



Blood and Transplant

ANNUAL REPORT ON ORGAN UTILISATION

**REPORT FOR 2023/2024
(1 APRIL 2014 – 31 MARCH 2024)**

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Foreword



We are delighted to introduce the first NHS Blood and Transplant (NHSBT) Annual Report on Organ Utilisation. The need to make the very best use of every precious deceased donor organ offered remains unchanged, but there are some fundamental principles that are imperative to be re-examined. This is especially important since the COVID pandemic, following which the UK has seen a decrease in consent/authorisation rates, and static numbers of living donors. The reduction in donation after brain death ([DBD](#)) donors, the increase in donation after circulatory death ([DCD](#)) donors, the growing transplant waiting list, and the increase in the use of perfusion technology make this report important and timely.

The challenges being experienced in organ donation, along with evidence of unwarranted variations in organ utilisation patterns between transplant centres, led to a renewed drive to improve UK organ transplant services with the publication of the [Organ Utilisation Group report](#) in February 2023. The Annual Report on Organ Utilisation is another example of the NHSBT's commitment to providing information to organ donation and transplant professionals to support optimal practice. This report seeks to define the organ utilisation pathway (see [Appendix A2](#)), as well as examining organ utilisation by donor type and considering metrics of perceived organ risk.

So far as we are aware, this is the first time a report from a national organ donation and transplantation organisation has focused specifically and comprehensively on organ utilisation. This report looks at patterns of usage of the five major solid organs from deceased donors that meet UK organ offering criteria ([POL188](#)). It examines the utilisation of offered organs as well as those that were subsequently retrieved by the National Organ Retrieval Service. It also presents reasons for organ offer decline and for non-transplantation after retrieval. Importantly, the data presented within this report allows comparisons over time, and between different organs and transplant centres.

We hope that it will provide important information and will provoke further discussion. We also hope that it might lead to new interventions and analyses seeking to improve organ utilisation. Although this is a complex report and is primarily aimed at organ donation and transplant professionals, we expect that patients with a transplant or those who are considering transplantation as a treatment option for end-stage organ disease will also find it valuable.

This report represents a very significant amount of work by a number of people. Colleagues in the NHSBT Statistics Team have again shown that their work is of the highest standard and we would like to thank them for their efforts. We would also like to thank members of the NHSBT Organ Utilisation Development Team, Clinical Leads in Organ Utilisation, and attendees at the National Organ Utilisation Conferences in 2023 and 2024 for their feedback.

Finally, every potential organ donor and every organ transplant that takes place in the UK represents the dedication of those in organ donation and retrieval teams, laboratories, transport teams, and transplant units, all working together to facilitate transplantation for deceased donors and their families as well as recipients and their loved ones. We hope that this report helps to support the processes by which every precious organ from

potential deceased donors is given the very best opportunity for successful transplantation, in order to transform the lives of those with end-stage organ disease.



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Contents



1. Executive Summary	1
2. Introduction	7
3. Utilisation of Offered Organs	11
3.1 Number of offered organs per year	12
3.2 Outcomes of offered organs	14
3.3 Reasons for offer decline	21
3.4 Centre-specific offer decline rates	23
3.4.1 Kidney	23
3.4.2 Liver	32
3.4.3 Pancreas	35
3.4.4 Heart	39
3.4.5 Lung	41
4. Utilisation of Retrieved Organs	45
4.1 Percentage of retrieved not transplanted organs per year	45
4.2 Reasons for non-use of retrieved not transplanted organs	51
5. Utilisation of Organs by Organ Quality	54
5.1 Offered organs by Higher Quality Donor status	55
5.2 Outcomes of offered Higher Quality Donor organs	62
5.3 Centre-specific offer decline rates for Higher Quality Donors	69
5.3.1 Kidney	69
5.3.2 Liver	73
5.3.3 Pancreas	75
5.3.4 Heart	79
5.3.5 Lung	81
5.4 Retrieved not transplanted organs by Donor Risk Index	84
5.5 Retrieved not transplanted organs by donor age	89
Appendix	94
A1 Glossary of terms	95
A2 Organ utilisation pathway	99
A3 Higher Quality Donor (HQD) definitions	100
A4 Donor Risk Indices	102
A5 Decline reason categories	103
A6 Reason for non-use categories	105

Executive Summary

This report presents key figures about deceased donor organ utilisation in the UK. The period reported covers 10 years of data, from 1 April 2014. The report presents information on the number of deceased donor organs offered and their outcomes. Data are presented separately for [DBD](#) donors and [DCD](#) donors, and for each of the following organs separately:

- Kidney
- Liver
- Pancreas
- Heart
- Lung

Key findings

Kidney

- In 2023/24, 1,574 DBD donor kidneys were offered, of which 81.1% were transplanted. 58.3% of the 2,067 offered DCD donor kidneys were transplanted.
- The number of organs offered dipped in 2020/21 due to the Covid-19 pandemic. The number of offered organs in the three preceding years have not yet managed to reach pre-Covid-19 numbers, particularly for DBD donors.
- The reported reasons for declining offered kidneys often fell into one of the following categories: 'organ unsuitable', 'donor unsuitable', 'recipient reasons'.
- In 2023/24, 1,438 DBD donor kidneys were retrieved but 11.3% of these organs were not transplanted. The percentage of retrieved DBD donor kidneys that were not transplanted has generally increased over time, from 7.8% in 2014/15 to 11.3% in 2023/24.
- 15.4% of the 1,426 retrieved DCD donor kidneys in 2023/24 were not transplanted. The percentage of retrieved DCD donor kidneys that were not transplanted in 2023/24 remains similar to that in 2014/15 (15.1%).
- The reported reasons for not transplanting kidneys that had been retrieved often fell into one of the following categories: 'donor unsuitable – medical', 'organ unsuitable – clinical'.
- In 2023/24, 439 (27.9%) of the 1,574 offered DBD kidneys were classed as Higher Quality Donor (HQD) organs. 89.7% of these 439 offered HQD kidneys were transplanted.
- In 2023/24, 366 (17.7%) of the 2,067 offered DCD kidneys were classed as HQD organs. 78.4% of these 366 offered HQD kidneys were transplanted.
- The percentage of retrieved kidneys that were not transplanted generally increased in line with the calculated Donor Risk Index (DRI); 2.0% of retrieved kidneys in 2023/24 were not transplanted for DCD donors with lower DRI values compared with 27.6% for DCD donors with higher DRI values.

- The percentage of retrieved kidneys that were not transplanted generally increased with increasing donor age; 3.8% of retrieved kidneys in 2023/24 were not transplanted for DBD donors aged under 18 years compared with 28.0% for DBD donors aged 70 years and above.

Liver

- In 2023/24, 789 DBD donor livers were offered, of which 71.4% were transplanted. 27.3% of the 963 offered DCD donor livers were transplanted.
- The number of organs offered dipped in 2020/21 due to the Covid-19 pandemic. The number of offered organs in the three proceeding years have not yet managed to reach pre-Covid-19 numbers, particularly for DBD donors.
- The reported reasons for declining offered livers often fell into one of the following categories: 'organ unsuitable', 'donor unsuitable'.
- In 2023/24, 691 DBD donor livers were retrieved but 18.5% of these organs were not transplanted. The percentage of retrieved DBD donor livers that were not transplanted has increased over time, from 7.2% in 2014/15 to 18.5% in 2023/24.
- 35.5% of the 408 retrieved DCD donor livers in 2023/24 were not transplanted. The percentage of retrieved DCD donor livers that were not transplanted increased considerably from 27.3% in 2018/19 to 38.8% in 2019/20 and has remained similar in the years that have followed.
- The reported reasons for not transplanting livers that had been retrieved often fell into the following category: 'organ unsuitable – clinical'.
- In 2023/24, 224 (28.4%) of the 789 offered DBD livers were classed as Higher Quality Donor (HQD) organs. 87.5% of these 224 offered HQD livers were transplanted.
- There were no DCD HQD livers by definition.
- The percentage of retrieved livers that were not transplanted generally increased in line with the calculated Donor Risk Index (DRI); 8.1% of retrieved livers in 2023/24 were not transplanted for DBD donors with lower DRI values compared with 27.0% for DBD donors with higher DRI values.
- The percentage of retrieved livers that were not transplanted generally increased with increasing donor age; 14.3% of retrieved livers in 2023/24 were not transplanted for DCD donors aged under 18 years compared with 41.0% for DCD donors aged 70 years and above.

Pancreas

- In 2023/24, 482 DBD donor pancreases were offered, of which 24.3% were transplanted. 16.0% of the 374 offered DCD donor pancreases were transplanted.
- The number of organs offered dipped in 2020/21 due to the Covid-19 pandemic. The number of offered organs from DBD donors in the three preceding years have not yet managed to reach pre-Covid-19 numbers. Offered organs from DCD donors, however, appear to have recovered.
- The reported reasons for declining offered pancreases often fell into one of the following categories: 'organ unsuitable', 'donor unsuitable'.
- In 2023/24, 232 DBD donor pancreases were retrieved but 49.6% of these organs were not transplanted. The percentage of retrieved DBD donor pancreases that were not transplanted in 2023/24 remains similar to that in 2014/15 (48.4%).
- 47.8% of the 115 retrieved DCD donor pancreases in 2023/24 were not transplanted. The percentage of retrieved DCD donor pancreases that were not transplanted has fluctuated over the last 10 years from 41.7% in 2014/15 to 57.3% in 2022/23.
- The reported reasons for not transplanting pancreases that had been retrieved often fell into the following category: 'organ unsuitable – clinical'.
- In 2023/24, 157 (32.6%) of the 482 offered DBD pancreases were classed as Higher Quality Donor (HQD) organs. 41.4% of these 157 offered HQD pancreases were transplanted.
- In 2023/24, 107 (28.6%) of the 374 offered DCD pancreases were classed as HQD organs. 30.8% of these 107 offered HQD pancreases were transplanted.
- The percentage of retrieved pancreases that were not transplanted generally increased in line with the calculated Donor Risk Index (DRI); 24.0% of retrieved pancreases in 2023/24 were not transplanted for DCD donors with lower DRI values compared with 65.5% for DCD donors with higher DRI values.
- The percentage of retrieved pancreases that were not transplanted generally increased with increasing donor age; 8.7% of retrieved pancreases in 2023/24 were not transplanted for DBD donors aged under 18 years compared with 74.6% for DBD donors aged between 50 and 60 years.

Heart

- In 2023/24, 444 DBD donor hearts were offered, of which 38.3% were transplanted. 33.7% of the 193 offered DCD donor hearts were transplanted.
- The number of organs offered dipped in 2020/21 due to the Covid-19 pandemic. The number of offered organs from DBD donors in the three preceding years have not yet managed to reach pre-Covid-19 numbers.

- The reported reasons for declining offered hearts often fell into the following category: 'organ unsuitable'.
- In 2023/24, 172 DBD donor hearts were retrieved and 1.2% of these organs were not transplanted. The percentage of retrieved DBD donor hearts that were not transplanted has been as low as 0.0% in 2021/22 and 2022/23.
- 12.2% of the 74 retrieved DCD donor hearts in 2023/24 were not transplanted.
- The reported reasons for not transplanting DCD hearts that had been retrieved often fell into the following category: 'poor function'.
- In 2023/24, 36 (8.1%) of the 444 offered DBD hearts were classed as Higher Quality Donor (HQD) organs. 80.6% of these 36 offered HQD hearts were transplanted.
- In 2023/24, 21 (10.9%) of the 193 offered DCD hearts were classed as HQD organs. 61.9% of these 21 offered HQD hearts were transplanted.
- Most retrieved hearts were from donors aged between 18 and 50 years.

Lung

- In 2023/24, 469 DBD donors had lungs offered, of which 23.0% were transplanted. Of the 386 DCD donors that had lungs offered, 8.3% were transplanted.
- The number of organs offered dipped in 2020/21 due to the Covid-19 pandemic. The number of offered organs in the three preceding years have not yet managed to reach pre-Covid-19 numbers.
- The reported reasons for declining offered lungs often fell into one of the following categories: 'organ unsuitable', 'donor unsuitable'.
- In 2023/24, 111 DBD donor lungs were retrieved and 2.7% of these organs were not transplanted. The percentage of retrieved DBD donor lungs that were not transplanted has fluctuated over time, from as high as 9.2% in 2017/18 to as low as 1.5% in 2022/23.
- 22.0% of the 41 retrieved DCD donor lungs in 2023/24 were not transplanted. The percentage of retrieved DCD donor lungs that were not transplanted has fluctuated over time, from as high as 28.3% in 2019/20 to as low as 9.5% in 2017/18.
- The reported reasons for not transplanting lungs that had been retrieved fell into one of the following categories: 'organ unsuitable – clinical', 'poor function', 'other'.
- In 2023/24, 89 (19.0%) of the 469 offered DBD lungs were classed as Higher Quality Donor (HQD) organs. 46.1% of these 89 offered HQD lungs were transplanted.
- In 2023/24, 48 (12.4%) of the 386 offered DCD lungs were classed as HQD organs. 20.8% of these 48 offered HQD lungs were transplanted.

- The percentage of retrieved DBD lungs that were not transplanted generally increased with increasing donor age; 0.0% of retrieved lungs in 2023/24 were not transplanted for DBD donors aged under 18 years compared with 8.3% for DBD donors aged between 60 and 70 years.

Use of the contents of this report should be acknowledged as follows:
Annual Report on Organ Utilisation 2023/24, NHS Blood and Transplant

Introduction

This report presents information on organ utilisation from UK deceased donors between 1 April 2014 and 31 March 2024. Data were obtained from the [UK Transplant Registry](#), at NHS Blood and Transplant, which holds information relating to donors, recipients and outcomes for all UK organs offered.

The pathway to organ transplantation is complex, as described in [Appendix A2](#). Organ utilisation metrics can therefore focus on different aspects of the pathway. This report considers:

- Outcomes of offered organs; when an organ is offered, it can either be 1) declined and not retrieved for transplantation, 2) accepted and retrieved but not transplanted or 3) accepted, retrieved and transplanted. National summaries are presented as well as centre-specific [offer decline rates](#).
- Retrieved not transplanted organs; organs that were retrieved from the donor for the purposes of transplantation but not transplanted.

While it is important that these metrics are considered for all offered organs, it is also useful to take measures of donor quality into account. The final chapter of this report breaks the data down using [donor risk indices](#), indicators of [Higher Quality Donors](#) and donor age.

Organ utilisation summaries are provided for each organ group separately (kidney, liver, pancreas, heart and lung) but these are presented side by side so that comparisons between organ groups can be made. Lung utilisation has generally been summarised on a per donor basis, such that the lung is classed as offered if at least one of the left or right lung was offered. The same principle applies to the outcome of the lungs (e.g. classed as retrieved/transplanted if at least one of the left or right was retrieved/transplanted). The exception to this rule is with Figures 2.1 and 2.2, which considers left and right lungs as separate organs, in order to retain consistency with the [NHSBT Annual Activity Report](#). Left and right kidneys are considered as two separate organs throughout the report.

Pancreases have been classed as offered if an offer was made, irrespective of whether it was considered for whole pancreas or islet transplantation. The same principle applies to classifying pancreases that were retrieved and those that were transplanted; this covers both whole pancreas and islet transplantation.

[DCD](#) heart utilisation data have been presented from 1 April 2021 only, due to the introduction of the national [DCD](#) heart programme occurring in September 2020.

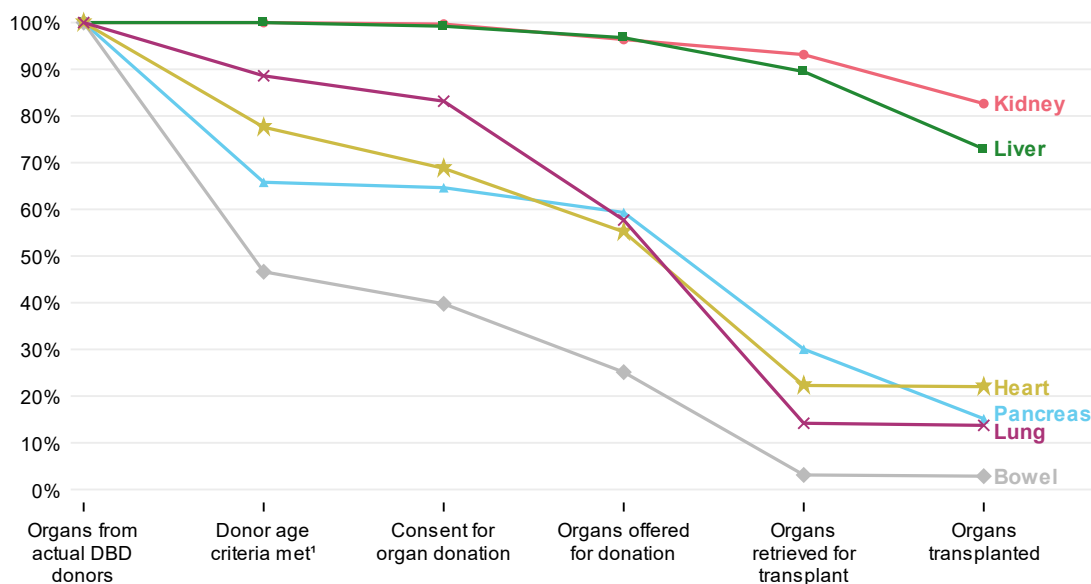
When looking at offered organs, donors that experienced [prolonged time to asystole](#) are included in this report. This means that some of the [DCD](#) organs offered (those with [prolonged time to asystole](#)) could not be transplanted and centres would have no choice but to decline. The exception to this is with Figures 2.1 and 2.2, where only donors where at least one organ was retrieved are considered.

If an organ was transplanted outside of the UK, this is recorded as a transplant for the purposes of this report. [Multi-organ transplants](#) are included, such that if multiple organs (e.g. kidney and heart) were transplanted into one recipient, each of these organs are recorded as transplanted in the individual organ group summaries. No age restrictions have been applied and so this report considers donors and recipients of all ages.

The exception to inclusion criteria mentioned above is where centre-specific [offer decline rates](#) are presented; the specific cohorts used for such analyses are described thoroughly in the centre-specific [offer decline rate](#) sections.

Figures 2.1 and 2.2 show the pathway for all donor organs through to transplantation. Unlike Chapter 3, only donors where at least one organ was retrieved are considered. These are referred to as ‘actual’ organ donors. The charts start at 100% for each organ, representing all organs from the 772 actual [DBD](#) and 738 actual [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. **Table 2.1** presents the final proportion that were transplanted. For example, **Figure 2.2** and **Table 2.1** show that 82% of the kidneys from the 738 actual [DCD](#) donors were transplanted. For heart, lung and pancreas, some of the donors did not meet organ-specific criteria for donation (i.e. the second step in the pathway) so **Table 2.1** also shows the proportion transplanted, of those organs that met the criteria. 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 2.1 Donation and transplantation rates of organs from DBD organ donors in the UK, 1 April 2023 - 31 March 2024



¹Suitability criteria:

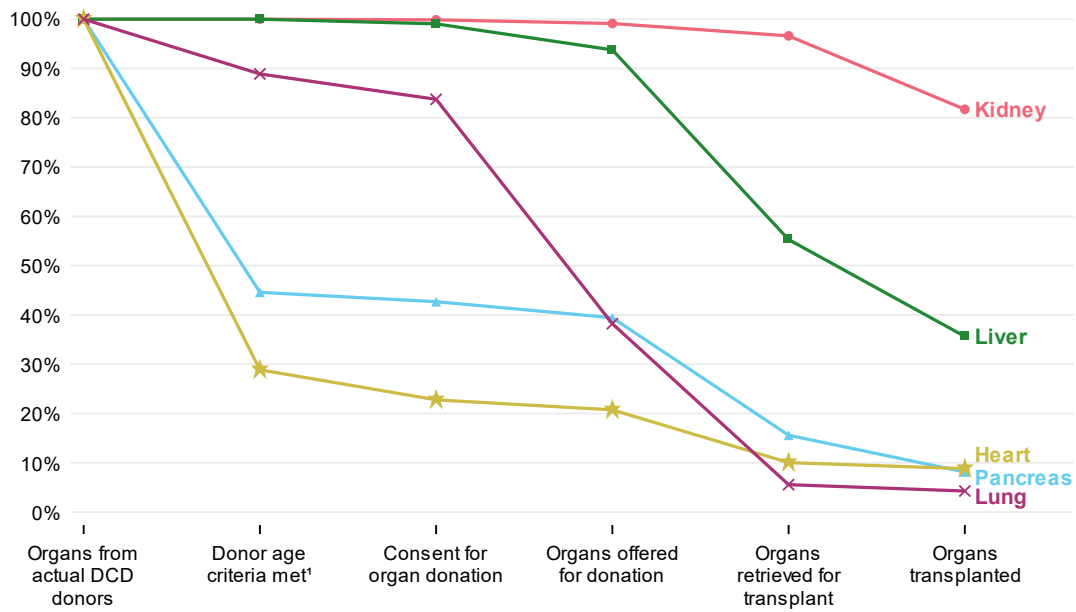
Pancreas: donors with BMI < 40.5 and aged <= 60.

Bowel: donors aged < 60 and weighing < 90 kg.

Heart: donors aged < 65 and did not die due to myocardial infarction.

Lung: donors aged < 70.

Figure 2.2 Donation and transplantation rates of organs from DCD organ donors in the UK, 1 April 2023 - 31 March 2024



¹Suitability criteria:

Pancreas: donors with BMI < 40.5 and aged <= 55.

Heart: donors aged < 50 and weighing > 50kg, and did not die due to myocardial infarction

Lung: donors aged < 70.

Table 2.1 Transplantation rates of organs from UK organ donors, 1 April 2023 - 31 March 2024

Organ	Percentage of organs transplanted, of all donors	Percentage of organs transplanted, of donors meeting age criteria ¹
DBD		
Kidney	82.6%	82.6%
Liver	72.9%	72.9%
Pancreas	15.2%	23.0%
Bowel	2.8%	6.1%
Heart	22.0%	28.4%
Lung	13.7%	15.5%
DCD		
Kidney	81.7%	81.7%
Liver	35.6%	35.6%
Pancreas	8.1%	18.2%
Heart	8.8%	30.5%
Lung	4.3%	4.8%

¹Suitability criteria:

- Pancreas: donors with BMI < 40.5 and aged <= 60 (DBD) or <= 55 (DCD).
- Bowel (DBD): donors aged < 60 and weighing < 90 kg.
- Heart: donors aged < 65 (DBD) or < 50 (DCD) and weighing > 50kg (DCD), and did not die due to myocardial infarction.
- Lung: donors aged < 70.

Utilisation of Offered Organs

3.1 Number of offered organs per year

Figure 3.1 and Table 3.1 show the number of [DBD](#) donor organs offered per year, for each of the five organ groups. The number of organs offered dipped in 2021 due to the Covid-19 pandemic and while numbers have steadily increased since, they have not managed to reach pre-Covid-19 numbers. The number of kidneys offered far exceeds any other organ type. A similar trend is seen for [DCD](#) donors, as shown in **Figure 3.2 and Table 3.2**.

Figure 3.1 Number of offered organs from DBD donors in the UK, 1 April 2014 - 31 March 2024

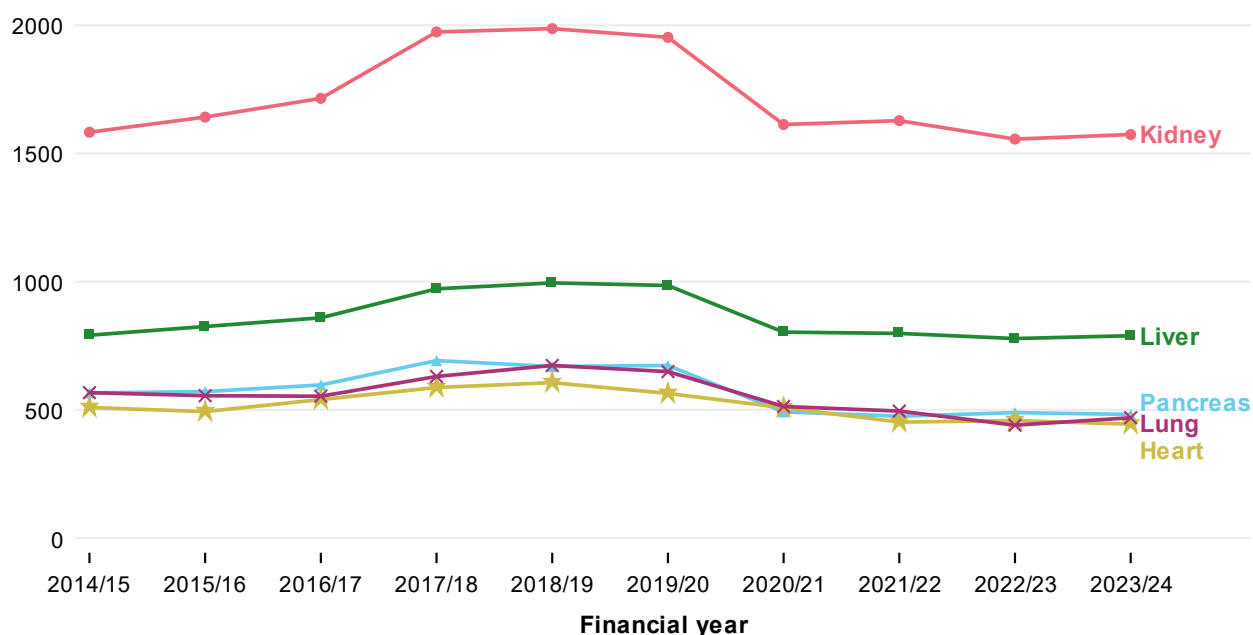
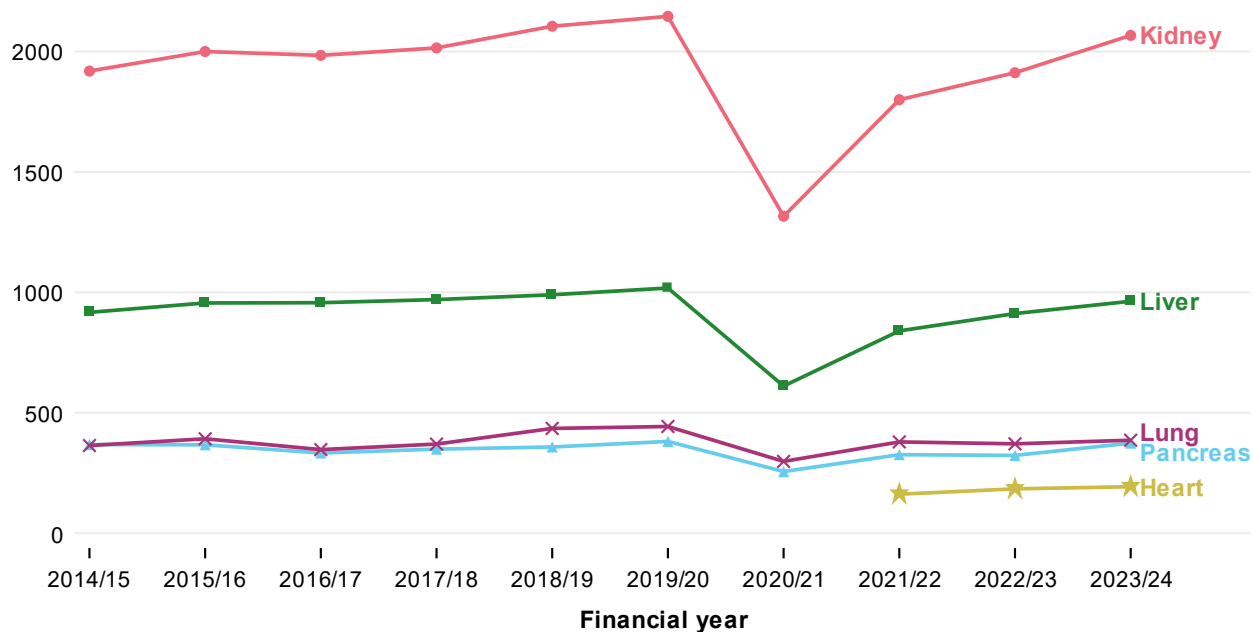


Table 3.1 Number of offered organs from DBD donors in the UK, 1 April 2014 - 31 March 2024

Financial year	Total DBD offers				
	Kidney	Liver	Pancreas	Heart	Lung
2014/15	1583	791	566	509	567
2015/16	1642	825	571	493	555
2016/17	1715	859	597	540	553
2017/18	1974	972	692	587	630
2018/19	1987	995	669	606	673
2019/20	1953	985	673	564	649
2020/21	1613	803	492	508	513
2021/22	1628	798	475	452	495
2022/23	1556	778	489	458	440
2023/24	1574	789	482	444	469

**Figure 3.2 Number of offered organs from DCD donors in the UK,
1 April 2014 - 31 March 2024**



On 7 September 2020, the UK National DCD heart programme was introduced. Therefore DCD heart data prior to 2021/22 is not shown.

