

## NHS BLOOD AND TRANSPLANT

### LIVER ADVISORY GROUP

POTENTIAL FOR ORGAN DONATION AND TRANSPLANTATION,  
1 APRIL 2012 – 31 MARCH 2013

### SUMMARY

#### INTRODUCTION

- 1 This paper examines the pathway from identification of a potential organ donor through to transplantation of donor organs and identifies points at which potential donors or organs are 'lost'. It is important that as many viable organs as possible are transplanted, and this paper examines reasons why donors do not proceed to donation and why organs are not donated or transplanted. Action identified by NHS Blood and Transplant (NHSBT) to try to minimise loss of potential donors is highlighted.

#### DATA

- 2 Data on potential donors prior to donation were obtained from the Potential Donor Audit (PDA), which includes all audited patient deaths in UK Intensive Care Units and Emergency Departments as reported by 6 June 2013. Patients aged 76 years or older and those who died in a Cardiothoracic ICU or ward were not audited during the time period.
- 3 Following donation, data on all UK deceased donors who donated at least one organ for transplantation were obtained from the UK Transplant Registry.

#### RESULTS

- 4 Between 1 April 2012 and 31 March 2013, there were 1,631 potential DBD donors reported through the PDA. Of these, 676 (41%) became donors (658 DBD and 18 DCD). There were 6,517 potential DCD donors during the time period, of which 449 (7%) became DCD donors. Overall, there were 1,212 deceased organ donors in the UK between 1 April 2012 and 31 March 2013 reported through the UK Transplant Registry.

#### NHSBT ACTIONS

- 5 Actions that NHSBT are taking in terms of neurological death testing, referral of potential donors to the Organ Donation Services Teams of Specialist Nurses, approaching the families of eligible donors, Coroner/Procurator Fiscal refusals and family consent/authorisation are detailed throughout the report.

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**August 2013**

## NHS BLOOD AND TRANSPLANT

### BOWEL ADVISORY GROUP

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### INTRODUCTION

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- 3 Following donation, data on all UK deceased donors who donated at least one organ for transplantation were obtained from the UK Transplant Registry.

### DEFINITIONS

- 4 **Potential donors after brain death (DBD)** are defined as patients in whom neurological death was suspected; that is, met the four criteria: apnoea, coma from known aetiology and unresponsive, ventilated and fixed pupils.
- 5 **Potential donors after circulatory death (DCD)** are defined as patients not confirmed dead by neurological criteria who had treatment withdrawn and death was anticipated within four hours.
- 6 **Imminent death anticipated patients** have not been confirmed dead using neurological criteria, received assisted ventilation, a clinical decision to withdraw treatment was made and death was anticipated within four hours.

### SECTION 1 – POTENTIAL ORGAN DONORS

- 7 Between 1 April 2012 and 31 March 2013, there were 1,631 potential DBD donors. Of these, 676 (41%) became donors (658 DBD and 18 DCD). There were 6,517 potential DCD donors during the time period, of which 449 (7%) became DCD donors. **Figures 1.1 and 1.2** show a detailed breakdown from the number of audited patient deaths to the number of solid organ donors for

potential DBD and DCD, respectively. **Figure 1.3** uses the flow chart information to illustrate the stages where opportunities for organ donation are not realised. **Tables 1.1 to 1.6** then provide the reasons why potential donors are 'lost' at each stage.

