

Detailed Report Actual and Potential Deceased Organ Donation 1 April 2018 - 31 March 2019

Scotland Organ Donation Services Team

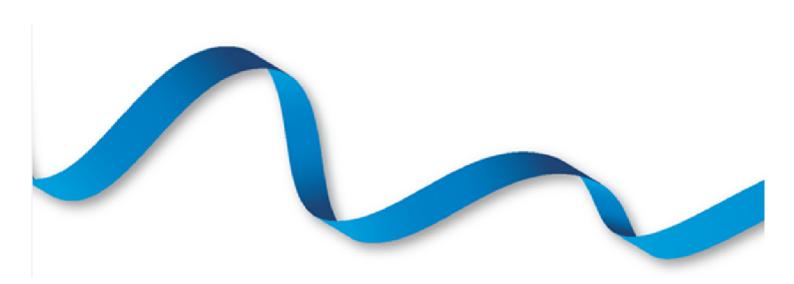




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Further Information

- 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 gueries 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 2019 based on data meeting PDA criteria reported at 9 May 2019.



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

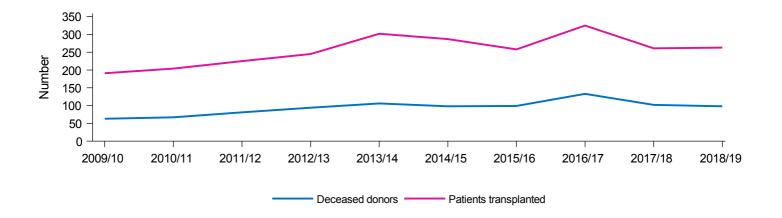
Between 1 April 2018 and 31 March 2019, the Scotland Organ Donation Services Team facilitated 98 deceased solid organ donors, resulting in 263 patients receiving a transplant. Additional information is shown in Tables 1.1 and 1.2, along with comparison data for 2017/18. Figure 1.1 shows the number of donors and patients transplanted for the previous ten periods for comparison.

Table 1.1 Donors, patients transplanted and organs per donor, 1 April 2018 - 31 March 2019 (1 April 2017 - 31 March 2018 for comparison)											
Donor type	Number of donors	Number of patients transplanted	Average number donated per Scotland	_							
DBD DCD DBD and DCD	68 (61) 30 (41) 98 (102)	201 (186) 62 (75) 263 (261)	3.8 (4.1) 2.5 (2.3) 3.4 (3.4)	3.5 (3.7) 2.7 (2.7) 3.2 (3.3)							

In addition to the 98 proceeding donors there were 50 additional consented donors that did not proceed, 10 where DBD organ donation was being facilitated and 40 where DCD organ donation was being facilitated.

Table 1.2 Organs transplanted by type, 1 April 2018 - 31 March 2019 (1 April 2017 - 31 March 2018 for comparison)										
Donor type	Kidney	Numb Pancreas	oer of organs t Liver	ransplanted b Heart	y type Lung	Small bowel				
DBD DCD DBD and DCD	117 (103) 53 (68) 170 (171)	16 (16) 3 (4) 19 (20)	60 (57) 8 (8) 68 (65)	7 (9) 0 (0) 7 (9)	15 (27) 0 (0) 15 (27)	1 (2) 0 (0) 1 (2)				

Figure 1.1 Number of donors and patients transplanted, 1 April 2009 - 31 March 2019





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 46 patients referred in 2018/19 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 2018/19 national targets for DBD and DCD authorisation rates are 78% and 72%, respectively.