**Table 3.2 Number of offered organs from DCD donors in the UK,
1 April 2014 - 31 March 2024**

Financial year	Total DCD offers				
	Kidney	Liver	Pancreas	Heart	Lung
2014/15	1919	917	368	.	364
2015/16	2000	956	367	.	392
2016/17	1984	957	333	.	347
2017/18	2015	970	349	.	370
2018/19	2105	990	358	.	435
2019/20	2146	1018	381	.	443
2020/21	1316	611	256	.	298
2021/22	1800	840	326	162	379
2022/23	1912	912	323	184	371
2023/24	2067	963	374	193	386

3.2 Outcomes of offered organs

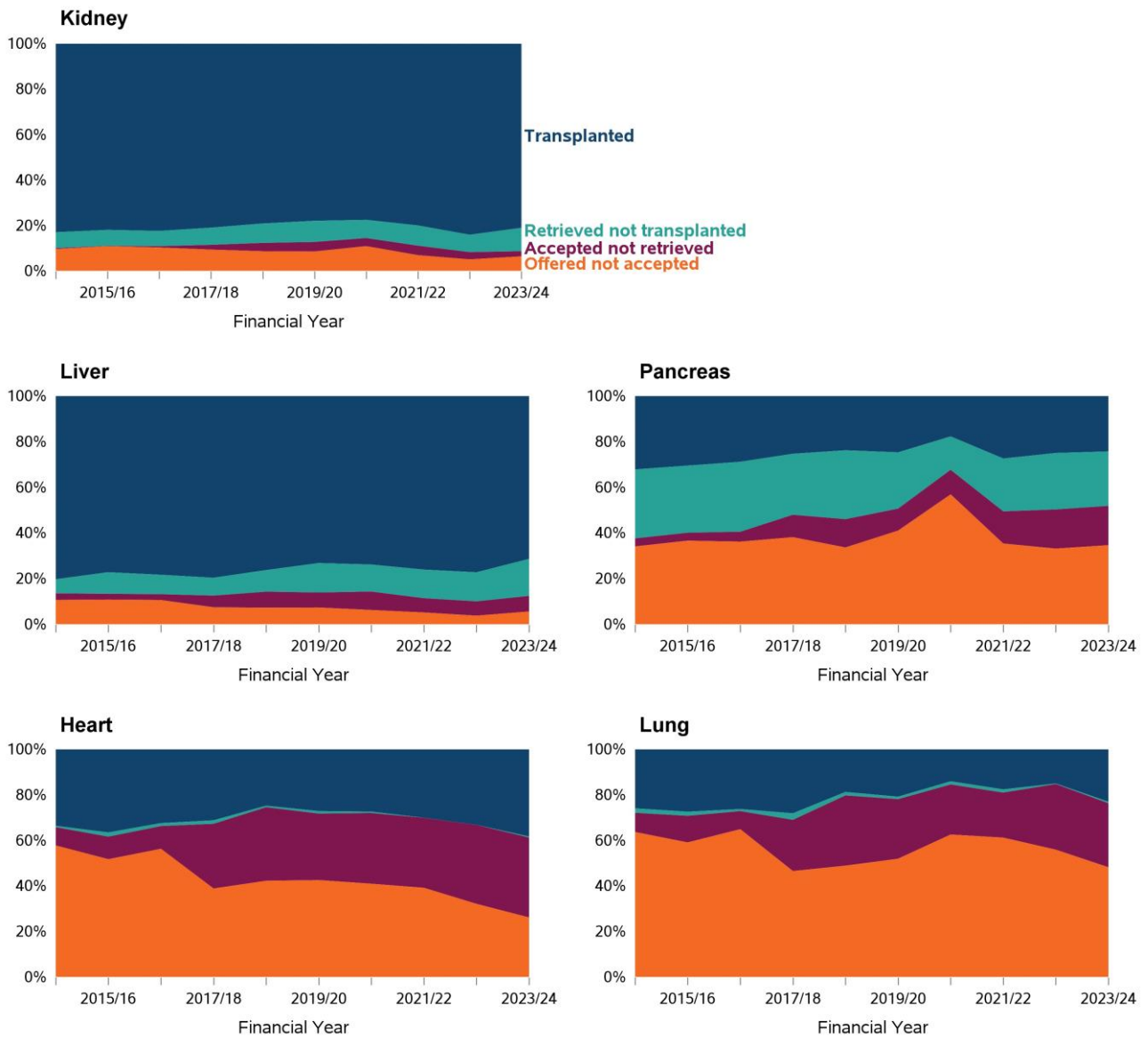
As outlined in the organ utilisation pathway presented in [Appendix A2](#), when an organ is offered, it may be accepted with the intention to transplant but later not used. The decision to not use the accepted organ may come either before it is retrieved or after. **Figure 3.3, Table 3.3 and Table 3.4** present the outcomes of offered organs from [DBD](#) donors, considering whether or not they were accepted, retrieved or transplanted.

The same information is presented for [DCD](#) donors in **Figure 3.4, Table 3.5 and Table 3.6**. For cardiothoracic organs, the proportion of offered organs that are retrieved but not transplanted is very low (more so for [DBD](#) donors). For abdominal organs, however, this is not the case and for kidneys and livers in particular, the percentage of offered organs that are retrieved but not transplanted organs has increased in recent years.

Overall, the proportion of offered organs that are transplanted is much higher for kidney and liver compared to the other organ groups.

Note that [DCD](#) donors with [prolonged time to asystole](#) are included in this analysis so not all organs were able to be transplanted.

Figure 3.3. Outcomes of offered organs from DBD donors in the UK, 1 April 2014 – 31 March 2024



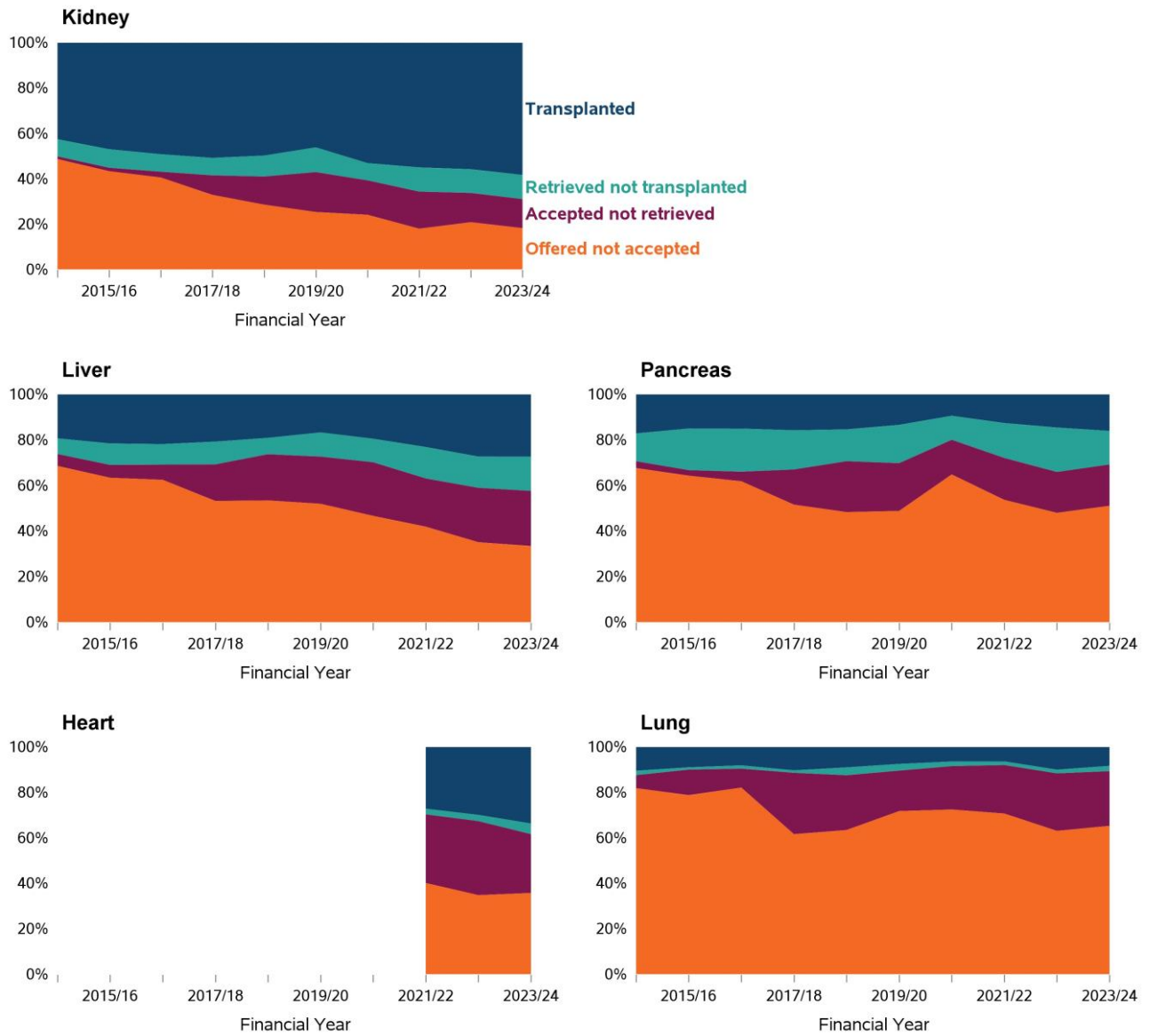
**Table 3.3 Outcomes of offered abdominal organs from DBD donors in the UK,
1 April 2014 – 31 March 2024**

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Kidney					
2014/15	1583	9.6%	0.4%	7.0%	83.0%
2015/16	1642	10.8%	0.1%	7.1%	82.0%
2016/17	1715	10.3%	0.6%	6.7%	82.4%
2017/18	1974	9.3%	2.1%	7.5%	81.0%
2018/19	1987	8.6%	3.7%	8.6%	79.2%
2019/20	1953	8.5%	4.2%	9.3%	78.0%
2020/21	1613	10.8%	3.6%	8.0%	77.6%
2021/22	1628	6.9%	4.2%	8.9%	80.0%
2022/23	1556	5.0%	3.2%	7.6%	84.1%
2023/24	1574	6.4%	2.3%	10.3%	81.1%
Liver					
2014/15	791	10.6%	2.9%	6.2%	80.3%
2015/16	825	10.8%	2.5%	9.5%	77.2%
2016/17	859	10.6%	2.6%	8.5%	78.3%
2017/18	972	7.4%	5.1%	7.8%	79.6%
2018/19	995	7.2%	7.0%	9.4%	76.3%
2019/20	985	7.3%	6.6%	12.9%	73.2%
2020/21	803	6.2%	8.1%	11.8%	73.8%
2021/22	798	5.1%	6.3%	12.5%	76.1%
2022/23	778	3.7%	6.3%	12.7%	77.2%
2023/24	789	5.6%	6.8%	16.2%	71.4%
Pancreas					
2014/15	566	34.1%	3.5%	30.2%	32.2%
2015/16	571	36.6%	3.5%	29.4%	30.5%
2016/17	597	36.2%	4.4%	30.7%	28.8%
2017/18	692	38.2%	9.8%	26.7%	25.3%
2018/19	669	33.6%	12.4%	30.2%	23.8%
2019/20	673	41.0%	9.7%	24.7%	24.7%
2020/21	492	56.9%	10.8%	14.6%	17.7%
2021/22	475	35.4%	14.1%	23.2%	27.4%
2022/23	489	33.1%	17.2%	24.7%	24.9%
2023/24	482	34.6%	17.2%	23.9%	24.3%

**Table 3.4 Outcomes of offered cardiothoracic organs from DBD donors in the UK,
1 April 2014 – 31 March 2024**

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Heart					
2014/15	509	57.8%	8.1%	0.6%	33.6%
2015/16	493	51.7%	9.9%	1.8%	36.5%
2016/17	540	56.3%	10.0%	1.3%	32.4%
2017/18	587	38.8%	28.4%	1.5%	31.2%
2018/19	606	42.2%	32.3%	0.7%	24.8%
2019/20	564	42.6%	29.3%	1.1%	27.1%
2020/21	508	40.9%	31.1%	0.6%	27.4%
2021/22	452	39.2%	30.8%	0.0%	30.1%
2022/23	458	32.1%	34.7%	0.0%	33.2%
2023/24	444	26.1%	35.1%	0.5%	38.3%
Lung					
2014/15	567	63.7%	8.5%	1.9%	25.9%
2015/16	555	59.1%	11.7%	1.8%	27.4%
2016/17	553	64.9%	8.0%	0.9%	26.2%
2017/18	630	46.5%	22.5%	2.9%	28.1%
2018/19	673	48.9%	30.9%	1.5%	18.7%
2019/20	649	51.9%	26.2%	1.1%	20.8%
2020/21	513	62.6%	22.0%	1.4%	14.0%
2021/22	495	61.2%	19.8%	1.4%	17.6%
2022/23	440	55.9%	28.9%	0.2%	15.0%
2023/24	469	48.2%	28.1%	0.6%	23.0%

Figure 3.4. Outcomes of offered organs from DCD donors in the UK, 1 April 2014 – 31 March 2024



1. On 7 September 2020, the UK National DCD heart programme was introduced. Therefore DCD heart data prior to 2021/22 is not shown.

2. DCD donors with prolonged time to asystole are included in this analysis so not all organs were able to be transplanted.

**Table 3.5 Outcomes of offered abdominal organs from DCD donors in the UK,
1 April 2014 – 31 March 2024**

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Kidney					
2014/15	1919	48.7%	1.2%	7.6%	42.6%
2015/16	2000	43.3%	1.6%	8.2%	47.0%
2016/17	1984	40.5%	2.6%	7.7%	49.2%
2017/18	2015	32.9%	8.6%	7.7%	50.8%
2018/19	2105	28.6%	12.4%	9.2%	49.8%
2019/20	2146	25.3%	17.6%	10.9%	46.2%
2020/21	1316	24.1%	15.2%	7.6%	53.1%
2021/22	1800	17.9%	16.4%	10.7%	55.0%
2022/23	1912	20.8%	12.9%	10.5%	55.8%
2023/24	2067	18.2%	12.8%	10.6%	58.3%
Liver					
2014/15	917	68.6%	5.2%	6.9%	19.3%
2015/16	956	63.4%	5.6%	9.4%	21.5%
2016/17	957	62.5%	6.7%	9.0%	21.8%
2017/18	970	53.2%	16.1%	10.0%	20.7%
2018/19	990	53.4%	20.3%	7.2%	19.1%
2019/20	1018	52.0%	20.7%	10.6%	16.7%
2020/21	611	46.6%	23.6%	10.3%	19.5%
2021/22	840	41.9%	21.2%	13.8%	23.1%
2022/23	912	35.1%	23.9%	13.7%	27.3%
2023/24	963	33.4%	24.2%	15.1%	27.3%
Pancreas					
2014/15	368	67.7%	3.0%	12.2%	17.1%
2015/16	367	64.3%	2.5%	18.3%	15.0%
2016/17	333	61.9%	4.2%	18.9%	15.0%
2017/18	349	51.6%	15.5%	17.2%	15.8%
2018/19	358	48.3%	22.3%	14.0%	15.4%
2019/20	381	48.8%	21.0%	16.8%	13.4%
2020/21	256	64.8%	15.2%	10.5%	9.4%
2021/22	326	53.7%	18.4%	15.3%	12.6%
2022/23	323	48.0%	18.0%	19.5%	14.6%
2023/24	374	51.1%	18.2%	14.7%	16.0%

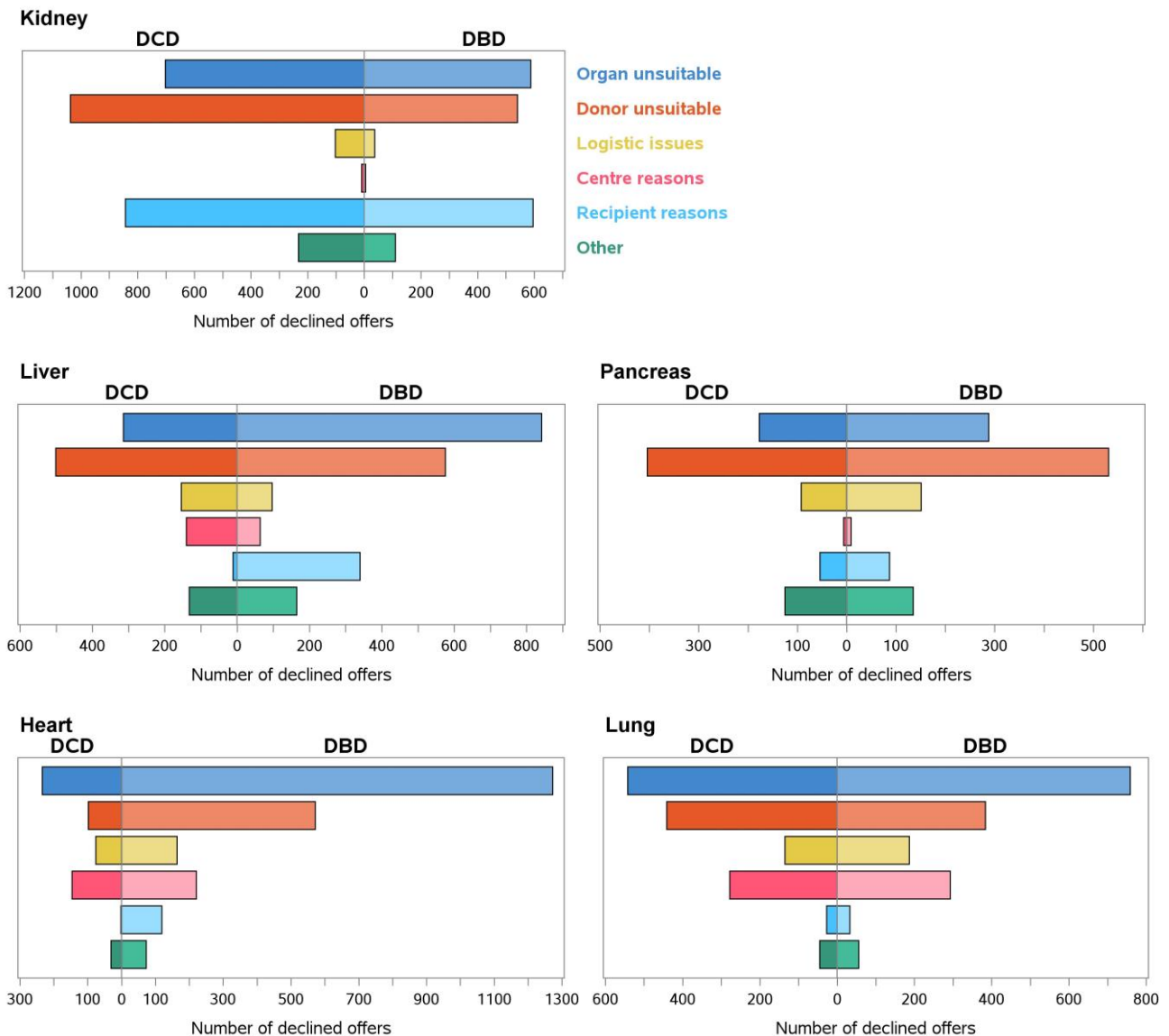
**Table 3.6 Outcomes of offered cardiothoracic organs from DCD donors in the UK,
1 April 2014 – 31 March 2024**

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Heart					
2021/22	162	40.1%	30.2%	2.5%	27.2%
2022/23	184	34.8%	32.6%	2.7%	29.9%
2023/24	193	35.8%	25.9%	4.7%	33.7%
Lung					
2014/15	364	81.9%	5.8%	1.9%	10.4%
2015/16	392	78.8%	11.2%	1.0%	8.9%
2016/17	347	82.1%	8.4%	1.4%	8.1%
2017/18	370	61.6%	27.0%	1.1%	10.3%
2018/19	435	63.4%	24.1%	3.4%	9.0%
2019/20	443	71.8%	17.8%	2.9%	7.4%
2020/21	298	72.5%	19.1%	2.0%	6.4%
2021/22	379	70.7%	21.4%	1.6%	6.3%
2022/23	371	63.1%	25.3%	1.6%	10.0%
2023/24	386	65.3%	24.1%	2.3%	8.3%

3.3 Reasons for offer decline

Organs are offered to transplant centres as per an organ-specific [offering scheme](#). This means that an organ can be offered to a number of centres and/or patients, and it can be declined multiple times before reaching its ultimate outcome of being either transplanted or not transplanted. The primary reason for decline, for each of these individual centre/patient offers, is captured on the [UK Transplant Registry](#). **Figure 3.5** presents these reasons for offer decline for [DBD](#) donors and [DCD](#) donors separately, grouped into the following categories; organ unsuitable, donor unsuitable, logistic reasons, centre reasons, recipient reasons and other reasons. See Appendix [A5: Decline reason categories](#) for how the offer decline reasons are categorised. Fast track offers and offers made to centres outside of the UK are excluded from these summaries. For all organ groups, ‘organ unsuitable’ is a common reason for decline but for abdominal organs, ‘donor unsuitable’ is also commonly reported. ‘Recipient reasons’ are also a frequently reported reason for decline for kidneys.

Figure 3.5 Reasons for offer decline for organs offered from UK donors, 1 April 2023 – 31 March 2024



Note that the x-axis range differs for each organ group.

**Table 3.7 Reasons for offer decline for organs offered from UK donors,
1 April 2023 - 31 March 2024**

Organ	Total number of offers declined	Percentage declined due to					
		Organ unsuitable	Donor unsuitable	Logistic reasons	Centre reasons	Recipient reasons	Other
DBD							
Kidney	1877	31.3%	28.8%	2.0%	0.3%	31.8%	5.9%
Liver	2084	40.4%	27.6%	4.7%	3.1%	16.3%	7.9%
Pancreas	1201	24.0%	44.2%	12.6%	0.7%	7.2%	11.2%
Heart	2422	52.6%	23.6%	6.8%	9.1%	4.9%	3.0%
Lung	1712	44.3%	22.4%	10.9%	17.1%	1.9%	3.3%
DCD							
Kidney	2926	24.0%	35.4%	3.5%	0.3%	28.8%	7.9%
Liver	1252	25.1%	40.0%	12.3%	11.2%	0.9%	10.5%
Pancreas	858	20.6%	47.1%	10.7%	0.7%	6.3%	14.6%
Heart	587	39.9%	16.7%	12.9%	24.9%	0.3%	5.3%
Lung	1468	36.9%	30.0%	9.2%	18.9%	1.8%	3.1%

3.4 Centre-specific offer decline rates

[Funnel plots](#) are presented below 1) to compare [offer decline rates](#) between centres and 2) to see how the centre-specific offer decline rates compare to the overall national offer decline rate. The overall national [unadjusted](#) offer decline rate is shown by the solid line while the 95% and 99.8% [confidence limits](#) are indicated via a thin and thick dotted line, respectively. Each dot in the plot represents an individual transplant centre. Centres that are positioned above the upper limits indicate an offer decline rate that is higher than the national rate, while centres positioned below the lower limits indicates an offer decline rate that is lower than the national rate. The number of offers a centre may receive will depend on patient [case mix](#) as per the organ specific [offering scheme](#), however the following summaries are not risk adjusted for known centre differences in patient [case mix](#).

The cohort inclusion criteria differ for each organ group and are hence described in detail in each of the following sub-sections. However, for all organ groups, only organs that resulted in transplantation are included in the analysis.

3.4.1 Kidney

Kidney-only offers from [DBD](#) and [DCD](#) donors who had at least one kidney retrieved, offered directly and on behalf of a named individual patient and resulted in transplantation are included in the analysis. Any offers made through the [reallocation of kidneys](#), declined kidney or [fast track](#) schemes were excluded. Only offers through the [DCD](#) kidney [offering scheme](#) are presented, all local [DCD](#) offers are excluded. Only individual offers for named patients were considered which excluded any [ABO](#) and [HLA-incompatible](#) patients.

In order to understand centre practices more comprehensively, data are presented separately for:

- Standard criteria (SCD) [DBD](#) kidney offers to adult (≥18 years) patients
 - Adult SCD are donors that did not meet the ECD criteria (below).
- Extended criteria (ECD) [DBD](#) kidney offers to adult (≥18 years) patients
 - ECDs for adult offers have been defined as donors aged ≥60 years at the time of death OR aged 50 to 59 years with at least two or three donor characteristics: hypertension, creatinine > 130 µmol/l or death due to intracranial haemorrhage.
- Standard criteria (SCD) [DCD](#) kidney offers to adult (≥18 years) patients
 - SCDs for adult offers are donors that did not meet the ECD criteria (above).
- Standard criteria (SCD) [DBD](#) kidney offers to paediatric (<18 years) patients
 - SCDs for paediatric offers are [DBD](#) donors aged <50 years at time of death.

Adult Standard Criteria DBD kidney offer decline rates, 1 April 2021 – 31 March 2024

Figure 3.6 compares individual centre adult kidney [offer decline rates](#) with the national rate for [DBD](#) SCD over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.8**.

Figure 3.6 Adult standard criteria DBD donor kidney offer decline rates for kidneys that resulted in a transplant 1 April 2021 and 31 March 2024

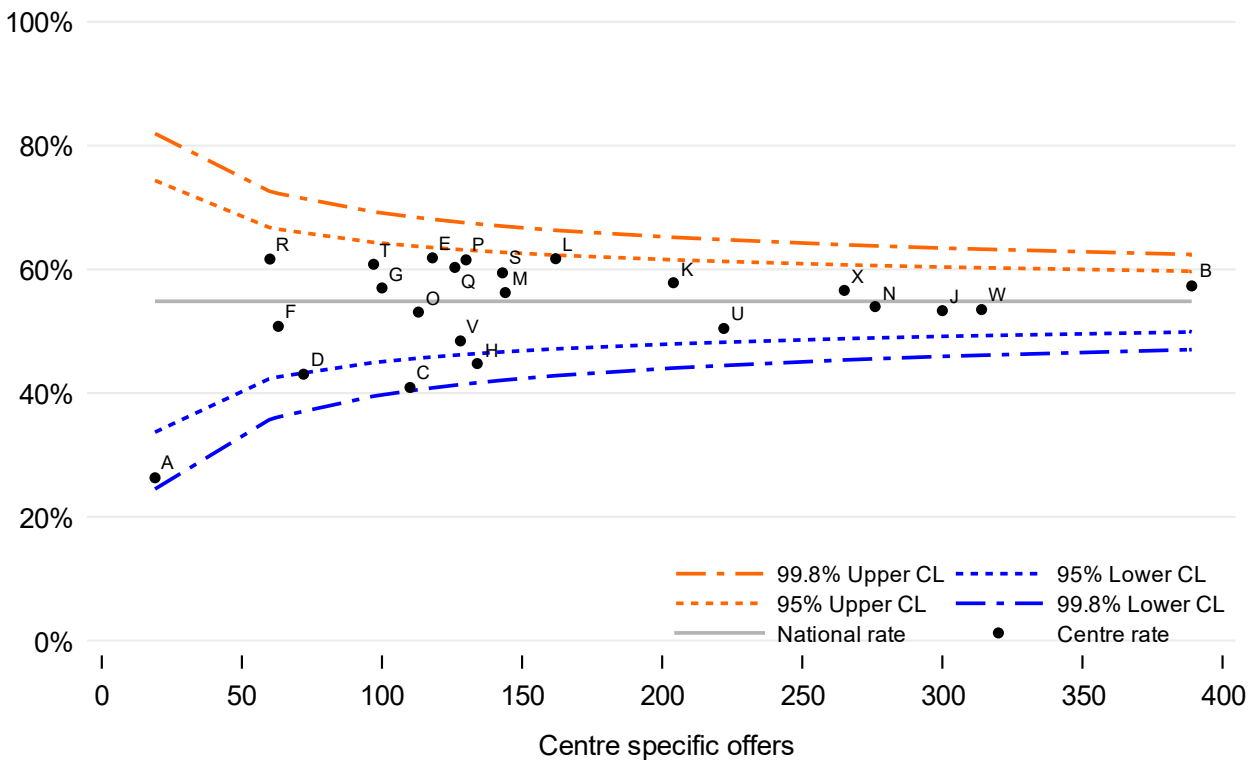


Table 3.8 compares individual centre adult kidney [offer decline rates](#) for [DBD](#) SCD over time by financial year.

Table 3.8 Adult standard criteria DBD donor kidney offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A	9	(33)	8	(25)	2	(0)	19	(26)
Birmingham	B	137	(66)	129	(55)	123	(50)	389	(57)
Bristol	C	36	(42)	39	(33)	35	(49)	110	(41)
Cambridge	D	30	(57)	22	(36)	20	(30)	72	(43)
Cardiff	E	38	(66)	45	(60)	35	(60)	118	(62)
Coventry	F	20	(60)	18	(44)	25	(48)	63	(51)
Edinburgh	G	39	(59)	32	(47)	29	(66)	100	(57)
Glasgow	H	40	(43)	50	(48)	44	(43)	134	(45)
Guy's	J	81	(41)	117	(56)	102	(61)	300	(53)
Leeds	K	54	(50)	80	(58)	70	(64)	204	(58)
Leicester	L	49	(71)	54	(65)	59	(51)	162	(62)
Liverpool	M	29	(48)	58	(59)	57	(58)	144	(56)
Manchester	N	90	(48)	90	(56)	96	(58)	276	(54)
Newcastle	O	31	(52)	41	(49)	41	(59)	113	(53)
Nottingham	P	44	(64)	47	(70)	39	(49)	130	(62)
Oxford	Q	32	(38)	33	(73)	61	(66)	126	(60)
Plymouth	R	19	(79)	23	(48)	18	(61)	60	(62)
Portsmouth	S	48	(60)	50	(56)	45	(62)	143	(59)
Sheffield	T	35	(54)	36	(67)	26	(62)	97	(61)
St George's	U	79	(56)	78	(49)	65	(46)	222	(50)
The Royal Free	V	37	(51)	49	(39)	42	(57)	128	(48)
The Royal London	W	130	(52)	93	(62)	91	(47)	314	(54)
WLRTC	X	100	(50)	77	(55)	88	(66)	265	(57)
UK		1207	(54)	1269	(55)	1213	(56)	3689	(55)

Centre has reached the upper 99.8% confidence limit
 Centre has reached the upper 95% confidence limit
 Centre has reached the lower 95% confidence limit
 Centre has reached the lower 99.8% confidence limit

Adult Extended Criteria DBD kidney offer decline rates, 1 April 2021 – 31 March 2024

Figure 3.7 compares individual centre adult kidney [offer decline rates](#) with the national rate for [DBD](#) ECD over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.9**.

