	0
Reading, Royal Berkshire Hospital	4	(1)	7	(7)	11	(8)	7	(5)	11	4	7	0	1	1
Redhill, East Surrey Hospital	4	(3)	2	(2)	6	(5)	5	(3)	5	1	6	0	1	1
Slough, Wexham Park Hospital	5	(5)	3	(2)	8	(7)	6	(6)	7	2	6	0	1	0
Southampton, Southampton University Hospitals	23	(19)	13	(22)	36	(41)	25	(34)	36	11	24	2	6	3
Tunbridge Wells, Tunbridge Wells Hospital	1	(1)	1	(1)	2	(2)	2	(2)	2	2	2	0	0	0
Winchester, Royal Hampshire County Hospital	2	(1)	0	(1)	2	(2)	2	(2)	2	0	2	0	0	0
Worthing, Worthing Hospital	2	(2)	2	(2)	4	(4)	2	(3)	3	1	3	0	0	0
Wycombe, Wycombe General Hospital	2	(0)	0	(1)	2	(1)	1	(0)	1	0	2	0	0	1
TOTAL	**103**	**(104)**	**100**	**(106)**	**203**	**(210)**	**138**	**(155)**	**191**	**38**	**146**	**3**	**28**	**18**
London														
Barnet, Barnet General Hospital	3	(1)	0	(0)	3	(1)	2	(1)	2	0	3	0	0	1
Carshalton, St Helier Hospital	0	(2)	2	(0)	2	(2)	2	(2)	1	0	2	0	0	1
Chelsea, Chelsea And Westminster Hospital	1	(2)	2	(0)	3	(2)	1	(1)	2	0	2	0	0	0
Croydon, Croydon University Hospital	2	(2)	2	(0)	4	(2)	4	(2)	4	2	4	0	1	1
Evelina Childrens Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Harefield, Harefield Hospital	1	(0)	2	(1)	3	(1)	1	(0)	2	0	2	0	0	0
Harrow, Northwick Park Hospital	4	(6)	5	(3)	9	(9)	4	(7)	9	0	4	0	0	0
Isleworth, West Middlesex University Hospital	0	(0)	0	(1)	0	(1)	0	(0)	0	0	0	0	0	0
Kingston, Kingston Hospital	2	(0)	2	(0)	4	(0)	3	(0)	4	1	3	0	1	0
London, Charing Cross Hospital	2	(10)	7	(4)	9	(14)	5	(11)	9	1	5	0	1	0
London, Great Ormond Street Hospital For Children	0	(3)	1	(0)	1	(3)	1	(2)	1	1	1	0	1	1
London, Hammersmith Hospital	1	(3)	4	(1)	5	(4)	1	(4)	5	0	1	0	0	0
London, Homerton Hospital	1	(1)	1	(0)	2	(1)	2	(1)	2	0	2	0	0	1
London, King's College Hospital	29	(30)	16	(14)	45	(44)	33	(37)	45	13	31	1	9	7
London, National Hospital For Neurology And Neurosurgery	4	(5)	2	(3)	6	(8)	6	(6)	6	4	4	0	3	3
London, Newham General Hospital	0	(2)	0	(1)	0	(3)	0	(2)	0	0	0	0	0	0
London, North Middlesex Hospital	1	(1)	3	(0)	4	(1)	1	(0)	4	0	1	0	0	0
London, Royal Brompton Hospital	1	(0)	0	(1)	1	(1)	1	(0)	1	1	1	0	0	0
London, St Bartholomew's Hospital	0	(2)	5	(1)	5	(3)	3	(3)	5	1	3	0	1	1
London, St George's Hospital	19	(17)	20	(17)	39	(34)	26	(26)	35	8	29	0	2	4