Figure 1.1 Donation after brain death

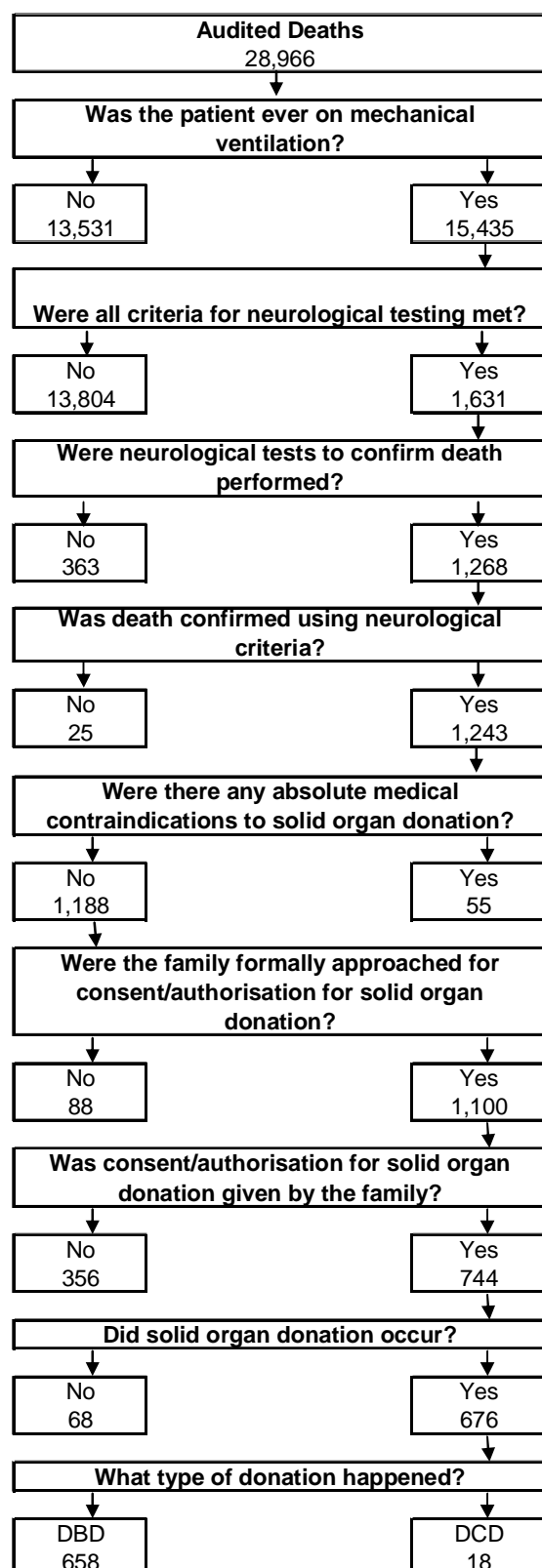