Figure 3.7 Adult extended criteria DBD donor kidney offer decline rates for kidneys that resulted in a transplant 1 April 2021 and 31 March 2024

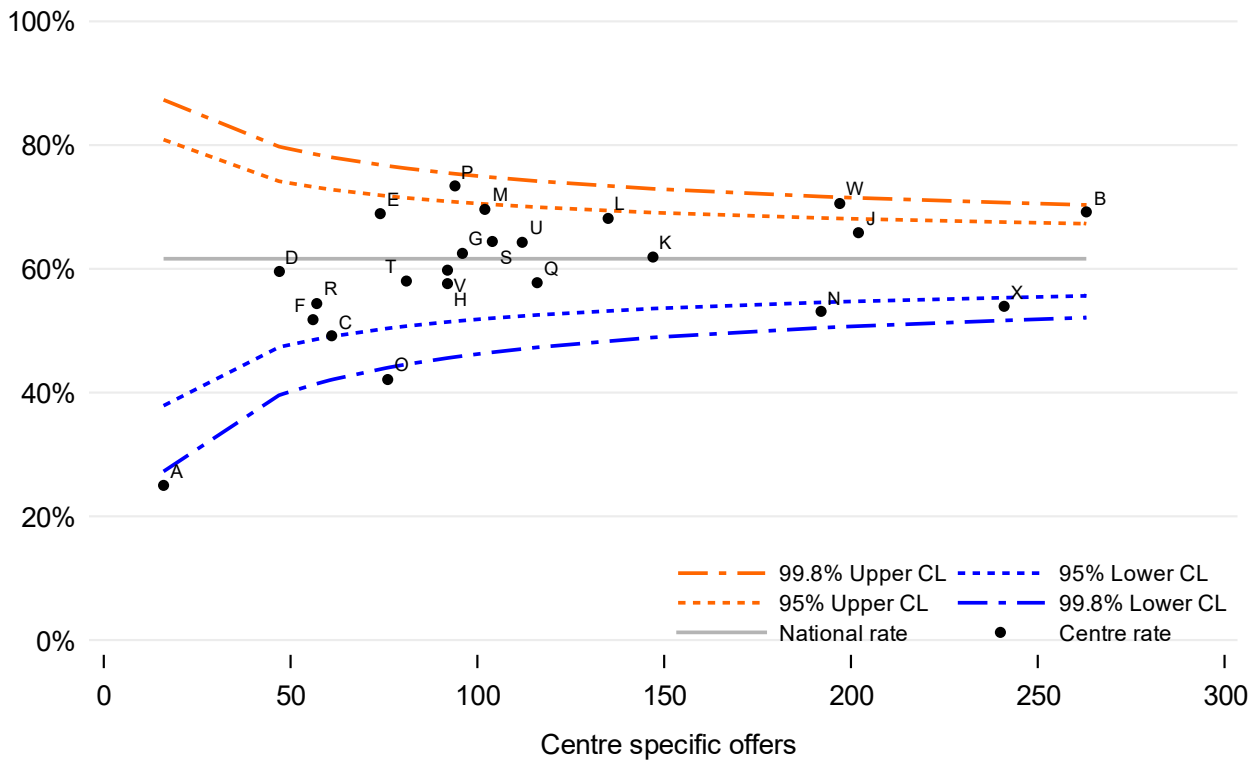


Table 3.9 compares individual centre adult kidney [offer decline rates](#) for [DBD](#) ECD over time by financial year.

Table 3.9 Adult extended criteria DBD donor kidney offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A	11	(27)	3	(0)	2	(50)	16	(25)
Birmingham	B	111	(75)	74	(72)	78	(59)	263	(69)
Bristol	C	20	(45)	17	(47)	24	(54)	61	(49)
Cambridge	D	17	(71)	13	(54)	17	(53)	47	(60)
Cardiff	E	27	(70)	26	(65)	21	(71)	74	(69)
Coventry	F	15	(40)	18	(50)	23	(61)	56	(52)
Edinburgh	G	34	(74)	27	(59)	35	(54)	96	(63)
Glasgow	H	31	(65)	30	(57)	31	(52)	92	(58)
Guy's	J	55	(67)	65	(68)	82	(63)	202	(66)
Leeds	K	49	(59)	41	(56)	57	(68)	147	(62)
Leicester	L	42	(81)	46	(67)	47	(57)	135	(68)
Liverpool	M	34	(65)	38	(71)	30	(73)	102	(70)
Manchester	N	73	(51)	52	(56)	67	(54)	192	(53)
Newcastle	O	18	(39)	17	(59)	41	(37)	76	(42)
Nottingham	P	32	(75)	36	(75)	26	(69)	94	(73)
Oxford	Q	19	(37)	43	(56)	54	(67)	116	(58)
Plymouth	R	15	(47)	24	(46)	18	(72)	57	(54)
Portsmouth	S	39	(67)	34	(71)	31	(55)	104	(64)
Sheffield	T	27	(59)	35	(60)	19	(53)	81	(58)
St George's	U	48	(56)	30	(73)	34	(68)	112	(64)
The Royal Free	V	25	(52)	34	(56)	33	(70)	92	(60)
The Royal London	W	61	(61)	59	(78)	77	(73)	197	(71)
WLRTC	X	106	(47)	66	(52)	69	(67)	241	(54)
UK		909	(61)	828	(63)	916	(62)	2653	(62)

	Centre has reached the upper 99.8% confidence limit
	Centre has reached the upper 95% confidence limit
	Centre has reached the lower 95% confidence limit
	Centre has reached the lower 99.8% confidence limit

Adult Standard Criteria DCD kidney offer decline rates, 1 April 2021 – 31 March 2024

Figure 3.8 compares individual centre adult kidney [offer decline rates](#) with the national rate for [DCD](#) SCD over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.10**.

Figure 3.8 Adult standard criteria DCD donor kidney offer decline rates for kidneys that resulted in a transplant 1 April 2021 and 31 March 2024

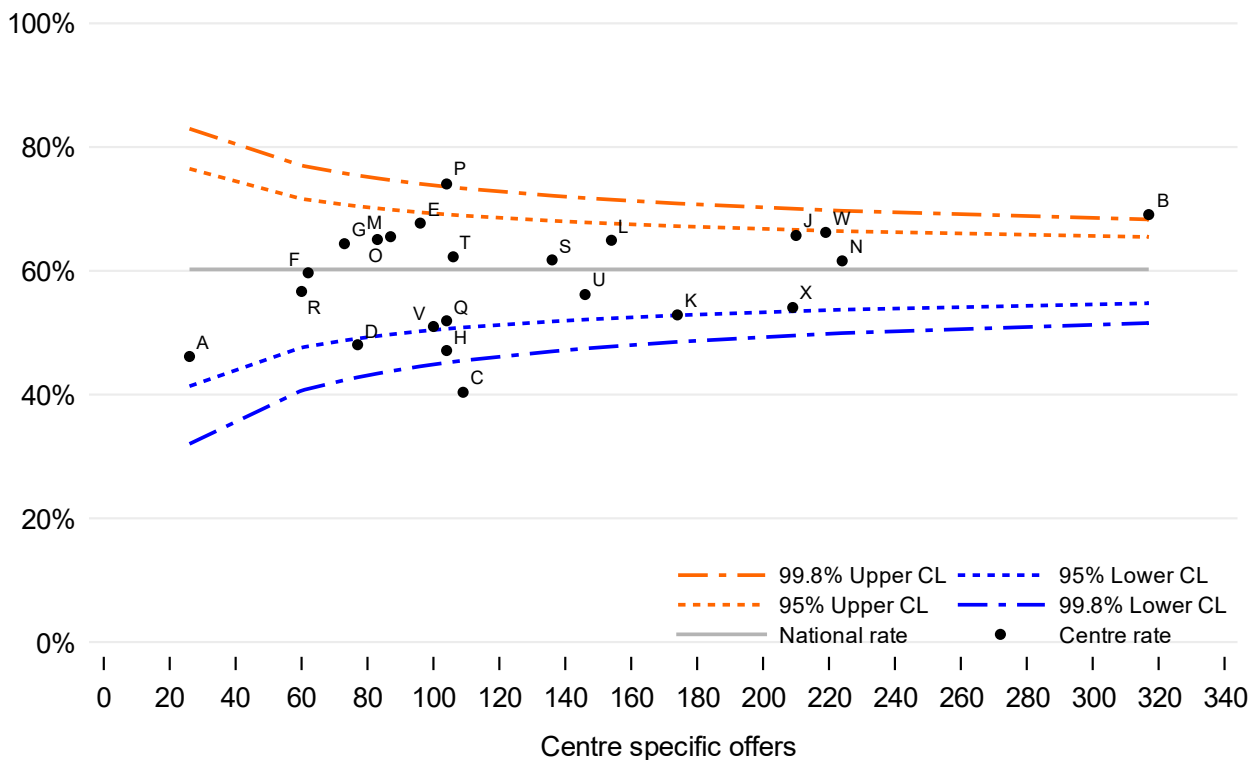


Table 3.10 compares individual centre adult kidney [offer decline rates](#) for [DCD](#) SCD over time by financial year.

Table 3.10 Adult standard criteria DCD donor kidney offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A	5	(60)	8	(25)	13	(54)	26	(46)
Birmingham	B	121	(74)	102	(67)	94	(65)	317	(69)
Bristol	C	31	(48)	38	(34)	40	(40)	109	(40)
Cambridge	D	28	(64)	22	(18)	27	(56)	77	(48)
Cardiff	E	18	(72)	37	(70)	41	(63)	96	(68)
Coventry	F	19	(58)	20	(60)	23	(61)	62	(60)
Edinburgh	G	25	(72)	18	(56)	30	(63)	73	(64)
Glasgow	H	45	(51)	30	(53)	29	(34)	104	(47)
Guy's	J	49	(61)	69	(70)	92	(65)	210	(66)
Leeds	K	45	(42)	45	(44)	84	(63)	174	(53)
Leicester	L	52	(77)	53	(62)	49	(55)	154	(65)
Liverpool	M	18	(61)	29	(59)	40	(73)	87	(66)
Manchester	N	77	(62)	65	(58)	82	(63)	224	(62)
Newcastle	O	20	(70)	28	(50)	35	(74)	83	(65)
Nottingham	P	36	(81)	36	(78)	32	(63)	104	(74)
Oxford	Q	21	(38)	42	(50)	41	(61)	104	(52)
Plymouth	R	16	(69)	23	(61)	21	(43)	60	(57)
Portsmouth	S	50	(54)	41	(63)	45	(69)	136	(62)
Sheffield	T	36	(61)	35	(69)	35	(57)	106	(62)
St George's	U	54	(50)	35	(43)	57	(70)	146	(56)
The Royal	V	34	(44)	18	(39)	48	(60)	100	(51)
Free									
The Royal	W	61	(62)	73	(74)	85	(62)	219	(66)
London									
WLRTC	X	74	(51)	44	(50)	91	(58)	209	(54)
UK		935	(61)	911	(58)	1134	(61)	2980	(60)

	Centre has reached the upper 99.8% confidence limit
	Centre has reached the upper 95% confidence limit
	Centre has reached the lower 95% confidence limit
	Centre has reached the lower 99.8% confidence limit

Paediatric Standard Criteria DBD kidney offer decline rates, 1 April 2021 – 31 March 2024

Figure 3.9 compares individual centre paediatric kidney [offer decline rates](#) with the national rate for [DBD](#) SCD over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.11**.

Figure 3.9 Paediatric standard criteria DBD donor kidney offer decline rates for kidneys that resulted in a transplant 1 April 2021 and 31 March 2024

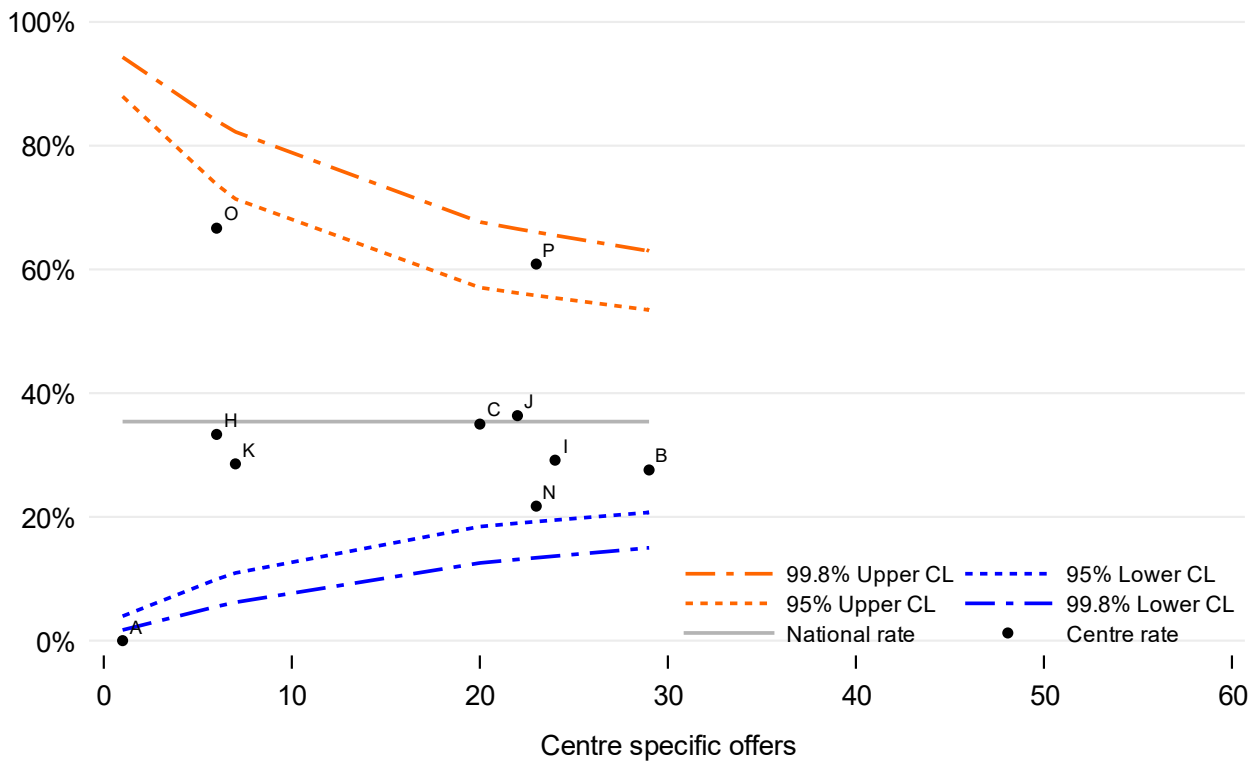


Table 3.11 compares individual centre paediatric kidney [offer decline rates](#) for paediatric [DBD](#) SCD over time by financial year.

Table 3.11 Paediatric standard criteria DBD donor kidney offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A	0	(0)	0	(0)	1	(0)	1	(0)
Birmingham	B	7	(43)	13	(23)	9	(22)	29	(28)
Bristol	C	10	(50)	6	(33)	4	(0)	20	(35)
GOSH	I	7	(14)	7	(0)	10	(60)	24	(29)
Glasgow	H	1	(0)	5	(40)	0	(0)	6	(33)
Guy's	J	6	(50)	8	(25)	8	(38)	22	(36)
Leeds	K	2	(50)	4	(25)	1	(0)	7	(29)
Manchester	N	8	(0)	9	(33)	6	(33)	23	(22)
Newcastle	O	3	(33)	2	100)	1	100)	6	(67)
Nottingham	P	9	(56)	6	(83)	8	(50)	23	(61)
UK		53	(36)	60	(33)	48	(38)	161	(35)

3.4.2 Liver

Named adult (≥ 16) and large paediatric (< 16 and weight $> 40\text{kg}$) [elective liver offers](#) to UK transplant centres where the liver resulted in a liver-only first transplant are included in the analysis. Offers to super-urgent, hepatoblastoma, [ACLF](#), paediatric, intestinal or liver and cardiothoracic patients are excluded. Offers to Dublin are not included.

For DBD donors, all [fast track](#) offers were excluded as these are offered at a centre level. For [DCD](#) donors, [fast track](#) offers were only included if the offer was accepted and transplanted.

Figure 3.10 compares individual centre adult liver [offer decline rates](#) with the national rate for [DBD](#) donors over the time period, 1 April 2021 and 31 March 2024 while **Figure 3.11** considers offers from [DCD](#) donors.

A [DBD](#) liver transplant can involve a whole liver, reduced liver or split liver. 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. Offers of whole livers and right lobes which resulted in transplantation are included in **Figure 3.10** and [offer decline rates](#) by centre and organ offered are presented in **Table 3.12**.

Figure 3.10 Named adult elective liver offer decline rates that resulted in a liver only first transplant from DBD donors, 1 April 2021 and 31 March 2024

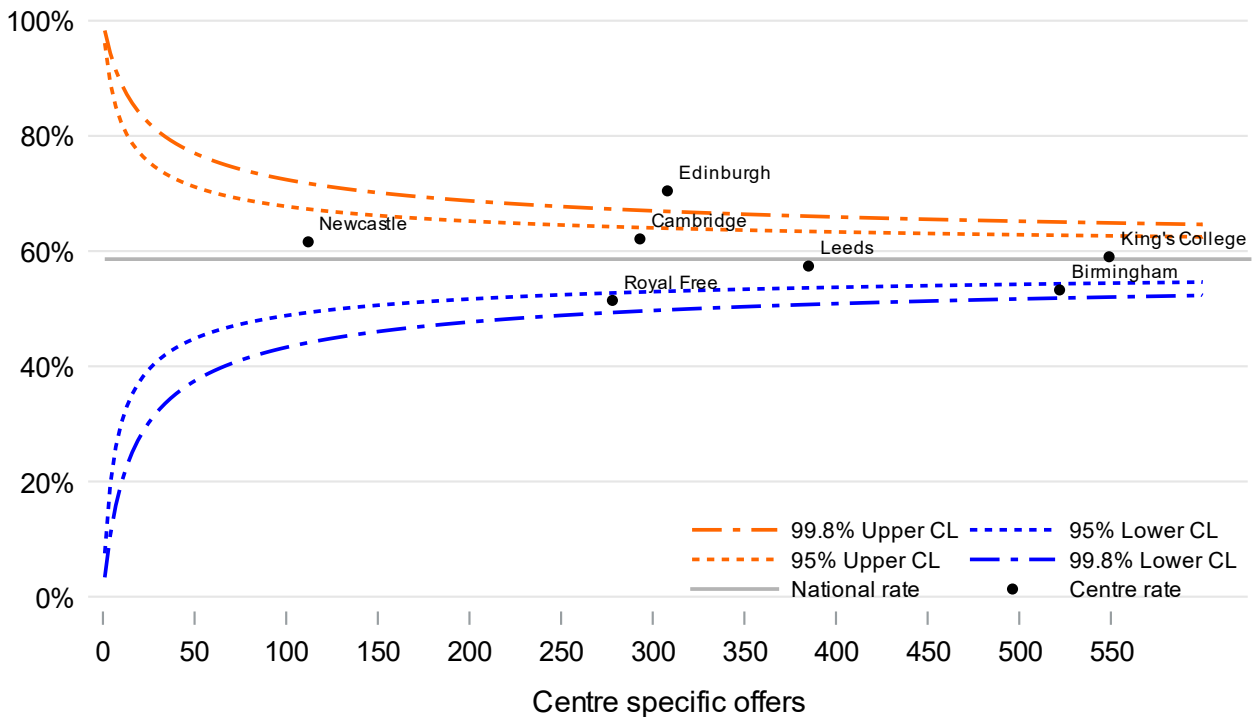
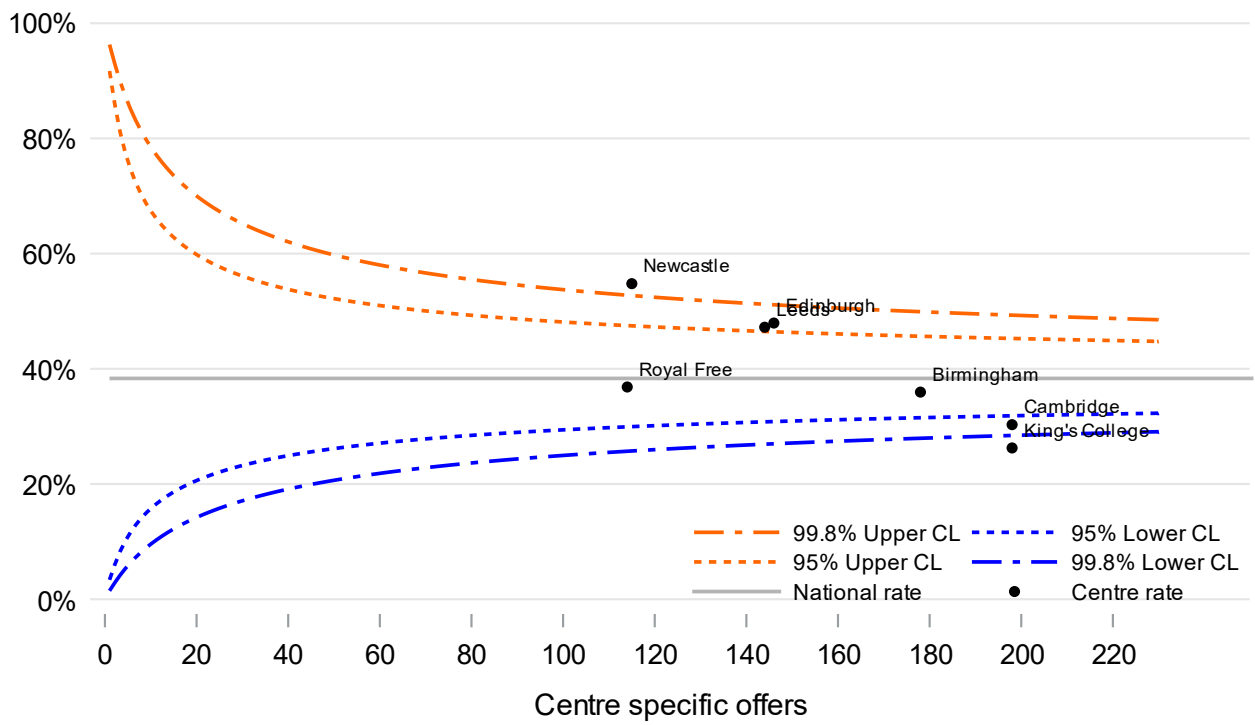


Figure 3.11 Adult elective liver offer decline rates that resulted in a liver only first transplant from DCD donors, 1 April 2021 and 31 March 2024



**Table 3.12 Offer decline rates for each centre by offered organ and donor type
1 April 21 and 31 March 24**

Centre	Whole Livers		DBD Donors Right Lobe		All Livers		DCD Donors Whole Livers	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
A. All donors								
Birmingham	467	50	55	78	522	53	178	36
Cambridge	250	59	43	79	293	62	198	30
Edinburgh	246	63	62	100	308	70	146	48
King's College	498	58	51	73	549	59	198	26
Leeds	322	54	63	73	385	57	144	47
Newcastle	81	47	31	100	112	62	115	55
Royal Free	231	48	47	68	278	51	114	37
Total	2095	55	352	81	2447	59	1093	38
B. DBD donors aged ≤65 years and DCD donors aged ≤60 years								
Birmingham	326	48	55	78	381	52	113	35
Cambridge	186	53	43	79	229	58	128	23
Edinburgh	181	61	62	100	243	71	84	44
King's College	309	53	51	73	360	56	128	31
Leeds	223	47	63	73	286	52	102	38
Newcastle	59	51	31	100	90	68	74	42
Royal Free	169	43	47	68	216	49	79	37
Total	1453	51	352	81	1805	57	708	35
<div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; background-color: #f4a460; margin-right: 5px;"></div> Centre has reached the upper 99.8% confidence limit </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; background-color: #f08080; margin-right: 5px;"></div> Centre has reached the upper 95% confidence limit </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; background-color: #a6a6ff; margin-right: 5px;"></div> Centre has reached the lower 95% confidence limit </div> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #0000ff; margin-right: 5px;"></div> Centre has reached the lower 99.8% confidence limit </div>								

3.4.3 Pancreas

Pancreas offers from [DBD](#) and [DCD](#) donors whose pancreas was retrieved, offered directly on behalf of a named individual patient and resulted in transplantation are included in the analysis. Any offers of pancreases declined for transplantation, pancreases offered for [multi-organ](#) or small bowel transplant were excluded, as were offers made through the [fast track](#) scheme or the [reallocation of the pancreas](#). Only individual offers for named patients were considered which excluded any [ABO-](#) and [HLA-incompatible](#) patients.

Figure 3.12 compares individual centre pancreas [offer decline rates](#) for [DBD](#) donors with the national rate over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.13**.

Figure 3.12 DBD donor pancreas offer decline rates for pancreases that result in a pancreas transplant, 1 April 2021 and 31 March 2024

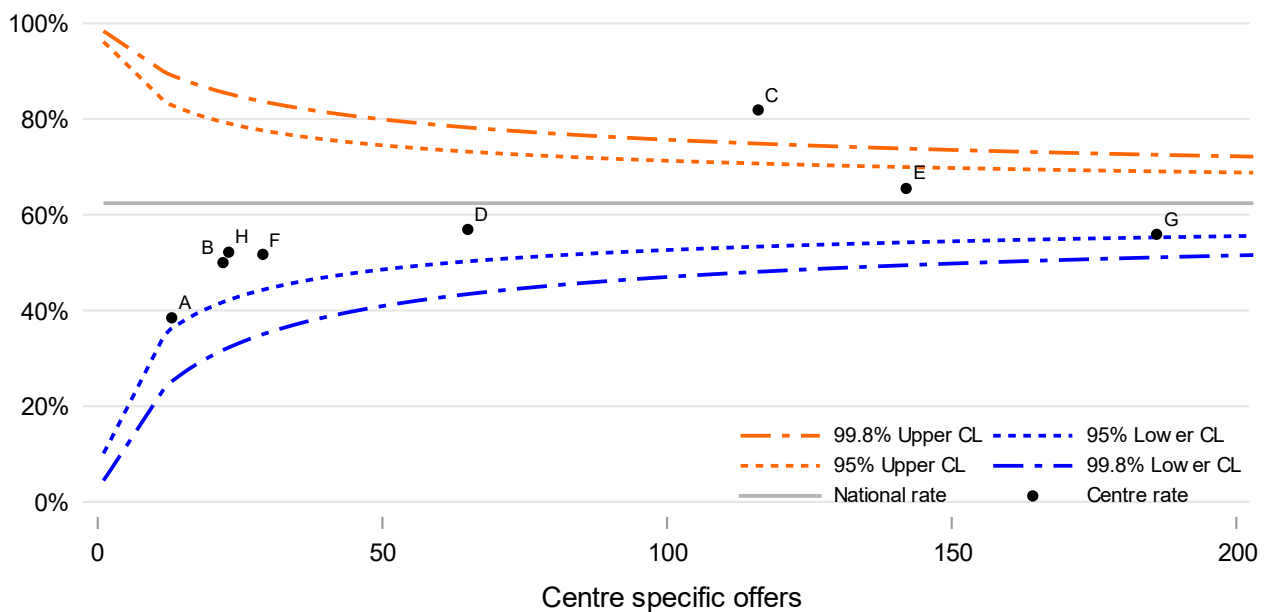


Table 3.13 compares individual centre pancreas [offer decline rates](#) for [DBD](#) donors over time by financial year.

Table 3.13 DBD donor pancreas offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Cambridge	A	3	(33)	6	(50)	4	(25)	13	(38)
Cardiff	B	7	(71)	7	(43)	8	(38)	22	(50)
Edinburgh	C	41	(88)	41	(73)	34	(85)	116	(82)
Guy's	D	32	(59)	20	(45)	13	(69)	65	(57)
Manchester	E	46	(65)	42	(64)	54	(67)	142	(65)
Newcastle	F	10	(50)	9	(67)	10	(40)	29	(52)
Oxford	G	79	(59)	57	(54)	50	(52)	186	(56)
WLRTC	H	11	(64)	5	(40)	7	(43)	23	(52)
UK		229	(66)	187	(59)	180	(62)	596	(62)

	Centre has reached the upper 99.8% confidence limit
	Centre has reached the upper 95% confidence limit
	Centre has reached the lower 95% confidence limit
	Centre has reached the lower 99.8% confidence limit

Figure 3.13 compares individual centre pancreas [offer decline rates](#) for [DCD](#) donors with the national rate over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 3.14**.