Figure 2.1 Key rates on the potential for organ donation including UK comparison, 1 April 2018 - 31 March 2019

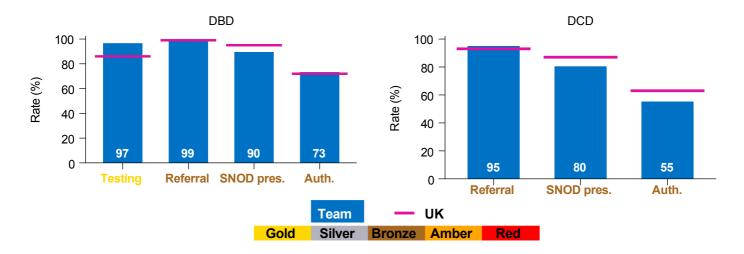


Figure 2.2 Trends in key rates on the potential for organ donation, 1 April 2014 - 31 March 2019

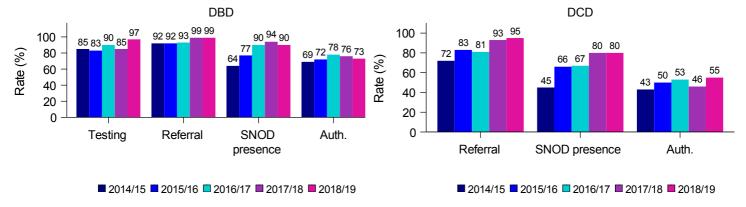




Table 2.1 Key numbers, rates and comparison with national rates, 1 April 2018 - 31 March 2019

	Sc	DBI otland	O UK	Sco	DCI otland	D UK	_	eceased otland	donors UK
Patients meeting organ donation referral criteria¹		120	2004		303	5974		420	7728
Referred to Organ Donation Service		119	1982		288	5539		405	7287
Referral rate %	В	99%	99%	В	95%	93%	S	96%	94%
Neurological death tested		116	1715						
Testing rate %	G	97%	86%						
Eligible donors ²		114	1635		261	4180		375	5815
Family approached		105	1493		123	1752		228	3245
Family approached and SNOD present		94	1423		99	1527		193	2950
% of approaches where SNOD present	В	90%	95%	В	80%	87%	A	85%	91%
Authorisation ascertained		77	1082		68	1099		145	2181
Authorisation rate %	В	73%	72%	В	55%	63%	В	64%	67%
Actual donors (PDA data)		68	970		30	612		98	1582
% of authorised donors that became actual donors		88%	90%		44%	56%		68%	73%

¹ DBD - A patient with suspected neurological death

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 2018 to 31 March 2019 there was one eligible DCD donor for whom authorisation for donation was ascertained who is 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.

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



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 2014 - 31 March 2019

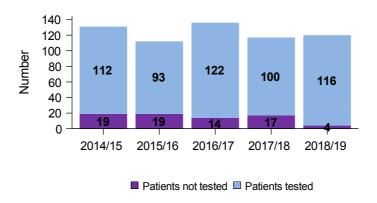


Table 3.1 Reasons given for neurological death tests not being performed, 1 April 2018 - 31 March 2019											
	Scotland	UK									
Biochemical/endocrine abnormality	-	20									
Clinical reason/Clinicians decision	1	48									
Continuing effects of sedatives	-	14									
Family declined donation	-	22									
Family pressure not to test	1	35									
Inability to test all reflexes	1	13									
Medical contraindication to donation	-	10									
Other	-	18									
Patient had previously expressed a wish not to donate	-	5									
Patient haemodynamically unstable	1	80									
Pressure on ICÚ beds	-	1									
SN-OD advised that donor not suitable	_	7									
Treatment withdrawn	_	11									
Unknown	_	5									
Total	4	289									
If 'other', please contact your local SNOD or CLOD for more info	mation, if requ	iired.									