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital

Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
London, St Mary's Hospital	4	(3)	6	(4)	10	(7)	7	(4)	10	4	7	0	1	2
London, St Thomas' Hospital	3	(2)	3	(1)	6	(3)	5	(1)	6	2	5	0	2	0
London, The Queen Elizabeth Hospital	1	(2)	1	(1)	2	(3)	2	(2)	2	0	2	0	1	0
London, The Royal Free Hospital	3	(2)	1	(2)	4	(4)	3	(3)	4	1	3	0	0	0
London, The Royal London Hospital (Whitechapel)	12	(12)	7	(5)	19	(17)	14	(13)	17	5	12	1	9	2
London, University College Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
London, University Hospital Lewisham	1	(2)	2	(0)	3	(2)	1	(1)	3	0	1	0	0	0
London, Whipps Cross Hospital	1	(2)	1	(0)	2	(2)	1	(1)	2	0	1	0	0	0
London, Whittington Hospital	1	(0)	0	(0)	1	(0)	1	(0)	1	0	1	0	0	0
Orpington, Princess Royal University Hospital	3	(1)	1	(1)	4	(2)	4	(2)	4	2	4	1	0	0
Romford, Queens Hospital	5	(6)	7	(5)	12	(11)	10	(6)	12	3	10	0	1	0
Southall, Ealing Hospital	2	(0)	1	(0)	3	(0)	1	(0)	3	0	1	0	0	0
Uxbridge, Hillingdon Hospital	3	(2)	2	(1)	5	(3)	3	(3)	5	2	3	0	2	1
TOTAL	**110**	**(123)**	**106**	**(67)**	**216**	**(190)**	**148**	**(143)**	**206**	**51**	**148**	**3**	**35**	**25**
East of England														
Basildon, Basildon Hospital	4	(1)	5	(4)	9	(5)	7	(2)	9	2	5	0	2	2
Bedford, Bedford Hospital	1	(1)	3	(3)	4	(4)	2	(2)	3	0	3	0	0	0
Bury St Edmunds, West Suffolk Hospital	0	(2)	1	(3)	1	(5)	1	(3)	1	0	1	0	0	0
Cambridge, Addenbrooke's Hospital	11	(16)	29	(24)	40	(40)	31	(30)	38	11	32	2	3	1
Chelmsford, Broomfield Hospital	2	(0)	0	(3)	2	(3)	2	(3)	2	2	2	1	1	1
Colchester, Colchester General Hospital	3	(2)	4	(2)	7	(4)	6	(3)	7	1	6	0	1	0
Great Yarmouth, The James Paget Hospital	2	(6)	3	(4)	5	(10)	4	(7)	5	2	4	0	0	0
Harlow, Princess Alexandra Hospital	1	(2)	1	(0)	2	(2)	2	(2)	2	0	2	0	2	0
Huntingdon, Hinchingbrooke Hospital	0	(0)	0	(1)	0	(1)	0	(0)	0	0	0	0	0	0
Ipswich, Ipswich Hospital	1	(2)	4	(2)	5	(4)	4	(4)	5	1	3	0	0	0
Kings Lynn, Queen Elizabeth Hospital	2	(2)	3	(3)	5	(5)	3	(3)	5	0	3	0	0	0
Luton, Luton And Dunstable Hospital	6	(2)	5	(0)	11	(2)	9	(2)	11	2	9	0	2	0
Milton Keynes, Milton Keynes General Hospital	3	(5)	0	(0)	3	(5)	3	(3)	3	3	3	0	0	0
Norwich, Norfolk And Norwich University Hospital	10	(11)	11	(9)	21	(20)	12	(13)	18	3	15	0	1	1
Papworth, Papworth Hospital	3	(0)	5	(4)	8	(4)	5	(3)	8	0	5	0	0	0
Peterborough, Peterborough City Hospital	1	(3)	4	(2)	5	(5)	5	(5)	5	2	4	1	2	1
Stevenage, Lister Hospital	6	(4)	3	(7)	9	(11)	8	(7)	8	2	8	1	3	1
Watford, Watford General Hospital	3	(8)	2	(4)	5	(12)	5	(10)	5	2	5	1	1	1
Westcliff On Sea, Southend Hospital	1	(0)	4	(1)	5	(1)	1	(0)	5	0	1	0	0	0
TOTAL	**60**	**(67)**	**87**	**(76)**	**147**	**(143)**	**110**	**(102)**	**140**	**33**	**111**	**6**	**18**	**8**

