

Detailed Report

Actual and Potential Deceased Organ Donation

1 April 2017 - 31 March 2018

Scotland Organ Donation Services Team



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Further Information

- Appendix A.1 contains definitions of terms and abbreviations used throughout this report and summarises the main changes made to the PDA over time.
- The latest Organ Donation and Transplantation Activity Report is available at <https://www.organdonation.nhs.uk/supporting-my-decision/statistics-about-organ-donation/transplant-activity-report/>
- The latest PDA Annual Report is available at <http://www.odt.nhs.uk/statistics-and-reports/potential-donor-audit/>
- Please refer any queries or requests for further information to your local Specialist Nurse - Organ Donation (SNOD)

Source

NHS Blood and Transplant: UK Transplant Registry (UKTR), Potential Donor Audit (PDA) and Referral Record.
Issued May 2018 based on data meeting PDA criteria reported at 9 May 2018.

1. Donor Outcomes

A summary of the number of donors, patients transplanted, average number of organs donated per donor and organs donated.

Data in this section is obtained from the UK Transplant Registry

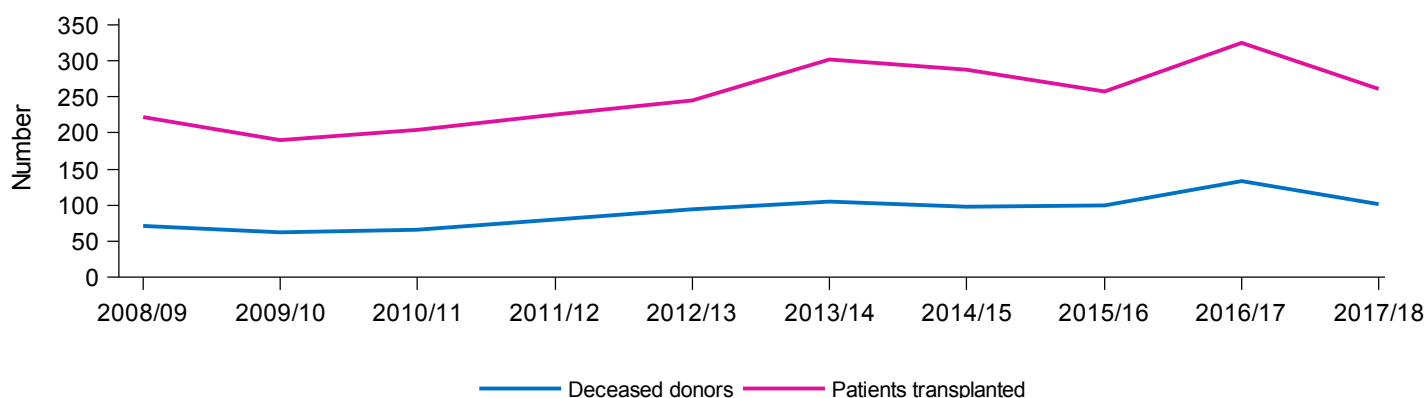
Between 1 April 2017 and 31 March 2018, the Scotland Organ Donation Services Team facilitated 102 deceased solid organ donors, resulting in 261 patients receiving a transplant. Additional information is shown in Tables 1.1 and 1.2, along with comparison data for 2016/17. Figure 1.1 shows the number of donors and patients transplanted for the previous ten periods for comparison.

Donor type	Number of donors	Number of patients transplanted	Average number of organs donated per donor	
			Scotland	UK
DBD	61 (77)	186 (223)	4.1 (3.6)	3.7 (3.7)
DCD	41 (56)	75 (102)	2.3 (2.4)	2.8 (2.7)
DBD and DCD	102 (133)	261 (325)	3.4 (3.1)	3.3 (3.3)

In addition to the 102 proceeding donors there were 43 additional consented donors that did not proceed, 5 where DBD organ donation was being facilitated and 38 where DCD organ donation was being facilitated.

Donor type	Number of organs transplanted by type					
	Kidney	Pancreas	Liver	Heart	Lung	Small bowel
DBD	103 (135)	16 (13)	57 (62)	9 (9)	27 (24)	2 (1)
DCD	68 (90)	4 (1)	8 (14)	0 (0)	0 (4)	0 (0)
DBD and DCD	171 (225)	20 (14)	65 (76)	9 (9)	27 (28)	2 (1)

Figure 1.1 Number of donors and patients transplanted, 1 April 2008 - 31 March 2018



2. Key Rates in Potential for Organ Donation

A summary of the key rates on the potential for organ donation

Data in this section is obtained from the National Potential Donor Audit (PDA)

This section presents specific percentage measures of potential donation activity for the Scotland Organ Donation Services Team.

Performance in the team has been compared with UK performance in both Figure 2.1 and Table 2.1 using funnel plot boundaries and the Gold, Silver, Bronze, Amber, and Red (GoSBAR) colour scheme. When compared with UK performance, gold represents exceptional, silver represents good, bronze represents average, amber represents below average, and red represents poor performance. See Appendix A.3 for funnel plot ranges used.

It is acknowledged that the PDA does not capture all activity. In total there were 40 patients referred in 2017/18 who are not included in this section onwards because they were either over 80 years of age or did not die in a unit participating in the PDA. None of these are included in Section 1 because they did not become a solid organ donor.

Goal: The agreed 2017/18 national targets for DBD and DCD authorisation rates are 73% and 67%, respectively.

Figure 2.1 Key rates on the potential for organ donation including UK comparison, 1 April 2017 - 31 March 2018

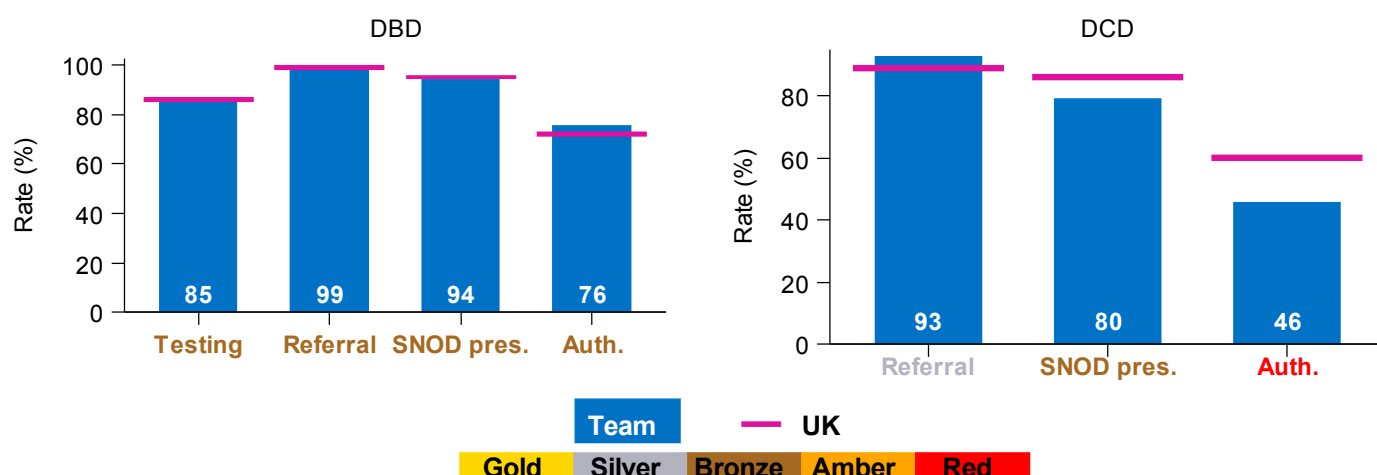
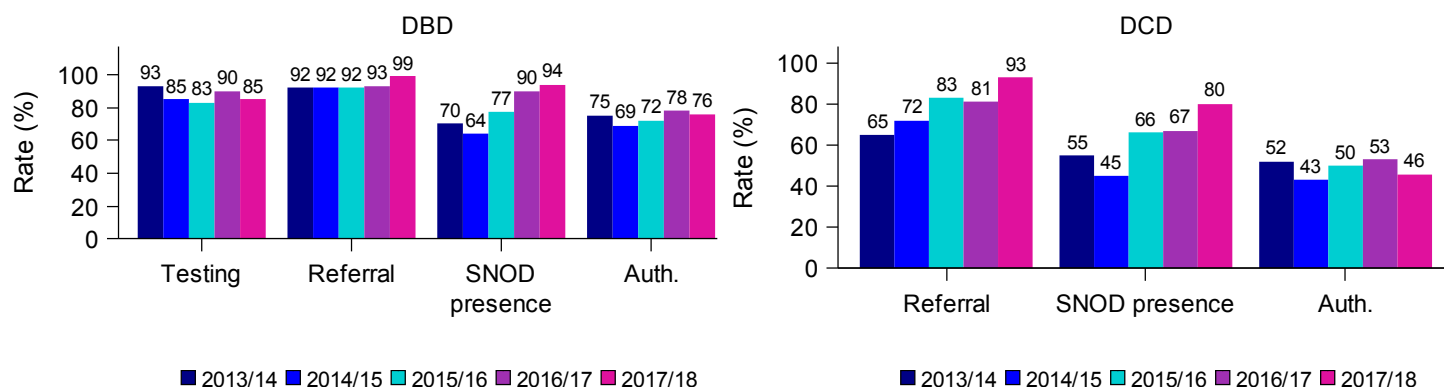


Figure 2.2 Trends in key rates on the potential for organ donation, 1 April 2013 - 31 March 2018



**Table 2.1 Key numbers, rates and comparison with national rates,
1 April 2017 - 31 March 2018**

	DBD		DCD		Deceased donors	
	Scotland	UK	Scotland	UK	Scotland	UK
Patients meeting organ donation referral criteria ¹	117	1954	357	6281	461	7978
Referred to Organ Donation Service	116	1929	332	5615	435	7302
<i>Referral rate %</i>	B 99%	99%	S 93%	89%	S 94%	92%
Neurological death tested	100	1676				
<i>Testing rate %</i>	B 85%	86%				
Eligible donors ²	98	1582	303	4456	401	6038
Family approached	90	1471	161	1858	251	3329
Family approached and SNOD present	85	1394	128	1591	213	2985
<i>% of approaches where SNOD present</i>	B 94%	95%	B 80%	86%	A 85%	90%
Authorisation ascertained	68	1066	74	1115	142	2181
<i>Authorisation rate %</i>	B 76%	72%	R 46%	60%	A 57%	66%
Actual donors (PDA data)	62	955	40	613	102	1568
<i>% of authorised donors that became actual donors</i>	91%	90%	54%	55%	72%	72%

¹ DBD - A patient with suspected neurological death

DCD - A patient in whom imminent death is anticipated, ie a patient receiving assisted ventilation, a clinical decision to withdraw treatment has been made and death is anticipated within 4 hours

² DBD - Death confirmed by neurological tests and no absolute contraindications to solid organ donation

DCD - Imminent death anticipated and treatment withdrawn with no absolute contraindications to solid organ donation

Note that a patient that meets both the referral criteria for DBD and DCD organ donation is featured in both the DBD and DCD data but will only be counted once in the deceased donors total

Gold **Silver** **Bronze** **Amber** **Red**

Note that from 1 April 2017 to 31 March 2018 there were 2 eligible DCD donors for whom authorisation for donation was ascertained who are not included in this section because they were either over 80 years of age or did not die in a unit participating in the PDA.