Figure 3.13 DCD donor pancreas offer decline rates for pancreases that resulted in a pancreas transplant, 1 April 2021 and 31 March 2024

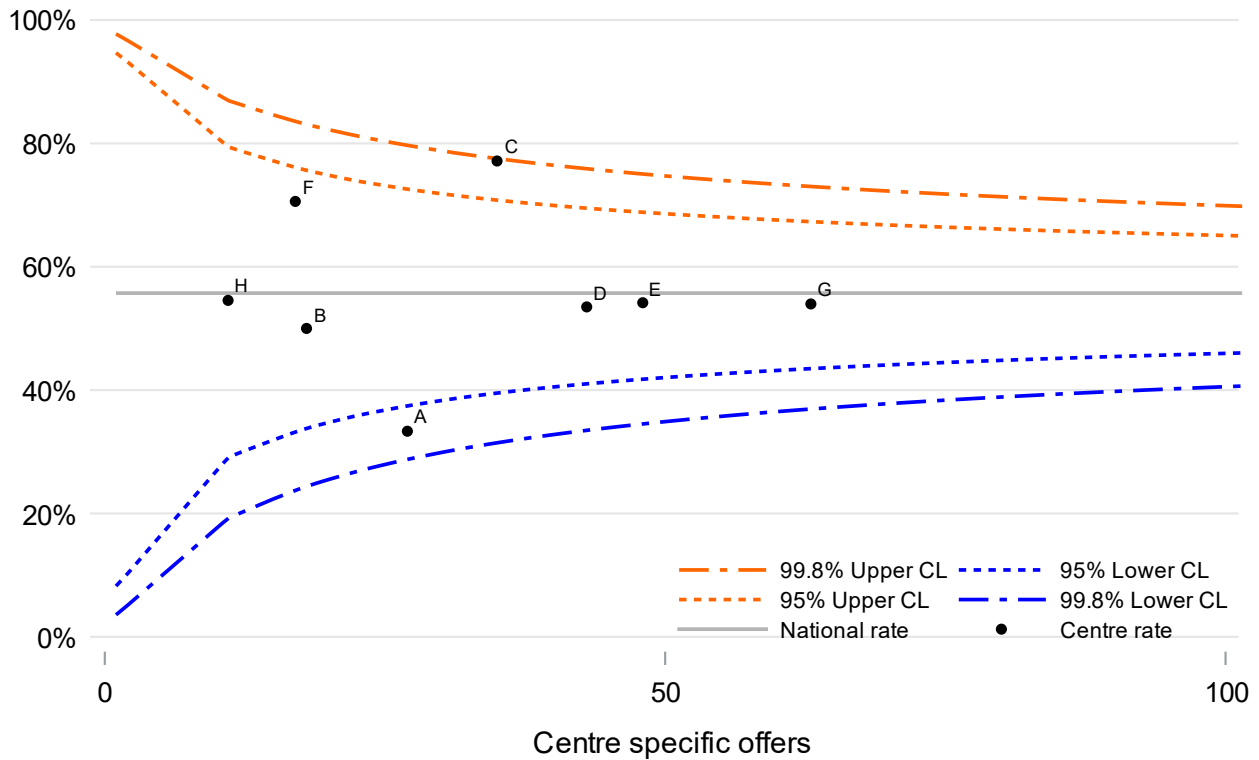


Table 3.14 compares individual centre pancreas [offer decline rates](#) for [DCD](#) donors over time by financial year.

Table 3.14 DCD donor pancreas offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Cambridge	A	7	(29)	4	(50)	16	(31)	27	(33)
Cardiff	B	4	(50)	8	(50)	6	(50)	18	(50)
Edinburgh	C	7	(57)	14	(71)	14	(93)	35	(77)
Guy's	D	16	(63)	17	(47)	10	(50)	43	(53)
Manchester	E	10	(40)	9	(56)	29	(59)	48	(54)
Newcastle	F	3	100	8	(63)	6	(67)	17	(71)
Oxford	G	21	(62)	17	(59)	25	(44)	63	(54)
WLRTC	H	5	(80)	3	(33)	3	(33)	11	(55)
UK		73	(58)	80	(56)	109	(54)	262	(56)

Centre has reached the upper 99.8% confidence limit
 Centre has reached the upper 95% confidence limit
 Centre has reached the lower 95% confidence limit
 Centre has reached the lower 99.8% confidence limit

3.4.4 Heart

This section presents an analysis of adult (≥ 16) and paediatric (< 16) [DBD](#) donor heart [offer decline rates](#) separately. This only considers offers of hearts between 1 April 2021 and 31 March 2024 that were eventually transplanted and excludes all [fast track](#) offers. Hearts offered as part of a heart-lung block are included. Super-urgent, urgent and non-urgent offers are all considered. For the adult offer decline analysis, only adult donor offers to adult recipients are considered, meaning that offers to paediatric patients at Newcastle are excluded. For the paediatric offer decline analysis, all paediatric donor offers to Great Ormond Street Hospital (GOSH) are included but only paediatric donor offers to paediatric patients at Newcastle are included.

In 2017, group offering for non-urgent cardiothoracic organ offers was introduced, where all centres receive a simultaneous offer for their non-urgent patients but acceptance is determined by a centre's position in the allocation sequence. Therefore, in the adult donor analysis, adjustments have been made to count any centre who is ranked above the accepting centre in the allocation sequence for that donor as declining the heart, even if they did not respond to the group offer, and any declines recorded for a centre ranked below the accepting centre were discounted.

Figure 3.14 compares individual centre adult heart [offer decline rates](#) for [DBD](#) donors with the national rate over the time period.

Figure 3.14 UK adult DBD donor heart offer decline rates by centre, 1 April 2021 to 31 March 2024

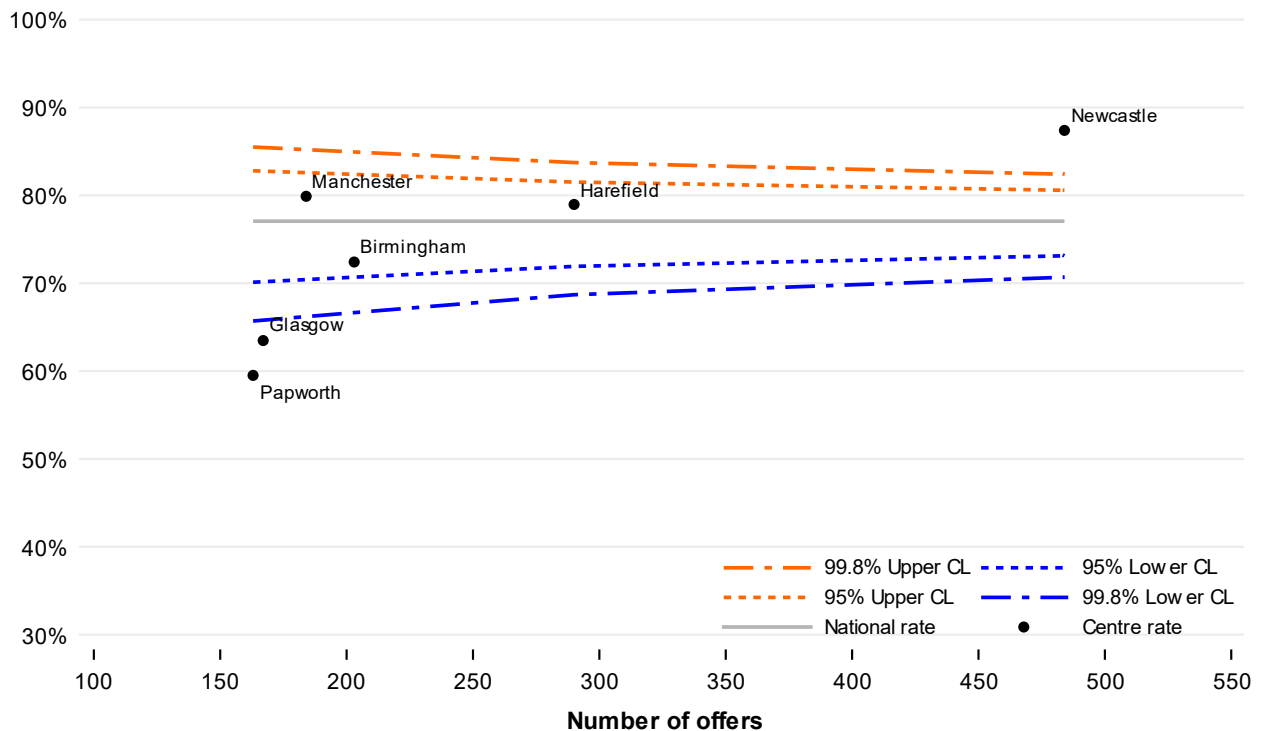


Table 3.15 shows a breakdown of each centre's adult heart [offer decline rate](#) for [DBD](#) donors across the three years analysed.

Table 3.15 Adult DBD donor heart (including cardiac block) offer decline rates by transplant centre, between 1 April 2021 and 31 March 2024								
Centre	2021/22		2022/23		2023/24		Overall	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Birmingham	53	(81)	59	(64)	91	(73)	203	(72)
Glasgow	42	(64)	59	(54)	66	(71)	167	(63)
Harefield	81	(86)	87	(77)	122	(75)	290	(79)
Manchester	61	(79)	39	(74)	84	(83)	184	(80)
Newcastle	161	(88)	137	(85)	186	(89)	484	(87)
Papworth	48	(56)	53	(58)	62	(63)	163	(60)
UK	446	(80)	434	(72)	611	(78)	1491	(77)

	Centre has reached the upper 99.8% confidence limit
	Centre has reached the upper 95% confidence limit
	Centre has reached the lower 95% confidence limit
	Centre has reached the lower 99.8% confidence limit

Table 3.16 compares individual centre paediatric heart [offer decline rates](#) for [DBD](#) donors over the three years between 1 April 2021 and 31 March 2024.

Table 3.16 Paediatric DBD donor heart offer decline rates by transplant centre, 1 April 2021 and 31 March 2024								
Centre	2021/22		2022/23		2023/24		Overall	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
GOSH	15	(60)	14	(64)	17	(76)	46	(67)
Newcastle	14	(79)	10	(40)	14	(79)	38	(68)
UK	29	(69)	24	(54)	31	(77)	84	(68)

3.4.5 Lung

This section presents an analysis of adult (≥ 16) and paediatric (< 16) [DBD](#) donor lung [offer decline rates](#) separately. This only considers offers of bilateral lungs between 1 April 2021 and 31 March 2024 that were eventually transplanted and excludes all [fast track](#) offers. A bilateral lung offer is counted as accepted if either both the lungs were accepted or just a single lung was accepted. Lungs offered as part of a heart-lung block are considered, this includes cases where just the lungs were declined as well as cases where both the heart and lungs were declined. Urgent and non-urgent offers are all considered; super-urgent offers are additionally considered for the adult donor analysis. For the adult offer decline analysis, only adult donor offers to adult recipients are considered, meaning that offers to paediatric patients at Newcastle are excluded. For the paediatric offer decline analysis, all paediatric donor offers to GOSH are included but only paediatric donor offers to paediatric patients at Newcastle are included.

In 2017, group offering for non-urgent cardiothoracic organ offers was introduced, where all centres receive a simultaneous offer for their non-urgent patients but acceptance is determined by a centre's position in the allocation sequence. Therefore, in the adult donor analysis, adjustments have been made to count any centre who is ranked above the accepting centre in the allocation sequence for that donor as declining the lung, even if they did not respond to the group offer, and any declines recorded for a centre ranked below the accepting centre were discounted.

Figure 3.15 compares individual centre adult lung [offer decline rates](#) for [DBD](#) donors with the national rate over the time period.

Figure 3.15 UK Adult DBD donor bilateral lung offer decline rates by centre, 1 April 2021 and 31 March 2024

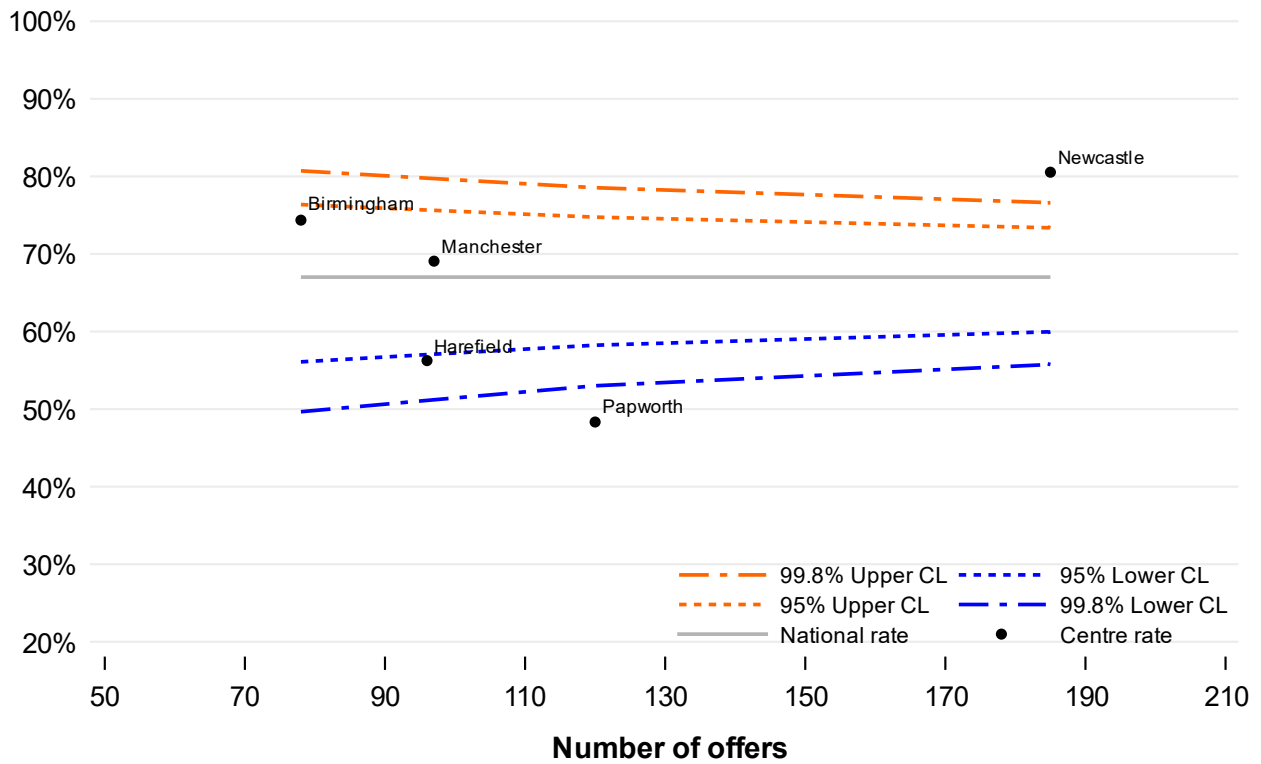


Table 3.17 shows a breakdown of each centre’s adult bilateral lung [offer decline rate](#) for [DBD](#) donors across the three years analysed.

**Table 3.17 Adult DBD Bilateral Lung offer decline rates
by transplant center, between 1 April 2021 and 31 March 2024**

Centre	2021/22		2022/23		2023/24		Overall	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Birmingham	19	(89)	24	(67)	35	(71)	78	(74)
Harefield	32	(41)	26	(69)	38	(61)	96	(56)
Manchester	28	(75)	31	(77)	38	(58)	97	(69)
Newcastle	77	(82)	41	(80)	67	(79)	185	(81)
Papworth	47	(55)	33	(61)	40	(30)	120	(48)
UK	203	(69)	155	(72)	218	(62)	576	(67)

	Centre has reached the upper 99.8% confidence limit
	Centre has reached the upper 95% confidence limit
	Centre has reached the lower 95% confidence limit
	Centre has reached the lower 99.8% confidence limit

Table 3.18 compares individual centre paediatric bilateral lung [offer decline rates](#) for [DBD](#) donors between 1 April 2021 to 31 March 2024.

Table 3.18 Paediatric DBD Bilateral Lung offer decline rates by transplant centre, between 1 April 21 and 31 March 24			
Centre	Number of offers	Overall	
		Decline rate (%)	
Great Ormond Street	8	(88)	
Newcastle	6	100)	
UK	14	(93)	

Utilisation of Retrieved Organs

4.1 Percentage of retrieved not transplanted organs per year

Figure 4.1 and Table 4.1 present the percentage of organs retrieved that were not transplanted, for **DBD** donors. The equivalent summaries are presented in **Figure 4.2 and Table 4.2** for **DCD** donors. The percentage of retrieved pancreases that were not transplanted is consistently higher compared to all other organ groups, for both **DBD** and **DCD** donors. Both **DBD** and **DCD** retrieved livers have seen an increase over time in the percentage retrieved not transplanted.

Figure 4.1 Percentage of organs retrieved that were not transplanted from DBD donors, in the UK, 1 April 2014 - 31 March 2024

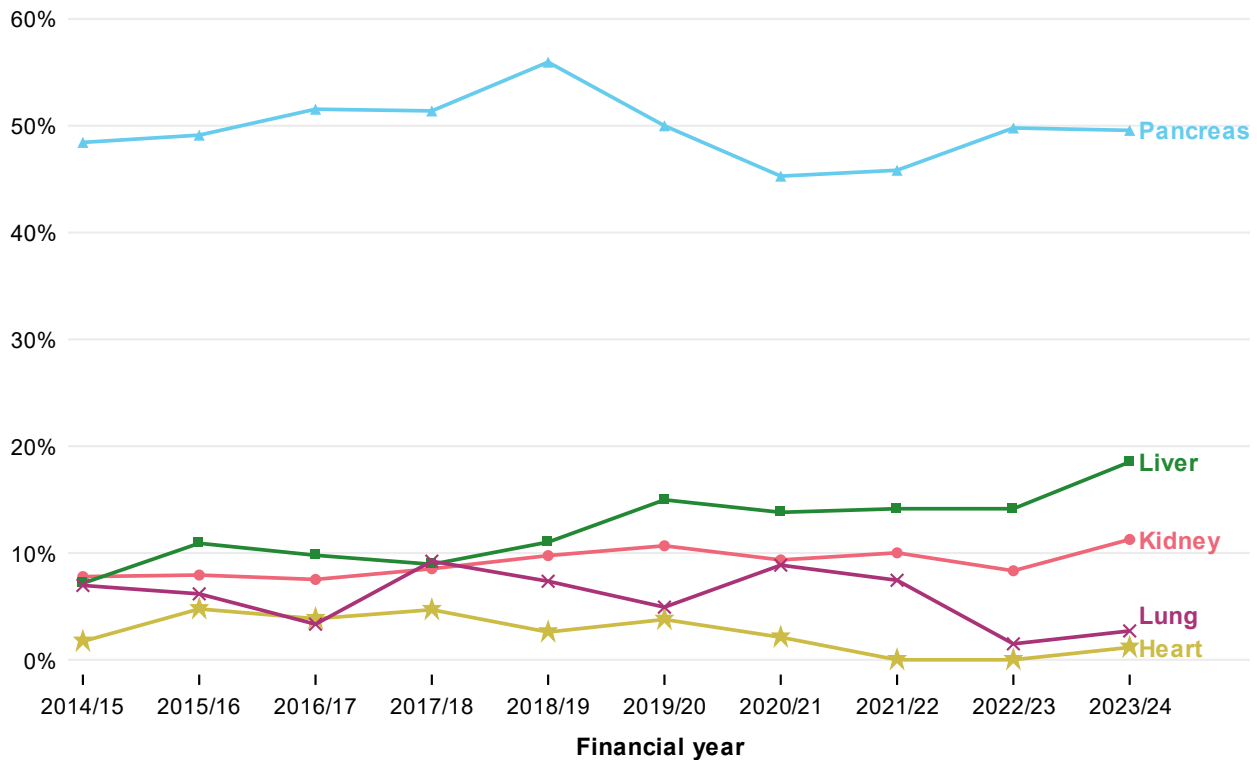
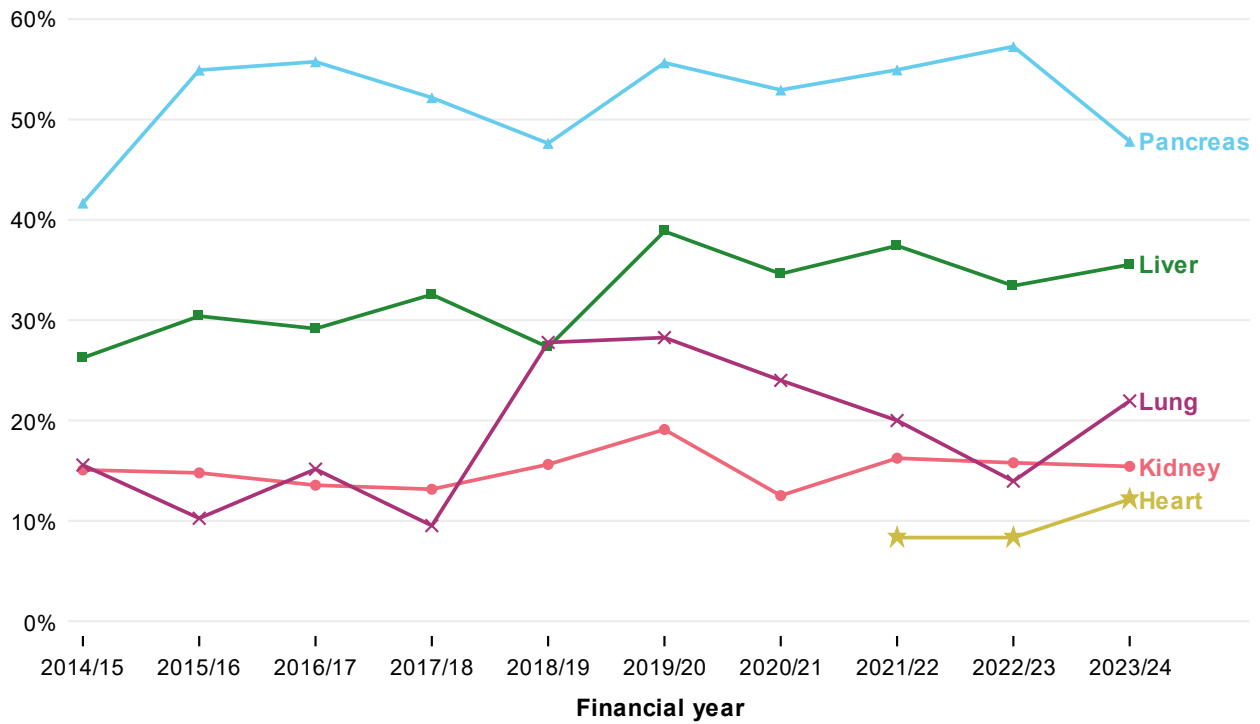


Figure 4.2 Percentage of organs retrieved that were not transplanted from DCD donors, in the UK, 1 April 2014 - 31 March 2024



On 7 September 2020, the UK National DCD heart programme was introduced. Therefore DCD heart data prior to 2021/22 is not shown.

Table 4.1 Percentage of abdominal retrieved not transplanted organs from DBD donors, in the UK, 1 April 2014 - 31 March 2024

Financial Year	Retrieved	Retrieved not transplanted (%)	Transplanted (%)
Kidney			
2014/15	1425	111 (7.8%)	1314 (92.2%)
2015/16	1462	116 (7.9%)	1346 (92.1%)
2016/17	1529	115 (7.5%)	1414 (92.5%)
2017/18	1748	149 (8.5%)	1599 (91.5%)
2018/19	1743	170 (9.8%)	1573 (90.2%)
2019/20	1705	182 (10.7%)	1523 (89.3%)
2020/21	1380	129 (9.3%)	1251 (90.7%)
2021/22	1448	145 (10.0%)	1303 (90.0%)
2022/23	1428	119 (8.3%)	1309 (91.7%)
2023/24	1438	162 (11.3%)	1276 (88.7%)
Liver			
2014/15	684	49 (7.2%)	635 (92.8%)
2015/16	715	78 (10.9%)	637 (89.1%)
2016/17	746	73 (9.8%)	673 (90.2%)
2017/18	850	76 (8.9%)	774 (91.1%)
2018/19	853	94 (11.0%)	759 (89.0%)
2019/20	848	127 (15.0%)	721 (85.0%)
2020/21	688	95 (13.8%)	593 (86.2%)
2021/22	707	100 (14.1%)	607 (85.9%)
2022/23	700	99 (14.1%)	601 (85.9%)
2023/24	691	128 (18.5%)	563 (81.5%)
Pancreas			
2014/15	353	171 (48.4%)	182 (51.6%)
2015/16	342	168 (49.1%)	174 (50.9%)
2016/17	355	183 (51.5%)	172 (48.5%)
2017/18	360	185 (51.4%)	175 (48.6%)
2018/19	361	202 (56.0%)	159 (44.0%)
2019/20	332	166 (50.0%)	166 (50.0%)
2020/21	159	72 (45.3%)	87 (54.7%)
2021/22	240	110 (45.8%)	130 (54.2%)
2022/23	243	121 (49.8%)	122 (50.2%)
2023/24	232	115 (49.6%)	117 (50.4%)

Table 4.2 Percentage of abdominal retrieved not transplanted organs from DBD donors, in the UK, 1 April 2014 - 31 March 2024

Financial Year	Retrieved	Retrieved not transplanted (%)	Transplanted (%)
Heart			
2014/15	174	3 (1.7%)	171 (98.3%)
2015/16	189	9 (4.8%)	180 (95.2%)
2016/17	182	7 (3.8%)	175 (96.2%)
2017/18	192	9 (4.7%)	183 (95.3%)
2018/19	154	4 (2.6%)	150 (97.4%)
2019/20	159	6 (3.8%)	153 (96.2%)
2020/21	142	3 (2.1%)	139 (97.9%)
2021/22	136	0 (0.0%)	136 (100.0%)
2022/23	152	0 (0.0%)	152 (100.0%)
2023/24	172	2 (1.2%)	170 (98.8%)
Lung			
2014/15	158	11 (7.0%)	147 (93.0%)
2015/16	162	10 (6.2%)	152 (93.8%)
2016/17	150	5 (3.3%)	145 (96.7%)
2017/18	195	18 (9.2%)	177 (90.8%)
2018/19	136	10 (7.4%)	126 (92.6%)
2019/20	142	7 (4.9%)	135 (95.1%)
2020/21	79	7 (8.9%)	72 (91.1%)
2021/22	94	7 (7.4%)	87 (92.6%)
2022/23	67	1 (1.5%)	66 (98.5%)
2023/24	111	3 (2.7%)	108 (97.3%)

Table 4.3 Percentage of abdominal retrieved not transplanted organs from DCD donors, in the UK, 1 April 2014 - 31 March 2024

Financial Year	Retrieved	Retrieved not transplanted (%)	Transplanted (%)
Kidney			
2014/15	962	145 (15.1%)	817 (84.9%)
2015/16	1103	163 (14.8%)	940 (85.2%)
2016/17	1129	153 (13.6%)	976 (86.4%)
2017/18	1179	155 (13.1%)	1024 (86.9%)
2018/19	1242	194 (15.6%)	1048 (84.4%)
2019/20	1225	234 (19.1%)	991 (80.9%)
2020/21	799	100 (12.5%)	699 (87.5%)
2021/22	1182	192 (16.2%)	990 (83.8%)
2022/23	1267	200 (15.8%)	1067 (84.2%)
2023/24	1426	220 (15.4%)	1206 (84.6%)
Liver			
2014/15	240	63 (26.3%)	177 (73.8%)
2015/16	296	90 (30.4%)	206 (69.6%)
2016/17	295	86 (29.2%)	209 (70.8%)
2017/18	298	97 (32.6%)	201 (67.4%)
2018/19	260	71 (27.3%)	189 (72.7%)
2019/20	278	108 (38.8%)	170 (61.2%)
2020/21	182	63 (34.6%)	119 (65.4%)
2021/22	310	116 (37.4%)	194 (62.6%)
2022/23	374	125 (33.4%)	249 (66.6%)
2023/24	408	145 (35.5%)	263 (64.5%)
Pancreas			
2014/15	108	45 (41.7%)	63 (58.3%)
2015/16	122	67 (54.9%)	55 (45.1%)
2016/17	113	63 (55.8%)	50 (44.2%)
2017/18	115	60 (52.2%)	55 (47.8%)
2018/19	105	50 (47.6%)	55 (52.4%)
2019/20	115	64 (55.7%)	51 (44.3%)
2020/21	51	27 (52.9%)	24 (47.1%)
2021/22	91	50 (54.9%)	41 (45.1%)
2022/23	110	63 (57.3%)	47 (42.7%)
2023/24	115	55 (47.8%)	60 (52.2%)

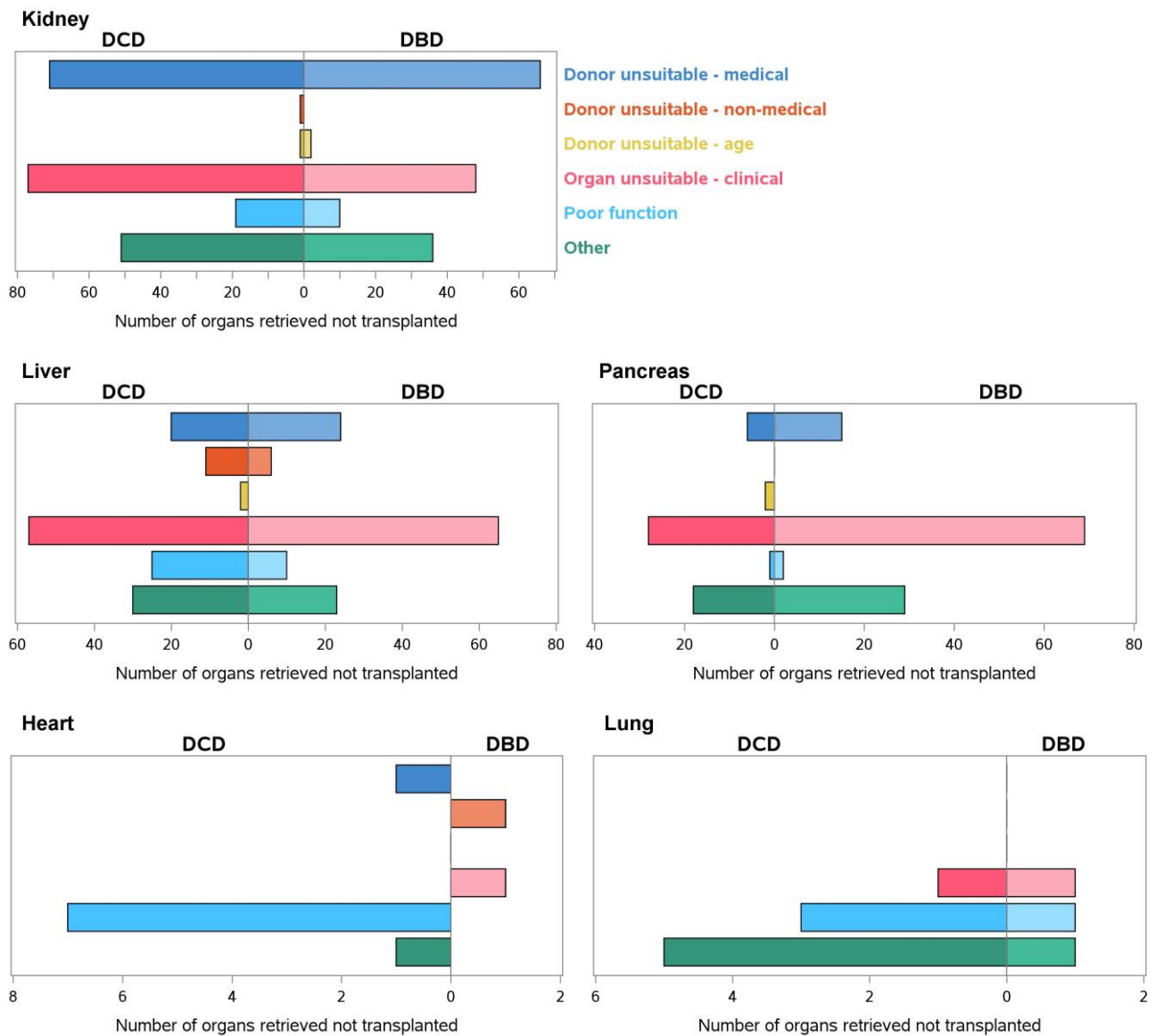
Table 4.4 Percentage of abdominal retrieved not transplanted organs from DCD donors, in the UK, 1 April 2014 - 31 March 2024

Financial Year	Retrieved	Retrieved not transplanted (%)	Transplanted (%)
Heart			
2021/22	48	4 (8.3%)	44 (91.7%)
2022/23	60	5 (8.3%)	55 (91.7%)
2023/24	74	9 (12.2%)	65 (87.8%)
Lung			
2014/15	45	7 (15.6%)	38 (84.4%)
2015/16	39	4 (10.3%)	35 (89.7%)
2016/17	33	5 (15.2%)	28 (84.8%)
2017/18	42	4 (9.5%)	38 (90.5%)
2018/19	54	15 (27.8%)	39 (72.2%)
2019/20	46	13 (28.3%)	33 (71.7%)
2020/21	25	6 (24.0%)	19 (76.0%)
2021/22	30	6 (20.0%)	24 (80.0%)
2022/23	43	6 (14.0%)	37 (86.0%)
2023/24	41	9 (22.0%)	32 (78.0%)

4.2 Reasons for non-use of retrieved not transplanted organs

The primary reason why retrieved organs were not transplanted is recorded on the [UK Transplant Registry](#). **Figure 4.3** and **Table 4.5** present these reasons for non-use for [DBD](#) donors and [DCD](#) donors separately, grouped into the following categories; donor unsuitable – medical, donor unsuitable - non-medical, donor unsuitable – age, organ unsuitable – clinical, poor function, other reasons. See [Appendix A6: Reason for non-use categories](#) for how the non-use reasons are categorised. The most common reasons recorded differ substantially between the organ groups and between [DBD](#) and [DCD](#) donors.