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital

Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
Midlands														
Birmingham, Birmingham Children's Hospital	0	(2)	0	(2)	0	(4)	0	(4)	0	0	0	0	0	0
Birmingham, Birmingham Heartlands Hospital	1	(2)	4	(3)	5	(5)	3	(3)	5	1	3	0	1	1
Birmingham, City Hospital	4	(0)	1	(0)	5	(0)	3	(0)	4	1	4	0	3	1
Birmingham, Queen Elizabeth Hospital Birmingham	8	(7)	11	(11)	19	(18)	14	(16)	18	6	13	1	4	2
Boston, Pilgrim Hospital	0	(2)	0	(0)	0	(2)	0	(2)	0	0	0	0	0	0
Burton-On-Trent, Queen's Hospital	0	(1)	1	(4)	1	(5)	1	(3)	1	0	1	0	0	0
Chesterfield, Chesterfield And N Derbyshire Royal Hospital	2	(3)	0	(1)	2	(4)	2	(4)	2	0	2	0	0	0
Coventry, University Hospital (Walsgrave)	13	(9)	9	(6)	22	(15)	16	(11)	20	6	17	1	3	2
Derby, Royal Derby Hospital	1	(5)	6	(5)	7	(10)	4	(8)	7	2	4	0	0	1
Dudley, Russells Hall Hospital	4	(2)	0	(1)	4	(3)	4	(3)	4	1	4	0	1	1
Hereford, The County Hospital	1	(2)	1	(2)	2	(4)	2	(2)	2	0	2	0	0	0
Kettering, Kettering General Hospital	4	(1)	1	(4)	5	(5)	4	(3)	5	1	4	0	0	2
Leicester, Glenfield General Hospital	0	(1)	0	(2)	0	(3)	0	(1)	0	0	0	0	0	0
Leicester, Leicester Royal Infirmary	6	(5)	0	(2)	6	(7)	5	(5)	5	1	6	1	1	1
Lincoln, Lincoln County Hospital	4	(1)	2	(3)	6	(4)	5	(3)	6	2	4	0	1	1
Northampton, Northampton General Hospital	5	(3)	2	(3)	7	(6)	5	(4)	7	2	5	0	2	0
Nottingham, Nottingham University Hospitals City Campus	2	(0)	0	(2)	2	(2)	2	(0)	2	1	2	0	0	0
Nottingham, Nottingham University Hospitals Qmc Campus	20	(19)	17	(17)	37	(36)	28	(27)	34	10	29	1	7	2
Nuneaton, George Eliot Hospital	0	(0)	1	(0)	1	(0)	1	(0)	1	0	0	0	0	0
Redditch, Alexandra Hospital	2	(3)	0	(0)	2	(3)	2	(3)	2	0	2	0	0	0
Shrewsbury, Royal Shrewsbury Hospital	2	(1)	3	(3)	5	(4)	2	(2)	4	1	3	0	0	0
Stoke-On-Trent, Royal Stoke University Hospital	6	(9)	18	(29)	24	(38)	15	(26)	24	3	13	1	4	2
Sutton Coldfield, Good Hope District General Hosp.	3	(1)	1	(1)	4	(2)	3	(1)	4	2	3	0	2	0
Sutton-In-Ashfield, King's Mill Hospital	2	(0)	3	(1)	5	(1)	4	(0)	5	3	4	0	2	0
Telford, Princess Royal Hospital	1	(1)	0	(2)	1	(3)	1	(3)	1	1	1	0	0	0
Walsall, Walsall Manor Hospital	0	(2)	1	(2)	1	(4)	1	(3)	1	0	1	0	0	0
Warwick, Warwick Hospital	1	(1)	0	(1)	1	(2)	1	(1)	1	0	1	0	0	0
West Bromwich, Sandwell District General Hospital	3	(2)	2	(1)	5	(3)	4	(1)	5	1	4	0	1	1
Wolverhampton, New Cross Hospital	1	(2)	10	(4)	11	(6)	4	(2)	9	1	6	0	0	1
Worcester, Worcestershire Royal Hospital	2	(2)	2	(2)	4	(4)	4	(2)	3	2	4	0	0	0
TOTAL	**98**	**(89)**	**96**	**(114)**	**194**	**(203)**	**140**	**(143)**	**182**	**48**	**142**	**5**	**32**	**18**
North West														
Ashton-Under-Lyne, Tameside General Hospital	1	(4)	0	(2)	1	(6)	1	(6)	1	0	1	0	1	0