3. Best quality of care in organ donation

Key stages in best quality of care in organ donation

Data in this section is obtained from the National Potential Donor Audit (PDA)

This section provides information on the quality of care in the Scotland Organ Donation Services Team at the key stages of organ donation. The ambition is that the team misses no opportunity to make a transplant happen and that opportunities are maximised at every stage.

3.1 Neurological death testing

Goal: neurological death tests are performed wherever possible.

Figure 3.1 Number of patients with suspected neurological death, 1 April 2013 - 31 March 2018

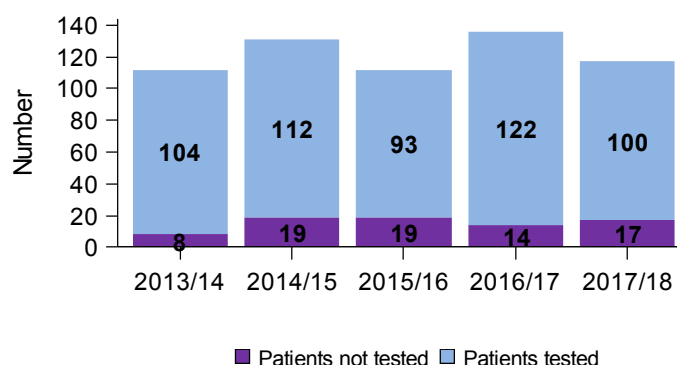


Table 3.1 Reasons given for neurological death tests not being performed, 1 April 2017 - 31 March 2018

	Scotland	UK
Biochemical/endocrine abnormality	2	26
Clinical reason/Clinicians decision	4	64
Continuing effects of sedatives	-	17
Family declined donation	2	18
Family pressure not to test	2	21
Hypothermia	-	1
Inability to test all reflexes	-	12
Medical contraindication to donation	1	6
Other	1	18
Patient had previously expressed a wish not to donate	1	2
Patient haemodynamically unstable	2	69
Pressure on ICU beds	-	3
SN-OD advised that donor not suitable	1	9
Treatment withdrawn	1	9
Unknown	-	3
Total	17	278

If 'other', please contact your local SNOD or CLOD for more information, if required.

3.2 Referral to Organ Donation Service

Goal: Every patient who meets the referral criteria should be identified and referred to the Organ Donation Service, as per NHS Blood and Transplant (NHSBT) Best Practice Guidance on timely identification and referral of potential organ donors.¹

Aim: There should be no purple on the following charts.

Figure 3.2 Number of patients meeting referral criteria, 1 April 2013 - 31 March 2018

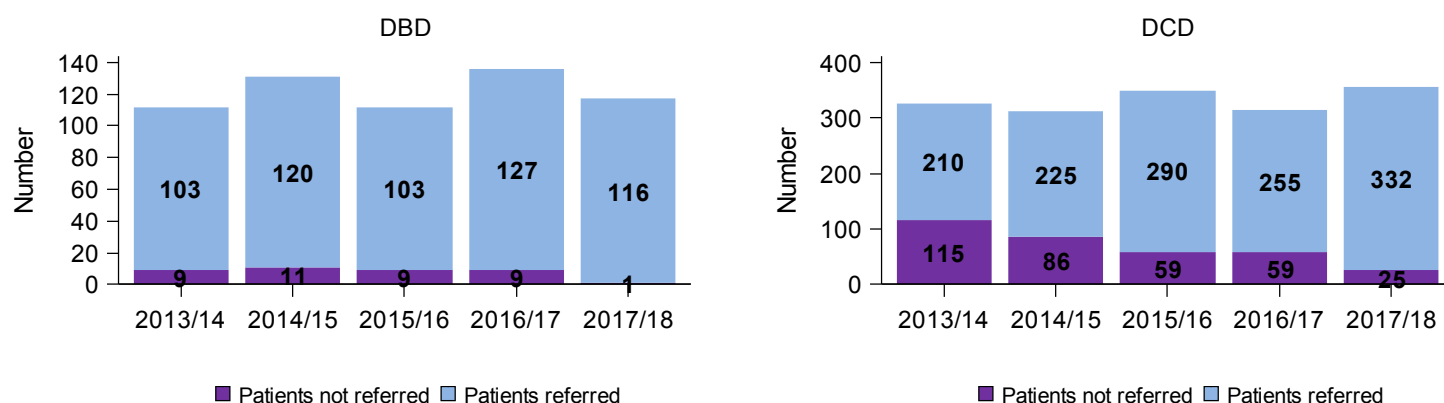


Table 3.2 Reasons given why patient not referred to SNOD, 1 April 2017 - 31 March 2018

	DBD		DCD	
	Scotland	UK	Scotland	UK
Clinician assessed that patient was unlikely to become asystolic within 4 hours	-	-	-	7
Coroner/Procurator Fiscal Reason	-	1	-	3
Family declined donation after neurological testing	-	2	-	-
Family declined donation following decision to withdraw treatment	-	-	4	24
Family declined donation prior to neurological testing	-	2	-	3
Medical contraindications	1	1	3	110
Neurological death not confirmed	-	1	-	-
Not identified as a potential donor/organ donation not considered	-	10	9	320
Other	-	5	2	76
Patient had previously expressed a wish not to donate	-	-	1	2
Pressure on ICU beds	-	-	2	7
Reluctance to approach family	-	2	1	8
Thought to be medically unsuitable	-	1	3	106
Total	1	25	25	666

If 'other', please contact your local SNOD or CLOD for more information, if required.

3.3 Contraindications

Table 3.3 shows the primary absolute medical contraindications to solid organ donation, if applicable, for potential DBD donors confirmed dead by neurological death tests and potential DCD donors in the team.

Table 3.3 Primary absolute medical contraindications to solid organ donation, 1 April 2017 - 31 March 2018

	DBD		DCD	
	Scotland	UK	Scotland	UK
Active (not in remission) haematological malignancy (myeloma, lymphoma, leukaemia)	3	15	8	212
All secondary intracerebral tumours	-	-	-	2
Any active cancer with evidence of spread outside affected organ within 3 years of donation	1	41	24	605
Choriocarcinoma	-	-	-	1
Definite, probable or possible case of human TSE, including CJD and vCJD	-	-	-	2
HIV disease (but not HIV infection)	-	2	-	14
Human TSE, CJD or vCJD; blood relatives with CJD; other infectious neurodegenerative diseases	-	-	-	6
Melanoma (except completely excised Stage 1 cancers)	-	4	1	9
No transplantable organ in accordance with organ specific contraindications	-	19	-	306
Other neurodegenerative diseases associated with infectious agents	-	-	-	1
Primary intra-cerebral lymphoma	-	-	-	3
TB: active and untreated	-	3	2	17
Total	4	84	35	1178

If 'other', please contact your local SNOD or CLOD for more information, if required.

3.4 SNOD presence

Goal: A SNOD should be present during the formal family approach as per NHS Blood and Transplant (NHSBT) Best Practice Guidance.²

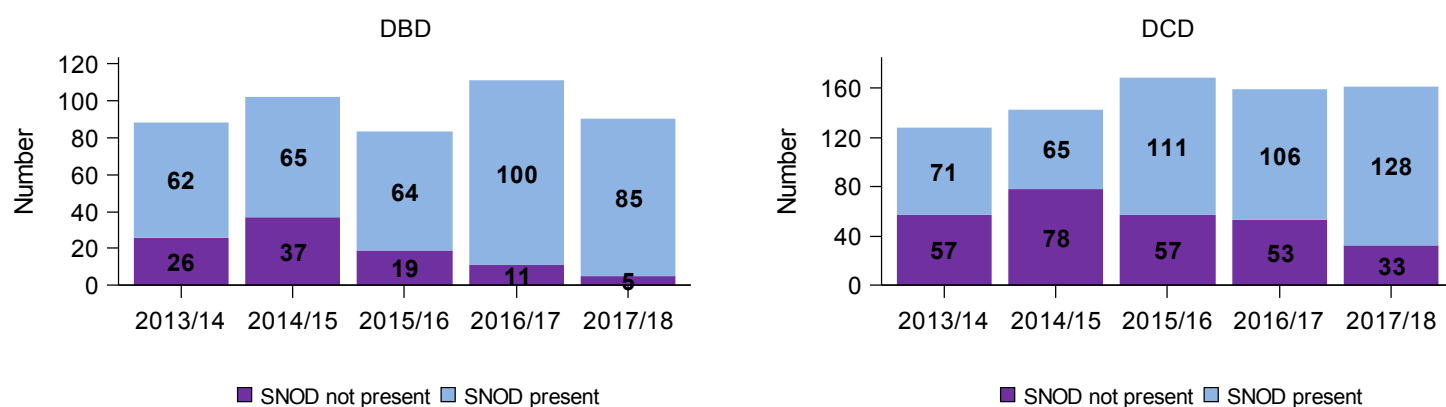
Aim: There should be no purple on the following charts.

In the UK, in 2017/18, when a SNOD was not present for the approach to the family to discuss organ donation, DBD and DCD authorisation rates were 36% and 18%, respectively, compared with DBD and DCD consent rates of 74% and 67%, respectively, when a SNOD was present.

Within the Boards in the team, when a SNOD was not present for the approach to the family to discuss organ donation, DBD and DCD authorisation rates were 0% and 0%, respectively, compared with DBD and DCD authorisation rates of 80% and 58%, respectively, when a SNOD was present.