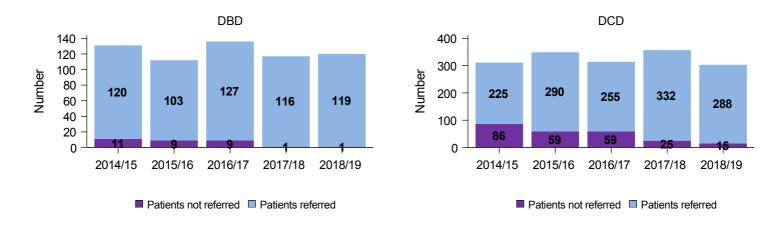


3.2 Referral to Organ Donation Service

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 2014 - 31 March 2019



	DBC)	DCE)
	Scotland	UK	Scotland	UK
Clinician assessed that patient was unlikely to become asystolic within 4 hours	-	-	-	4
Coroner/Procurator Fiscal Reason	-	1	1	2
Family declined donation following decision to withdraw treatment	1	2	6	15
Family declined donation prior to neurological testing	-	2	=	2
Medical contraindications	-	-	1	56
Not identified as a potential donor/organ donation not considered	-	11	1	215
Other	_	4	3	56
Pressure on ICU beds	_	-	2	3
Reluctance to approach family	-	-	-	2
Thought to be medically unsuitable	-	2	1	78
Thought to be outside age criteria	-	-	-	2
Total	1	22	15	435



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 of 1 April 2018 - 31 March 2019	·											
	DBD		DCI	כ								
	Scotland	UK	Scotland	UK								
Active (not in remission) haematological malignancy (myeloma, lymphoma, leukaemia)	1	14	4	201								
All secondary intracerebral tumours	-	2	2	8								
Any active cancer with evidence of spread outside affected organ within 3 years of donation	1	46	12	630								
HIV disease (but not HIV infection)	_	5	2	12								
Human TSE, CJD or vCJD; blood relatives with CJD; other infectious neurodegenerative diseases	-	1	-	8								
Melanoma (except completely excised Stage 1 cancers)	-	1	-	3								
No transplantable organ in accordance with organ specific contraindications	-	7	-	234								
Primary intra-cerebral lymphoma	-	-	-	5								
TB: active and untreated	-	2	-	13								
West Nile Virus (WNV) infection	-	-	1	1								
Total	2	78	21	1115								
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

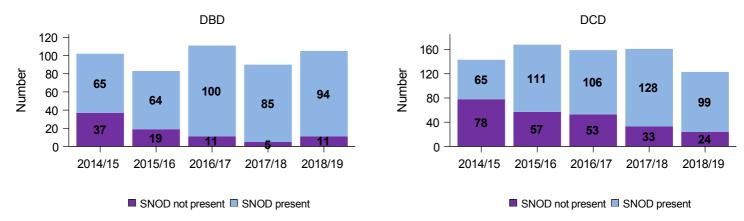
Aim: There should be no purple on the following charts.

In the UK, in 2018/19, when a SNOD was not present for the approach to the family to discuss organ donation, DBD and DCD authorisation rates were 53% and 23%, respectively, compared with DBD and DCD consent rates of 73% and 69%, 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 9% and 4%, respectively, compared with DBD and DCD authorisation rates of 81% and 68%, 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 2014 - 31 March 2019



¹ NHS Blood and Transplant, 2012. Timely Identification and Referral of Potential Organ Donors - A Strategy for Implementation of Best Practice [accessed 9 May 2019]

² NHS Blood and Transplant, 2013. Approaching the Families of Potential Organ Donors – Best Practice Guidance [accessed 9 May 2019]

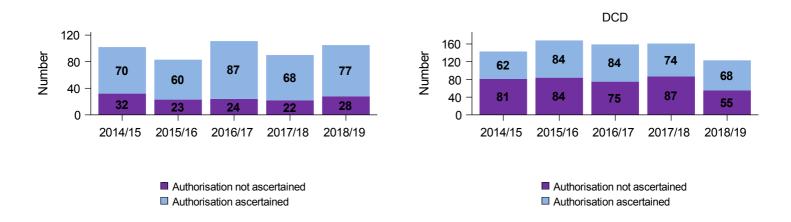


3.5 Authorisation

Goal: The agreed 2018/19 national targets for DBD and DCD authorisation rates are 78% and 72%, respectively.

In 2018/19 the DBD and DCD authorisation rates in the team were 73% and 55%, respectively.