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital														
Donating hospital	**DBD**		**DCD**		**All donors**		**Multi-organ donor**		**Kidney**	**Pancreas**	**Liver**	**Bowel**	**Heart**	**Lung**
Blackburn, Royal Blackburn Hospital	2	(3)	2	(2)	4	(5)	3	(4)	4	2	2	0	1	0
Blackpool, Blackpool Victoria Hospital	5	(2)	7	(6)	12	(8)	8	(6)	12	2	8	0	0	0
Bolton, Royal Bolton Hospital	3	(1)	1	(1)	4	(2)	4	(2)	4	1	3	0	1	0
Bury, Fairfield General Hospital	0	(3)	1	(3)	1	(6)	1	(3)	1	0	1	0	0	0
Chester, Countess Of Chester Hospital	4	(5)	2	(3)	6	(8)	5	(7)	6	1	5	0	2	0
Crewe, Leighton Hospital	1	(3)	1	(0)	2	(3)	1	(3)	2	1	1	0	0	1
Lancaster, Royal Lancaster Infirmary	1	(2)	0	(2)	1	(4)	1	(3)	1	1	1	0	0	0
Liverpool, Alder Hey Children's Hospital	2	(1)	1	(0)	3	(1)	3	(1)	2	3	1	1	2	1
Liverpool, Liverpool Heart And Chest Hospital	1	(1)	0	(2)	1	(3)	1	(2)	1	0	1	0	0	0
Liverpool, Royal Liverpool University Hospital	2	(2)	1	(0)	3	(2)	3	(2)	3	1	3	0	0	0
Liverpool, University Hospital Aintree	1	(3)	2	(8)	3	(11)	3	(7)	3	2	3	0	0	0
Liverpool, Walton Centre For Neurology And Neurosurgery	10	(13)	3	(6)	13	(19)	10	(16)	13	6	8	0	1	3
Macclesfield, Macclesfield District General Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Manchester, Manchester Royal Infirmary	2	(2)	0	(1)	2	(3)	2	(3)	2	1	2	0	0	0
Manchester, North Manchester General Hospital	0	(2)	0	(2)	0	(4)	0	(4)	0	0	0	0	0	0
Manchester, Wythenshawe Hospital	0	(5)	1	(0)	1	(5)	0	(5)	1	0	0	0	0	0
Oldham, Royal Oldham Hospital(Rochdale Road)	1	(0)	4	(1)	5	(1)	4	(0)	5	0	4	0	1	2
Prescot, Whiston Hospital	9	(2)	2	(0)	11	(2)	11	(2)	11	1	10	0	1	0
Preston, Royal Preston Hospital	6	(7)	6	(5)	12	(12)	9	(12)	12	4	8	0	1	0
Salford, Salford Royal	13	(14)	8	(9)	21	(23)	17	(17)	21	4	17	0	2	4
Southport, Southport District General Hospital	0	(0)	0	(1)	0	(1)	0	(1)	0	0	0	0	0	0
Stockport, Stepping Hill Hospital	0	(1)	1	(1)	1	(2)	0	(2)	1	0	0	0	0	0
Warrington, Warrington Hospital	3	(8)	2	(3)	5	(11)	3	(8)	5	1	3	0	1	0
Wigan, Royal Albert Edward Infirmary	2	(1)	2	(1)	4	(2)	4	(1)	4	1	3	0	0	0
Wirral, Arrowe Park Hospital	4	(2)	2	(0)	6	(2)	4	(2)	6	0	4	0	0	0
TOTAL	**73**	**(88)**	**49**	**(59)**	**122**	**(147)**	**98**	**(120)**	**121**	**32**	**89**	**1**	**14**	**11**
North East and Yorkshire														
Barnsley, Barnsley District General Hospital	1	(0)	3	(4)	4	(4)	3	(3)	4	0	3	0	2	0
Barrow-In-Furness, Furness General Hospital	1	(1)	2	(0)	3	(1)	3	(1)	3	0	3	0	0	0
Bradford, Bradford Royal Infirmary	3	(2)	1	(2)	4	(4)	4	(4)	4	1	4	0	2	0
Carlisle, Cumberland Infirmary	5	(4)	4	(1)	9	(5)	8	(5)	9	1	8	0	0	0
Cottingham, Castle Hill Hospital	0	(0)	1	(1)	1	(1)	1	(1)	1	1	1	0	0	0
Darlington, Darlington Memorial Hospital	0	(2)	3	(3)	3	(5)	2	(4)	3	0	2	0	0	0
Doncaster, Doncaster Royal Infirmary	2	(3)	1	(0)	3	(3)	3	(2)	3	2	3	0	1	1
Durham, University Hospital Of North Durham	4	(3)	4	(0)	8	(3)	7	(3)	8	1	5	1	2	1
Gateshead, Queen Elizabeth Hospital	2	(1)	0	(2)	2	(3)	2	(2)	2	0	1	0	0	1