Every approach to those close to the patient should be planned with the multidisciplinary team (MDT), should involve the SNOD and should be clearly planned taking into account the known wishes of the patient. The NHS Organ Donor Register (ODR) should be checked in all cases of potential donation and this information must be discussed with the family as it represents the eligible donor's legal consent to donation.

Figure 3.3 Number of families approached by SNOD presence, 1 April 2013 - 31 March 2018



¹ NHS Blood and Transplant, 2012.

Timely Identification and Referral of Potential Organ Donors - A Strategy for Implementation of Best Practice
[accessed 9 May 2018]

² NHS Blood and Transplant, 2013.

Approaching the Families of Potential Organ Donors – Best Practice Guidance
[accessed 9 May 2018]

3.5 Authorisation

Goal: The agreed 2017/18 national targets for DBD and DCD authorisation rates are 73% and 67%, respectively.

In 2017/18 the DBD and DCD authorisation rates in the team were 76% and 46%, respectively.

Figure 3.4 Number of families approached, 1 April 2013 - 31 March 2018

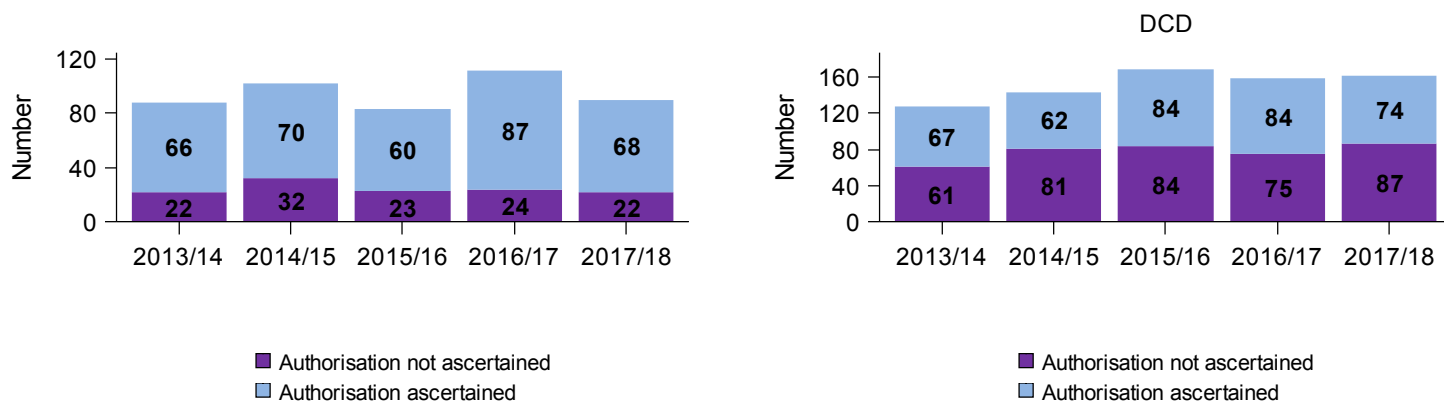


Table 3.4 Reasons given why authorisation was not ascertained, 1 April 2017 - 31 March 2018

	DBD		DCD	
	Scotland	UK	Scotland	UK
Families concerned about organ allocation	-	-	-	1
Family concerned donation may delay the funeral	-	2	-	1
Family concerned that organs may not be transplanted	2	2	4	11
Family did not believe in donation	-	13	5	29
Family did not want surgery to the body	6	52	4	72
Family felt it was against their religious/cultural beliefs	1	44	-	25
Family felt the body needs to be buried whole (unrelated to religious or cultural reasons)	-	39	1	24
Family felt the length of time for donation process was too long	1	23	19	128
Family felt the patient had suffered enough	1	15	6	57
Family had difficulty understanding/accepting neurological testing	-	3	-	-
Family wanted to stay with the patient after death	-	-	2	9
Family were divided over the decision	1	21	1	26
Family were not sure whether the patient would have agreed to donation	4	65	19	103
Other	-	24	3	79
Patient previously expressed a wish not to donate	4	91	21	162
Strong refusal - probing not appropriate	2	11	2	16
Total	22	405	87	743

If 'other', please contact your local SNOD or CLOD for more information, if required.

3.6 Solid organ donation

Goal: NHSBT is committed to supporting transplant units to ensure as many organs as possible are safely transplanted. The strategy for achieving this, including steps to minimising warm ischaemic injury in proceeding DCD donors, is set out in NHSBT Taking Organ Utilisation to 2020³.

**Table 3.5 Reasons why solid organ donation did not occur,
1 April 2017 - 31 March 2018**

	DBD		DCD	
	Scotland	UK	Scotland	UK
Cardiac Arrest	-	-	-	6
Coroner/Procurator Fiscal refusal	1	19	1	15
Family changed mind	1	4	-	25
Family placed conditions on donation	-	1	-	-
General instability	1	17	3	36
Logistic reasons	-	1	-	1
Organs deemed medically unsuitable by recipient centres	1	40	6	146
Organs deemed medically unsuitable on surgical inspection	1	17	-	8
Other	-	3	2	35
Positive virology	1	9	1	9
Prolonged time to asystole	-	-	21	221
Total	6	111	34	502

If 'other', please contact your local SNOD or CLOD for more information, if required.

³NHS Blood and Transplant, 2017.
Taking Organ Utilisation to 2020
[accessed 9 May 2018]

4. Comparative Data

A comparison of performance in your team with national data

Data in this section is obtained from the National Potential Donor Audit (PDA)

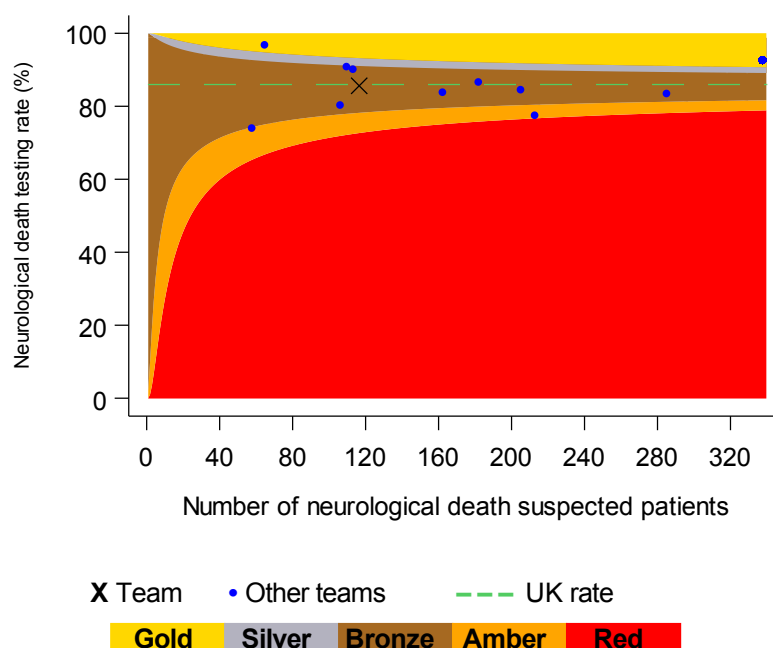
This section compares the quality of care in the key areas of organ donation in the Scotland Organ Donation Services team with the UK rate using funnel plots. The UK rate is shown as a green dashed line and the funnel shape is formed by the 95% and 99.8% confidence limits around the UK rate. The confidence limits reflect the level of precision of the UK rate relative to the number of observations. Performance in the team is indicated by a black cross. The Gold, Silver, Bronze, Amber, and Red colour scheme is used to indicate whether performance in the team, when compared to UK performance, is exceptional (gold), good (silver), average (bronze), below average (amber) or poor (red).

It is important to note that the differences in patient mix have not been accounted for in these plots. Further to these, separate funnel plots for DBD and DCD rates are presented in Section 8.

4.1 Neurological death testing

Goal: neurological death tests are performed wherever possible.

Figure 4.1 Funnel plot of neurological death testing rate, 1 April 2017 - 31 March 2018

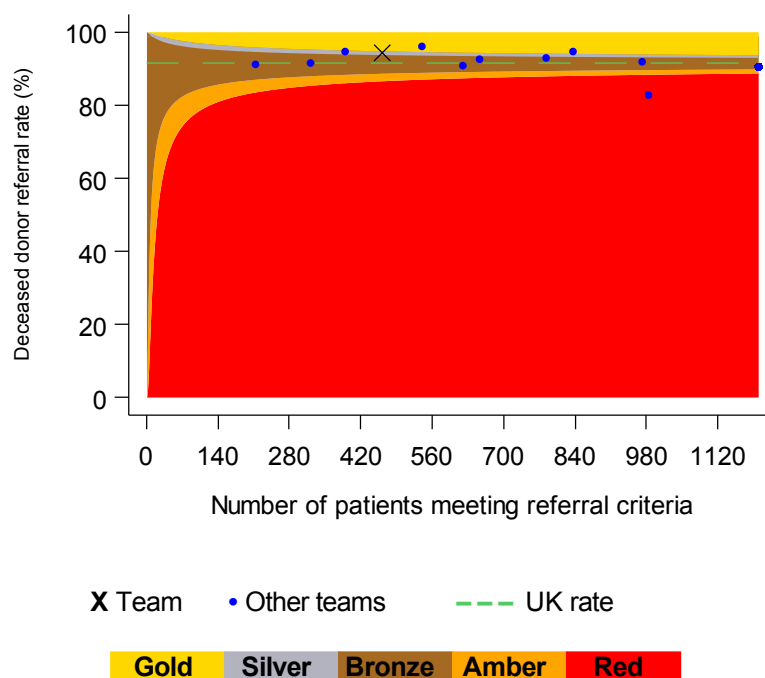


When compared with UK performance, the performance within the Boards in the team was average (bronze) for neurological death testing.