Figure 3.4 Number of families approached, 1 April 2014 - 31 March 2019



	DBC)	DCD)
	Scotland	UK	Scotland	UK
families concerned about organ allocation	-	4	_	-
amily concerned donation may delay the funeral	=	1	-	-
amily concerned that organs may not be transplanted	-	3	_	8
amily concerned that other people may disapprove/be offended	_	3	-	1
amily did not believe in donation	2	22	6	25
amily did not want surgery to the body	5	42	3	51
amily felt it was against their religious/cultural beliefs	_	44	-	21
amily felt the body needs to be buried whole (unrelated to eligious or cultural reasons)	-	24	-	19
amily felt the length of time for donation process was too long	2	22	10	88
amily felt the patient had suffered enough	4	30	4	50
amily had difficulty understanding/accepting neurological testing	_	1	-	_
amily wanted to stay with the patient after death	1	5	2	11
amily were divided over the decision	_	25	_	31
amily were not sure whether the patient would have agreed to onation	5	78	13	12
ther	3	18	4	55
atient previously expressed a wish not to donate	5	82	10	14
atients treatment may be or has been limited to facilitate organ onation	-	-	-	1
trong refusal - probing not appropriate	1	7	3	22
otal	28	411	55	653



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 2018 - 31 March 2019

	DBD)	DCE)
	Scotland	UK	Scotland	UK
Cardiac Arrest	3	8	=	5
Coroner/Procurator Fiscal refusal	1	16	=	23
Family changed mind	-	8	2	18
Family placed conditions on donation	=	-	=	1
General instability	1	9	4	32
Logistic reasons	=	-	=	3
Organs deemed medically unsuitable by recipient centres	2	42	10	136
Organs deemed medically unsuitable on surgical inspection	1	5	1	10
Other	-	10	-	33
Positive virology	1	14	1	7
Prolonged time to asystole	-	-	20	219
Total	9	112	38	487

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 2019]



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)

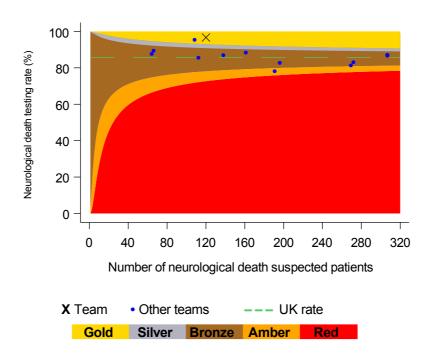
This section compares the quality of care in the key areas of organ donation in the Scotland Organ Donation Services team with the UK rate using funnel plots. The UK rate is shown as a green dashed line and the funnel shape is formed by the 95% and 99.8% confidence limits around the UK rate. The confidence 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 2018 - 31 March 2019



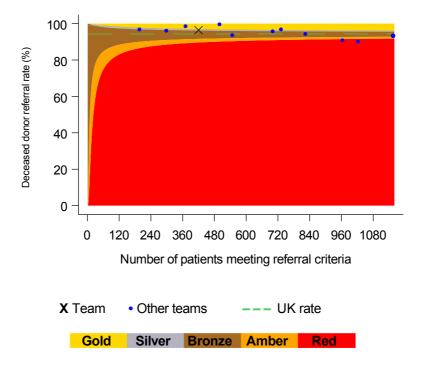
When compared with UK performance, the performance within the Boards in the team was exceptional (gold) for neurological death testing.



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 2018 - 31 March 2019



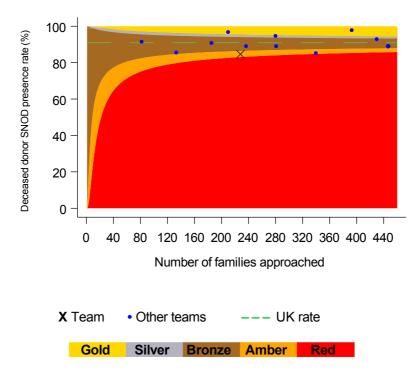
When compared with UK performance, the performance within the Boards in the team was good (silver) for referral of potential organ donors to NHS Blood and Transplant's Organ Donation Service.