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Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
Grimsby, Diana Princess Of Wales Hospital	1	(1)	2	(1)	3	(2)	2	(1)	3	0	2	0	0	1
Halifax, Calderdale Royal Hospital	4	(3)	2	(0)	6	(3)	6	(3)	6	0	6	0	0	0
Harrogate, Harrogate District Hospital	2	(1)	1	(0)	3	(1)	2	(1)	3	1	2	0	0	1
Huddersfield, Huddersfield Royal Infirmary	1	(2)	4	(0)	5	(2)	3	(2)	4	1	4	0	0	0
Hull, The Hull Royal Infirmary	8	(3)	14	(7)	22	(10)	19	(7)	22	8	17	2	7	2
Keighley, Airedale General Hospital	1	(2)	1	(2)	2	(4)	2	(3)	2	0	2	0	0	0
Leeds, Leeds General Infirmary	11	(17)	16	(11)	27	(28)	22	(23)	27	10	21	0	8	3
Leeds, St James's University Hospital	1	(4)	3	(1)	4	(5)	2	(4)	3	0	2	0	1	1
Middlesbrough, The James Cook University Hospital	8	(5)	6	(8)	14	(13)	13	(8)	14	6	13	0	2	3
Newcastle, Freeman Hospital	1	(1)	2	(3)	3	(4)	3	(2)	3	1	3	1	0	0
Newcastle, Royal Victoria Infirmary	15	(20)	9	(7)	24	(27)	19	(24)	24	5	18	0	4	1
Northumbria, Nsech	6	(1)	3	(1)	9	(2)	4	(1)	6	0	7	0	2	1
Rotherham, Rotherham District General Hospital	4	(0)	1	(0)	5	(0)	4	(0)	5	1	4	0	0	1
Scarborough, Scarborough Hospital	2	(2)	1	(1)	3	(3)	3	(3)	3	2	3	0	1	1
Scunthorpe, Scunthorpe General Hospital	0	(0)	2	(1)	2	(1)	2	(0)	2	0	2	0	0	0
Sheffield, Northern General Hospital	9	(9)	7	(6)	16	(15)	11	(12)	14	4	13	0	3	2
Sheffield, Royal Hallamshire Hospital	3	(3)	4	(4)	7	(7)	5	(4)	7	2	4	0	1	1
South Shields, South Tyneside Dist. Gen. Hospital	0	(1)	1	(1)	1	(2)	1	(2)	1	0	0	0	0	1
Stockton-On-Tees, University Hospital Of North Tees	5	(6)	2	(3)	7	(9)	5	(5)	7	3	4	0	3	3
Sunderland, Sunderland Royal Hospital	3	(3)	7	(4)	10	(7)	9	(4)	10	1	5	0	1	0
Wakefield, Pinderfields General Hospital	7	(5)	4	(3)	11	(8)	9	(7)	10	1	8	0	2	2
Whitehaven, West Cumberland Hospital	1	(1)	0	(1)	1	(2)	1	(2)	1	1	1	0	1	0
York, York District Hospital	3	(3)	2	(4)	5	(7)	5	(6)	5	0	5	0	0	1
TOTAL	**114**	**(109)**	**113**	**(82)**	**227**	**(191)**	**185**	**(149)**	**219**	**53**	**176**	**4**	**43**	**28**
Isle of Man														
Douglas, Nobles I-O-M Hospital	2	(0)	0	(1)	2	(1)	2	(0)	2	0	2	0	0	0
TOTAL	**2**	**(0)**	**0**	**(1)**	**2**	**(1)**	**2**	**(0)**	**2**	**0**	**2**	**0**	**0**	**0**
Channel Islands														
St Helier, Jersey General Hospital	1	(1)	0	(1)	1	(2)	0	(2)	1	0	0	0	0	0
TOTAL	**1**	**(1)**	**0**	**(1)**	**1**	**(2)**	**0**	**(2)**	**1**	**0**	**0**	**0**	**0**	**0**
England	**635**	**(646)**	**631**	**(555)**	**1266**	**(1201)**	**934**	**(898)**	**1210**	**289**	**921**	**24**	**193**	**123**
Wales														
Aberystwyth, Bronglais Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0