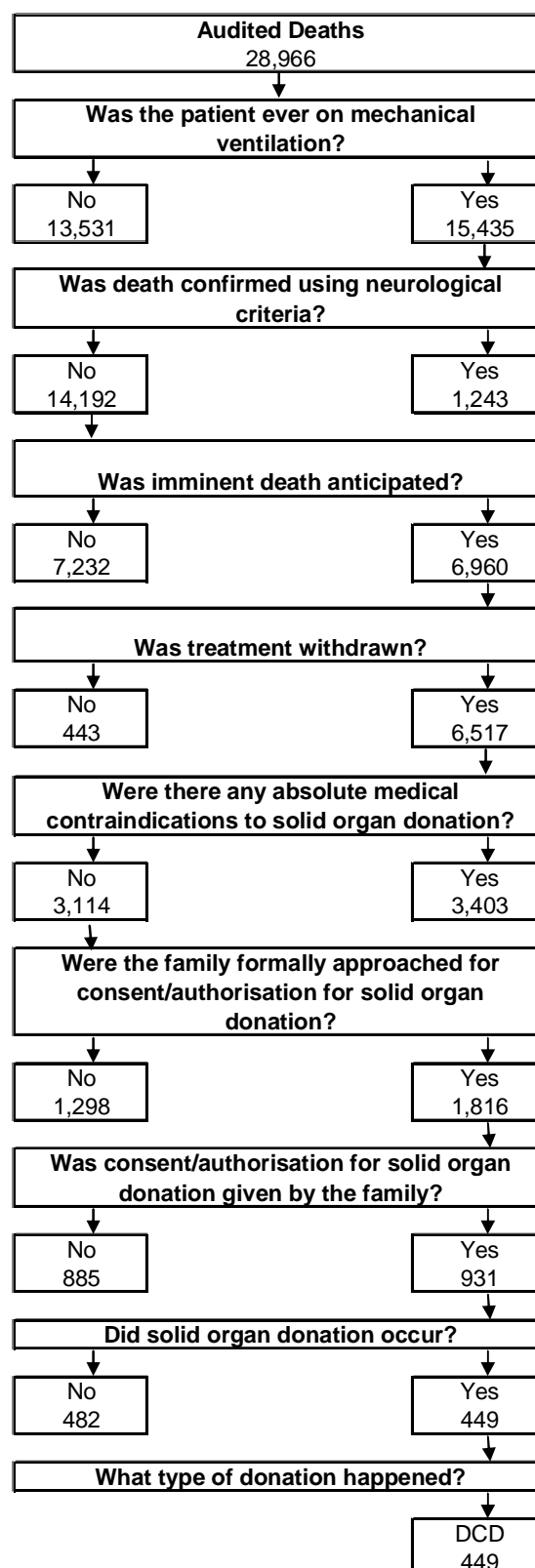
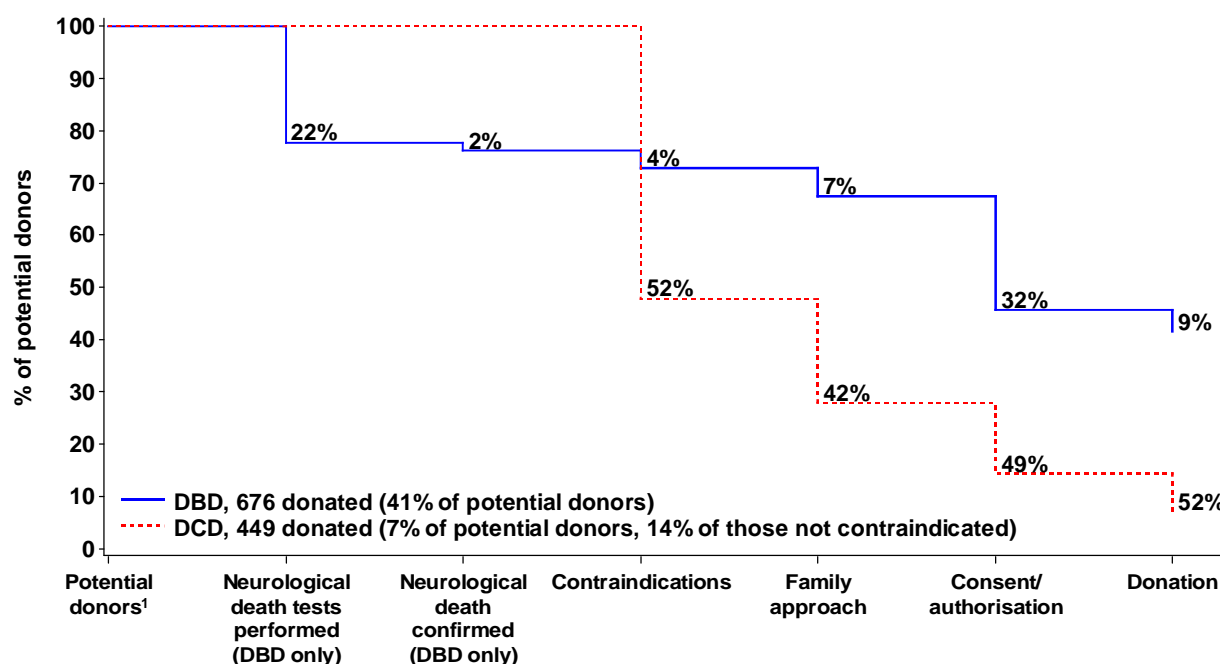