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 2018 - 31 March 2019



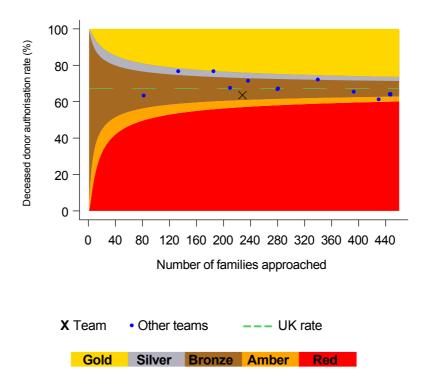
When compared with UK performance, the performance within the Boards in the team was below average (amber) for Specialist Nurse presence when approaching families to discuss organ donation.



4.4 Authorisation

Goal: The agreed 2018/19 national targets for DBD and DCD authorisation rates are 78% and 72%, respectively.

Figure 4.4 Funnel plot of authorisation rate, 1 April 2018 - 31 March 2019



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



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 2018 - 31 March 2019													
Patients neurolo death	ogical was	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
		National H	lospital	i					_				
1		1	-	1	-	1	1	1	1	-	1	-	1
NHS Ay	rshire a	nd Arran 3	-	3	-	3	3	3	3	-	3	-	3
NHS Bo		1	-	1	-	1	1	1	0	-	0	-	0
NHS Du		and Gallov 1	vay -	1	-	1	1	0	0	-	0	-	0
NHS Fif		3	-	3	-	3	3	3	3	-	2	-	1
NHS Fo		ey 6	-	6	_	6	6	6	6	_	6	-	6
NHS Gr 14		14	100	14	100	14	13	13	13	100	8	62	7
NHS Gr 46		asgow & 43	Clyde 93	45	98	43	43	38	30	79	24	63	21
NHS Hi		4	-	4	_	4	4	4	3	_	4	-	3
NHS La		e 9	90	10	100	9	9	9	9	-	6	-	5
NHS Lo		25	100	25	100	25	24	21	20	95	17	81	17
NHS Ta	ayside	6		6	<u>-</u>	6	6	6	6	<u>-</u>	6		4

Table 5.2		s who met 2018 - 31			riteria - key	numbers	and rates,			
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 Hos	spital								
11	11	100	11	11	5	5	-	4	-	2
NHS Ayrshire a	and Arran									
25	24	96	25	25	3	3	_	2	-	1



Table 5.2 Patients who met the DCD referral criteria - key numbers and rates, 1 April 2018 - 31 March 2019

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
NHS Borders 1	1	-	1	0	0	0	-	0	-	0
NHS Dumfries	and Galloway 7	_	7	6	2	2	_	1	_	0
NHS Fife 19	19	100	19	18	6	5		5		3
NHS Forth Valle	∍ <i>y</i>						-		-	
17	17	100	13	11	7	7	-	4	-	2
NHS Grampian 45	45	100	44	41	23	21	91	13	57	5
NHS Greater G 63	lasgow & Clyd 59	de 94	57	55	27	16	59	13	48	7
NHS Highland 17	14	82	16	15	4	2	-	2	-	1
NHS Lanarkshii 14	re 14	100	8	6	5	5	-	1	-	1
NHS Lothian 67	63	94	64	57	29	22	76	14	48	3
NHS Tayside 17	14	82	17	16	12	11	92	9	75	5

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 2018/19 there were 7 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 2018 - 31 March 2019

	DBI	,	DCE	,	Deceased donors		
	Scotland	UK	Scotland	UK	Scotland	UK	
Patients meeting organ donation referral criteria ¹	3	74	6	156	9	209	
Referred to Organ Donation Service	3	72	5	128	8	180	
Referral rate %		97%		82%		86%	
Neurological death tested	3	54					
Testing rate %		73%					
Eligible donors ²	3	52	5	121	8	173	
Family approached	2	44	1	48	3	92	
Family approached and SNOD present	2	39	1	32	3	71	
% of approaches where SNOD present		89%		67%		77%	
Authorisation ascertained	2	32	1	22	3	54	
Authorisation rate %		73%		46%		59%	
Actual donors (PDA data)	1	27	0	14	1	41	
% of authorised donors that became actual donors		84%		64%		76%	