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Donating hospital	DBD		DCD		All donors		Multi-organ donor		Kidney	Pancreas	Liver	Bowel	Heart	Lung
Bangor, Ysbyty Gwynedd District General Hospital	3	(0)	2	(0)	5	(0)	3	(0)	5	1	3	0	0	0
Bodelwyddan, Glan Clwyd District General Hospital	2	(3)	0	(1)	2	(4)	1	(2)	2	1	0	0	0	0
Bridgend, Princess Of Wales Hospital	1	(3)	0	(1)	1	(4)	1	(4)	1	0	1	0	0	0
Cardiff, University Of Wales Hospital	10	(14)	11	(11)	21	(25)	17	(16)	20	4	15	0	5	2
Carmarthen, Glangwili General Hospital	1	(2)	2	(2)	3	(4)	1	(3)	2	0	2	0	0	0
Haverford West, Withybush General Hospital	0	(0)	0	(1)	0	(1)	0	(1)	0	0	0	0	0	0
Llanelli, Prince Philips Hospital	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Llanfrechfa, The Grange University Hospital	6	(4)	2	(0)	8	(4)	4	(4)	7	1	5	0	1	1
Merthyr Tydfil, Prince Charles Hospital	3	(1)	0	(3)	3	(4)	2	(2)	3	0	2	0	0	0
Pontypridd, Royal Glamorgan Hospital	1	(1)	1	(3)	2	(4)	1	(3)	2	0	1	0	0	0
Swansea, Morriston Hospital	6	(5)	0	(5)	6	(10)	5	(9)	4	1	6	0	0	2
Wrexham, Maelor General Hospital	4	(2)	2	(0)	6	(2)	5	(2)	6	2	4	0	2	1
TOTAL	**37**	**(37)**	**20**	**(27)**	**57**	**(64)**	**40**	**(48)**	**52**	**10**	**39**	**0**	**8**	**6**
Scotland														
Aberdeen, Aberdeen Royal Infirmary	7	(5)	7	(3)	14	(8)	12	(7)	13	4	11	0	3	1
Airdrie, University Hospital Monklands	0	(1)	0	(0)	0	(1)	0	(1)	0	0	0	0	0	0
Ayr, University Hospital Ayr	1	(0)	1	(1)	2	(1)	2	(0)	2	2	2	0	1	1
Crosshouse, University Hospital Crosshouse	3	(2)	0	(0)	3	(2)	3	(2)	3	2	3	0	1	0
Dumfries, Dumfries And Galloway Royal Infirmary	0	(1)	0	(2)	0	(3)	0	(2)	0	0	0	0	0	0
Dundee, Ninewells Hospital	7	(4)	3	(2)	10	(6)	9	(5)	10	3	8	0	3	0
Edinburgh, Royal Hospital For Children And Young People	1	(0)	1	(1)	2	(1)	2	(1)	2	1	2	0	1	1
Edinburgh, Royal Infirmary Of Edinburgh	13	(4)	12	(15)	25	(19)	23	(16)	25	5	21	0	5	6
Glasgow, Glasgow Royal Infirmary	4	(6)	2	(2)	6	(8)	6	(7)	6	2	6	0	1	2
Glasgow, Golden Jubilee University National Hospital	2	(0)	1	(1)	3	(1)	3	(1)	3	1	3	0	0	1
Glasgow, Queen Elizabeth University Hospital	10	(9)	11	(5)	21	(14)	18	(12)	21	5	16	0	7	1
Glasgow, The Royal Hospital For Children	2	(2)	0	(0)	2	(2)	2	(2)	2	0	1	0	2	0
Hairmyres, University Hospital Hairmyres	0	(0)	3	(1)	3	(1)	2	(1)	3	1	2	0	0	0
Inverness, Raigmore Hospital	4	(3)	3	(2)	7	(5)	6	(5)	6	0	6	0	1	1
Kirkcaldy, Victoria Hospital	0	(3)	4	(7)	4	(10)	2	(8)	4	0	2	0	0	0
Larbert, Forth Valley Royal Hospital	1	(3)	2	(2)	3	(5)	3	(5)	3	3	3	0	1	1
Livingston, St John's Hospital	2	(1)	3	(0)	5	(1)	5	(1)	5	4	4	0	1	1
Melrose, Borders General Hospital	0	(1)	2	(1)	2	(2)	2	(2)	2	0	1	0	0	0
Paisley, Royal Alexandra Hospital	2	(2)	1	(4)	3	(6)	2	(3)	3	0	2	0	1	0
Wishaw, University Hospital Wishaw	5	(4)	0	(2)	5	(6)	5	(4)	5	1	5	0	1	1
TOTAL	**64**	**(51)**	**56**	**(51)**	**120**	**(102)**	**107**	**(85)**	**118**	**34**	**98**	**0**	**29**	**17**