Figure 1.2 Donation after circulatory death



**Figure 1.3 Stages at which potential organ donors lose the opportunity to become actual donors, 1 April 2012 to 31 March 2013**



<sup>1</sup> Potential DBD donor - A patient who meets all four criteria for neurological death testing

Potential DCD donor - A patient who had treatment withdrawn and death was anticipated within four hours

## NEUROLOGICAL DEATH TESTING RATE

8 1,268 (78%) potential DBD donors underwent neurological tests to establish whether neurological death had occurred. 363 (22%) did not undergo tests, the primary reasons for which are summarised in **Table 1.1**. The most common reason for not testing, given in 114 (31%) cases, was that the patient was haemodynamically unstable. Although only 78% of potential DBD donors were tested, an increase of 4 percentage points has been observed from the 74% achieved in 2011/12. A comparison table of key rates obtained in 2010/11, 2011/12 and 2012/13 is provided in **Appendix 1** for information.

9 Of the 1,268 potential donors tested, 1,243 (98%) were confirmed dead following neurological death tests.

### 10 NHSBT action – neurological death testing

The rates of testing are analysed in detail on a monthly basis as an intrinsic element of the performance improvement framework. Performance is shared and addressed at each regional collaborative and through the network of clinical leads as the most influential group of staff to affect rates of testing. Members of the National Organ Donation Committee (NODC) continue to work with colleagues at a local level to understand the barriers to testing and to identify local solutions to improve performance.

<b>Table 1.1      Reasons given for neurological death tests not being performed, 1 April 2012 – 31 March 2013</b>		
	<b>N</b>	<b>%</b>
Patient haemodynamically unstable	114	31.4
Clinical reason/Clinicians decision	40	11.0
Family declined donation	29	8.0
Biochemical/endocrine abnormality	29	8.0
Cardiac arrest despite resuscitation	28	7.7
Other	28	7.7
Continuing effects of sedatives	27	7.4
Treatment withdrawn	18	5.0
Inability to test all reflexes	11	3.0
Family pressure not to test	9	2.5
Medical contraindication to donation	9	2.5
Unknown	9	2.5
Neonates - Less than 2 months post term	5	1.4
Pressure on ICU beds	3	0.8
Brain stem reflexes returned	2	0.6
SN-OD advised that donor not suitable	2	0.6
<b>Total</b>	<b>363</b>	<b>100.0</b>

## IMMINENT DEATH

- 11 Of the 14,192 patients for whom death was *not* confirmed using neurological criteria, imminent death was anticipated for 6,960 (49%) and, of these, 6,517 (94%) subsequently had their treatment withdrawn.

## CONTRAINDICATIONS

- 12 Within the PDA, patients are not classified as eligible donors if they have any absolute medical contraindications, which were defined as follows in the PDA *during the time period*\*:

- known HIV positive
- known or suspected CJD
- active untreated tuberculosis
- any malignancy within the past 12 months (excluding brain tumour)
- multi-organ failure.

*\* Please note that the PDA was brought inline with current contraindications on 1 April 2013, hence 2012/13 data still reports on the old contraindications.*

- 13 55 (4%) patients confirmed dead following neurological tests had a contraindication, while the equivalent figure for patients who had treatment withdrawn was 3,403 (52%). The breakdown of primary contraindications for both groups is given in **Table 1.2**.

Table 1.2 Primary medical contraindications, 1 April 2012 – 31 March 2013				
	DBD		DCD	
	N	%	N	%
Any malignancy within the past 12 months, excluding brain tumour	34	61.8	1,187	34.9
Multi-organ failure	14	25.5	2,151	63.2
Active untreated tuberculosis	4	7.3	30	0.9
Known HIV positive	2	3.6	29	0.9
Known or suspected CJD	1	1.8	6	0.2
<b>Total</b>	<b>55</b>	<b>100.0</b>	<b>3,403</b>	<b>100.0</b>