Figure 4.3 Reasons for non-use for retrieved not transplanted organs from DBD and DCD donors in the UK, 1 April 2023 – 31 March 2024



Note that the x-axis range differs for each organ group.

**Table 4.5 Reasons for non-use for retrieved not transplanted organs from DBD and DCD donors
in the UK, 1 April 2023 - 31 March 2024**

Organ	Total number retrieved not transplanted	Percentage retrieved not transplanted due to					
		Donor unsuitable - medical	Donor unsuitable - non-medical	Donor unsuitable - age	Organ unsuitable - clinical	Poor function	Other
DBD							
Kidney	162	40.7%	0.0%	1.2%	29.6%	6.2%	22.2%
Liver	128	18.8%	4.7%	0.0%	50.8%	7.8%	18.0%
Pancreas	115	13.0%	0.0%	0.0%	60.0%	1.7%	25.2%
Heart	2	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%
Lung	3	0.0%	0.0%	0.0%	33.3%	33.3%	33.3%
DCD							
Kidney	220	32.3%	0.5%	0.5%	35.0%	8.6%	23.2%
Liver	145	13.8%	7.6%	1.4%	39.3%	17.2%	20.7%
Pancreas	55	10.9%	0.0%	3.6%	50.9%	1.8%	32.7%
Heart	9	11.1%	0.0%	0.0%	0.0%	77.8%	11.1%
Lung	9	0.0%	0.0%	0.0%	11.1%	33.3%	55.6%

Utilisation of Organs by Organ Quality

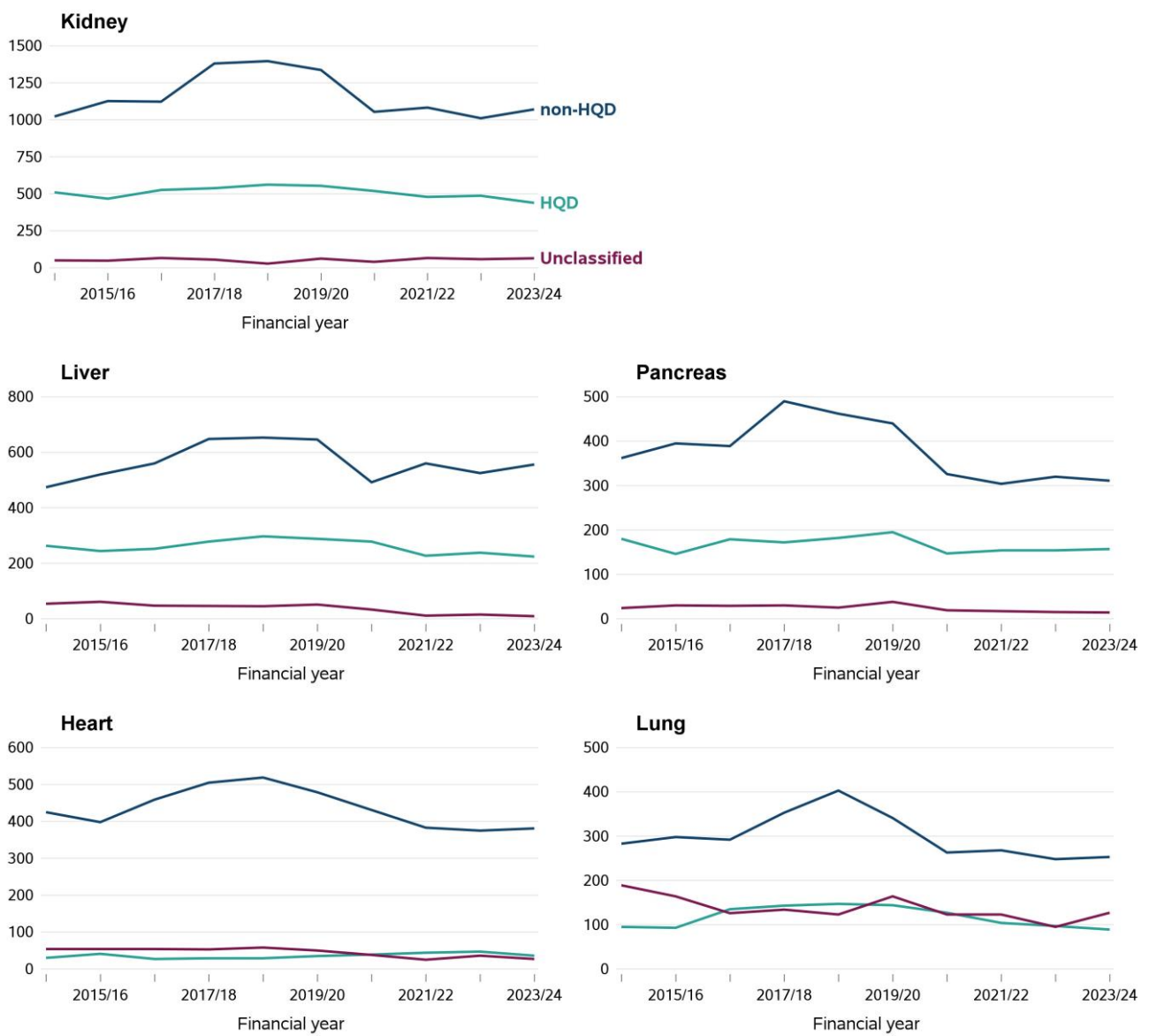
5.1 Offered organs by Higher Quality Donor status

A [Higher Quality Donor \(HQD\)](#) is defined by a set of parameters captured on the [UK Transplant Registry](#). These parameters are listed in [Appendix A3](#). There is a different set of parameters for each organ so a donor may be considered an [HQD](#) for one organ but not another. While a donor may be considered 'higher quality' according to these parameters for a particular organ, there may be other reasons, which are not captured on the registry, which would deem the organ of lower quality in practice.

Figure 5.1 and Tables 5.1 and 5.2 show the number of [HQD](#) organs offered each year, alongside the number of non-HQD donor organs offered. Note that if data are missing on any of the [HQD](#) parameters, then the [HQD](#) status is considered 'unclassified' for that organ. Generally, around a quarter of abdominal [DBD](#) organs are classed as [HQD](#) organs. For lungs, this slightly lower and for hearts, the proportion of [DBD](#) offers classed as [HQD](#) can be as low as 5%. The number of unclassified lung offers is high due to a substantial amount of missing data for the [HQD](#) parameters.

Equivalent information for [DCD](#) donors in **Figure 5.2 and Tables 5.3 and 5.4** although note there are no [DCD HQD](#) livers by definition.

Figure 5.1 Number of offered organs from DBD donors in the UK by Higher Quality Donor status, 1 April 2023 – 31 March 2024



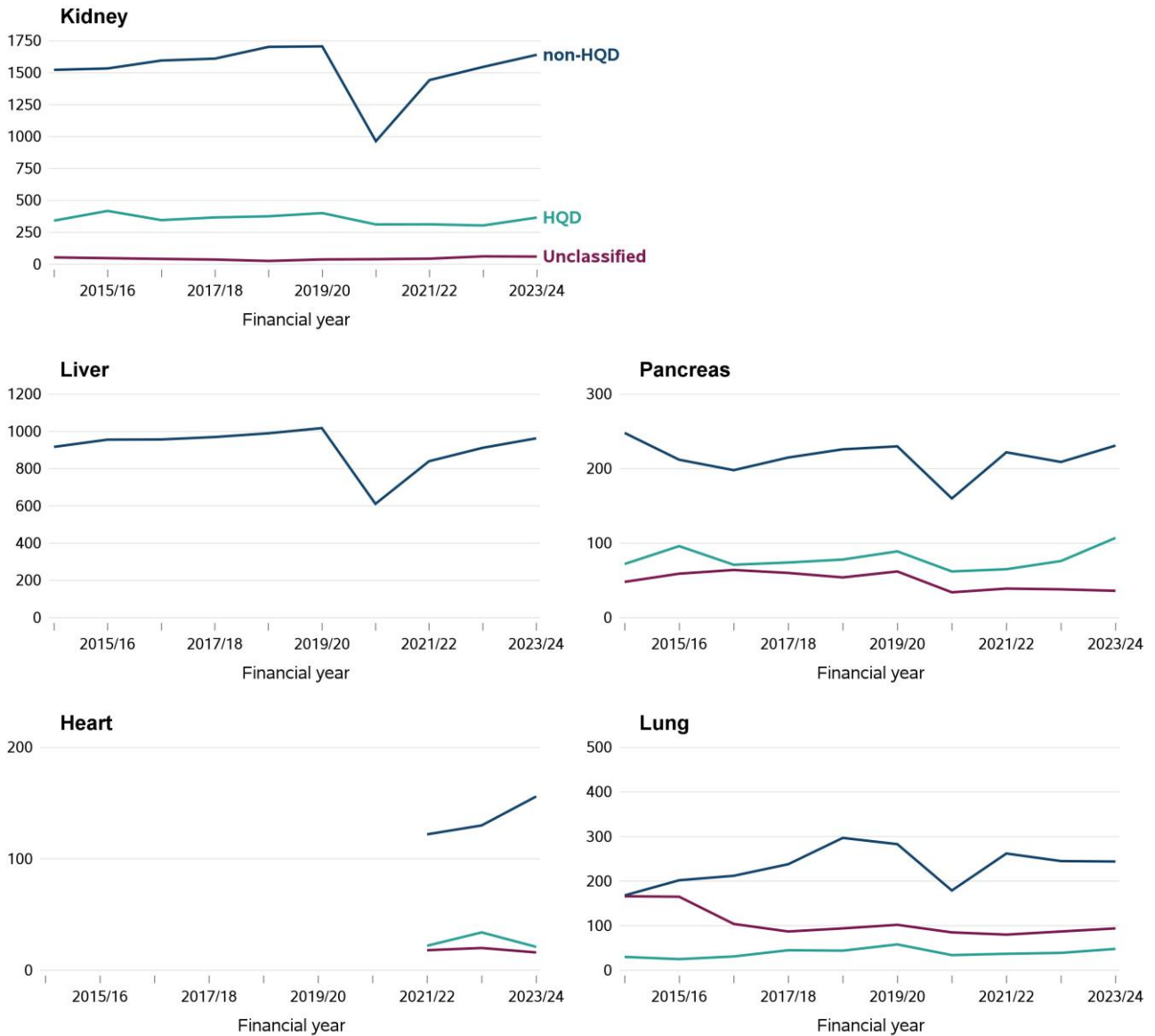
**Table 5.1 Number of offered abdominal organs from DBD donors in the UK
by Higher Quality Donor status, 1 April 2014 - 31 March 2024**

Financial Year	HQD	non-HQD	Unclassified
Kidney			
2014/15	510	1023	50
2015/16	467	1127	48
2016/17	526	1123	66
2017/18	538	1381	55
2018/19	562	1397	28
2019/20	554	1337	62
2020/21	519	1054	40
2021/22	479	1083	66
2022/23	487	1011	58
2023/24	439	1071	64
Liver			
2014/15	263	474	54
2015/16	244	520	61
2016/17	252	560	47
2017/18	278	648	46
2018/19	297	653	45
2019/20	288	646	51
2020/21	278	492	33
2021/22	227	560	11
2022/23	238	525	15
2023/24	224	556	9
Pancreas			
2014/15	180	362	24
2015/16	146	395	30
2016/17	179	389	29
2017/18	172	490	30
2018/19	182	462	25
2019/20	195	440	38
2020/21	147	326	19
2021/22	154	304	17
2022/23	154	320	15
2023/24	157	311	14

**Table 5.2 Number of offered cardiothoracic organs from DBD donors in the UK
by Higher Quality Donor status, 1 April 2014 - 31 March 2024**

	Financial Year	HQD	non-HQD	Unclassified
Heart	2014/15	30	425	54
	2015/16	41	398	54
	2016/17	27	459	54
	2017/18	29	505	53
	2018/19	29	519	58
	2019/20	35	479	50
	2020/21	39	431	38
	2021/22	44	383	25
	2022/23	47	375	36
	2023/24	36	381	27
Lung	2014/15	95	283	189
	2015/16	93	298	164
	2016/17	135	292	126
	2017/18	143	353	134
	2018/19	147	403	123
	2019/20	144	341	164
	2020/21	127	263	123
	2021/22	104	268	123
	2022/23	97	248	95
	2023/24	89	253	127

Figure 5.2 Number of offered organs from DCD donors in the UK by Higher Quality Donor status, 1 April 2023 – 31 March 2024



1. On 7 September 2020, the UK National DCD heart programme was introduced. Therefore DCD heart data prior to 2021/22 is not shown.
2. Donors must be DBD for the associated liver to be high quality.

Table 5.3 Number of offered abdominal organs from DCD donors in the UK by Higher Quality Donor status, 1 April 2014 - 31 March 2024

Financial Year	HQD	non-HQD	Unclassified
Kidney			
2014/15	342	1523	54
2015/16	418	1534	48
2016/17	346	1596	42
2017/18	367	1611	37
2018/19	376	1703	26
2019/20	401	1707	38
2020/21	312	964	40
2021/22	313	1443	44
2022/23	304	1546	62
2023/24	366	1641	60
Liver			
2014/15		917	
2015/16		956	
2016/17		957	
2017/18		970	
2018/19		990	
2019/20		1018	
2020/21		611	
2021/22		840	
2022/23		912	
2023/24		963	
Pancreas			
2014/15	72	248	48
2015/16	96	212	59
2016/17	71	198	64
2017/18	74	215	60
2018/19	78	226	54
2019/20	89	230	62
2020/21	62	160	34
2021/22	65	222	39
2022/23	76	209	38
2023/24	107	231	36

Table 5.4 Number of offered cardiothoracic organs from DCD donors in the UK by Higher Quality Donor status, 1 April 2014 - 31 March 2024

	Financial Year	HQD	non-HQD	Unclassified
Heart	2021/22	22	122	18
	2022/23	34	130	20
	2023/24	21	156	16
Lung	2014/15	30	168	166
	2015/16	25	202	165
	2016/17	31	212	104
	2017/18	45	238	87
	2018/19	44	297	94
	2019/20	58	283	102
	2020/21	34	179	85
	2021/22	37	262	80
	2022/23	39	245	87
	2023/24	48	244	94

5.2 Outcomes of offered Higher Quality Donor organs

Figure 5.3, Table 5.5 and Table 5.6 present the outcomes of offered organs from [DBD Higher Quality Donors \(HQD\)](#), by considering whether or not they were accepted, retrieved or transplanted. The same information is presented for [DCD HQDs](#) in **Figure 5.4, Table 5.7 and Table 5.8**.

Utilisation is expected to be greater for offered [HQD](#) organs compared to all offered organs due to the selective nature of the [HQD](#) parameters. Comparing **Figure 5.3** with **Figure 3.3**, transplantation rates of offered [DBD HQD](#) organs are almost double that of all offered [DBD](#) organs, for pancreases, hearts and lungs. Despite this, transplantation rates are still much lower than for kidneys and livers. For kidneys and livers, transplantation rates of offered [DBD HQD](#) organs are also higher when comparing with transplantation rates for all offered [DBD](#) organs, and this fluctuates around 90%.

For [DCD](#) organs, the transplantation rate of offered [HQD](#) organs (**Figure 5.4**) is higher when comparing with all offered organs (**Figure 3.4**), but considering these donors estimated to be of 'higher quality', utilisation is not particularly high. Note that [DCD](#) donors with [prolonged time to asystole](#) are included in this analysis so not all organs were able to be transplanted.

Figure 5.3 Outcomes of offered organs from DBD Higher Quality Donors in the UK, 1 April 2014 – 31 March 2024

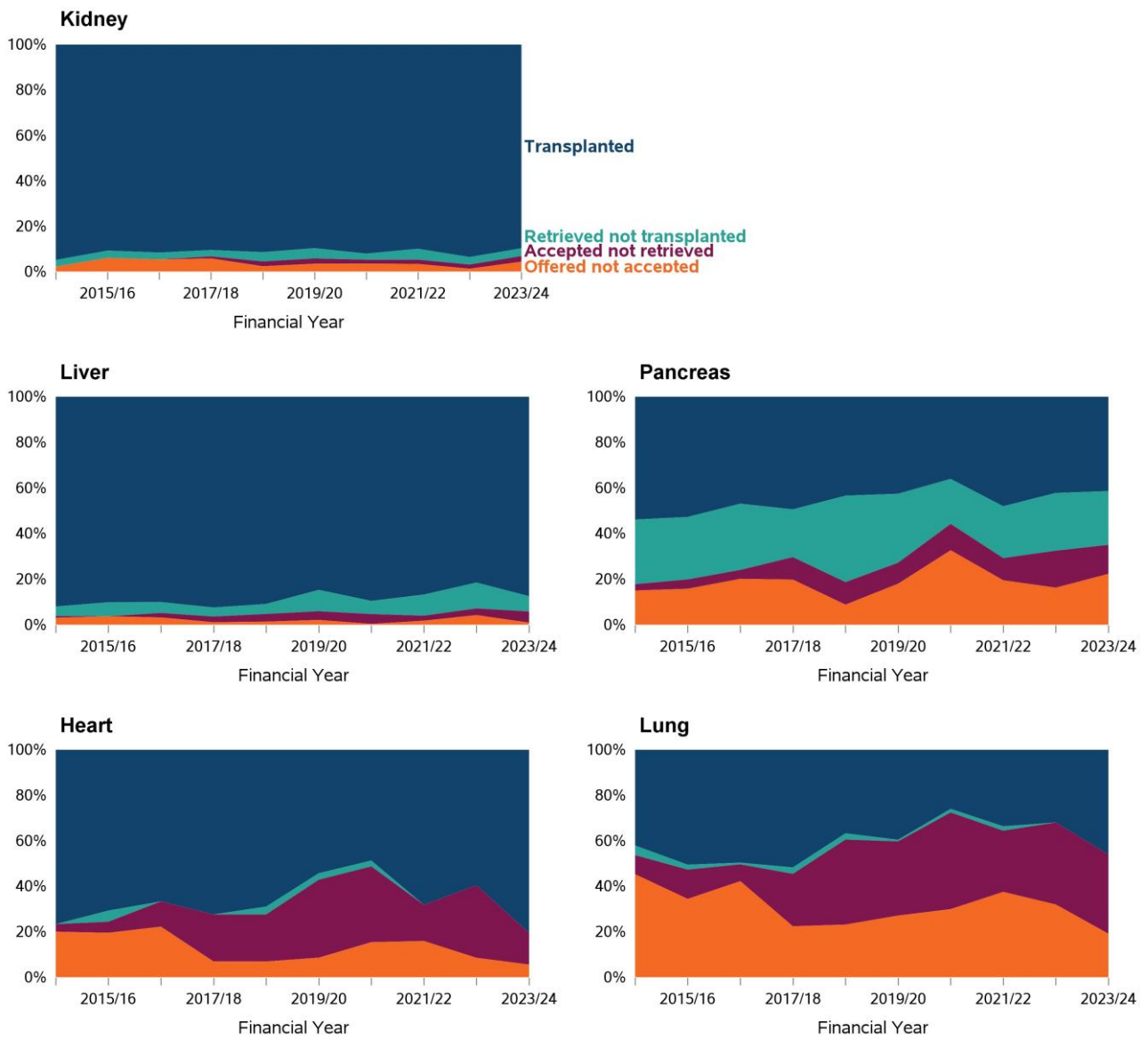


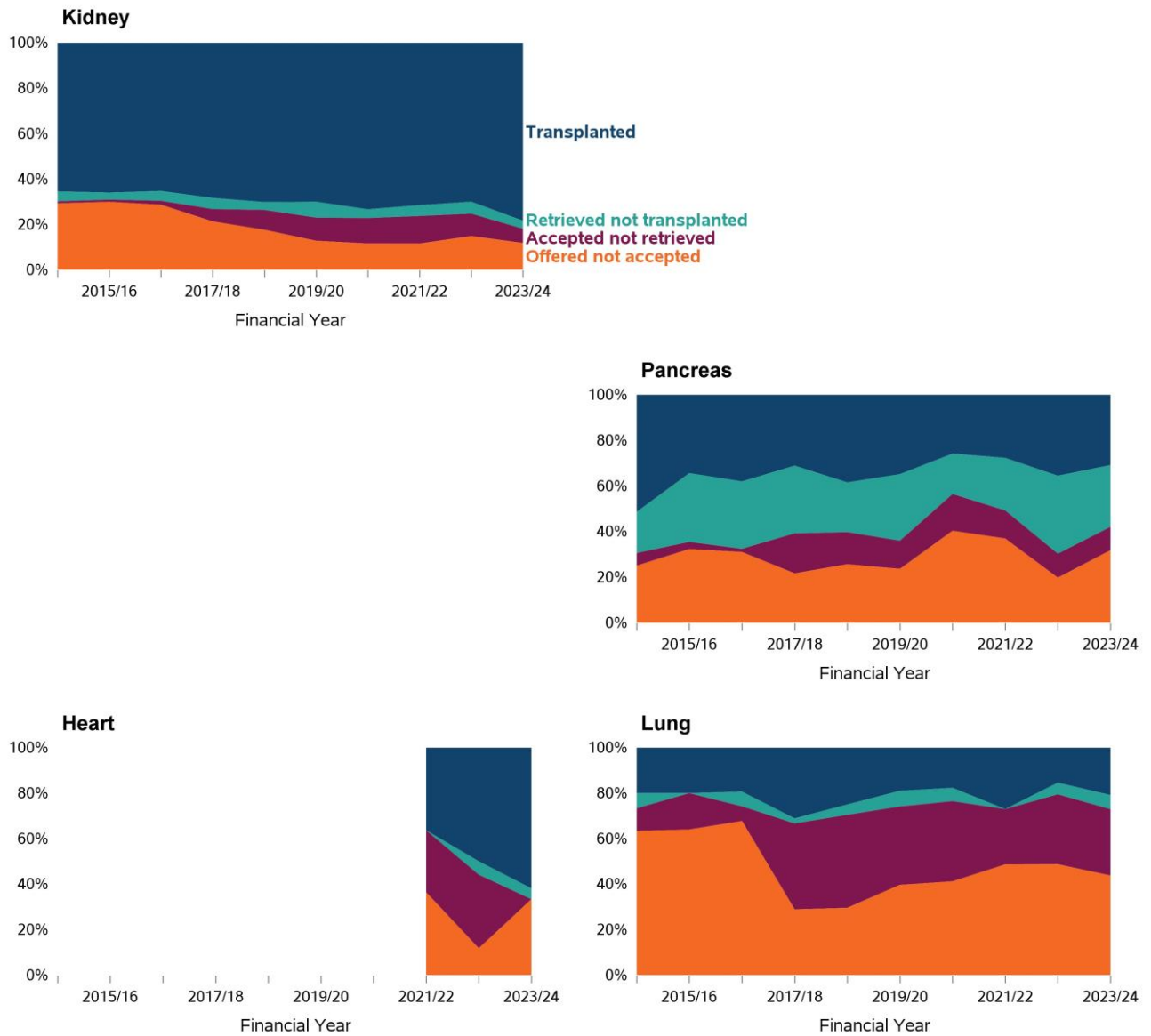
Table 5.5 Outcomes of offered abdominal organs from DBD Higher Quality Donors in the UK, between 1 April 2014 - 31 March 2024

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Kidney					
2014/15	510	2.2%	0.0%	2.9%	94.9%
2015/16	467	6.0%	0.0%	3.2%	90.8%
2016/17	526	5.3%	0.0%	3.0%	91.6%
2017/18	538	5.8%	0.9%	2.8%	90.5%
2018/19	562	2.3%	2.1%	4.1%	91.5%
2019/20	554	3.4%	2.3%	4.5%	89.7%
2020/21	519	3.5%	1.7%	2.7%	92.1%
2021/22	479	3.3%	1.9%	4.8%	90.0%
2022/23	487	1.2%	1.8%	3.3%	93.6%
2023/24	439	4.3%	2.5%	3.4%	89.7%
Liver					
2014/15	263	3.0%	0.8%	4.2%	92.0%
2015/16	244	3.7%	0.0%	6.1%	90.2%
2016/17	252	3.2%	2.0%	4.8%	90.1%
2017/18	278	1.1%	2.5%	4.0%	92.4%
2018/19	297	1.3%	3.4%	4.4%	90.9%
2019/20	288	2.1%	3.8%	9.4%	84.7%
2020/21	278	0.4%	4.3%	5.8%	89.6%
2021/22	227	1.8%	2.2%	9.3%	86.8%
2022/23	238	4.2%	2.9%	11.3%	81.5%
2023/24	224	0.9%	4.9%	6.7%	87.5%
Pancreas					
2014/15	180	15.0%	2.8%	28.3%	53.9%
2015/16	146	15.8%	4.1%	27.4%	52.7%
2016/17	179	20.1%	3.9%	29.1%	46.9%
2017/18	172	19.8%	9.9%	20.9%	49.4%
2018/19	182	8.8%	9.9%	37.9%	43.4%
2019/20	195	17.9%	9.2%	30.3%	42.6%
2020/21	147	32.7%	11.6%	19.7%	36.1%
2021/22	154	19.5%	9.7%	22.7%	48.1%
2022/23	154	16.2%	16.2%	25.3%	42.2%
2023/24	157	22.3%	12.7%	23.6%	41.4%

Table 5.6 Outcomes of offered cardiothoracic organs from DBD Higher Quality Donors in the UK, between 1 April 2014 - 31 March 2024

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Heart					
2014/15	30	20.0%	3.3%	0.0%	76.7%
2015/16	41	19.5%	4.9%	4.9%	70.7%
2016/17	27	22.2%	11.1%	0.0%	66.7%
2017/18	29	6.9%	20.7%	0.0%	72.4%
2018/19	29	6.9%	20.7%	3.4%	69.0%
2019/20	35	8.6%	34.3%	2.9%	54.3%
2020/21	39	15.4%	33.3%	2.6%	48.7%
2021/22	44	15.9%	15.9%	0.0%	68.2%
2022/23	47	8.5%	31.9%	0.0%	59.6%
2023/24	36	5.6%	13.9%	0.0%	80.6%
Lung					
2014/15	95	45.3%	8.4%	4.2%	42.1%
2015/16	93	34.4%	12.9%	2.2%	50.5%
2016/17	135	42.2%	7.4%	0.7%	49.6%
2017/18	143	22.4%	23.1%	2.8%	51.7%
2018/19	147	23.1%	37.4%	2.7%	36.7%
2019/20	144	27.1%	32.6%	0.7%	39.6%
2020/21	127	29.9%	42.5%	1.6%	26.0%
2021/22	104	37.5%	26.9%	1.9%	33.7%
2022/23	97	32.0%	36.1%	0.0%	32.0%
2023/24	89	19.1%	34.8%	0.0%	46.1%

Figure 5.4 Outcomes of offered organs from DCD Higher Quality Donors in the UK, 1 April 2014 – 31 March 2024



1. On 7 September 2020, the UK National DCD heart programme was introduced. Therefore DCD heart data prior to 2021/22 is not shown.