4.2 Referral to Organ Donation Service

Goal: Every patient who meets the referral criteria should be identified and referred to NHSBT's Organ Donation Service, as per NHS Blood and Transplant (NHSBT) Best Practice Guidance on timely identification and referral of potential organ donors.¹

Figure 4.2 Funnel plot of deceased donor referral rate, 1 April 2017 - 31 March 2018

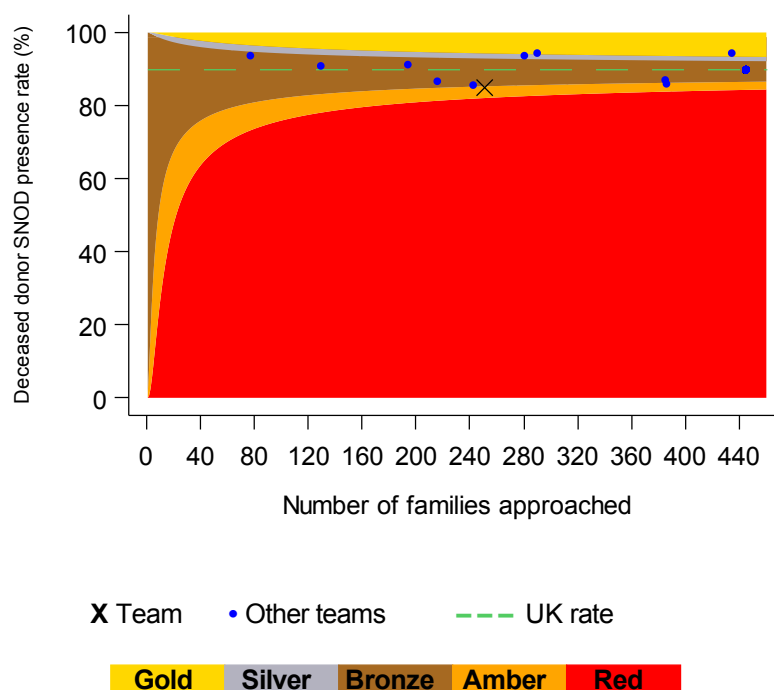


When compared with UK performance, the performance within the Boards in the team was good (silver) for referral of potential organ donors to NHS Blood and Transplant's Organ Donation Service.

4.3 SNOD presence

Goal: A SNOD should be present during the formal family approach as per NHS Blood and Transplant (NHSBT) Best Practice Guidance.²

Figure 4.3 Funnel plot of SNOD presence rate, 1 April 2017 - 31 March 2018

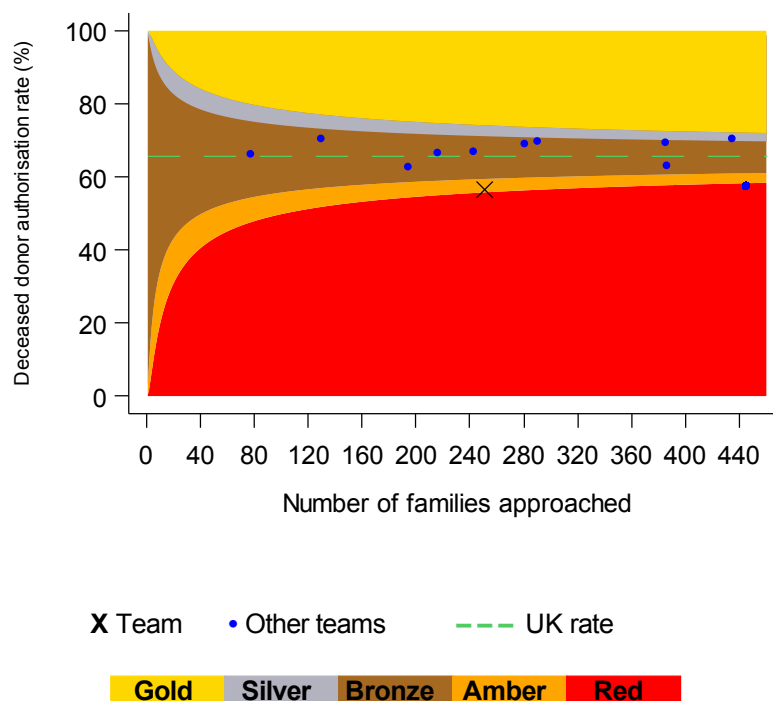


When compared with UK performance, the performance within the Boards in the team was below average (amber) for Specialist Nurse presence when approaching families to discuss organ donation.

4.4 Authorisation

Goal: The agreed 2017/18 national targets for DBD and DCD authorisation rates are 73% and 67%, respectively.

Figure 4.4 Funnel plot of authorisation rate, 1 April 2017 - 31 March 2018



When compared with UK performance, the authorisation rate within the Boards in the team was below average (amber).

5. PDA data by hospital and unit

A summary of key numbers and rates from the PDA by hospital and unit where patient died

Data in this section is obtained from the National Potential Donor Audit (PDA)

Tables 5.1 and 5.2 show the key numbers and rates for patients who met the DBD and/or DCD referral criteria, respectively. Percentages have been excluded where numbers are less than 10.

Table 5.1 Patients who met the DBD referral criteria - key numbers and rates, 1 April 2017 - 31 March 2018

	Patients where neurological death was suspected	Patients tested	Neurological death testing rate (%)	Patients referred	DBD referral rate (%)	Patients confirmed dead by neurological testing	Eligible DBD donors	Eligible DBD donors whose family were approached	Approaches where SNOD involved	SNOD presence rate (%)	Authorisation ascertained	Authorisation rate (%)	Actual DBD and DCD donors from eligible DBD donors
Golden Jubilee National Hospital	3	3	-	3	-	3	3	2	2	-	1	-	1
NHS Ayrshire and Arran	6	5	-	6	-	5	5	5	5	-	4	-	4
NHS Borders	1	1	-	1	-	1	1	1	1	-	1	-	1
NHS Dumfries and Galloway	5	5	-	5	-	5	5	5	5	-	4	-	4
NHS Fife	7	4	-	7	-	4	4	3	2	-	1	-	1
NHS Forth Valley	2	2	-	2	-	2	2	1	1	-	1	-	1
NHS Grampian	16	12	75	16	100	12	12	11	11	100	8	73	6
NHS Greater Glasgow & Clyde	41	36	88	40	98	36	35	32	28	88	23	72	20
NHS Highland	8	6	-	8	-	6	6	6	6	-	5	-	5
NHS Lanarkshire	9	9	-	9	-	9	9	9	9	-	8	-	7
NHS Lothian	16	14	88	16	100	14	13	13	13	100	10	77	10
NHS Tayside	3	3	-	3	-	3	3	2	2	-	2	-	2

Table 5.2 Patients who met the DCD referral criteria - key numbers and rates, 1 April 2017 - 31 March 2018

Patients for whom imminent death was anticipated	Patients referred	DCD referral rate (%)	Patients for whom treatment was withdrawn	Eligible DCD donors	Eligible DCD donors whose family were approached	Approaches where SNOD involved	SNOD presence rate (%)	Authorisation ascertained	Authorisation rate (%)	Actual DCD donors from eligible DBD donors
Golden Jubilee National Hospital 22	22	100	19	16	7	7	-	1	-	1
NHS Ayrshire and Arran 24	21	88	23	20	5	4	-	1	-	1

**Table 5.2 Patients who met the DCD referral criteria - key numbers and rates,
1 April 2017 - 31 March 2018**

Patients for whom imminent death was anticipated	Patients referred	DCD referral rate (%)	Patients for whom treatment was withdrawn	Eligible DCD donors	Eligible DCD donors whose family were approached	Approaches where SNOD involved	SNOD presence rate (%)	Authorisation ascertained	Authorisation rate (%)	Actual DCD donors from eligible DBD donors
<i>NHS Borders</i> 8	5	-	8	7	3	2	-	1	-	0
<i>NHS Dumfries and Galloway</i> 3	3	-	3	3	1	1	-	1	-	1
<i>NHS Fife</i> 26	26	100	24	23	13	11	85	4	31	1
<i>NHS Forth Valley</i> 10	10	100	7	7	6	5	-	4	-	1
<i>NHS Grampian</i> 59	52	88	56	49	32	23	72	17	53	6
<i>NHS Greater Glasgow & Clyde</i> 79	74	94	74	66	25	17	68	11	44	6
<i>NHS Highland</i> 12	12	100	12	7	5	1	-	1	-	1
<i>NHS Lanarkshire</i> 18	17	94	17	16	7	5	-	1	-	0
<i>NHS Lothian</i> 87	82	94	87	80	49	44	90	26	53	18
<i>NHS Tayside</i> 9	8	-	9	9	8	8	-	6	-	4

Tables 5.1 and 5.2 show the hospital where the patient died. However, it is acknowledged that there are some occasions where a patient is referred in an Emergency Department but moves to a critical care unit. In total for the team in 2017/18 there were 21 such patients. For more information regarding the Emergency Department please see Section 7.

6. Paediatric ICU data

A summary of key numbers for paediatric ICUs

Data in this section is obtained from the National Potential Donor Audit (PDA)

End of life care guidance and practice for paediatric patients does differ and care of the family unit as a whole is a core key principle. Paediatric Intensive Care Units (PICU) systems should never prevent families being offered the opportunity to donate if this is a possibility.

This section provides information on the quality of care for patients that died in PICUs in the Scotland Organ Donation Services team at the key stages of organ donation. The ambition is that your PICU misses no opportunity to make a transplant happen and that opportunities are maximised at every stage.

6.1 Key numbers for PICUs

**Table 6.1 PICU key numbers comparison with national rates,
1 April 2017 - 31 March 2018**

	DBD		DCD		Deceased donors	
	Scotland	UK	Scotland	UK	Scotland	UK
Patients meeting organ donation referral criteria ¹	1	79	9	192	10	244
Referred to Organ Donation Service	1	74	9	158	10	207
<i>Referral rate %</i>		94%		82%		85%
Neurological death tested	1	53				
<i>Testing rate %</i>		67%				
Eligible donors ²	1	48	6	150	7	198
Family approached	1	38	3	67	4	105
Family approached and SNOD present	1	28	2	46	3	74
<i>% of approaches where SNOD present</i>		74%		69%		70%
Authorisation ascertained	1	23	1	22	2	45
<i>Authorisation rate %</i>		61%		33%		43%
Actual donors (PDA data)	1	21	1	13	2	34
<i>% of authorised donors that became actual donors</i>		91%		59%		76%

¹ DBD - A patient with suspected neurological death

DCD - A patient in whom imminent death is anticipated, ie a patient receiving assisted ventilation, a clinical decision to withdraw treatment has been made and death is anticipated within 4 hours

² DBD - Death confirmed by neurological tests and no absolute contraindications to solid organ donation

DCD - Imminent death anticipated and treatment withdrawn with no absolute contraindications to solid organ donation

Note that a patient that meets both the referral criteria for DBD and DCD organ donation is featured in both the DBD and DCD data but will only be counted once in the deceased donors total

6.2 Neurological death testing in PICUs

Goal: neurological death tests are performed wherever possible.