Appendix I Deceased solid organ donors and donated organs in the UK, 1 April 2023 - 31 March 2024 (2022-2023), by donating hospital														
Donating hospital	**DBD**		**DCD**		**All donors**		**Multi-organ donor**		**Kidney**	**Pancreas**	**Liver**	**Bowel**	**Heart**	**Lung**
Northern Ireland														
Belfast, Antrim Hospital	1	(2)	2	(2)	3	(4)	2	(3)	3	1	2	0	0	0
Belfast, Belfast City Hospital	0	(3)	4	(0)	4	(3)	1	(3)	4	0	0	0	1	0
Belfast, Royal Belfast Hospital For Sick Children	1	(2)	0	(1)	1	(3)	1	(3)	1	1	1	0	1	1
Belfast, Royal Victoria Hospital	21	(21)	19	(12)	40	(33)	33	(21)	40	14	27	0	10	5
Belfast, The Ulster Hospital	3	(3)	4	(0)	7	(3)	3	(2)	7	1	2	0	2	0
Coleraine, Causeway Hospital	1	(0)	0	(0)	1	(0)	1	(0)	1	0	1	0	0	1
Enniskillen, South West Acute Hospital	2	(0)	0	(1)	2	(1)	2	(0)	2	0	2	0	0	0
Londonderry, Altnagelvin Area Hospital	1	(5)	1	(4)	2	(9)	1	(4)	2	0	1	0	0	0
Portadown, Craigavon Area Hospital	3	(1)	1	(2)	4	(3)	3	(1)	4	0	3	0	2	0
TOTAL	**33**	**(37)**	**31**	**(22)**	**64**	**(59)**	**47**	**(37)**	**64**	**17**	**39**	**0**	**16**	**7**
TOTAL	**772**	**(772)**	**738**	**(657)**	**1510**	**(1429)**	**1130**	**(1070)**	**1447**	**350**	**1099**	**24**	**246**	**153**

Appendix IIA Numbers of donors after brain death and organs retrieved in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region

Country/ NHS region	Donors				Organs					
	All donors	pmp	Multi-organ donors	pmp	Kidney	Pancreas	Liver	Bowel	Heart	Lung
North East and Yorkshire	114	13.9	102	12.4	107	34	102	4	30	23
North West	73	9.7	66	8.8	72	22	63	1	11	9
Midlands	98	8.9	88	8.0	88	30	92	5	22	15
East of England	60	9.4	55	8.6	56	21	59	6	11	5
London	110	12.4	91	10.3	101	35	96	3	24	19
South East	103	11.0	84	9.0	93	28	91	3	24	13
South West	77	13.4	66	11.5	75	21	68	2	12	7
England	**597**	**10.5**	**517**	**9.1**	**554**	**181**	**537**	**24**	**126**	**86**
Isle of Man	**2**	**25.0**	**2**	**25.0**	**2**	**0**	**2**	**0**	**0**	**0**
Channel Islands	**1**	**5.9**	**0**	**0.0**	**1**	**0**	**0**	**0**	**0**	**0**
Wales	**37**	**11.8**	**31**	**9.9**	**33**	**8**	**31**	**0**	**7**	**5**
Scotland	**64**	**11.7**	**64**	**11.7**	**64**	**22**	**60**	**0**	**21**	**10**
Northern Ireland	**33**	**17.3**	**30**	**15.7**	**33**	**13**	**27**	**0**	**10**	**5**
TOTAL	**772**	**11.4**	**679**	**10.0**	**725**	**234**	**691**	**24**	**172**	**111**

Appendix IIB Numbers of donors after circulatory death and organs retrieved in the UK, 1 April 2023 - 31 March 2024, by country/ NHS region