2. Donors must be DBD for the associated liver to be high quality.

Table 5.7 Outcomes of offered abdominal organs from DCD Higher Quality Donors in the UK, between 1 April 2014 - 31 March 2024

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Kidney					
2014/15	342	29.2%	0.9%	4.4%	65.5%
2015/16	418	29.9%	1.0%	3.1%	66.0%
2016/17	346	28.6%	1.7%	4.3%	65.3%
2017/18	367	21.3%	5.4%	4.9%	68.4%
2018/19	376	17.6%	8.8%	3.5%	70.2%
2019/20	401	12.7%	10.2%	7.0%	70.1%
2020/21	312	11.5%	11.2%	3.8%	73.4%
2021/22	313	11.5%	12.1%	4.8%	71.6%
2022/23	304	14.8%	9.9%	5.3%	70.1%
2023/24	366	11.7%	6.3%	3.6%	78.4%
Pancreas					
2014/15	72	25.0%	5.6%	18.1%	51.4%
2015/16	96	32.3%	3.1%	30.2%	34.4%
2016/17	71	31.0%	1.4%	29.6%	38.0%
2017/18	74	21.6%	17.6%	29.7%	31.1%
2018/19	78	25.6%	14.1%	21.8%	38.5%
2019/20	89	23.6%	12.4%	29.2%	34.8%
2020/21	62	40.3%	16.1%	17.7%	25.8%
2021/22	65	36.9%	12.3%	23.1%	27.7%
2022/23	76	19.7%	10.5%	34.2%	35.5%
2023/24	107	31.8%	10.3%	27.1%	30.8%

Table 5.8 Outcomes of offered cardiothoracic organs from DCD Higher Quality Donors in the UK, between 1 April 2014 - 31 March 2024

Financial year	Total number offered	% Offered not accepted	% Accepted not retrieved	% Retrieved not transplanted	% Transplanted
Heart					
2021/22	22	36.4%	27.3%	0.0%	36.4%
2022/23	34	11.8%	32.4%	5.9%	50.0%
2023/24	21	33.3%	0.0%	4.8%	61.9%
Lung					
2014/15	30	63.3%	10.0%	6.7%	20.0%
2015/16	25	64.0%	16.0%	0.0%	20.0%
2016/17	31	67.7%	6.5%	6.5%	19.4%
2017/18	45	28.9%	37.8%	2.2%	31.1%
2018/19	44	29.5%	40.9%	4.5%	25.0%
2019/20	58	39.7%	34.5%	6.9%	19.0%
2020/21	34	41.2%	35.3%	5.9%	17.6%
2021/22	37	48.6%	24.3%	0.0%	27.0%
2022/23	39	48.7%	30.8%	5.1%	15.4%
2023/24	48	43.8%	29.2%	6.3%	20.8%

5.3 Centre-specific offer decline rates for Higher Quality Donors

Similarly to Section 3 of this report, [funnel plots](#) are presented below to compare centre specific [offer decline rates](#) and indicate how consistent the rates of the individual transplant centres are with the national rate. However, only [Higher Quality Donors \(HQDs\)](#) are considered in this section. The overall national [unadjusted HQD offer decline rate](#) is shown by the solid line while the 95% and 99.8% [confidence limits](#) are indicated via a thin and thick dotted line, respectively. Each dot in the plot represents an individual transplant centre. Centres that are positioned above the upper limits indicate on [offer decline rate](#) that is higher than the national rate, while centres positioned below the lower limits indicates an offer decline rate that is lower than the national rate. The number of HQD offers a centre may receive will depend on patient [case mix](#) as per the organ specific [offering scheme](#), however the following summaries are not risk adjusted for known centre differences in patient [case mix](#).

5.3.1 Kidney

Kidney-only offers from [DBD](#) and [DCD HQD](#) donors who had at least one kidney retrieved, offered directly and on behalf of a named individual patient and resulted in transplantation are included in the analysis. Any offers made through the [reallocation](#) of kidneys, declined kidney or [fast track](#) schemes were excluded. Only offers through the [DCD](#) kidney [offering scheme](#) are presented, all local [DCD](#) offers are excluded. Only individual offers for named patients were considered which excluded any [ABO-](#) and [HLA-incompatible](#) patients. Only [HQD](#) kidney offers to adult patients are presented and results are presented separately for [DBD](#) and [DCD](#) donors. The [HQD](#) criteria are listed in [Appendix A3](#).

Figure 5.5 compares individual centre adult kidney [offer decline rates](#) with the national rate for [DBD HQD](#) donors over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 5.9**.

Figure 5.5 Adult DBD Higher Quality Donor kidney offer decline rates for kidneys that resulted in a transplant, 1 April 2021 to 31 March 2024

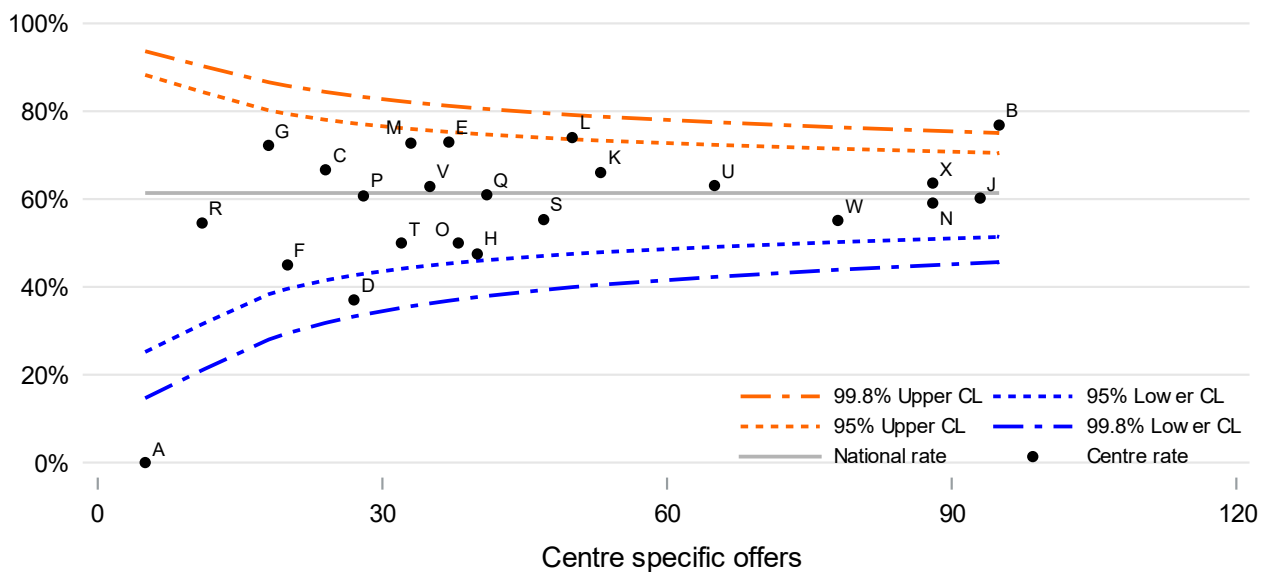


Table 5.9 Adult DBD Higher Quality Donor kidney offer decline rates by transplant centre, 1 April 2021 to 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A					0	(0)	5	(0)
Birmingham	B	40	(85)	26	(65)	29	(76)	95	(77)
Bristol	C	9	(67)	6	(33)	9	(89)	24	(67)
Cambridge	D	13	(54)	9	(33)			27	(37)
Cardiff	E	11	(82)	15	(73)	11	(64)	37	(73)
Coventry	F	8	(50)	7	(57)	5	(20)	20	(45)
Edinburgh	G	9	(89)	5	(60)	4	(50)	18	(72)
Glasgow	H	11	(36)	16	(50)	13	(54)	40	(48)
Guy's	J	23	(48)	38	(63)	32	(66)	93	(60)
Leeds	K	14	(57)	24	(75)	15	(60)	53	(66)
Leicester	L	15	(93)	18	(72)	17	(59)	50	(74)
Liverpool	M	2	(50)	15	(73)	16	(75)	33	(73)
Manchester	N	26	(54)	31	(65)	31	(58)	88	(59)
Newcastle	O	15	(53)	11	(45)	12	(50)	38	(50)
Nottingham	P	11	(55)	8	(88)	9	(44)	28	(61)
Oxford	Q	9	(44)	7	(43)	25	(72)	41	(61)
Plymouth	R	3	100)	4	(25)	4	(50)	11	(55)
Portsmouth	S	19	(53)	14	(50)	14	(64)	47	(55)
Sheffield	T	11	(36)	11	(45)	10	(70)	32	(50)
St George's	U	26	(73)	19	(63)	20	(50)	65	(63)
The Royal Free	V	12	(75)	10	(50)	13	(62)	35	(63)
The Royal London	W	33	(61)	25	(60)	20	(40)	78	(55)
WLRTC	X	39	(56)	23	(61)	26	(77)	88	(64)
UK		361	(62)	345	(60)	340	(61)	1046	(61)

Centre has reached the upper 99.8% confidence limit

Centre has reached the upper 95% confidence limit

Centre has reached the lower 95% confidence limit

Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

Figure 5.6 compares individual centre adult kidney [offer decline rates](#) with the national rate for [DCD HQD](#) donors over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 5.10**.

Figure 5.6 Adult DCD Higher Quality Donor kidney offer decline rates for kidneys that resulted in a transplant, 1 April 2021 to 31 March 2024

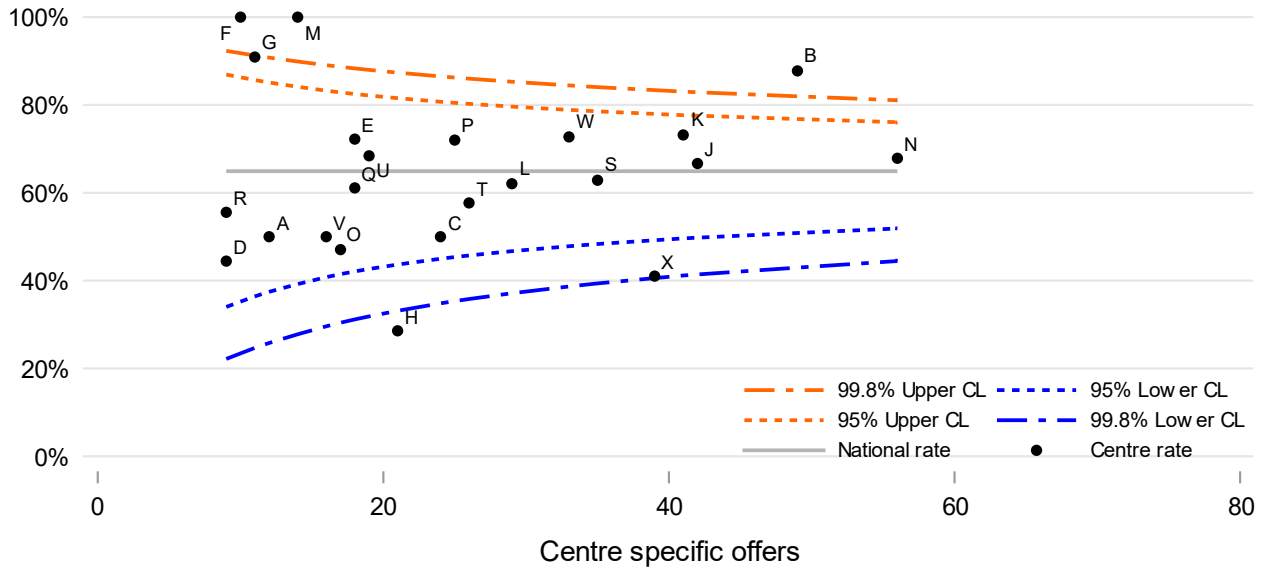


Table 5.10 Adult DCD Higher Quality Donor kidney offer decline rates by transplant centre, 1 April 2021 to 31 March 2024

Centre	Code	2021/22		2022/23		2023/24		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Belfast	A	2	(50)	2	(50)	8	(50)	12	(50)
Birmingham	B	19	(84)	15	(93)	15	(87)	49	(88)
Bristol	C	7	(57)	5	(60)	12	(42)	24	(50)
Cambridge	D	1	100)			6	(50)	9	(44)
Cardiff	E	4	(75)	5	(60)	9	(78)	18	(72)
Coventry	F	3	100)	1	100)	6	100)	10	100)
Edinburgh	G	4	100)	1	100)	6	(83)	11	(91)
Glasgow	H	8	(38)	6	(33)			21	(29)
Guy's	J	8	(63)	14	(93)	20	(50)	42	(67)
Leeds	K	8	(63)	10	(70)	23	(78)	41	(73)
Leicester	L	8	(75)	10	(70)	11	(45)	29	(62)
Liverpool	M	3	100)	5	100)	6	100)	14	100)
Manchester	N	13	(77)	17	(59)	26	(69)	56	(68)
Newcastle	O	5	(60)			9	(56)	17	(47)
Nottingham	P	8	(75)	8	(75)	9	(67)	25	(72)
Oxford	Q	2	(50)	9	(44)	7	(86)	18	(61)
Plymouth	R	3	(67)	2	(50)	4	(50)	9	(56)
Portsmouth	S	10	(40)	12	(67)	13	(77)	35	(63)
Sheffield	T	8	(50)	12	(67)	6	(50)	26	(58)
St George's	U	7	(71)	4	(50)	8	(75)	19	(68)
The Royal Free	V	8	(50)			6	(67)	16	(50)
The Royal London	W	10	(70)	8	(63)	15	(80)	33	(73)
WLRTC	X	12	(33)	10	(40)	17	(47)	39	(41)
UK		161	(65)	163	(64)	249	(65)	573	(65)

Centre has reached the upper 99.8% confidence limit

Centre has reached the upper 95% confidence limit

Centre has reached the lower 95% confidence limit

Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

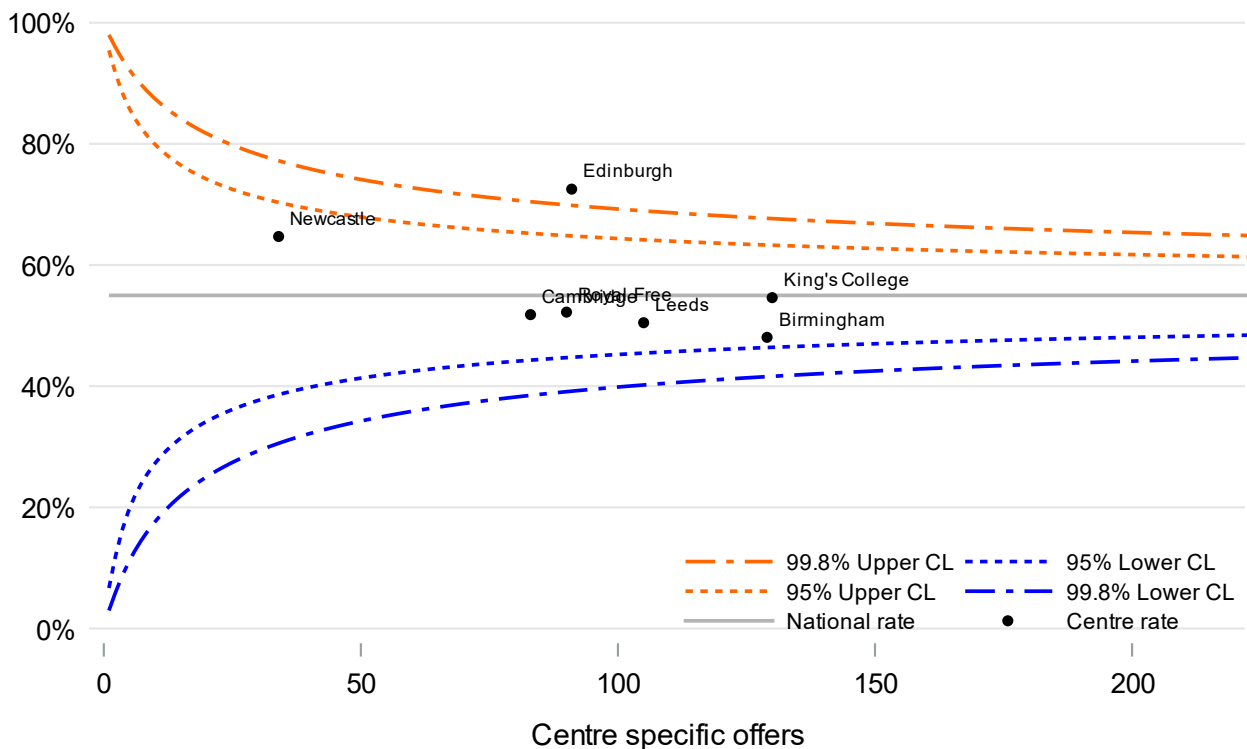
5.3.2 Liver

Named adult (≥ 16) and large paediatric (< 16 and weight $> 40\text{kg}$) [elective Higher Quality Donor \(HQD\)](#) liver offers to UK transplant centres where the liver resulted in a liver-only first transplant are included in the analysis. Offers to super-urgent, hepatoblastoma, [ACLF](#), paediatric, intestinal or liver and cardiothoracic patients are excluded. Dublin are not included. The [HQD](#) criteria are listed in [Appendix A3](#).

For [DBD](#) donors, all [fast track](#) offers were excluded. By definition, there are no [DCD HQD](#) liver donors ([Appendix A3](#)).

Figure 5.7 compares individual centre adult liver [offer decline rates](#) with the national rate for [HQD DBD](#) donors over the time period, 1 April 2021 and 31 March 2024.

Figure 5.7 Named adult elective liver offer decline rates that resulted in a liver only first transplant from DBD Higher Quality Donors, 1 April 21 and 31 March 24



A [DBD](#) liver transplant can involve a whole liver, reduced liver or split liver. 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. Offers of whole livers and right lobes which resulted in transplantation are included in **Figure 5.7** and adult liver [offer decline rates](#) for [HQD DBD](#) donors by centre and organ offered are presented in **Table 5.11**.

**Table 5.11 Higher Quality Donor liver offer decline rates for each centre by offered organ
1 April 2021 to 31 March 2024**

Centre	Whole Livers		DBD Donors Right Lobe		All Livers	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Birmingham	108	41	21	86	129	48
Cambridge	58	41	25	76	83	52
Edinburgh	60	58	31	100	91	73
King's College	102	53	28	61	130	55
Leeds	75	45	30	63	105	50
Newcastle	23	48	11	100	34	65
Royal Free	65	46	25	68	90	52
Total	491	47	171	77	662	55

Centre has reached the upper 99.8% confidence limit
 Centre has reached the upper 95% confidence limit
 Centre has reached the lower 95% confidence limit
 Centre has reached the lower 99.8% confidence limit

5.3.3 Pancreas

Pancreas offers from [DBD](#) and [DCD Higher Quality Donors \(HQD\)](#) whose pancreas was retrieved, offered directly on behalf of a named individual patient and resulted in transplantation are included in the analysis. Any offers of pancreases declined for transplantation, pancreases offered for [multi-organ](#) or small bowel transplant were excluded, as were offers made through the [fast track](#) scheme or the [reallocation](#) of the pancreas. Only individual offers for named patients were considered which excluded any [ABO-](#) and [HLA-incompatible](#) patients. The [HQD](#) criteria are listed in [Appendix A3](#).

Figure 5.8 compares individual centre pancreas [offer decline rates](#) for [HQD DBD](#) donors with the national rate over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 5.12**.

Figure 5.8 DBD Higher Quality Donor pancreas offer decline rates for pancreases that resulted in a pancreas transplant, 1 April 2021 and 31 March 2024

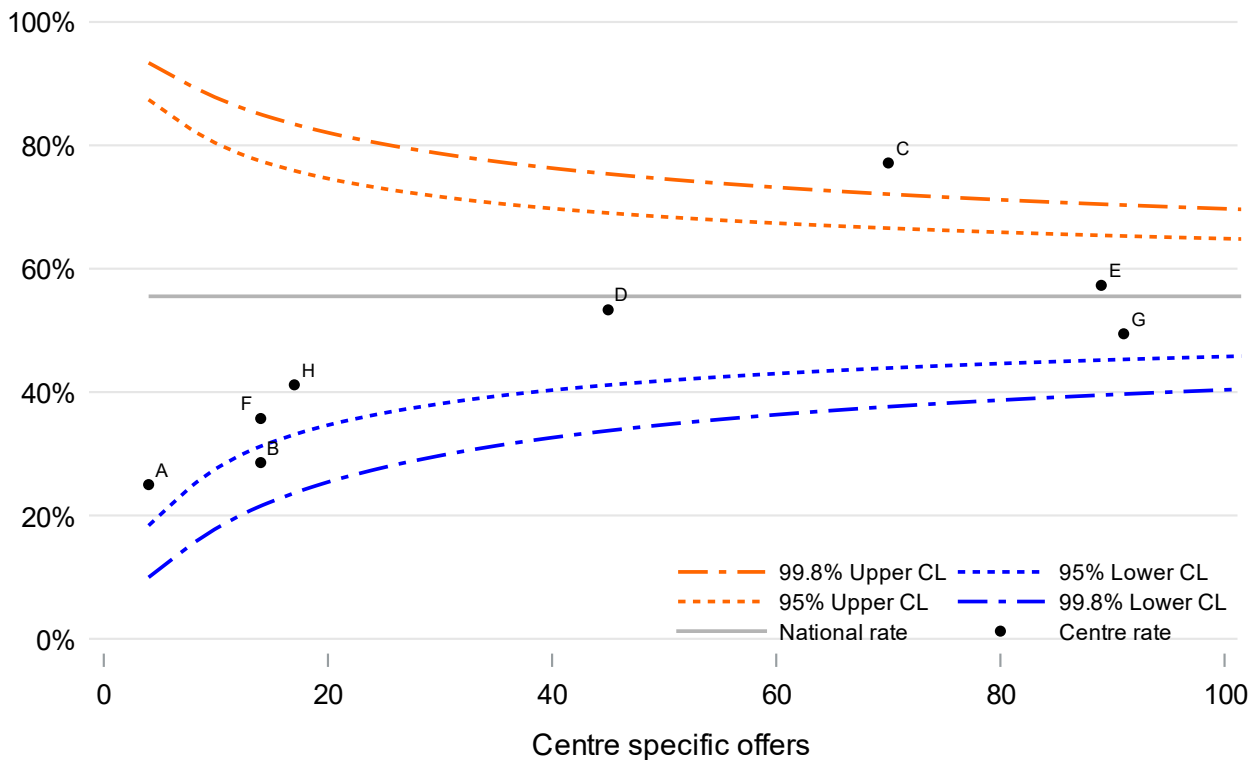


Table 5.12 compares individual centre pancreas [offer decline rates](#) for [DBD HQD](#) donors over time by financial year.

**Table 5.12 DBD Higher Quality Donor pancreas offer decline rates by transplant centre
1 April 2021 to 31 March 2024**

Centre	Code	2021/2022		2022/2023		2023/2024		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Cambridge	A			2	(50)			4	(25)
Cardiff	B	5	(60)	4	(25)			14	(29)
Edinburgh	C	31	(84)	23	(65)	16	(81)	70	(77)
Guy's	D	25	(56)	11	(45)	9	(56)	45	(53)
Manchester	E	29	(59)	29	(55)	31	(58)	89	(57)
Newcastle	F	7	(43)	4	(50)			14	(36)
Oxford	G	34	(56)	29	(45)	28	(46)	91	(49)
WLRTC	H	9	(56)			5	(40)	17	(41)
UK		141	(62)	105	(50)	98	(52)	344	(56)

Centre has reached the upper 99.8% confidence limit
 Centre has reached the upper 95% confidence limit
 Centre has reached the lower 95% confidence limit
 Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

Figure 5.9 compares individual centre pancreas [offer decline rates](#) for [DCD HQD](#) donors with the national rate over the time period, 1 April 2021 and 31 March 2024. Centres can be identified by the information shown in **Table 5.13**.

Figure 5.9 DCD Higher Quality Donor pancreas offer decline rates for pancreases that resulted in a pancreas transplant, 1 April 2021 and 31 March 2024

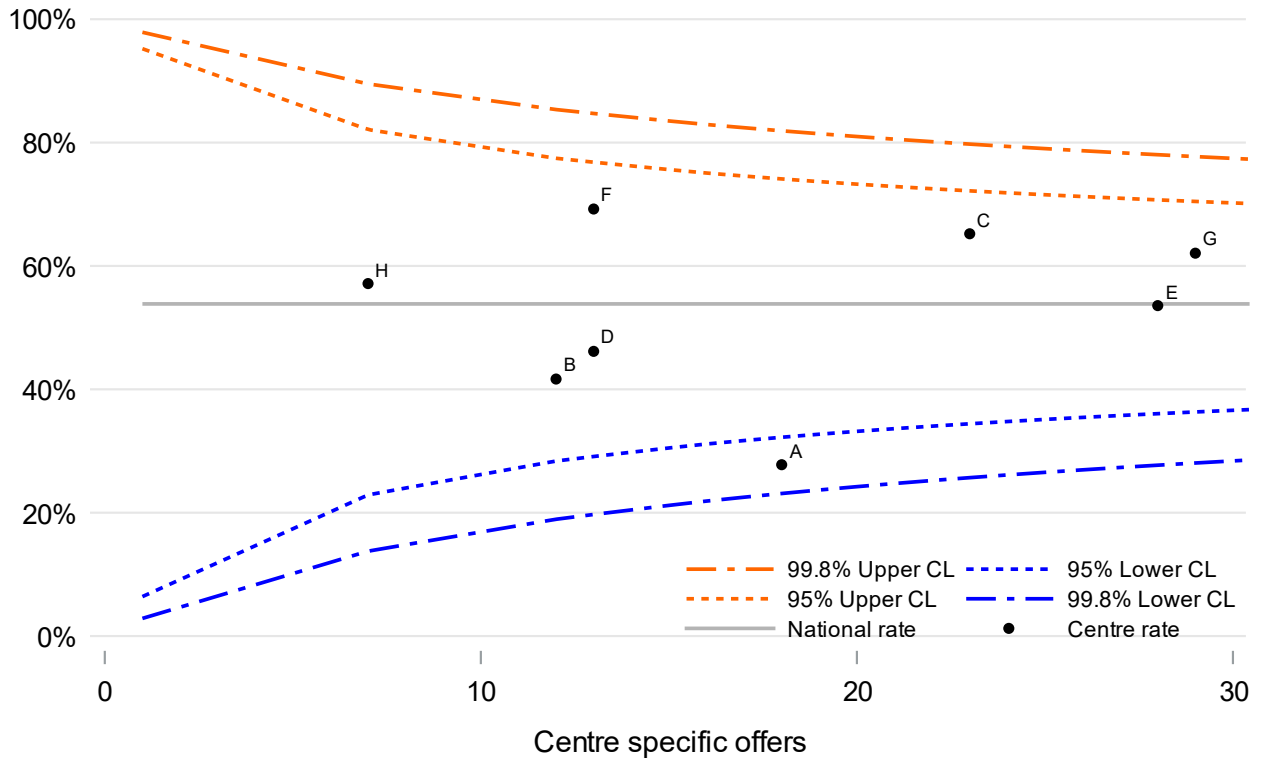


Table 5.13 compares individual centre pancreas [offer decline rates](#) for [DCD HQD](#) donors over time by financial year.