## REFERRAL RATE

- 14 NHSBT continues to work with stakeholders, via the NODC to ensure the implementation of NICE guidance published in September 2011 relating to triggers for referral and the involvement of trained individuals when approaching families for consent/authorisation.
- 15 A patient who meets the criteria for neurological death tests or for whom imminent death is anticipated should be referred to a Specialist Nurse - Organ Donation (SN-OD). The criteria for neurological death tests in the PDA are:
  - Apnoea
  - Coma from known aetiology and unresponsive
  - Ventilated
  - Fixed Pupils

The DBD referral rate was 92% and the DCD referral rate was 62% during 2012/13; this represents a considerable improvement on last year's DCD referral rate of 53%. **Table 1.3** shows the reasons given why such patients were not referred. Note that one patient can meet the referral criteria for both DBD and DCD and therefore some patients may be counted in both columns.

- 16 Of the patients who met the referral criteria and were not referred, the reason given for 25% of DBD and DCD was because the patient was not identified as a potential donor or organ donation was not considered. The reason given for 42% of DCD was medical contraindications.

**Table 1.3 Reasons given why patient not referred, 1 April 2012 – 31 March 2013**

	DBD		DCD	
	N	%	N	%
Not identified as a potential donor/organ donation not considered	35	25.4	667	25.5
Other	26	18.8	224	8.6
Family declined donation prior to neurological testing	18	13.0	10	0.4
Medical contraindications	16	11.6	1,107	42.3
Family declined donation after neurological testing	15	10.9	-	-
Thought to be medically unsuitable	10	7.2	425	16.2
Coroner/Procurator Fiscal Reason	6	4.3	11	0.4
Neurological death not confirmed	5	3.6	3	0.1
Reluctance to approach family	4	2.9	21	0.8
Family declined donation following decision to withdraw treatment	3	2.2	92	3.5
Thought to be outside age criteria	-	-	21	0.8
Pressure on ICU beds	-	-	6	0.2
Donation after circulatory death not supported by ICU	-	-	29	1.1
<b>Total</b>	<b>138</b>	<b>100.0</b>	<b>2,616</b>	<b>100.0</b>

## APPROACH RATE

- 17 Families of eligible donors were approached in 1,100 (93%) and 1,816 (58%) DBD and DCD cases, respectively. **Table 1.4** shows the reasons given why families were not approached. Although only 58% of eligible DCD donor families were approached, an increase of 4 percentage points has been observed from the 54% achieved in 2011/12.

**Table 1.4 Reasons given why family not formally approached, 1 April 2012 – 31 March 2013**

	DBD		DCD	
	N	%	N	%
Coroner/Procurator Fiscal refused permission	33	37.5	38	2.9
Other	17	19.3	605	46.6
Family stated that they would not consent/authorise before they were formally approached	12	13.6	43	3.3
Other medical reason	9	10.2	130	10.0
Family untraceable	7	8.0	42	3.2
Patient's general medical condition	5	5.7	332	25.6
Family considered too upset to approach	3	3.4	23	1.8
Not identified as a potential donor / organ donation not considered	2	2.3	44	3.4
Resource failure	-	-	21	1.6
Pressure on ICU beds	-	-	1	0.1
Patient outside age criteria	-	-	18	1.4
Not reported	-	-	1	0.1
<b>Total</b>	<b>88</b>	<b>100.0</b>	<b>1,298</b>	<b>100.0</b>

- 18 For eligible DBD, in 38% of cases the reason stated for non approach was Coroner or Procurator Fiscal refused permission, whereas this reason only accounted for 3% of the eligible DCD families not approached. A further 12 (14%) were not approached because the family had already indicated that they would not consent to/authorise donation. Again, this reason accounted for a further 3% of the eligible DCD cases.
- 19 For eligible DCD, in 605 (47%) cases the reason stated was 'other'. Investigating the text provided has shown that of the 605 cases where other was chosen, the text indicated that the patient was not identified as a potential donor or donation was not considered in nearly half the cases. The families of 26% of eligible DCD were not approached because of the patient's general medical condition.