¹ DBD - A patient with suspected neurological death

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

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



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 2014 - 31 March 2019

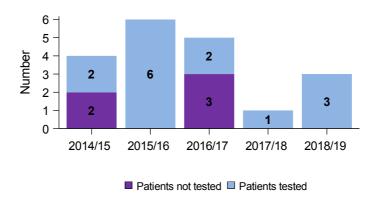


Table 6.2 Reasons given for neurological death tests not PICUs, 1 April 2018 - 31 March 2019	being performe	d in
	Scotland	UK
Biochemical/endocrine abnormality	-	3
Clinical reason/Clinicians decision	-	3
Continuing effects of sedatives	-	2
Family declined donation	-	2
Family pressure not to test	-	6
Inability to test all reflexes	-	2
Other	-	1
Treatment withdrawn	-	1
Total	-	20
If 'other', please contact your local SNOD or CLOD for more in	formation, if requ	ired.

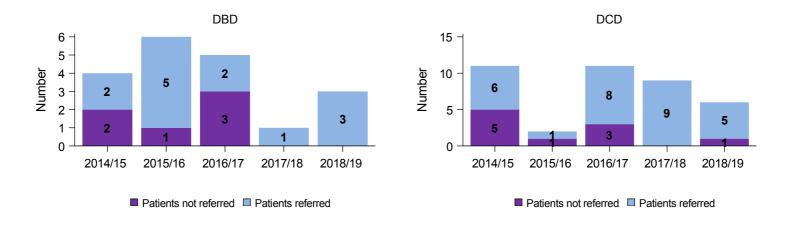


6.3 Referral to Organ Donation Service in PICUs

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 2014 - 31 March 2019



	DBD)	DCE)
	Scotland	UK	Scotland	UK
Clinician assessed that patient was unlikely to become asystolic	-	-	-	1
within 4 hours				
Coroner/Procurator Fiscal Reason	-	1	1	2
Family declined donation following decision to withdraw treatment	-	-	-	2
Family declined donation prior to neurological testing	-	1	-	1
Not identified as a potential donor/organ donation not considered	-	-	-	9
Other	-	-	-	7
Thought to be medically unsuitable	-	-	-	5
Thought to be outside age criteria	-	-	-	1
Total	-	2	1	28



6.4 Contraindications in PICUs

organ within 3 years of donation

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 1 April 2018 - 31 March 2019	o solid organ do	nation	in PICUs,	
l		DBD		DCD)
1		Scotland	UK	Scotland	UK
	Active (not in remission) haematological malignancy	-	-	-	7
	(myeloma, lymphoma, leukaemia) Any active cancer with evidence of spread outside affected	-	-	1	7

No transplantable organ in accordance with organ specific - - - 4 contraindications

Total - 1 18

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

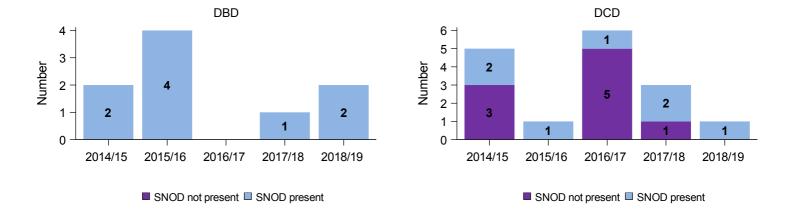


6.5 SNOD presence for patients in PICUs

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 2014 - 31 March 2019



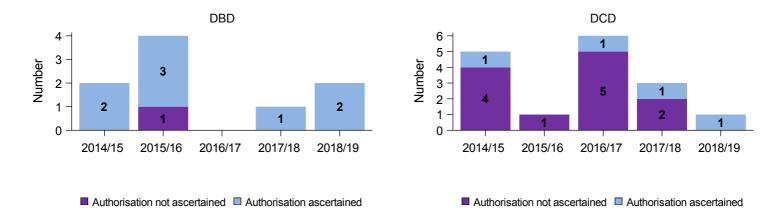


6.6 Authorisation for patients in PICUs

Goal: The agreed 2018/19 combined adult and paediatric national targets for DBD and DCD authorisation rates are 78% and 72%, respectively.