**Table 5.13 DCD Higher Quality Donor pancreas offer decline rates by transplant centre,
1 April 2021 to 31 March 2024**

Centre	Code	2021/2022		2022/2023		2023/2024		Overall	
		Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Cambridge	A			3	(67)	11	(27)	18	(28)
Cardiff	B	4	(50)	4	(25)	4	(50)	12	(42)
Edinburgh	C	5	(40)	9	(56)	9	(89)	23	(65)
Guy's	D	2	(50)	5	(60)	6	(33)	13	(46)
Manchester	E	3	(33)	7	(57)	18	(56)	28	(54)
Newcastle	F	3	100)	6	(33)	4	100)	13	(69)
Oxford	G	5	(80)	10	(60)	14	(57)	29	(62)
WLRTC	H	3	(67)	2	(50)	2	(50)	7	(57)
UK		29	(52)	46	(52)	68	(56)	143	(54)

- Centre has reached the upper 99.8% confidence limit
- Centre has reached the upper 95% confidence limit
- Centre has reached the lower 95% confidence limit
- Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

5.3.4 Heart

This section presents an analysis of adult (≥ 16) [Higher Quality Donor \(HQD\) DBD](#) donor heart [offer decline rates](#). This only considers offers of hearts between 1 April 2021 and 31 March 2024 that were eventually transplanted and excludes all [fast track](#) offers. Hearts offered as part of a heart-lung block are included. Super-urgent, urgent and non-urgent offers are all considered. Only adult donor offers to adult recipients are considered, meaning that offers to paediatric patients at Newcastle are excluded. The [HQD](#) criteria are listed in [Appendix A3](#).

In 2017, group offering for non-urgent cardiothoracic organ offers was introduced, where all centres receive a simultaneous offer for their non-urgent patients but acceptance is determined by a centre's position in the allocation sequence. Therefore, adjustments have been made to count any centre who is ranked above the accepting centre in the allocation sequence for that donor as declining the heart, even if they did not respond to the group offer, and any declines recorded for a centre ranked below the accepting centre were discounted.

Figure 5.10 compares individual centre adult heart [offer decline rates](#) for [DBD HQD](#) donors with the national rate over the time period.

Figure 5.10 Adult DBD Higher Quality Donor heart offer decline rates for hearts that resulted in a transplant, 1 April 2021 to 31 March 2024

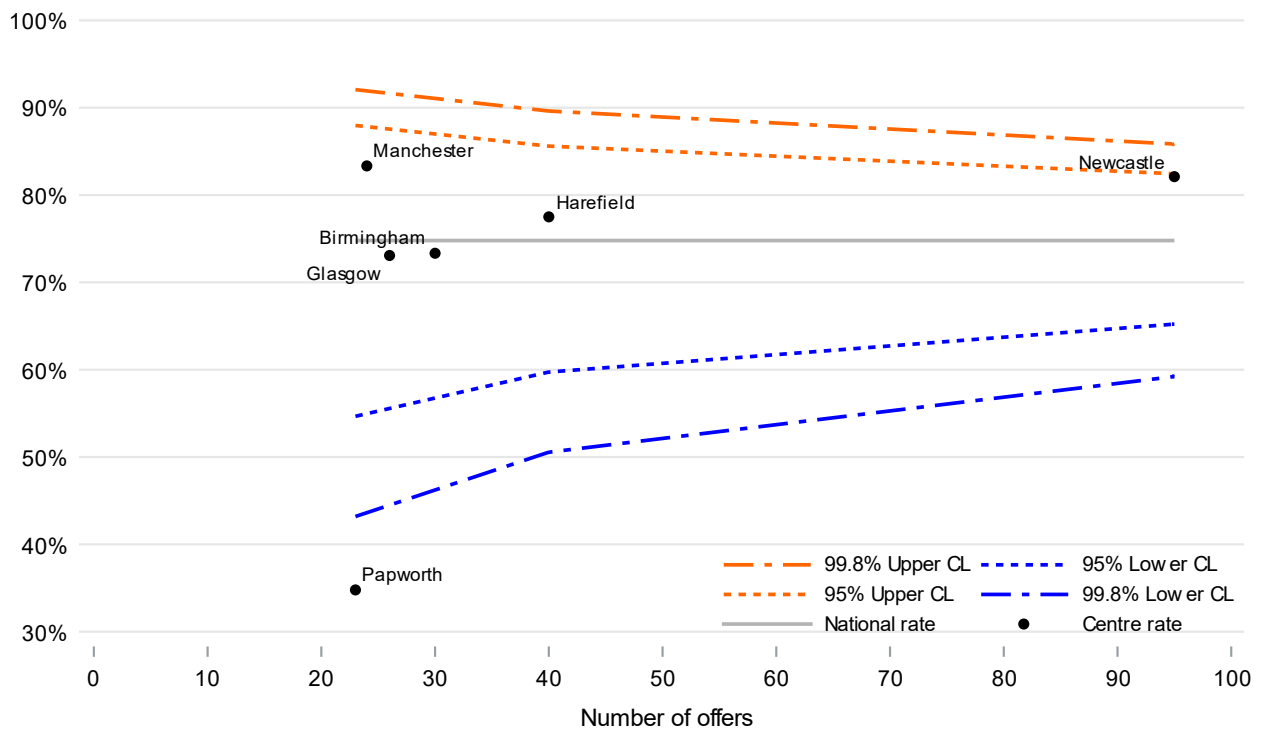


Table 5.14 compares individual centre adult heart [offer decline rates](#) for [DBD HQD](#) donors over time by financial year.

Table 5.14 Adult DBD Higher Quality Donor heart (including cardiac block) offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	2021/22		2022/23		2023/24		Overall	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Birmingham	14	(86)	6	(67)	10	(60)	30	(73)
Glasgow	9	(78)	9	(44)	8	100)	26	(73)
Harefield	16	(81)	14	(71)	10	(80)	40	(78)
Manchester	10	(80)	5	100)	9	(78)	24	(83)
Newcastle	41	(88)	27	(81)	27	(74)	95	(82)
Papworth			8	(50)	9	(33)	23	(35)
UK	96	(80)	69	(71)	73	(71)	238	(75)

- Centre has reached the upper 99.8% confidence limit
- Centre has reached the upper 95% confidence limit
- Centre has reached the lower 95% confidence limit
- Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

5.3.5 Lung

This section presents an analysis of adult (≥ 16) [Higher Quality Donor \(HQD\) DBD](#) donor lung [offer decline rates](#). This only considers offers of bilateral lungs between 1 April 2021 and 31 March 2024 that were eventually transplanted and excludes all [fast track](#) offers. A bilateral lung offer is counted as accepted if either both the lungs were accepted or just a single lung was accepted. Lungs offered as part of a heart-lung block are considered, this includes cases where just the lungs were declined as well as cases where both the heart and lungs were declined. Urgent and non-urgent offers are all considered; super-urgent offers are additionally considered for the adult donor analysis. Only adult donor offers to adult recipients are considered, meaning that offers to paediatric patients at Newcastle are excluded. The [HQD](#) criteria are listed in [Appendix A3](#).

In 2017, group offering for non-urgent cardiothoracic organ offers was introduced, where all centres receive a simultaneous offer for their non-urgent patients but acceptance is determined by a centre's position in the allocation sequence. Therefore, adjustments have been made to count any centre who is ranked above the accepting centre in the allocation sequence for that donor as declining the lung, even if they did not respond to the group offer, and any declines recorded for a centre ranked below the accepting centre were discounted.

Figure 5.11 compares individual centre adult lung [offer decline rates](#) for [DBD HQD](#) donors with the national rate over the time period.

Figure 5.11 Adult DBD Higher Quality Donor bilateral lung offer decline rates for bilateral lungs that resulted in a transplant, 1 April 2021 to 31 March 2024

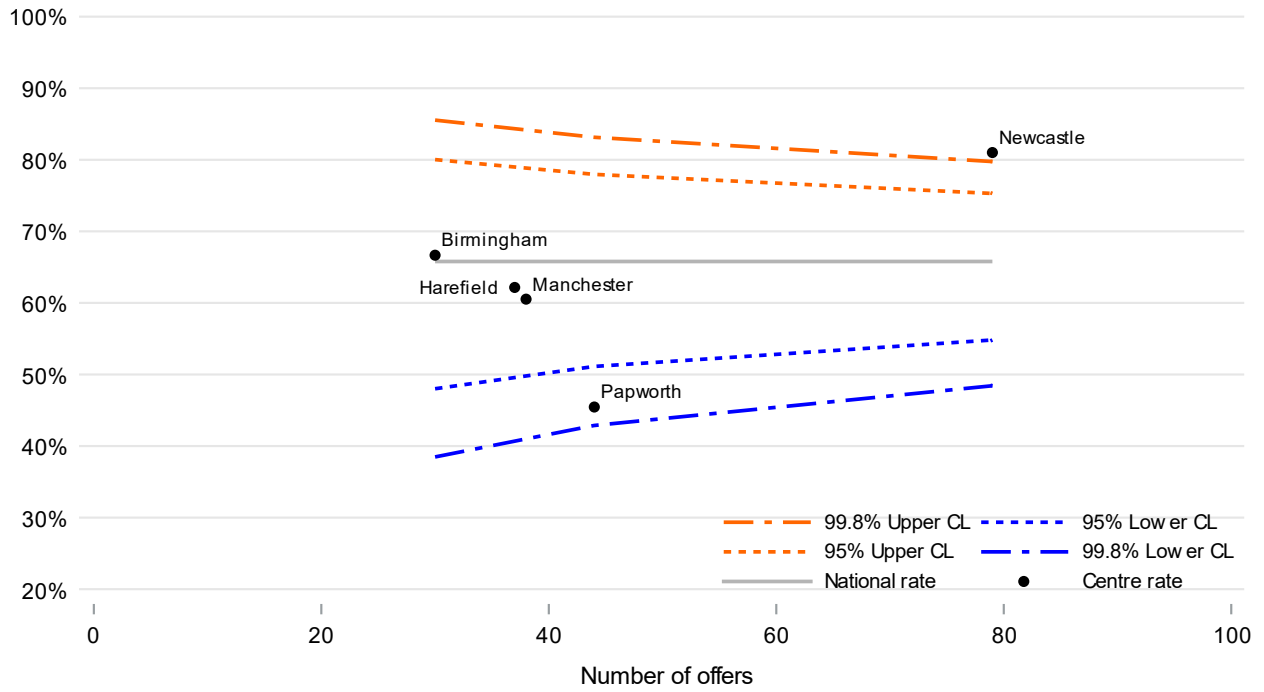


Table 5.15 compares individual centre adult lung [offer decline rates](#) for [DBD HQD](#) donors over time by financial year.

Table 5.15 Adult DBD Higher Quality Donor bilateral lung offer decline rates by transplant centre, 1 April 2021 and 31 March 2024

Centre	2021/22		2022/23		2023/24		Overall	
	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)	Number of offers	Decline rate (%)
Birmingham	3	100)	10	(50)	17	(71)	30	(67)
Harefield	10	(50)	12	(75)	15	(60)	37	(62)
Manchester	8	(50)	14	(64)	16	(63)	38	(61)
Newcastle	30	(83)	23	(83)	26	(77)	79	(81)
Papworth	14	(50)	13	(54)	17	(35)	44	(45)
UK	65	(68)	72	(68)	91	(63)	228	(66)

Centre has reached the upper 99.8% confidence limit

Centre has reached the upper 95% confidence limit

Centre has reached the lower 95% confidence limit

Centre has reached the lower 99.8% confidence limit

Note: highlighting only shown in the 'Overall' column due to small numbers in the annual columns.

5.4 Retrieved not transplanted organs by Donor Risk Index

[Donor Risk Indices \(DRIs\)](#) can be used to estimate the quality of an organ using data captured on the [UK Transplant Registry](#). [DRIs](#) are equations that are derived from statistical models and lead to a single value estimate of risk; higher values indicate higher estimated risk. There are published [DRIs](#) that have been validated for UK cohorts for kidney, liver and pancreas, which are outlined in [Appendix A4](#). This section presents the percentage of retrieved organs that were not transplanted, by [DRI](#), for these three organ groups.

For each organ group, the [DRI](#) has been calculated for all retrieved organs across the 10 year period and the 25th, 50th and 75th percentile value calculated, for [DBD](#) donors and [DCD](#) donors separately. [DBD](#) organs were then analysed in one of four categories, depending on the value of the [DRI](#) calculated for that organ:

- First quartile (lowest risk): Calculated [DRI](#) < 25th percentile value for [DBD](#) donors
- Second quartile: 25th percentile value for [DBD](#) donors ≤ calculated [DRI](#) < 50th percentile value for [DBD](#) donors
- Third quartile: 50th percentile value for [DBD](#) donors ≤ calculated [DRI](#) < 75th percentile value for [DBD](#) donors
- Fourth quartile (highest risk): calculated [DRI](#) ≥ 75th percentile value for [DBD](#) donors

The equivalent method was applied to [DCD](#) donors.

Figure 5.12 and **Table 5.16** presents the percentage of retrieved organs that were not transplanted, by [DRI](#) quartile, for [DBD](#) organs. As expected, organs with a lower [DRI](#) (first quartile and considered lowest risk) generally had the lowest percentage of retrieved organs that were not transplanted. For kidneys, this was generally around 2-3% and for livers, around 5-6%. Kidneys with the highest [DRI](#) (fourth quartile and considered highest risk) still had a lower percentage not transplanted compared to pancreases with the lowest [DRI](#) (first quartile and considered lowest risk).

Figure 5.13 and **Table 5.17** show that the percentage of retrieved organs that are not transplanted for [DCD](#) donors is higher than for [DBD](#) donors although similar patterns can be seen. Kidneys with the highest [DRI](#) (fourth quartile and considered highest risk) had a similar percentage not transplanted compared to pancreases with the lowest [DRI](#) (first quartile and considered lowest risk).

Figure 5.12 Percentage of organs retrieved that were not transplanted from DBD donors in the UK, split by DRI quartile, 1 April 2014 – 31 March 2024

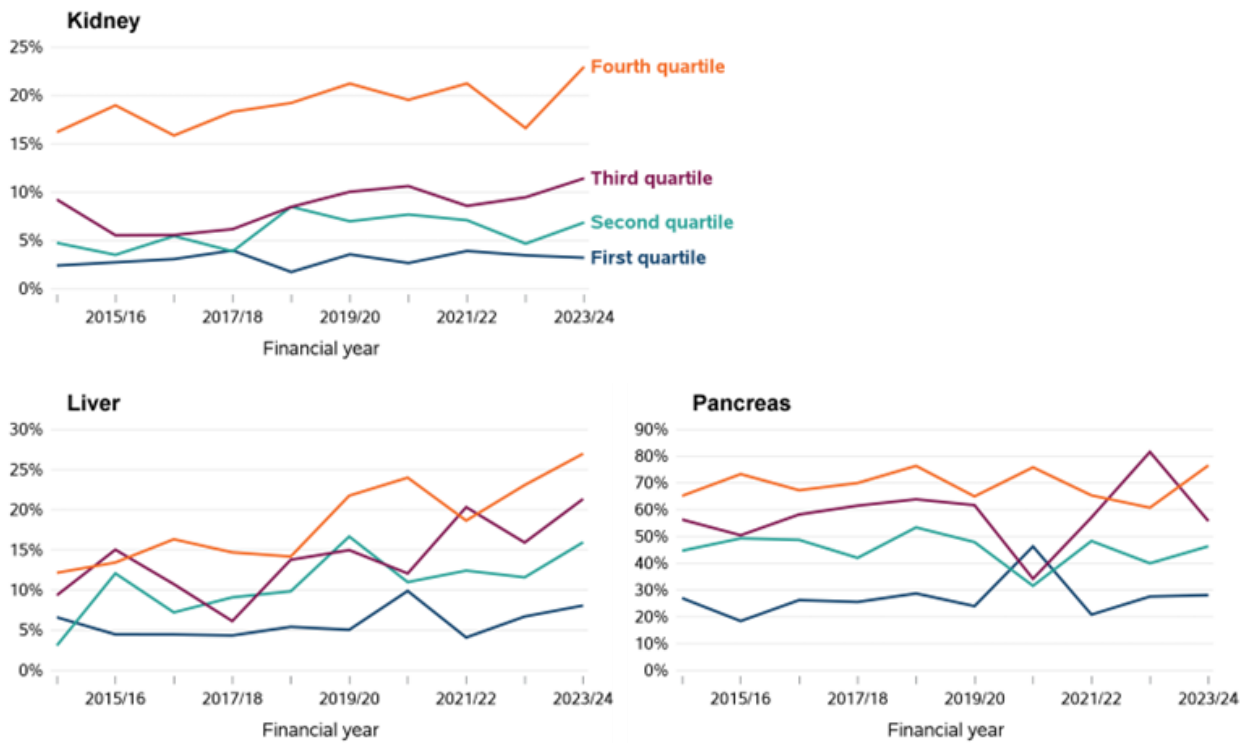


Table 5.16 Percentage of organs retrieved that were not transplanted from DBD donors in the UK, split by DRI quartile, 1 April 2014 - 31 March 2024

Financial Year	Percentage retrieved not transplanted			
	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
Kidney				
2014/15	2.4%	4.7%	9.2%	16.2%
2015/16	2.7%	3.5%	5.5%	19.0%
2016/17	3.1%	5.4%	5.6%	15.9%
2017/18	4.0%	3.9%	6.2%	18.3%
2018/19	1.7%	8.5%	8.5%	19.2%
2019/20	3.5%	7.0%	10.0%	21.2%
2020/21	2.7%	7.7%	10.6%	19.5%
2021/22	3.9%	7.1%	8.6%	21.2%
2022/23	3.4%	4.7%	9.5%	16.6%
2023/24	3.2%	6.8%	11.4%	23.0%
Liver				
2014/15	6.6%	3.1%	9.4%	12.1%
2015/16	4.5%	12.1%	15.0%	13.4%
2016/17	4.5%	7.2%	10.7%	16.3%
2017/18	4.3%	9.1%	6.1%	14.7%
2018/19	5.4%	9.8%	13.8%	14.2%
2019/20	5.1%	16.7%	15.0%	21.8%
2020/21	9.9%	11.0%	12.1%	24.0%
2021/22	4.1%	12.4%	20.3%	18.7%
2022/23	6.7%	11.6%	15.9%	23.1%
2023/24	8.1%	16.0%	21.3%	27.0%
Pancreas				
2014/15	27.0%	44.7%	56.3%	65.2%
2015/16	18.4%	49.3%	50.5%	73.3%
2016/17	26.3%	48.8%	58.2%	67.3%
2017/18	25.6%	42.0%	61.5%	70.0%
2018/19	28.7%	53.4%	63.9%	76.4%
2019/20	24.0%	47.9%	61.7%	65.0%
2020/21	46.3%	31.6%	34.2%	75.9%
2021/22	20.8%	48.3%	57.1%	65.4%
2022/23	27.6%	40.0%	81.6%	60.8%
2023/24	28.1%	46.4%	55.8%	76.6%

Figure 5.13 Percentage of organs retrieved that were not transplanted from DCD donors in the UK, split by DRI quartile, 1 April 2014 – 31 March 2024

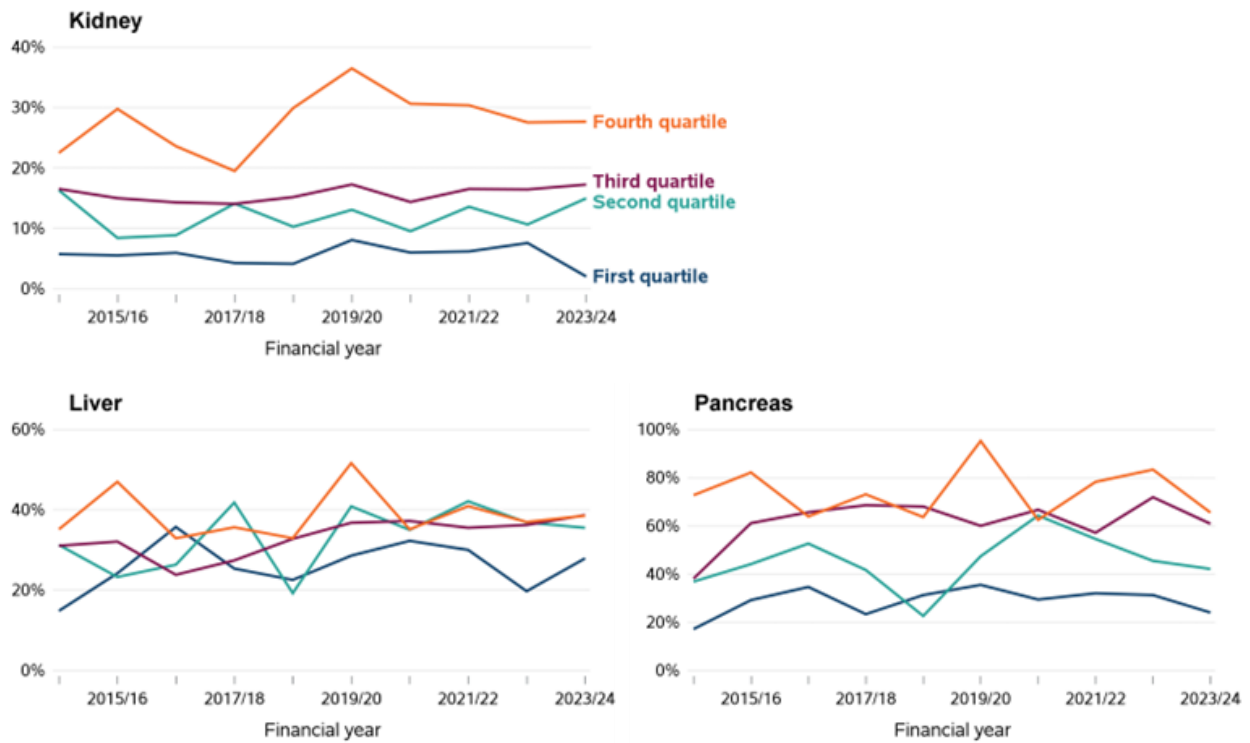


Table 5.17 Percentage of organs retrieved that were not transplanted from DCD donors in the UK, split by DRI quartile, 1 April 2014 - 31 March 2024

Financial Year	Percentage retrieved not transplanted			
	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
Kidney				
2014/15	5.7%	16.3%	16.5%	22.5%
2015/16	5.5%	8.4%	15.0%	29.8%
2016/17	5.9%	8.9%	14.3%	23.6%
2017/18	4.2%	14.1%	14.0%	19.5%
2018/19	4.1%	10.3%	15.2%	29.9%
2019/20	8.1%	13.1%	17.3%	36.5%
2020/21	6.0%	9.5%	14.4%	30.6%
2021/22	6.2%	13.6%	16.5%	30.4%
2022/23	7.6%	10.6%	16.4%	27.5%
2023/24	2.0%	15.0%	17.2%	27.6%
Liver				
2014/15	14.8%	31.3%	31.0%	35.1%
2015/16	24.2%	23.3%	32.1%	47.0%
2016/17	35.7%	26.3%	23.8%	32.9%
2017/18	25.4%	41.8%	27.4%	35.6%
2018/19	22.5%	19.2%	32.8%	32.9%
2019/20	28.6%	40.8%	36.8%	51.6%
2020/21	32.3%	35.0%	37.2%	35.1%
2021/22	30.0%	42.1%	35.5%	40.9%
2022/23	19.7%	36.8%	36.2%	37.0%
2023/24	27.9%	35.5%	38.7%	38.5%
Pancreas				
2014/15	17.1%	36.8%	38.1%	72.7%
2015/16	29.2%	44.1%	61.1%	82.1%
2016/17	34.6%	52.6%	65.6%	63.9%
2017/18	23.3%	41.7%	68.6%	73.1%
2018/19	31.3%	22.6%	68.0%	63.6%
2019/20	35.5%	47.4%	60.0%	95.2%
2020/21	29.4%	64.3%	66.7%	62.5%
2021/22	32.0%	54.5%	57.1%	78.3%
2022/23	31.3%	45.5%	71.9%	83.3%
2023/24	24.0%	42.1%	60.9%	65.5%

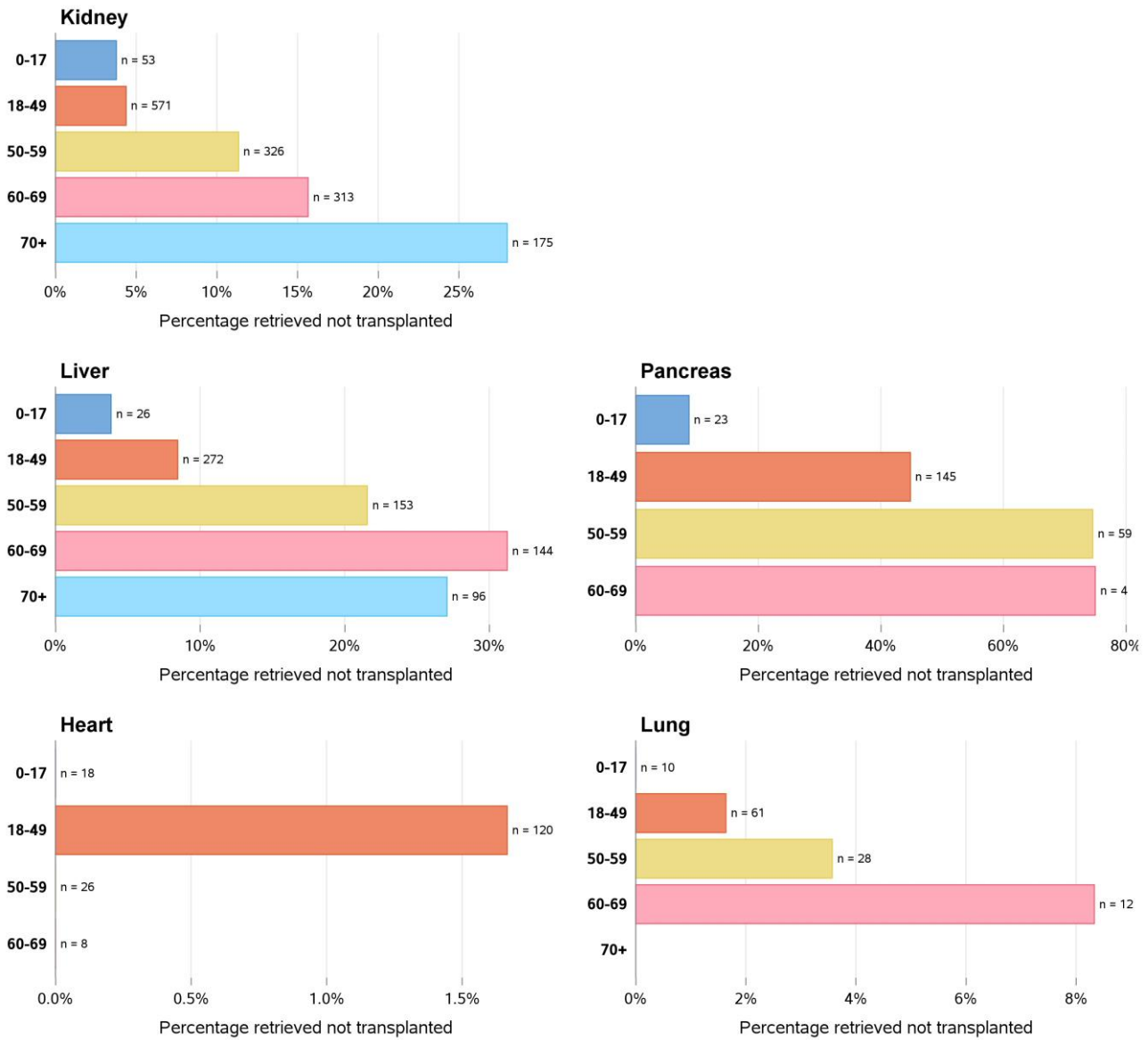
5.5 Retrieved not transplanted organs by donor age

The percentage of retrieved organs that were not transplanted is shown for [DBD](#) donors in **Figure 5.14 and Table 5.18**, and for [DCD](#) donors in **Figure 5.15 and Table 5.19**, with donors grouped into the following age categories:

- 0-17
- 18-49
- 50-59
- 60-69
- 70+

For abdominal organs, generally, the percentage of retrieved organs that were not transplanted increased as the donor age category increased. This was seen for both [DBD](#) and [DCD](#) donors. Due to the low number of retrieved not transplanted cardiothoracic organs, trends were less clear.