Figure 6.1 Number of patients with suspected neurological death in PICUs, 1 April 2013 - 31 March 2018

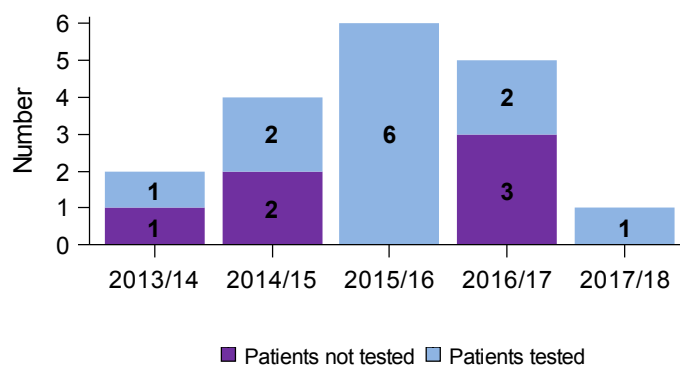


Table 6.2 Reasons given for neurological death tests not being performed in PICUs,

1 April 2017 - 31 March 2018

	Scotland	UK
Biochemical/endocrine abnormality	-	4
Clinical reason/Clinicians decision	-	6
Continuing effects of sedatives	-	4
Family declined donation	-	1
Family pressure not to test	-	1
Medical contraindication to donation	-	1
Other	-	2
Patient haemodynamically unstable	-	5
SN-OD advised that donor not suitable	-	1
Unknown	-	1
Total	-	26

If 'other', please contact your local SNOD or CLOD for more information, if required.

6.3 Referral to Organ Donation Service in PICUs

Goal: Every patient who meets the referral criteria should be identified and referred to the Organ Donation Service, as per NHS Blood and Transplant (NHSBT) Best Practice Guidance on timely identification and referral of potential organ donors.¹

Aim: There should be no purple on the following charts.

Figure 6.2 Number of patients meeting referral criteria in PICUs, 1 April 2013 - 31 March 2018

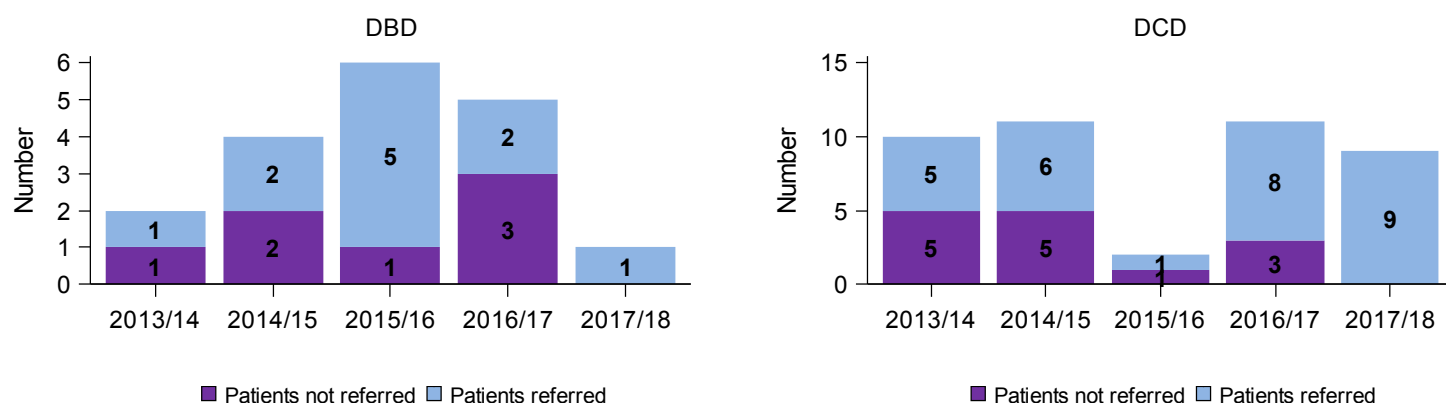


Table 6.3 Reasons given why patient not referred to Organ Donation Service in PICUs, 1 April 2017 - 31 March 2018

	DBD		DCD	
	Scotland	UK	Scotland	UK
Coroner/Procurator Fiscal Reason	-	1	-	1
Family declined donation after neurological testing	-	2	-	-
Family declined donation following decision to withdraw treatment	-	-	-	2
Medical contraindications	-	-	-	3
Neurological death not confirmed	-	1	-	-
Not identified as a potential donor/organ donation not considered	-	-	-	12
Other	-	1	-	12
Thought to be medically unsuitable	-	-	-	4
Total	-	5	-	34

If 'other', please contact your local SNOD or CLOD for more information, if required.

6.4 Contraindications in PICUs

Table 6.4 shows the primary absolute medical contraindications to solid organ donation in PICUs, if applicable, for potential DBD donors confirmed dead by neurological death tests and potential DCD donors in the team.

**Table 6.4 Primary absolute medical contraindications to solid organ donation in PICUs,
1 April 2017 - 31 March 2018**

	DBD		DCD	
	Scotland	UK	Scotland	UK
Active (not in remission) haematological malignancy (myeloma, lymphoma, leukaemia)	-	1	1	6
All secondary intracerebral tumours	-	-	-	1
Any active cancer with evidence of spread outside affected organ within 3 years of donation	-	1	1	7
No transplantable organ in accordance with organ specific contraindications	-	-	-	9
Total	-	2	2	23

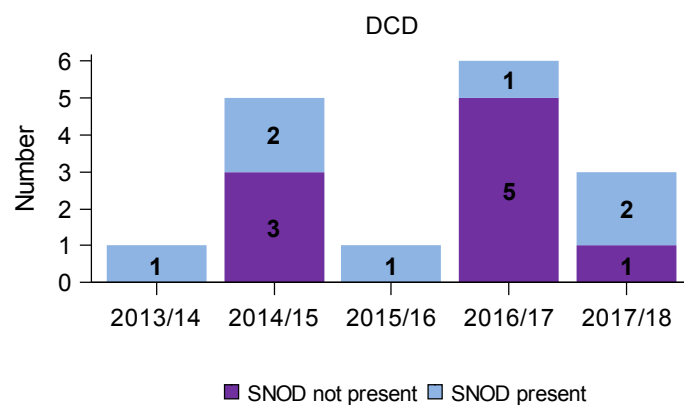
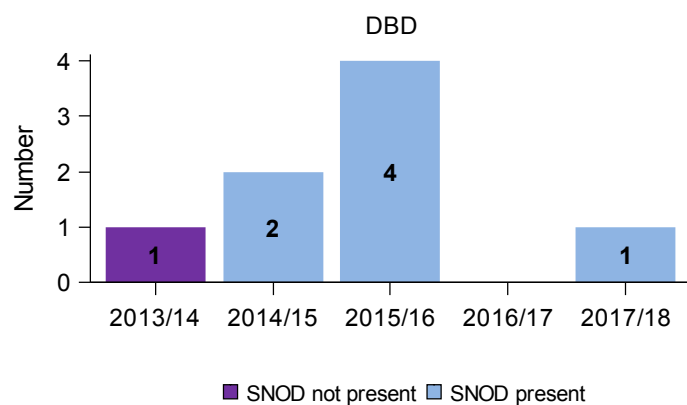
If 'other', please contact your local SNOD or CLOD for more information, if required.

6.5 SNOD presence for patients in PICUs

Goal: A SNOD should be present during the formal family approach as per NHS Blood and Transplant (NHSBT) Best Practice Guidance.²

Aim: There should be no purple on the following charts.

Figure 6.3 Number of families of PICU patients approached by SNOD presence, 1 April 2013 - 31 March 2018



6.6 Authorisation for patients in PICUs

Goal: The agreed 2017/18 combined adult and paediatric national targets for DBD and DCD authorisation rates are 73% and 67%, respectively.

In 2017/18 less than 10 families of eligible donors, facilitated in the PICU, were approached to discuss organ donation in the team therefore authorisation rates are not presented.

Figure 6.4 Number of families of PICU patients approached, 1 April 2013 - 31 March 2018

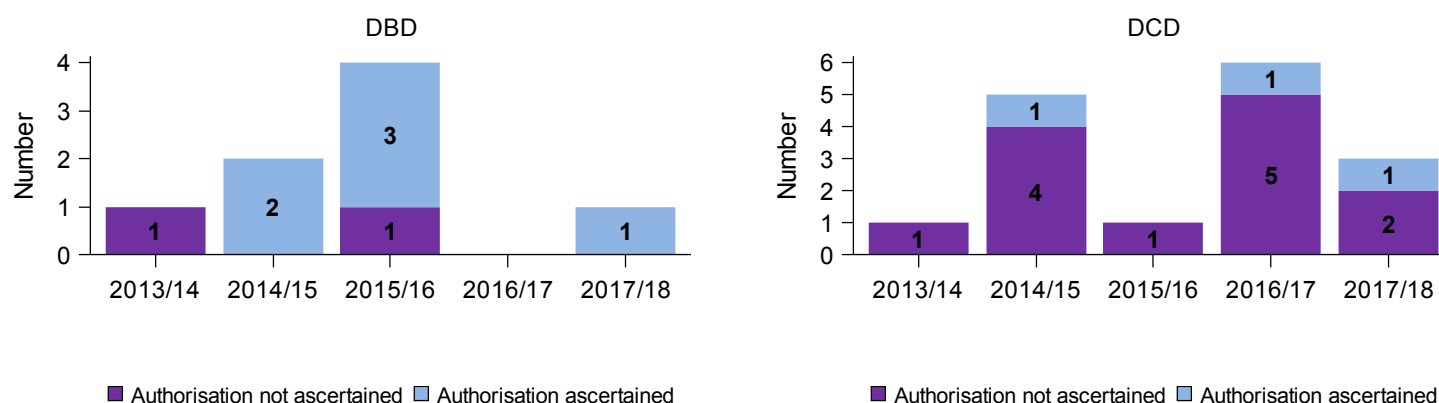


Table 6.5 Reasons given why authorisation was not ascertained for PICU patients, 1 April 2017 - 31 March 2018

	DBD		DCD	
	Scotland	UK	Scotland	UK
Families concerned about organ allocation	-	-	-	1
Family did not want surgery to the body	-	1	-	12
Family felt it was against their religious/cultural beliefs	-	3	-	1
Family felt the body needs to be buried whole (unrelated to religious or cultural reasons)	-	-	-	3
Family felt the length of time for donation process was too long	-	1	-	4
Family felt the patient had suffered enough	-	2	2	10
Family wanted to stay with the patient after death	-	-	-	1
Family were divided over the decision	-	1	-	1
Other	-	5	-	12
Strong refusal - probing not appropriate	-	2	-	-
Total	-	15	2	45

If 'other', please contact your local SNOD or CLOD for more information, if required.