In 2018/19 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 2014 - 31 March 2019



	DBC)	DCD)
	Scotland	UK	Scotland	UŁ
Family concerned that organs may not be transplanted	_	_	_	1
Family concerned that other people may disapprove/be offended	_	1	_	-
Family did not believe in donation	-	-	-	3
Family did not want surgery to the body	_	3	-	3
Family felt it was against their religious/cultural beliefs	-	2	-	1
Family felt the body needs to be buried whole (unrelated to	-	-	-	1
religious or cultural reasons)				
Family felt the length of time for donation process was too long	_	_	_	1
Family felt the patient had suffered enough	_	3	-	4
Family wanted to stay with the patient after death	_	1	-	2
Family were divided over the decision	-	2	-	1
Family were not sure whether the patient would have agreed to	-	-	-	1
donation				
Other	-	-	-	7
Strong refusal - probing not appropriate	-	-	-	1
Total	-	12	-	26



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 20)18 - 31 Ma	arch 20	019			

DBD		DCD	
Scotland	UK	Scotland	UK
-	1	=	-
-	-	=	1
1	2	-	-
-	-	1	3
-	2	=	-
-	-	=	1
-	-	=	3
1	5	1	8

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

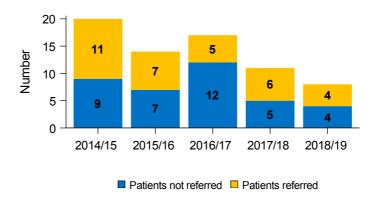
Data in this section is obtained from the National Potential Donor Audit (PDA)

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 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.

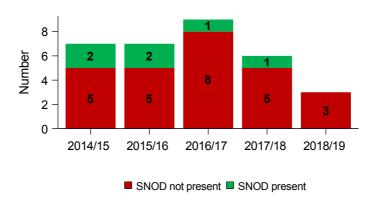
Figure 7.1 Number of patients meeting referral criteria that died in the ED, 1 April 2014 - 31 March 2019



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 2014 - 31 March 2019



⁴ NHS Blood and Transplant, 2016. Organ Donation and the Emergency Department [accessed 9 May 2019]



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 2018 using the average number of donors in 2016/17 and 2017/18, 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 (\geq 12) proceeding donors per year	35				
Level 2	6 or more but less than 12 (\geq 6 to <12) proceeding donors per year	45				
Level 3	More than 3 but less than 6 (>3 to <6) proceeding donors per year	47				
Level 4	3 or less (\leq 3) proceeding donors per year	41				
Level 4	3 or less (≤ 3) proceeding donors per year	41				

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.

		Actual
death was suspected Patients tested death testing referred rate (%) Patients referred rate (%) neurological testing referred rate (%) DBD donors family were approached present where SNOD present present rate (%) Level 1 1153 995 86 1144 99 987 951 875 826 Level 2 435 361 83 431 99 355 344 313 302 Level 3 279 244 87 274 98 237 228 203 197	SNOD esence te (%) Authorisation ascertained 94 626 96 221 97 155 96 80	DBD and DCD donors from eligible DBD donors 563 200 136 71

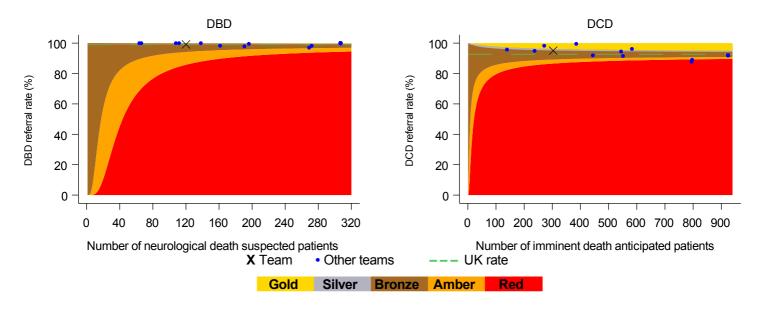
rate by Tru	ust/Board leve	el,			
Eligible don	gible DCD ors whose Approa mily were where s proached pres	SNOD presence	Authorisation ascertained	Authorisation rate (%)	Actual DCD donors from eligible DBD donors
1882	950 81	6 86	576	61	326
1235	446 39	96 89	283	63	156
723	233 21	0 90	159	68	84
340	123 10)5 85	81	66	46