20 **NHSBT action – approach and referral**

A key area of focus for the NODC is to understand and improve the timely identification and referral of all potential donors. A number of interventions have been proposed and developed. These include:

- The development of specific education and training materials relating to donor identification and referral for use in local hospital Trust/Health Boards.
- Local donation committees to adopt tangible and measurable referral methods in collaboration with their local SN-OD team

An intrinsic part of ODT strategy is to work in collaboration with clinical leads and clinicians to ensure that every family where donation is an option has the approach planned and undertaken in a collaborative manner. In order to reinforce and support this strategy, a sub group of the National Organ Donation Committee has produced documents to support this which are accompanied by a DVD demonstrating best practice in consent for use by SN-ODs and Clinical leads to promote recognised best practice within their hospitals.

In addition, Trust /Board reports have been amended to include data on SN-OD involvement in approach as a national key performance indicator.

21 **NHSBT action – Coroner and Procurator Fiscal refusal**

The Chief Coroner took up post in 2012. Work is ongoing to develop collaborative working relationships nationally via the Chief coroner as well as specific targeted actions locally.

## **CONSENT/AUTHORISATION RATE**

- 22 The consent/authorisation rate is based on eligible donors whose family were formally approached for consent to/authorisation for donation. The consent/authorisation rate is the proportion of these families who consented to/authorised solid organ donation.
- 23 During the financial year, the DBD consent/authorisation rate was 68% and the 95% confidence interval (CI) for this percentage was 65% - 70%. The DCD consent/authorisation rate was 51% (95% CI: 49% - 54%) and the overall consent/authorisation rate was 57% (95% CI: 55% - 60%).

- 24 When a patient is known to have expressed a wish to donate, for example they were registered on the Organ Donor Register (ODR), carried a donor card or expressed a wish to donate verbally or in writing and the patient's wish was known at the time of potential donation, the DBD consent/authorisation rate was 96% compared to 55% when a patient hadn't expressed a wish to donate or the patient's ODR status was not known at the time of potential donation. For DCD, the rates were 83% compared with 40%. Overall, these rates were 88% compared with 46%. In total during the financial year, 105 families overruled their loved one's known wish to be an organ donor.
- 25 When a SN-OD was involved in the approach to the family, the DBD consent/authorisation rate was 72% compared with 52% when the SN-OD was not involved. Similarly, for DCD the rate was 61% compared with 31% when the SN-OD was not involved. The overall rate was 66% compared with 37%.
- 26 The reasons why families did not give consent/authorisation are shown in **Table 1.5**. The main reason that families of eligible DBD and DCD patients gave for no consent/authorisation was that the patient had stated in the past that they did not wish to be a donor (21% and 18%, respectively).

<b>Table 1.5 Reasons given why family did not give consent, 1 April 2012 – 31 March 2013</b>				
	<b>DBD</b>		<b>DCD</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Patient had stated in the past that they did not wish to be a donor	75	21.1	155	17.5
Family were not sure whether the patient would have agreed to donation	46	12.9	140	15.8
Family did not want surgery to the body	42	11.8	49	5.5
Family felt it was against their religious/cultural beliefs	30	8.4	26	2.9
Strong refusal - probing not appropriate	30	8.4	63	7.1
Other	28	7.9	103	11.6
Family felt the patient had suffered enough	23	6.5	67	7.6
Family were divided over the decision	20	5.6	52	5.9
Family did not believe in donation	16	4.5	35	4.0
Family felt the body needs to be buried whole (unrelated to religious or cultural reasons)	15	4.2	29	3.3
Family felt the length of time for donation process was too long	11	3.1	128	14.5
Family had difficulty understanding/accepting neurological testing	10	2.8	1	0.1
Family wanted to stay with the patient after death	4	1.1	12	1.4
Family concerned that organs may not be transplanted	3	0.8	21	2.4
Family concerned that other people may disapprove/be offended	2	0.6	3	0.3
Patients treatment may be or has been limited to facilitate organ donation	1	0.3	-	-
Families concerned about organ allocation	-	-	1	0.1
<b>Total</b>	<b>356</b>	<b>100.0</b>	<b>885</b>	<b>100.0</b>

## 27 NHSBT action – consent/authorisation

Continuing to focus on increasing consent/authorisation rates is a key objective for ODT. Previous analysis of national PDA data shows consent/authorisation to be more likely with the involvement of the SN-OD. The increase in the number of families who have been approached and given consent /authorisation has been achieved by collaborative working and the involvement of the SN-OD in the donation conversation.