Figure 5.14 Percentage of organs retrieved that were not transplanted from DBD donors in the UK, split by donor age, 1 April 2023 – 31 March 2024



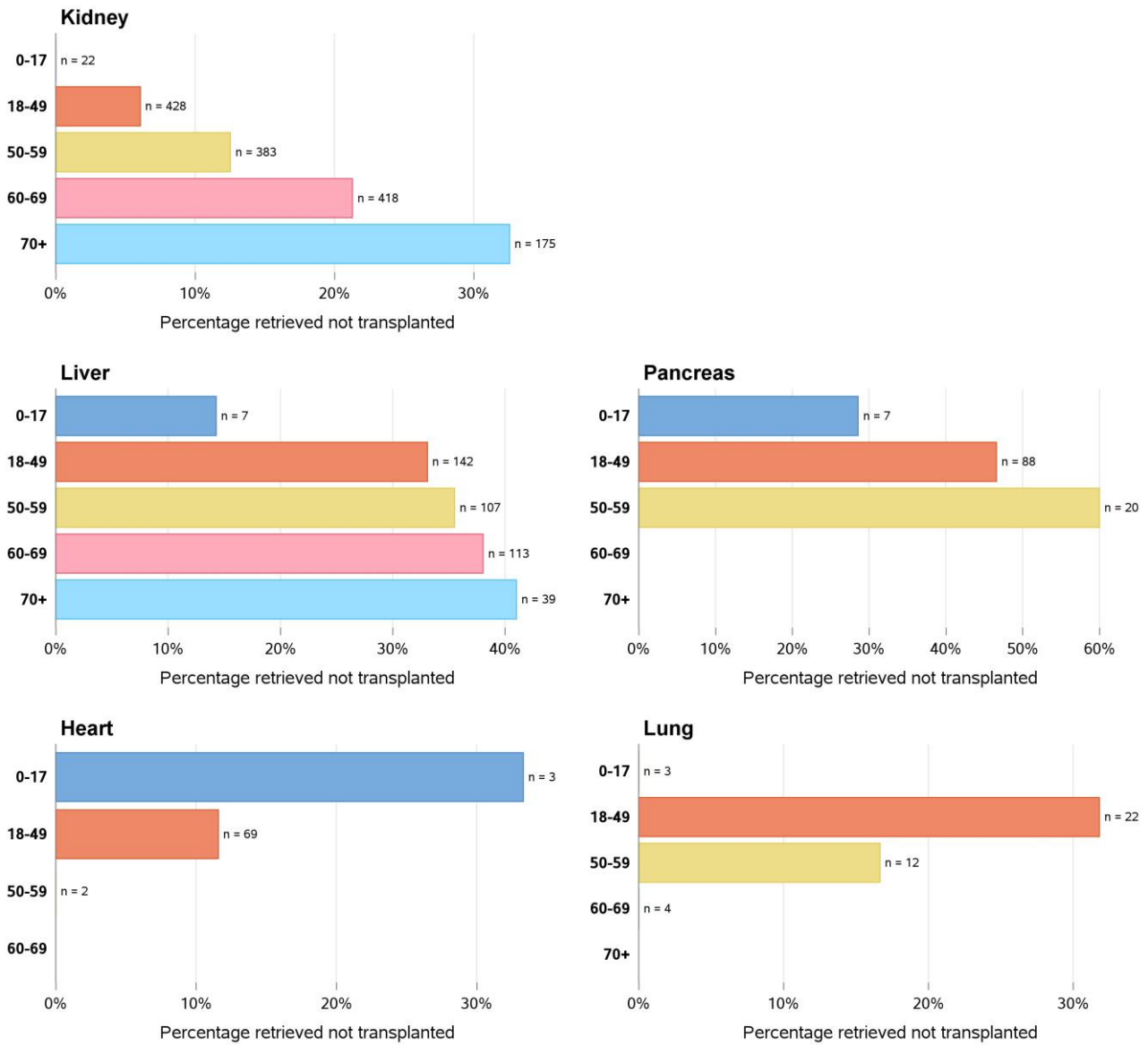
Note that the x-axis range differs for each organ group.

One pancreas retrieved from a donor aged 70+ has been removed due to a data error.

Table 5.18 Retrieved not transplanted I organs from DBD donors in the UK, by donor age, between 1 April 2023 - 31 March 2024

	Donor Age									
	0 - 17		18 - 49		50 - 59		60 - 69		70+	
	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)
Kidney	53	2 (3.8%)	571	25 (4.4%)	326	37 (11.3%)	313	49 (15.7%)	175	49 (28.0%)
Liver	26	1 (3.8%)	272	23 (8.5%)	153	33 (21.6%)	144	45 (31.3%)	96	26 (27.1%)
Pancreas	23	2 (8.7%)	145	65 (44.8%)	59	44 (74.6%)	4	3 (75.0%)	0	.
Heart	18	0 (0.0%)	120	2 (1.7%)	26	0 (0.0%)	8	0 (0.0%)	0	.
Lung	10	0 (0.0%)	61	1 (1.6%)	28	1 (3.6%)	12	1 (8.3%)	0	.

Figure 5.15 Percentage of organs retrieved that were not transplanted from DCD donors in the UK, split by donor age, 1 April 2023 – 31 March 2024



Note that the x-axis range differs for each organ group.

Table 5.19 Retrieved not transplanted organs from DCD donors in the UK, by donor age, between 1 April 2023 - 31 March 2024

	Donor Age									
	0 - 17		18 - 49		50 - 59		60 - 69		70+	
	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)	Retrieved	Retrieved not transplanted (%)
Kidney	22	0 (0.0%)	428	26 (6.1%)	383	48 (12.5%)	418	89 (21.3%)	175	57 (32.6%)
Liver	7	1 (14.3%)	142	47 (33.1%)	107	38 (35.5%)	113	43 (38.1%)	39	16 (41.0%)
Pancreas	7	2 (28.6%)	88	41 (46.6%)	20	12 (60.0%)	0	.	0	.
Heart	3	1 (33.3%)	69	8 (11.6%)	2	0 (0.0%)	0	.	0	.
Lung	3	0 (0.0%)	22	7 (31.8%)	12	2 (16.7%)	4	0 (0.0%)	0	.

Appendix

A1 Glossary of terms

ABO incompatible

The blood group of the donor is incompatible with the blood group of the recipient.

ACLF patients

Patients with acute-on-chronic liver failure, an advanced form of liver disease.

Offering Scheme

When an organ becomes available for transplantation, it is offered to centres/patients according to an offering scheme. Each organ has its own allocation policy which can be found on the NHSBT website:

[Policies and guidance - ODT Clinical - NHS Blood and Transplant](#)

Case mix

The types of patients treated at a unit for a common condition. This can vary across units depending on the facilities available at the unit as well as the types of people in the catchment area of the unit. The definition of what type of patient a person is depends on the patient characteristics that influence the outcome of the treatment. For example the case mix for patients registered for a kidney transplant is defined in terms of various factors such as the blood group, tissue type and age of the patient. These factors have an influence on the chance of a patient receiving a transplant.

Confidence interval (CI)

When an estimate of a quantity such as an offer decline rate is obtained from data, the value of the estimate depends on the set of donor organs that were used. If, by chance, data from a different set of donor organs had been used, the value of the estimate may have been different. There is therefore some uncertainty linked with any estimate. A confidence interval is a range of values whose width gives an indication of the uncertainty or precision of an estimate. The number of offers analysed influences the width of a confidence interval. Smaller data sets tend to lead to wider confidence intervals compared to larger data sets. Estimates from larger data sets are therefore more precise than those from smaller data sets. Confidence intervals are calculated with a stated probability, usually 95%. We then say that there is a 95% chance that the confidence interval includes the true value of the quantity we wish to estimate.

Confidence limit

The upper and lower bounds of a confidence interval.

Donor after brain death (DBD)

A donor whose heart is still beating when their entire brain has stopped working so that they cannot survive without the use of a ventilator. Organs for transplant are removed from the donor while their heart is still beating, but only after extensive tests determine that the brain cannot recover and they have been certified dead.

Donor after circulatory death (DCD)

A donor whose heart stops beating before their brain stops working and who is then certified dead. The organs are then removed.

Donor Risk Index (DRI)

A Donor Risk Index (DRI) can be used to estimate the quality of an organ using data captured on the UK Transplant Registry. DRIs are equations that are derived from

statistical models and lead to a single value estimate of risk; higher values indicate higher estimated risk. There are published DRIs that have been validated for UK cohorts for kidney, liver and pancreas, which are outlined in [Appendix A4](#).

Elective liver patients

Separate selection criteria to join the liver transplant list have been devised for those patients requiring emergency transplantation (super-urgent) compared to those who require a routine procedure (elective transplantation). The two groups have a different range of aetiologies with markedly different short-term prognoses; different criteria are required to define that prognosis. Similarly, processes to allocate a donor liver are different for super-urgent and elective transplantation, reflecting those patient groups with a different risk of death without transplantation.

Funnel plot

A graphical method that shows how consistent the offer decline rates of the different transplant units are compared to the national rate. The graph shows for each unit, an offer decline rate plotted against the number of offers received, with the national rate and confidence limits around this national rate superimposed. In this report, 95% and 99.8% confidence limits were used. Units that lie within the confidence limits have offer decline rates that are statistically consistent with the national rate. When a unit is close to or outside the limits, this is an indication that the centre may have a rate that is considerably different from the national rate.

Fast Track

For each organ group, there are a set of criteria for which the organ may be fast tracked, meaning that the organ will not be offered through the standard allocation scheme and will instead be offered straight out to all centres registered on to the fast track scheme. The fast track criteria for each organ group can be found in the NHSBT allocation policies: [Policies and guidance - ODT Clinical - NHS Blood and Transplant](#)

Higher Quality Donor

A Higher Quality Donor (HQD) is defined by a set of parameters captured on the UK Transplant Registry. These parameters are listed in [Appendix A3](#). There is a different set of parameters for each organ so a donor may be considered an HQD for one organ but not another. While a donor may be considered 'higher quality' according to these parameters for a particular organ, there may be other reasons, which are not captured on the registry, which would deem the organ of lower quality in reality.

HLA incompatible

Human Leucocyte Antigen (HLA) antigens are carried on many cells in the body. Sometimes a patient may have particular antibodies that can react against the donor kidney. Such 'anti-HLA' antibodies carried by the patient are labelled as being 'incompatible' with the donor kidney. This is known as HLA incompatibility.

Multi-organ transplant

A transplant in which the recipient receives more than one organ. For example, a recipient may undergo a transplant of a kidney and liver.

NHSBT Annual Activity Report

The NHSBT Annual Activity Report gives a comprehensive update about organ donors, transplant waiting lists and transplant activity for the UK for the latest financial year and can be found here:

[Annual Activity Report - ODT Clinical - NHS Blood and Transplant](#)

Offer decline rate

When an organ is offered to a centre, the centre can either decline or transplant the organ. The offer decline rate is the percentage of all offers that were declined.

Prolonged Time to Asystole

In DCD donation, organ donation takes place following the diagnosis of death using circulatory criteria after the withdrawal of life sustaining treatment. If diagnosis of death does not occur within a suitable time frame to allow donation to occur, then the organs experience deterioration post treatment withdrawal. This is referred to as prolonged time to asystole.

Reallocation of kidneys

Between 3 April 2006 and 11 September 2019 all kidneys from donation after brain death (DBD) donors were allocated through the 2006 National Kidney Allocation Scheme. There are however certain situations when a kidney can be reallocated to an alternative patient of the centre's choice. This occurs when the kidney is accepted and dispatched to a named patient but is subsequently declined and there are no other patients listed nationally who fall within Tiers A to D of the kidney offering scheme (000 mismatched adults and paediatric patients or favourably matched paediatric patients). In this situation the centre in receipt of the kidney can reallocate the organ to a locally listed patient of their choice based on an individual centre matching run. Since 11 September 2019 all kidneys from deceased donors have been allocated through the 2019 National Kidney Offering Scheme. In a similar fashion to the 2006 scheme, if a kidney needs to be reallocated because the patient for whom the kidney has been accepted cannot subsequently receive the transplant then the kidney can be reallocated to an alternative patient of the centre's choice if the kidney has been dispatched to the transplant centre and there are no suitable patients in Tier A.

Reallocation of pancreases

All pancreases from deceased donors are allocated through the National Pancreas Offering Scheme. If a pancreas needs to be reallocated because the patient for whom the pancreas has been accepted cannot subsequently receive the transplant, then the pancreas can be reallocated to an alternative patient of the centre's choice if the pancreas has been dispatched to the transplant centre.

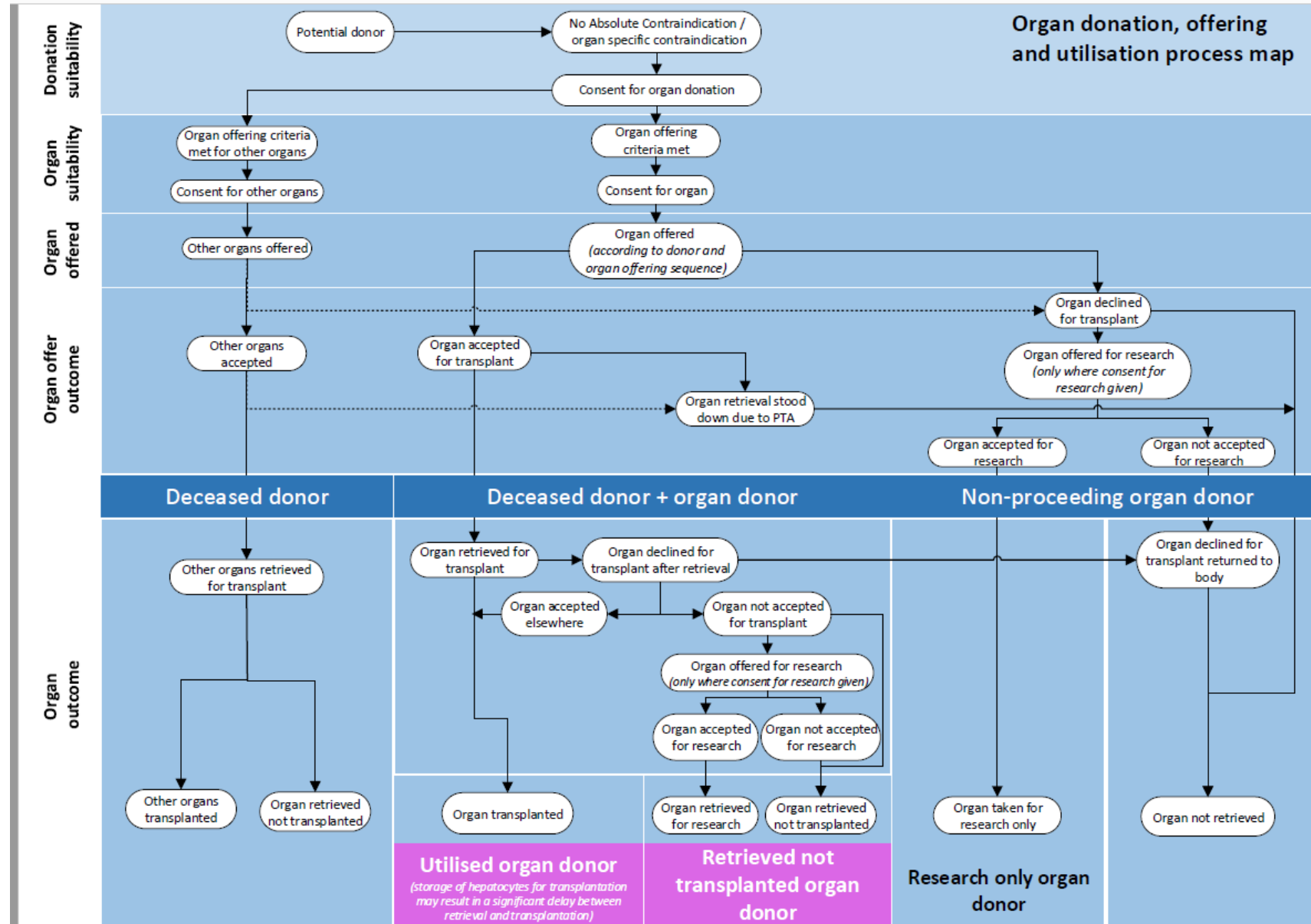
UK Transplant Registry

The UK Transplant Registry, managed by NHS Blood and Transplant, is a computerised system which stores information about donors, transplants and transplant patients. It is essential to facilitate allocation and matching of organs and is also used for improving patient care based on robust evidence.

Unadjusted offer decline rates

Unadjusted offer decline rates do not take account of risk factors and are based only on the number of offers made to a given centre and the number that were declined, during the period of interest. All offers are assumed to be equally likely to be declined. However, some centres may have higher unadjusted offer decline rates than others simply because they tend to have patients with more complex needs on their waiting list and therefore are not in a position to accept organs with a higher perceived risk. Comparison of unadjusted offer decline rates across centres and to the national rate is therefore inappropriate.

A2 Organ utilisation pathway



A3 Higher Quality Donor (HQD) definitions

Kidney HQD parameters:

- No history of malignancy
- No evidence of positive HBsAg
- No evidence of positive HCVAb
- No evidence of positive HIV
- No evidence of positive HTLV
- Aged >10 and <50 years
- No history of hypertension
- No history of diabetes
- No urinary infections in the current hospital admission

Liver HQD parameters:

- DBD donor
- No history of malignancy
- No evidence of positive HBsAg
- No evidence of positive HCVAb
- No evidence of positive HIV
- Age >15 and <60 years
- BMI <30
- Liver Serum ALT <150
- ITU stay less than 10 days
- Bilirubin <25

Pancreas HQD parameters:

- No history of malignancy
- No evidence of positive HBsAg
- No evidence of positive HCVAb
- No evidence of positive HIV
- No evidence of positive HTLV
- Age >15 and <50 years
- BMI <27
- ITU stay less than 10 days
- No cardiac arrest of more than 60 minutes

Heart HQD parameters:

- Age >16 and <50 years
- No past medical history of any of the following:
 - History of hypertension
 - History of diabetes
 - Current or past smoker
 - History of cardiac disease
- Echocardiogram: LVEF $\geq 50\%$ and IVS ≤ 12
- Current dose of Adrenaline, Dopamine and Dobutamine = 0 at the time of organ offer
- No history of malignancy
- No evidence of positive HBsAg1
- No evidence of positive HCVAb1
- No evidence of positive HIV1
- No evidence of positive HTLV1

Lung HQD parameters:

- Age 16 - 55 years
- No history of malignancy
- No history of smoking OR age <30 OR Smoking ≤ 20 pack years
- $pO_2 \geq 40$ kPA with $FiO_2 1$ and PEEP 5 at offering
- Mechanical ventilation ≤ 7 days
- No evidence of positive HBsAg1
- No evidence of positive HCVAb1
- No evidence of positive HIV1
- No evidence of positive HTLV1

A4 Donor Risk Indices

Kidney

The Kidney Donor Risk Index used in the UK Kidney Offering Scheme was used:

$$\text{KDRI} = \exp\{ 0.023 \times (\text{age} - 50) - 0.152 \times ((\text{Height} - 170)/10) + (0.149 \text{ if past history of hypertension}) - (0.184 \text{ if female}) + (0.190 \text{ if positive CMV status}) - 0.023 \times ((\text{eGFR} - 90)/10) + 0.015 \times (\text{days in hospital})\}$$

Liver

The Donor Liver Index presented in Collet et al (2017) was used:

$$\text{DLI} = \exp\{ 1.6775 + 0.009179 \text{ age} - (0.1948 \text{ if female}) + (0.6363 \text{ if DCD}) + (0.4697 \text{ if split liver}) - 0.01283 \times (\text{Height}) + (0.1570 \text{ if smoker}) + 0.009019 \times (\text{Bilirubin}) \}$$

Note that the split liver factor (in grey) was excluded from the equation for the purposes of this report as this would not be populated for unused livers.

Collett D, Friend PJ, Watson CJ. Factors Associated With Short- and Long-term Liver Graft Survival in the United Kingdom: Development of a UK Donor Liver Index. *Transplantation*. 2017 Apr;101(4):786-792.

Pancreas

The Pancreas Donor Risk Index presented in Axelrod et al (2010) was used, which has been validated for use in a UK population (Mittal et al, 2015):

$$\text{pDRI} = \exp\{ (-0.13792 \text{ if female}) - (0.034455 \text{ if age} < 20) \times (\text{age} - 20) + 0.026149 \times (\text{age} - 28) + (0.19490 \text{ if Creatinine} > 2.5) + (0.23951 \text{ if black ethnic group}) + (0.15711 \text{ if asian ethnic group}) - 0.000986347 \times (\text{Donor BMI} - 24) + (0.033274 \text{ if BMI} > 25) \times (\text{BMI} - 25) - 0.006073879 \times (\text{Height} - 173) + (0.21018 \text{ if cause of death CVA}) - (0.28137 \text{ if cause of death CVA for PAK tx}) + 0.014678 \times (\text{Preservation Time} - 12) + (0.33172 \text{ if DCD})\}$$

Note that the preservation time factor (in grey) was excluded from the equation for the purposes of this report as this would not be populated for unused pancreases.

Axelrod DA, Sung RS, Meyer KH, Wolfe RA, Kaufman DB. Systematic evaluation of pancreas allograft quality, outcomes and geographic variation in utilization. *Am J Transplant*. 2010 Apr;10(4):837-845.

Mittal S, Lee FJ, Bradbury L, Collett D, Reddy S, Sinha S, Sharples E, Ploeg RJ, Friend PJ, Vaidya A. Validation of the Pancreas Donor Risk Index for use in a UK population. *Transpl Int*. 2015 Sep;28(9):1028-33.

A5 Decline reason categories

All available offer decline reasons are listed below, grouped by category. Please note that some of these decline reasons may not apply to the offered organs included in this report.

Category	Offer decline reasons within this category
<i>Organ unsuitable</i>	Organ not present; Donor unsuitable - DCD donor; Donor unstable; Donor unsuitable - size; Donor arrested; Poor function; Infection; Contamination/damage in removal; Poor function/ischaemic time; Anatomical anomaly, please specify; Poor perfusion; On perfusion machine; HLA/ABO type; X-match positive; Unable to x-match; Better match required; Organ damaged; Contamination - organ unsuitable; Ischaemia time too long - warm; Ischaemia time too long - cold; Unable to x-match - no recipient material; Infection in storage medium; Expired in tissue bank; Tissue bank classify as unsuitable; Steatosis (Fatty organ) - organ unsuitable; Organ/tissue unsuitable for transplant; Unable to purify pancreas islets; Insufficient pancreas islets; Whole organ cut down for transplant; Zone team felt organ not viable; Organ too small; Fibrosis; Insufficient distension with collagenase; Insufficient islet yield - organ unsuitable; Insufficient islet viability; Insufficient islet purity; Packed cell volume too large; Organ fatty infiltration; No kidney available; Organ damage (retrieval injury), please specify; Organ damage (at transplant centre), please specify; Organ damage (pre-mortem), please specify; Organ trauma - contusion, laceration; Insufficient investigations to assess organ function; Poor function - initial assessment; Poor function at retrieval; Biliary pathology, please specify; Extensive adhesions; Scarring; Donor diabetes - organ unsuitable; Donor history of chronic pancreatitis; Donor hyperglycaemia (without diabetes diagnosis); Organ failed viability assessment, please specify; Taken for vessels only; Taken for histology/biopsy only; Multiple cysts; Severe hypertension; Paediatric en bloc not performed in this centre; Would only accept for dual kidney transplant; Renal tumour, please specify - organ unsuitable; Organ unsuitable - scan results; Coronary artery disease; Excessive catecholamines; Ventricular hypertrophy; Donor unsuitable - smoking history - organ unsuitable; Aspiration; Atelectasis; Bullous disease/emphysema; ABO mismatch; Age mismatch; HLA mismatch; Size mismatch; Sex mismatch; Size and sex mismatch; Anticipated positive crossmatch; Donor hepatitis C; Donor hypertension; Donor hepatitis B; Atheromatous SMA/splenic artery; Portal vein diseased; IVC diseased; Atheromatous aortic patch/proximal renal artery; Donor specific antibodies; Insufficient islet yield - organ unsuitable for named recipient; Donor diabetes - organ unsuitable for named recipient; Renal tumour, please specify - organ unsuitable for named recipient; Donor unsuitable - smoking history - organ unsuitable for named recipient; Steatosis (fatty organ) - organ unsuitable for named recipient; Organ damage due to COVID-19; Adverse findings on machine perfusion; Poor function following machine perfusion; Unsuitable for isolation - isolation lab opinion, please specify; Other, please specify - organ unsuitable; Other - organ unsuitable for named recipient
<i>Donor unsuitable</i>	Donor unsuitable - cause of death; Donor unsuitable - age; Donor unsuitable - past history; Brain stem tests not satisfied; Donor unsuitable - other/unknown; No blood for virology; Clinical; Donor unsuitable - Tumour, please specify; Donor unsuitable - Medication; Other disease, please specify; Unable to x-match - no donor material; Donor unsuitable - virology; Donor unsuitable - medical reason; Increased infection risk, please specify; Prolonged time to asystole; Composite organ/tissue unavailable - donor unsuitable; Whole liver unavailable - donor unsuitable; Prolonged ventilation; Donor COVID-19 infection risk; Donor positive for COVID-19 after offering; Other, please specify - donor unsuitable
<i>Logistic issues</i>	No beds/staff/theatre; No time; Centre already transplanting; Limited theatre time; Poor weather; Distance; No beds; No staff; No theatre; Transport difficulties; Donor cross clamp time too imminent; No UK retrieval team available; Timing of donation; No isolation lab available; No "COVID-19 free" ICU beds available; No "COVID-19 free" ward beds available; Limited resources due to COVID-19; COVID-19 related transport difficulty, please specify; Other, please specify - logistic issues

<i>Centre reasons</i>	No suitable recipients; Centre barred; Centre closed; Centre criteria not achieved; Organ used elsewhere; No response to fast track/group offer; Recipient centre; No suitable recipients due to reduced patient list: COVID-19; Centre closed due to COVID-19 risk, please specify; Centre closed due to COVID-19 staff absences, please specify; Max number liver acceptances reached; Other, please specify - centre reason
<i>Recipient reasons</i>	Recipient unfit; Recipient died; Recipient unavailable; Recipient refused; Recipient did not need transplant; Recipient due to receive live donor tx; Split liver not suitable for recipient; Recipient has potential live donor; Recipient travel time too long; Donor already accepted for this recipient; Composite organ/tissue unavailable - recipient unsuitable; Whole liver unavailable - recipient unsuitable; Recipient unfit - COVID-19; Declined by centre due to COVID-19 risk in recipient; Declined by centre due to COVID-19 risk with transplant; Recipient unsuitable for augmented immunosuppression (COVID-19 risk); Other - recipient unsuitable
<i>Other</i>	Not applicable; Organ not offered eg euro/living donor; Offer withdrawn; Donor recovered; Other administrative reason; Offered to national pool as payback; Currently in tissue bank; Epikeratophakia; Issued from tissue bank for unknown; Taken for hepatocytes; Only taken for research use; Packaging; Offer waived; Offer from Europe for super-urgents; Heart retrieved for valves only; Used for research after declined by centres; Donor centre; Other, please specify; Unknown; Other administrative reason; Tissue damage - ocular; Tissue was torn on receipt of the tissue; Tissue damaged during graft preparation by surgeon; Tissue damaged in hospital; Contamination - ocular; Tissue recalled by eye bank due to identification of contamination post-issue; Suspected contamination detected in hospital; Not reported; Tissue unsuitable for transplant; Incorrect tissue ordered by hospital; Incorrect tissue issued by eye bank; Opacity/scars identified; Unsuitable pre-cut or pre-peeled tissue - DS(A)EK/DMEK; Issues with preloaded tissues; Quality concerns identified in hospital; Other, please specify - ocular; Other, please specify - research/disposed of; Decline for all recipients, please specify

A6 Reason for non-use categories

All available reasons for non-use are listed below, grouped by category. Please note that some of these reasons may not apply to the retrieved organs included in this report.

Category	Non-use reasons within this category
<i>Donor unsuitable - medical</i>	Donor unsuitable - cause of death; Infection; Clinical; Donor unsuitable - Tumour, please specify; Anatomical anomaly, please specify; Donor unsuitable - Medication; Other disease, please specify; Donor unsuitable - virology; Donor unsuitable - medical reason; Prolonged time to asystole; Insufficient investigations to assess organ function; Donor history of chronic pancreatitis; Organ unsuitable - scan results; Aspiration; Organ damage due to COVID-19; Donor COVID-19 infection risk; Other, please specify - donor unsuitable
<i>Donor unsuitable - non medical</i>	Organ not present; Donor recovered; Donor unsuitable - DCD donor; Brain stem tests not satisfied; Donor unstable; Donor unsuitable - size; Donor unsuitable - other/unknown
<i>Donor unsuitable - age</i>	Donor unsuitable - age
<i>Organ unsuitable - clinical</i>	Donor unsuitable - past history; Contamination/damage in removal; Poor function/ischaemic time; Poor perfusion; On perfusion machine; HLA/ABO type; Organ damaged; Contamination - organ unsuitable; Ischaemia time too long - warm; Ischaemia time too long - cold; Steatosis (Fatty organ) - organ unsuitable; Organ/tissue unsuitable for transplant; Unable to purify pancreas islets; Insufficient pancreas islets; Organ too small; Fibrosis; Insufficient distension with collagenase; Insufficient islet yield - organ unsuitable; Insufficient islet viability; Insufficient islet purity; Packed cell volume too large; Organ fatty infiltration; Organ damage (retrieval injury), please specify; Organ damage (at transplant centre), please specify; Donor diabetes - organ unsuitable; Organ failed viability assessment, please specify; Renal tumour, please specify - organ unsuitable; Coronary artery disease; Insufficient islet yield - organ unsuitable for named recipient; Other, please specify - organ unsuitable
<i>Poor function</i>	Poor function; Poor function - initial assessment; Poor function at retrieval; Poor function following machine perfusion
<i>Other</i>	Donor arrested; No suitable recipients; No beds/staff/theatre; No time; Centre barred; Centre already transplanting; Centre closed; Centre criteria not achieved; No blood for virology; Other administrative reason; X-match positive; Unable to x-match; Better match required; Unable to x-match - no donor material; Unable to x-match - no recipient material; Recipient unfit; Recipient died; Recipient unavailable; Recipient refused; Recipient did not need transplant; Limited theatre time; Offered to national pool as payback; Currently in tissue bank; Infection in storage medium; Expired in tissue bank; Epikeratophakia; Tissue bank classify as unsuitable; Issued from tissue bank for unknown; Taken for hepatocytes; Only taken for research use; Poor weather; Packaging; Organ used elsewhere; Distance; Offer waived; No beds; No staff; No theatre; Transport difficulties; No response to fast track/group offer; Offer from Europe for super-urgents; Heart retrieved for valves only; Used for research after declined by centres; Whole organ cut down for transplant; Donor centre; Recipient centre; Zone team felt organ not viable; Other, please specify; Unknown; No isolation lab available; Not reported; Other, please specify - ocular; Other, please specify - logistic issues; Other, please specify - centre reason; Other, please specify - research/disposed of

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