Country/ NHS region	Donors				Organs					
	All donors	pmp	Multi-organ donors	pmp	Kidney	Pancreas	Liver	Bowel	Heart	Lung
North East and Yorkshire	113	13.7	83	10.1	112	19	74	0	13	5
North West	49	6.5	32	4.3	49	10	26	0	3	2
Midlands	96	8.8	52	4.7	94	18	50	0	10	3
East of England	87	13.6	55	8.6	84	12	52	0	7	3
London	106	12.0	57	6.4	105	16	52	0	11	6
South East	100	10.7	54	5.8	98	10	55	0	4	5
South West	79	13.7	48	8.3	75	13	40	0	11	8
England	**597**	**10.5**	**356**	**6.2**	**584**	**91**	**329**	**0**	**54**	**32**
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	**20**	**6.4**	**9**	**2.9**	**19**	**2**	**8**	**0**	**1**	**1**
Scotland	**56**	**10.3**	**43**	**7.9**	**54**	**12**	**38**	**0**	**8**	**7**
Northern Ireland	**31**	**16.2**	**17**	**8.9**	**31**	**4**	**12**	**0**	**6**	**2**
TOTAL	**738**	**10.9**	**451**	**6.7**	**722**	**116**	**408**	**0**	**74**	**42**

Appendix III Populations for NHS regions, 2023-2024
Mid-2022 estimates based on ONS 2021 Census figures

Country/ NHS region	Population (millions)
North East and Yorkshire	8.22
North West	7.52
Midlands	10.96
East of England	6.40
London	8.87
South East	9.38
South West	5.76
England	**57.11**
Isle of Man	**0.08**
Channel Islands	**0.17**
Wales	**3.13**
Scotland	**5.45**
Northern Ireland	**1.91**
TOTAL	**67.60**

Appendix IVA **UK solid organ transplants from deceased UK donors[1] to non-UK residents, 1 April 2021 to 31 March 2024**

Transplant type by year

Year	Transplant type	Residency of recipient ROI	Other EU	Non-EU	Total
2021/22	Kidney	0	0	1	1
	Heart	1	0	0	1
	Liver	6	2	1	9
	Total	**7**	**2**	**2**	**11**
2022/23	Liver	6	0	0	6
	Bilateral lung	1	0	0	1
	Total	**7**	**0**	**0**	**7**
2023/24	Kidney	0	1	0	1
	Heart	3	0	0	3
	Liver	3	0	0	3
	Bowel	0	0	1	1
	Modified multi-visceral	1	0	0	1
	Total	**7**	**1**	**1**	**9**

ROI = Republic of Ireland
[1] Based on country of donor hospital

Appendix IVB **UK solid organ transplants from deceased non-UK donors[1] to UK residents, 1 April 2021 to 31 March 2024**

Transplant type by year

Year	Transplant type	Country of donation ROI	Other EU	Non-EU	Total
2021/22	Kidney	4	0	0	4
	Heart	0	3	0	3
	Liver	7	0	0	7
	Total	**11**	**3**	**0**	**14**
2022/23	Kidney	4	2	0	6
	Heart	5	3	0	8
	Liver	9	0	0	9
	Bilateral lung	3	0	0	3
	Bowel	1	0	0	1
	Total	**22**	**5**	**0**	**27**
2023/24	Kidney	0	1	0	1
	Heart	3	5	0	8
	Liver	9	1	0	10
	Bilateral lung	2	0	0	2
	Total	**14**	**7**	**0**	**21**

ROI = Republic of Ireland
[1] Based on country of donor hospital

Appendix IVC **Non-UK solid organ transplants from deceased UK donors[1] to non-UK hospitals, 1 April 2021 to 31 March 2024**

Transplant type by year

		Residency of recipient			
Year	**Transplant type**	**ROI**	**Other EU**	**Non-EU**	**Total**
2021/22	Liver	4	0	0	4
	Bilateral lung	0	2	1	3
	Total	**4**	**2**	**1**	**7**
2022/23	Heart	0	1	0	1
	Liver	1	1	0	1
	Bilateral lung	0	3	2	5
	Total	**1**	**5**	**2**	**8**
2023/24	Heart	0	1	0	1
	Liver	5	0	0	5
	Bilateral lung	0	2	0	2
	Total	**5**	**3**	**0**	**8**

ROI = Republic of Ireland
[1] Based on country of donor hospital

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