NHSBT has now issued toolkits to support the implementation of the strategy producing toolkits for both adult and paediatric ICUs, which include:

- written material based upon NICE guidance
- scripts of good and bad requests, open and closed questions, impact of known consent / authorisation
- videos of simulated family approaches to demonstrate the elements of success in the SN-OD approach.

In addition to this strategy there is a national group, the National Black, Asian and Minority Ethnic (BAME) Transplant Alliance, working with all stakeholders to increase awareness and consent/authorisation rates within these particular groups. NHSBT is working closely with this group, providing data, expertise and communications input.

As part of the TOT Strategy (2013) the issue of families over-riding the issue of the patients known wish to donate has been given specific focus to understand how this can be improved.

## ORGAN DONATION FROM ELIGIBLE DONORS WITH CONSENT/AUTHORISATION

- 28 Of the eligible donors whose family consented to/authorised donation, 91% of the eligible DBD and 48% of the eligible DCD donors went on to become actual solid organ donors. **Table 1.6** shows the reasons why consented/authorised eligible donors did not become actual solid organ donors.

Table 1.6 Reasons why solid organ donation did not happen, 1 April 2012 – 31 March 2013				
	DBD		DCD	
	N	%	N	%
Organs deemed medically unsuitable by recipient centres	18	26.5	149	30.9
Coroner/ Procurator Fiscal refusal	12	17.6	26	5.4
Organs deemed medically unsuitable on surgical inspection	12	17.6	14	2.9
Family changed mind	7	10.3	25	5.2
Cardiac arrest	7	10.3	4	0.8
Other	6	8.8	25	5.2
Positive virology	5	7.4	8	1.7
General instability	1	1.5	15	3.1
Prolonged time to asystole	-	-	211	43.8
Logistic reasons	-	-	3	0.6
Retrieval team not available	-	-	1	0.2
Not reported	-	-	1	0.2
<b>Total</b>	<b>68</b>	<b>100.0</b>	<b>482</b>	<b>100.0</b>

- 29 For consented/authorised eligible DBD the main reason given for solid organ donation not proceeding was that the organs were deemed medically unsuitable by recipient centres (26%). This reason also accounted for 31% of DCD cases. However, the main reason given for consented/authorised eligible DCD not proceeding to become a solid organ donor was prolonged time to asystole, 44%.

## SECTION 2 – RETRIEVAL AND USAGE OF ORGANS

- 30 There were 1,212 actual deceased organ donors last year, but not all organs from these donors were offered for transplantation. **Table 2.1** shows the number of organs offered, retrieved and transplanted from the 705 DBD and 507 DCD donors. The number of organs from these donors that were subsequently used for research purposes is also shown. The number of organs offered for transplant excludes those where the donor did not meet the nationally agreed age criteria for suitability for donation of that specific organ. There are no age cut-offs agreed for kidney and liver donation.