6.7 Solid organ donation in PICUs

Goal: NHSBT is committed to supporting transplant units to ensure as many organs as possible are safely transplanted. The strategy for achieving this, including steps to minimising warm ischaemic injury in proceeding DCD donors, is set out in NHSBT Taking Organ Utilisation to 2020³.

**Table 6.6 Reasons why solid organ donation did not occur in PICUs,
1 April 2017 - 31 March 2018**

	DBD		DCD	
	Scotland	UK	Scotland	UK
Coroner/Procurator Fiscal refusal	-	1	-	2
Family changed mind	-	-	-	3
Logistic reasons	-	-	-	1
Organs deemed medically unsuitable by recipient centres	-	-	-	1
Positive virology	-	1	-	-
Prolonged time to asystole	-	-	-	2
Total	-	2	-	9

If 'other', please contact your local SNOD or CLOD for more information, if required.

7. Emergency Department data

A summary of key numbers for Emergency Departments

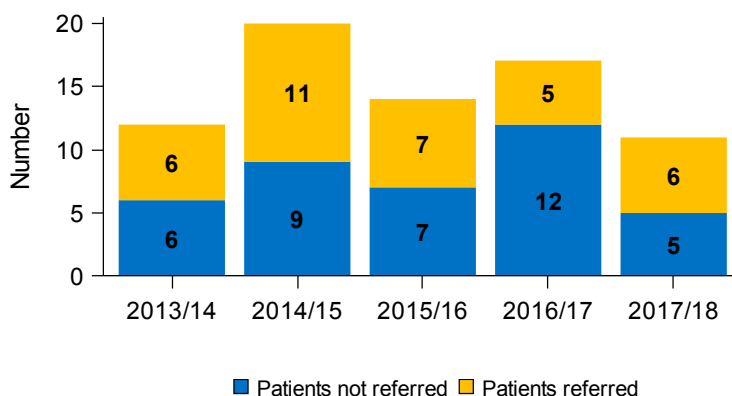
Data in this section is obtained from the National Potential Donor Audit (PDA)

Most patients who go on to become organ donors start their journey in the emergency department (ED). Deceased donation is important, not just for those people waiting on the transplant list, but also because many people in the UK have expressed a wish in life to become organ donors after their death. The overarching principle of the NHSBT Organ donation and Emergency Department strategy ⁴ is that best quality of care in organ donation should be followed irrespective of the location of the patient within the hospital at the time of death.

7.1 Referral to Organ Donation Service

Goal: No one dies in your ED meeting referral criteria and is not referred to NHSBT's Organ Donation Service.
Aim: There should be no blue on the following chart.

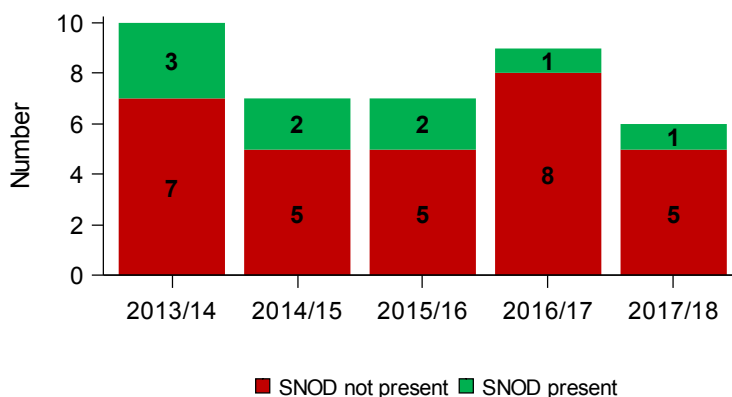
Figure 7.1 Number of patients meeting referral criteria that died in the ED, 1 April 2013 - 31 March 2018



7.2 Organ donation discussions

Goal: No family is approached in ED regarding organ donation without a SNOD present.
Aim: There should be no red on the following chart.

Figure 7.2 Number of families approached in ED by SNOD presence, 1 April 2013 - 31 March 2018



⁴ NHS Blood and Transplant, 2016.

Organ Donation and the Emergency Department
 [accessed 9 May 2018]

8. Additional data and figures

Key numbers and rates on the potential for organ donation

Data in this section is obtained from the National Potential Donor Audit (PDA)

8.1 Trust/Board Level Benchmarking

Trust/Board levels were reallocated in July 2016 using the average number of donors in 2014/15 and 2015/16, Table 8.1 shows the criteria used and how many Trusts/Boards belong to each level.

Table 8.1 Trust/Board level categories

		Number of Trusts Boards in each level
Level 1	12 or more proceeding donors per year	33
Level 2	5-12 proceeding donors per year	45
Level 3	3-5 proceeding donors per year	47
Level 4	<3 proceeding donors per year	46

Tables 8.2 and 8.3 show the national DBD and DCD key numbers and rates for the UK by Trust/Board level, to aid in comparison with equivalent Trusts/Boards. Note that percentages have been excluded where numbers are less than 10.

**Table 8.2 National DBD key numbers and rate by Trust/Board level,
1 April 2017 - 31 March 2018**

	Patients where neurological death was suspected	Patients tested	Neurological death testing rate (%)	Patients referred	DBD referral rate (%)	Patients confirmed dead by neurological testing	Eligible DBD donors	Eligible DBD donors whose family were approached	Approaches where SNOD present	SNOD presence rate (%)	Authorisation ascertained	Authorisation rate (%)	Actual DBD and DCD donors from eligible DBD donors
Level 1	1012	893	88	1002	99	878	843	791	753	95	560	71	510
Level 2	416	352	85	413	99	341	328	302	283	94	220	73	192
Level 3	322	272	84	320	99	265	255	240	230	96	184	77	165
Level 4	204	159	78	194	95	157	156	138	128	93	102	74	88

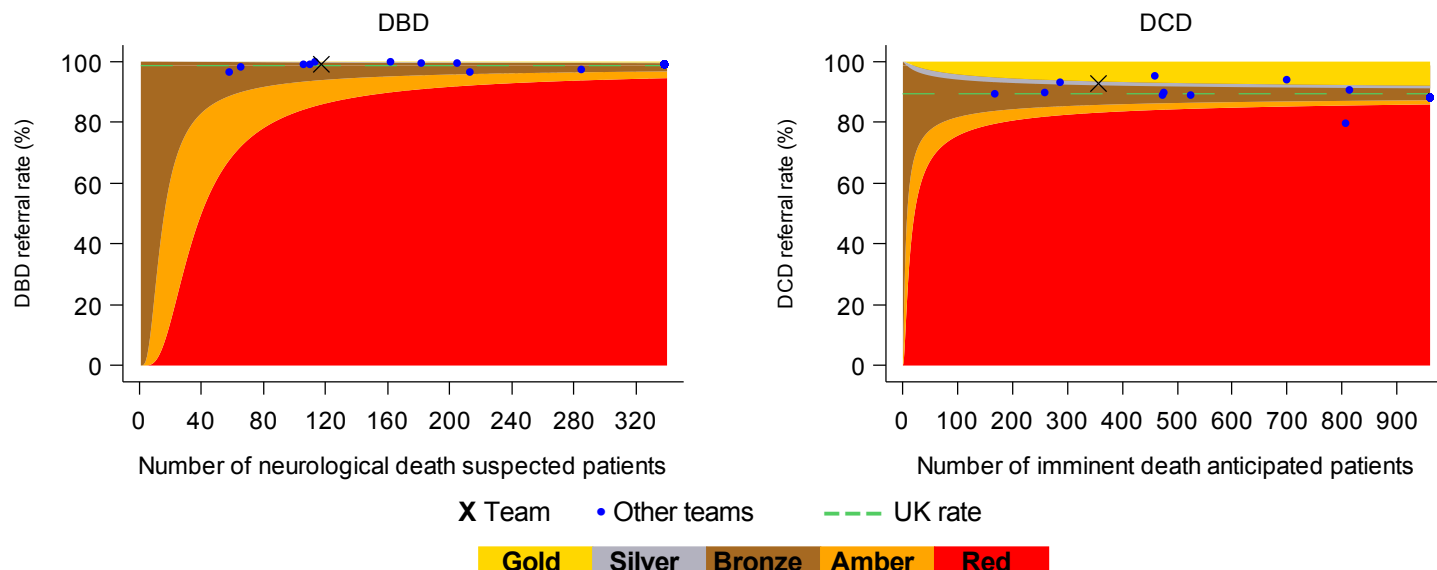
**Table 8.3 National DCD key numbers and rate by Trust/Board level,
1 April 2017 - 31 March 2018**

	Patients for whom imminent death was anticipated	Patients referred	DCD referral rate (%)	Patients for whom treatment was withdrawn	Eligible DCD donors	Eligible DCD donors whose family were approached	Approaches where SNOD present	SNOD presence rate (%)	Authorisation ascertained	Authorisation rate (%)	Actual DCD donors from eligible DBD donors
Level 1	2612	2372	91	2384	1906	978	841	86	596	61	349
Level 2	1510	1342	89	1355	1060	394	342	87	233	59	122
Level 3	1407	1253	89	1233	980	326	274	84	199	61	100
Level 4	752	648	86	668	510	160	134	84	87	54	42