8.2 Comparative data for DBD and DCD deceased donors

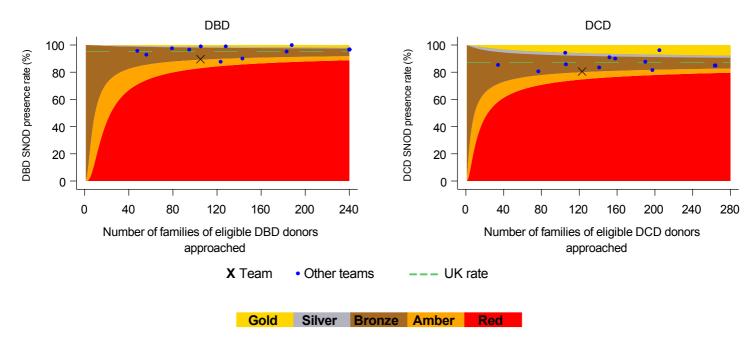
Funnel plots are presented in Section 4 showing performance in the team against the UK rate for deceased organ donation. The following funnel plots present data for DBD and DCD donors separately.

Figure 8.1 Funnel plots of referral rates, 1 April 2018 - 31 March 2019



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

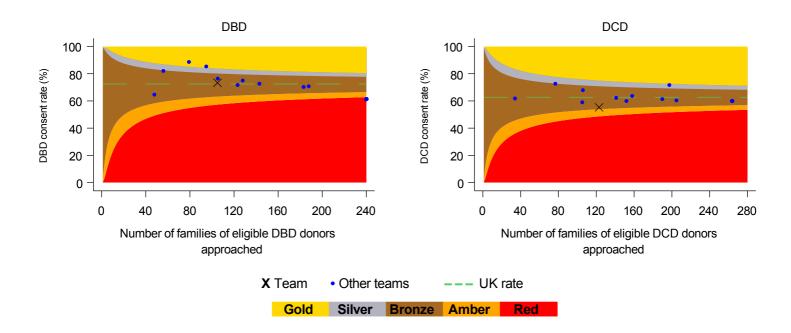
Figure 8.2 Funnel plots of SNOD presence rates, 1 April 2018 - 31 March 2019



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 2018 - 31 March 2019



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



Appendices

Appendix A.1 Definitions

Potential Donor Audit Definitions

Potential Donor Audit inclusion criteria 1 October 2009 – 31 March 2010

All deaths in critical care in patients aged 75 and under, excluding

cardiothoracic intensive care units 1 April 2010 – 31 March 2013

All deaths in critical and emergency care in patients aged 75 and under,

excluding cardiothoracic intensive care units

1 April 2013 onwards

All deaths in critical and emergency care in patients aged 80 and under

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

Consent/authorisation rate where SNOD was present

Percentage of formal organ donation discussions with families or nominated/appointed representatives where a 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 do	onation
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 dona	ation
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/Roard has a rate that is statistically consistent with the LIK rate (average

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.

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

4 Comparative data

Figure 4.2

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. The primary absolute medical contraindications to solid organ donation for DBD and DCD Table 6.4 paediatric ICU patients have been obtained from the PDA, if applicable. A UK comparison is also provided. Stacked bar charts display the number of families of DBD and DCD paediatric ICU Figure 6.3 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. Stacked bar charts display the number of families of DBD and DCD paediatric ICU Figure 6.4 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. The reasons why consent/authorisation was not ascertained for solid organ donation in Table 6.5 paediatric ICU patients in your Trust/Board, have been obtained from the PDA, if

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.

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.