8.2 Comparative data for DBD and DCD deceased donors

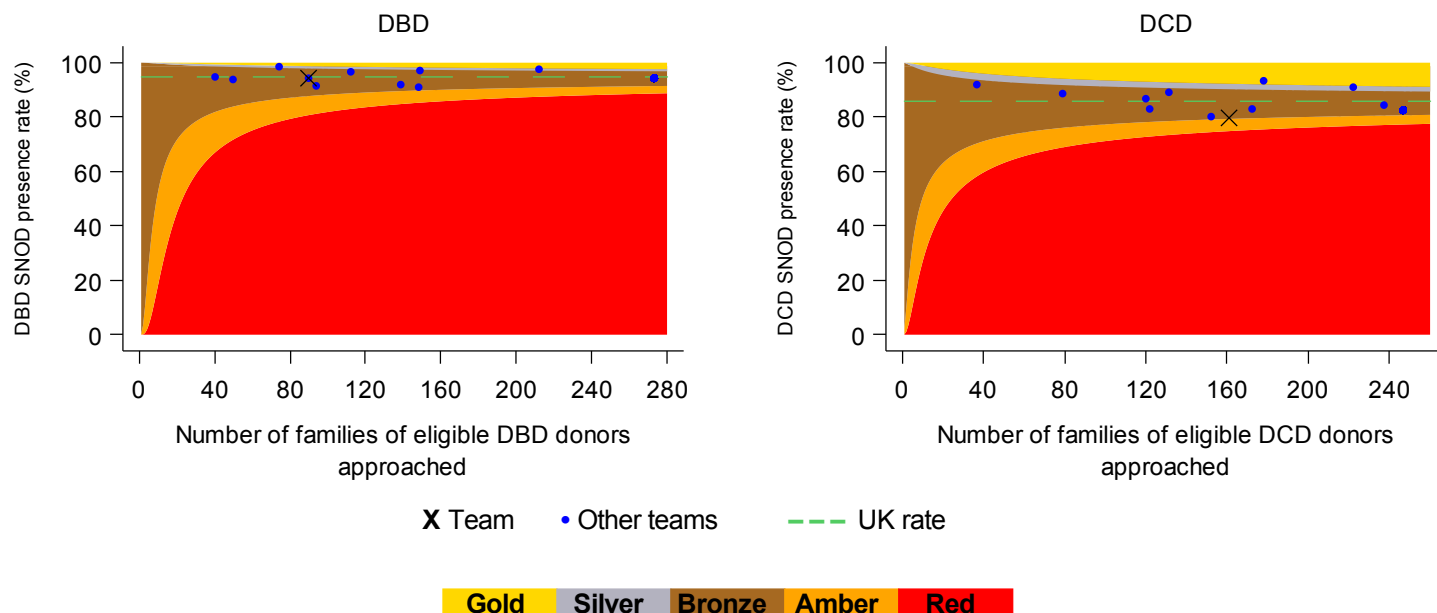
Funnel plots are presented in Section 4 showing performance in the team against the UK rate for deceased organ donation. The following funnel plots present data for DBD and DCD donors separately.

Figure 8.1 Funnel plots of referral rates, 1 April 2017 - 31 March 2018



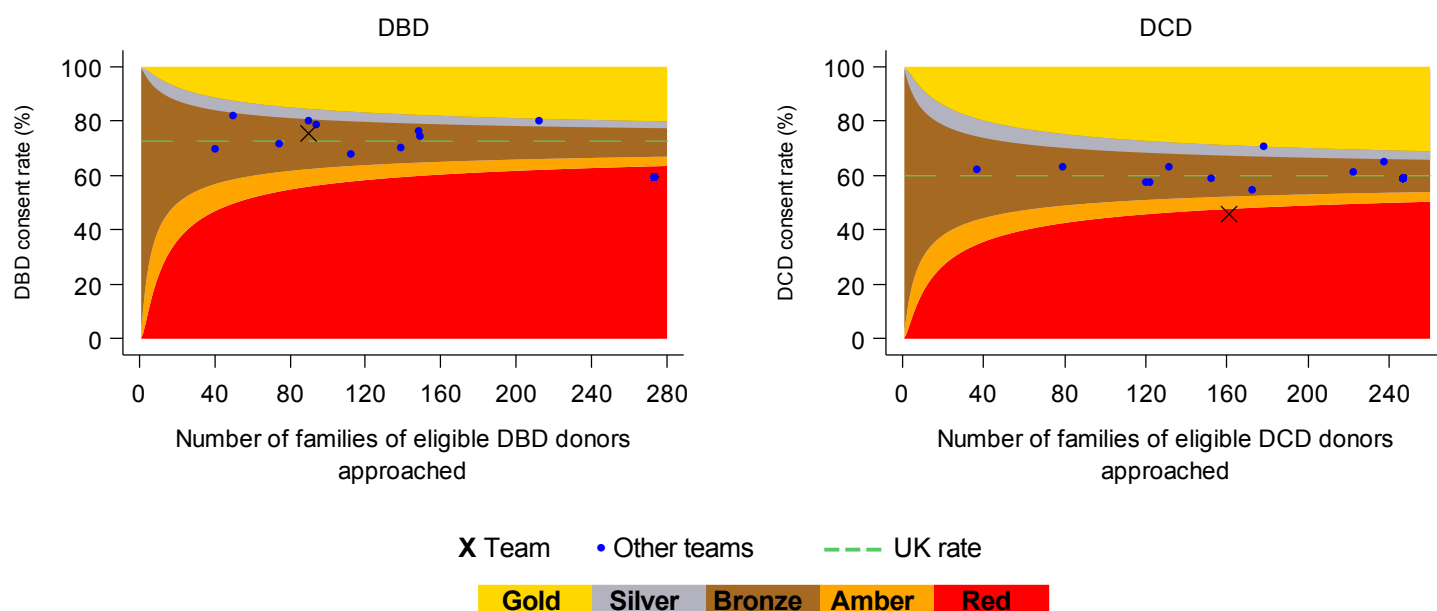
When compared with UK performance, the performance within the Boards in the team was average (bronze) for referral of potential DBD organ donors and good (silver) for referral of potential DCD organ donors to NHS Blood and Transplant's Organ Donation Service.

Figure 8.2 Funnel plots of SNOD presence rates, 1 April 2017 - 31 March 2018



When compared with UK performance, the performance within the Boards in the team was average (bronze) and average (bronze) for Specialist Nurse presence in approaches to families of eligible DBD and DCD donors, respectively.

Figure 8.3 Funnel plots of authorisation rates, 1 April 2017 - 31 March 2018



When compared with UK performance, the authorisation rate within the Boards in the team was average (bronze) and poor (red) for DBD and DCD donors, respectively.

Appendices

Appendix A.1 Definitions

Potential Donor Audit Definitions

Potential Donor Audit inclusion criteria	<p>1 October 2009 – 31 March 2010 All deaths in critical care in patients aged 75 and under, excluding cardiothoracic intensive care units</p> <p>1 April 2010 – 31 March 2013 All deaths in critical and emergency care in patients aged 75 and under, excluding cardiothoracic intensive care units</p> <p>1 April 2013 onwards All deaths in critical and emergency care in patients aged 80 and under</p>
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Donors after brain death (DBD) definitions

Suspected Neurological Death	A patient who meets all of the following criteria: Apnoea, coma from known aetiology and unresponsive, ventilated, fixed pupils. Excluding those not tested due to reasons 'cardiac arrest despite resuscitation', 'brainstem reflexes returned', 'neonates – less than 2 months post term'.
Potential DBD donor	A patient who meets all four criteria for neurological death testing excluding those not tested due to reasons 'cardiac arrest despite resuscitation', 'brainstem reflexes returned', 'neonates – less than 2 months post term' (ie suspected neurological death, as defined above).
DBD referral criteria	A patient with suspected neurological death
Discussed with Specialist Nurse – Organ Donation	A patient with suspected neurological death discussed with the Specialist Nurse – Organ Donation (SNOD)
Neurological death tested	Neurological death tests were performed
Eligible DBD donor	A patient confirmed dead by neurological death tests, with no absolute medical contraindications to solid organ donation
Absolute contraindications	Absolute medical contraindications to organ donation are listed here: https://nhsbtdbe.blob.core.windows.net/umbraco-assets-corp/6455/contraindications_to_organ_donation.pdf
Family approached for formal organ donation discussion	Family of eligible DBD asked to support patient's expressed or deemed consent/authorisation, informed of a nominated/appointed representative, asked to make a decision on donation on behalf of their relative, or informed of a patient's opt-out decision via the ODR.
Consent/authorisation ascertained	Family supported expressed or deemed consent/authorisation, nominated/appointed representative gave consent, or where applicable family gave consent/authorisation
Actual donors: DBD	Neurological death confirmed patients who became actual DBD as reported through the PDA
Actual donors: DCD	Neurological death confirmed patients who became actual DCD as reported through the PDA
Neurological death testing rate	Percentage of patients for whom neurological death was suspected who were tested
Referral rate	Percentage of patients for whom neurological death was suspected who were discussed with the SNOD
Consent/authorisation rate	Percentage of families or nominated/appointed representatives approached for formal organ donation discussion where consent/authorisation was ascertained

SNOD presence rate	Percentage of formal organ donation discussions with families or nominated/appointed representatives where a SNOD was present
Consent/authorisation rate where SNOD was present	Percentage of formal organ donation discussions with families or nominated/appointed representatives where a SNOD was present where consent/authorisation was ascertained

Donors after circulatory death (DCD) definitions

Imminent death anticipated	A patient, not confirmed dead using neurological criteria, receiving assisted ventilation, a clinical decision to withdraw treatment has been made and death is anticipated within a time frame to allow donation to occur, as determined at time of assessment
DCD referral criteria	A patient in whom imminent death is anticipated (as defined above)
Discussed with Specialist Nurse – Organ Donation	Patients for whom imminent death was anticipated who were discussed with the SNOD
Potential DCD donor	A patient who had treatment withdrawn and death was anticipated within four hours
Eligible DCD donor	A patient who had treatment withdrawn and death was anticipated within four hours, with no absolute medical contraindications to solid organ donation
Absolute contraindications	Absolute medical contraindications to organ donation are listed here: https://nhsbtdbe.blob.core.windows.net/umbraco-assets-corp/6455/contraindications_to_organ_donation.pdf
Family approached for formal organ donation discussion	Family of eligible DCD asked to: support the patient's expressed or deemed consent/authorisation decision, informed of a nominated/appointed representative, make a decision themselves on donation, or informed of a patient's opt-out decision via the Organ Donor Register
Consent/authorisation rate	Percentage of families or nominated/appointed representatives approached for formal organ donation discussion where consent/authorisation was ascertained
SNOD presence rate	Percentage of formal organ donation discussions with families or nominated/appointed representatives where a SNOD was present
Consent/authorisation rate where SNOD was present	Percentage of formal organ donation discussions with families or nominated/appointed representatives where a SNOD was present where consent/authorisation was ascertained

UK Transplant Registry (UKTR) definitions

Donor type	Type of donor: Donation after brain death (DBD) or donation after circulatory death (DCD)
Number of actual donors	Total number of donors reported to the UKTR
Number of patients transplanted	Total number of patients transplanted from these donors
Organs per donor	Number of organs donated divided by the number of donors.
Number of organs transplanted	Total number of organs transplanted by organ type

Appendix A.2 Data Description

This report provides a summary of data relating to potential and actual organ donors as recorded by NHS Blood and Transplant via the Potential Donor Audit (PDA), the accompanying Referral Record, and the UK Transplant Registry (UKTR) for the specified Trust, Board, Organ Donation Services Team, or nation.

This report is provided for information and to facilitate case based discussion about organ donation by the Organ Donation Committees and Trusts/Boards.

As part of the PDA, patients over 80 years of age and those who did not die on a critical care unit or emergency department are not audited nationally and are therefore excluded from the majority of this report. Data from neonatal intensive care units (ICU) have also been excluded from this report. In addition, some information may be outstanding due to late reporting and difficulties obtaining patient notes. Donations not captured by the PDA will still be included in the data supplied from the accompanying Referral Record or from the UKTR, as appropriate.

Appendix A.3 Table and Figure Description

For the purposes of this report please note that Trust/Board is equivalent to team.

1 Donor outcomes	
Table 1.1	The number of actual donors, the resulting number of patients transplanted and the average number of organs donated per donor have been obtained from the UK Transplant Registry (UKTR) for your Trust/Board. Results have been displayed separately for donors after brain death (DBD) and donors after circulatory death (DCD).
Table 1.2	The number of organs transplanted by type from donors at your Trust/Board has been obtained from the UKTR. Further information can be obtained from your local Specialist Nurse – Organ Donation (SNOD), specifically regarding organs that were not transplanted. Results have been displayed separately for DBD and DCD.
Figure 1.1	The number of actual donors and the resulting number of patients transplanted obtained from the UKTR for your Trust/Board for the past 10 equivalent time periods are presented on a line chart.

2 Key rates in potential for organ donation	
Figure 2.1	Key percentage measures of DBD and DCD potential donation activity for your Trust/Board are presented in a bar chart, using data from the Potential Donor Audit (PDA). The comparative UK rate, for the same time period, is illustrated by the pink line. The key rates labels are coloured using the gold, silver, bronze, amber, and red (GoSBAR) colour scheme to show the performance of your Trust/Board, relative to the UK rate, as reflected in the funnel plots (see description for Figure 4.1 below).
Figure 2.2	Trends in the key percentage measures of DBD and DCD potential donation activity for your Trust/Board are presented for the past five equivalent time periods, using data from the PDA.
Table 2.1	A summary of DBD, DCD and deceased donor data and key numbers have been obtained from the PDA. A UK comparison is also provided. Note that caution should be applied when interpreting percentages based on small numbers. Appendix A.1 gives a fuller explanation of terms used. The key rates are highlighted using the gold, silver, bronze, amber, and red (GoSBAR) colour scheme to show the performance of your Trust/Board, relative to the UK rate, as reflected in the funnel plots (see description for Figure 4.1 below).

3 Best quality of care in organ donation	
Figure 3.1	A stacked bar chart displays the number of patients with suspected neurological death who were tested and the number who were not tested in your Trust/Board for the past five equivalent time periods.
Table 3.1	The reasons given for neurological death tests not being performed in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Figure 3.2	Stacked bar charts display the number of DBD and DCD patients meeting referral criteria who were referred to the Organ Donation Service and the number who were not referred in your Trust/Board for the past five equivalent time periods.
Table 3.2	The reasons given for not referring patients to the Organ Donation Service in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Table 3.3	The primary absolute medical contraindications to solid organ donation for DBD and DCD patients have been obtained from the PDA, if applicable. A UK comparison is also provided.
Figure 3.3	Stacked bar charts display the number of families of DBD and DCD patients approached where a SNOD was present and the number approached where a SNOD was not present in your Trust/Board for the past five equivalent time periods.

Figure 3.4	Stacked bar charts display the number of families of DBD and DCD patients approached where consent/authorisation for organ donation was ascertained and the number approached where consent/authorisation was not ascertained in your Trust/Board for the past five equivalent time periods.
Table 3.4	The reasons why consent/authorisation was not ascertained for solid organ donation in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Table 3.5	The reasons why solid organ donation did not occur in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.

4 Comparative data	
Figure 4.1	A funnel plot of the neurological death testing rate is displayed using data obtained from the PDA. Each Trust/Board, of the same level, is represented on the plot as a blue dot, although one dot may represent more than one Trust/Board. The UK rate is shown on the plot as a green horizontal dashed line, together with 95% and 99.8% confidence limits for this rate. These limits form a 'funnel', which is shaded using the gold, silver, bronze, amber, and red (GoSBAR) colour scheme. Graphs obtained in this way are known as funnel plots. If a Trust/Board lies within the 95% limits, shaded bronze, then that Trust/Board has a rate that is statistically consistent with the UK rate (average performance). If a Trust/Board lies outside the 95% confidence limits, shaded silver (good performance) or amber (below average performance), this serves as an alert that the Trust/Board may have a rate that is significantly different from the UK rate. When a Trust/Board lies above the upper 99.8% limit, shaded gold, this indicates a rate that is significantly higher than the UK rate (exceptional performance), while a Trust/Board that lies below the lower limit, shaded red, has a rate that is significantly lower than the UK rate (poor performance). It is important to note that differences in patient mix have not been accounted for in these plots. Your Trust/Board is shown on the plot as the large black cross. If there is no large black cross on the plot, your Trust/Board did not report any patients of the type presented. The funnel plots can also be used to identify the maximum rates currently being achieved by Trusts/Boards with similar donor potential.
Figure 4.2	A funnel plot of the deceased donor referral rate is displayed using data obtained from the PDA. See description for Figure 4.1 above.
Figure 4.3	A funnel plot of the deceased donor SNOD presence rate is displayed using data obtained from the PDA. See description for Figure 4.1 above.
Figure 4.4	A funnel plot of the deceased donor consent/authorisation rate is displayed using data obtained from the PDA. See description for Figure 4.1 above.

5 PDA data by hospital and unit	
Table 5.1	DBD key numbers and rates by unit where the patient died have been obtained from the PDA. Percentages have been excluded where numbers are less than 10.
Table 5.2	DCD key numbers and rates by unit where the patient died have been obtained from the PDA. Percentages have been excluded where numbers are less than 10.

6 Paediatric ICU data

Table 6.1	A summary of DBD, DCD and deceased donor data and key numbers for paediatric ICUs have been obtained from the PDA. A UK comparison is also provided. Note that caution should be applied when interpreting percentages based on small numbers. Appendix A.1 gives a fuller explanation of terms used.
Figure 6.1	A stacked bar chart displays the number of paediatric ICU patients with suspected neurological death who were tested and the number who were not tested in your Trust/Board for the past five equivalent time periods.
Table 6.2	The reasons given for neurological death tests not being performed for paediatric ICU patients in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Figure 6.2	Stacked bar charts display the number of DBD and DCD paediatric ICU patients meeting referral criteria who were referred to the Organ Donation Service and the number who were not referred in your Trust/Board for the past five equivalent time periods.
Table 6.3	The reasons given for not referring paediatric ICU patients to the Organ Donation Service in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Table 6.4	The primary absolute medical contraindications to solid organ donation for DBD and DCD paediatric ICU patients have been obtained from the PDA, if applicable. A UK comparison is also provided.
Figure 6.3	Stacked bar charts display the number of families of DBD and DCD paediatric ICU patients approached where a SNOD was present and the number approached where a SNOD was not present in your Trust/Board for the past five equivalent time periods.
Figure 6.4	Stacked bar charts display the number of families of DBD and DCD paediatric ICU patients approached where consent/authorisation for organ donation was ascertained and the number approached where consent/authorisation was not ascertained in your Trust/Board for the past five equivalent time periods.
Table 6.5	The reasons why consent/authorisation was not ascertained for solid organ donation in paediatric ICU patients in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.
Table 6.6	The reasons why solid organ donation did not occur in paediatric ICU patients in your Trust/Board, have been obtained from the PDA, if applicable. A UK comparison is also provided.

7 Emergency department data

Figure 7.1	Stacked bar charts display the number of patients that died in the emergency department (ED) who met the referral criteria and were referred to the Organ Donation Service and the number who were not referred in your Trust/Board for the past five equivalent time periods.
Figure 7.2	Stacked bar charts display the number of families of patients in ED approached where a SNOD was present and the number approached where a SNOD was not present in your Trust/Board for the past five equivalent time periods.

8 Additional data and figures

Table 8.1	A summary of deceased donor, transplant, transplant list and ODR opt-in registration data for your region have been obtained from the UKTR. Your region has been defined as per former Strategic Health Authority. A UK comparison is also provided.
Table 8.2	Trust/board level categories and the relevant expected number of proceeding donors per year are provided for information.
Table 8.3	National DBD key numbers and rates for level 1, 2, 3 and 4 Trusts/Boards are displayed alongside your local data to aid comparison with equivalent Trusts/Boards. Percentages have been excluded where numbers are less than 10.

Table 8.4	National DCD key numbers and rates for level 1, 2, 3 and 4 Trusts/Boards are displayed alongside your local data to aid comparison with equivalent Trusts/Boards. Percentages have been excluded where numbers are less than 10.
Figure 8.1	A funnel plot of the DBD and DCD referral rates are displayed using data obtained from the PDA. See description for Figure 4.1 above.
Figure 8.2	A funnel plot of the DBD and DCD SNOD presence rates are displayed using data obtained from the PDA. See description for Figure 4.1 above.
Figure 8.3	A funnel plot of the DBD and DCD consent/authorisation rates are displayed using data obtained from the PDA. See description for Figure 4.1 above.