Table 2.1 Donation and transplantation of organs from 1212 deceased donors in the UK, 1 April 2012 – 31 March 2013							
Organ	Organs meeting initial suitability criteria and offered for transplant	Organs retrieved for transplant		Organs transplanted			Organs used for research (from actual organ donors)
		N	% of offered	N	% of retrieved	% of offered	
DBD organ donors							
Kidney	1403	1291	92	1196	93	85	38
Liver	693	640	92	582	91	84	42
Pancreas <sup>1</sup>	475	347	73	195	56	41	65
Bowel <sup>2,3</sup>	225	14	6	14	100	6	0
Heart <sup>4</sup>	502	144	29	144	100	29	0
Lung <sup>5</sup>	1054	334	32	309	93	29	2
DCD organ donors							
Kidney	1012	974	96	797	82	79	96
Liver	480	185	39	136	74	28	38
Pancreas <sup>1</sup>	240	92	38	41	45	17	27
Lung <sup>5</sup>	592	75	13	59	79	10	0
Deceased organ donors							
Kidney	2415	2265	94	1993	88	83	134
Liver	1173	825	70	718	87	61	80
Pancreas <sup>1</sup>	715	439	61	236	54	33	92
Bowel <sup>2,3</sup>	225	14	6	14	100	6	0
Heart <sup>4</sup>	502	142	28	142	100	28	0
Lung <sup>5</sup>	1646	407	25	366	90	22	2

<sup>1</sup> Excludes donors aged > 60 years

<sup>2</sup> Excludes one bowel transplanted from an overseas donor

<sup>3</sup> Excludes donors aged > 65 years and donors weighing > 100kg and donors with a BMI >30 kg/m<sup>2</sup>

<sup>4</sup> Excludes donors aged > 65 years or died due to myocardial infarction

<sup>5</sup> Excludes donors aged > 65 years

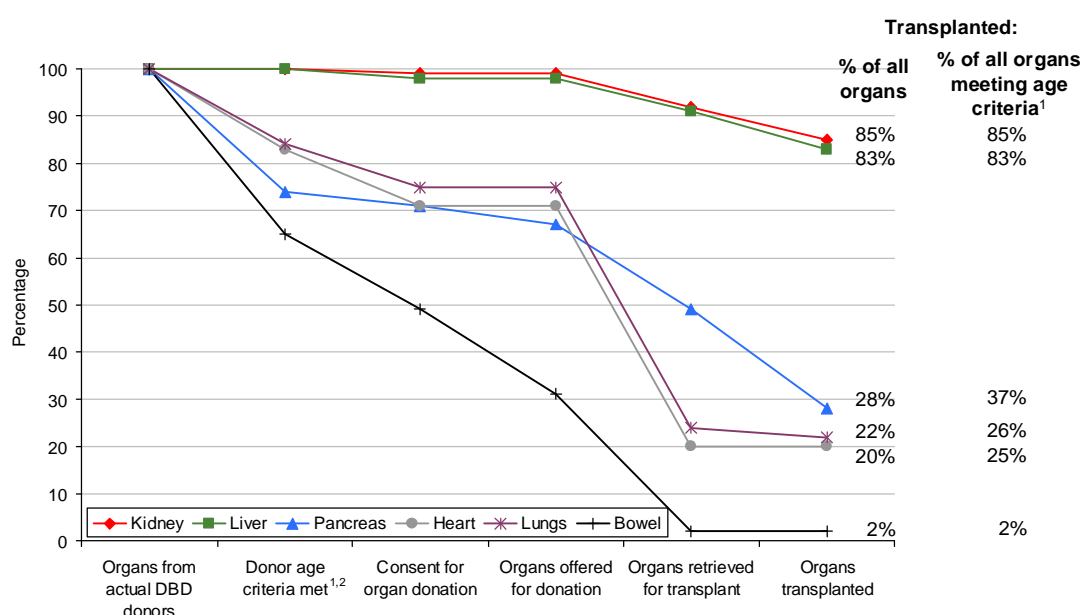
- 31 Each year, a number of actual organ donors result in no transplants. Donors resulting in at least one transplant are termed 'utilised' donors and the number of actual and utilised donors for the UK as a whole is shown in **Table 2.2**. The number of donors per million of population is also shown. Last year 8% of actual donors resulted in no organ transplants. This compares with 6% in 2011/12.

<b>Table 2.2 Actual and utilised deceased donors in the UK, 1 April 2012 – 31 March 2013</b>					
	<b>DBD (pmp)</b>		<b>DCD (pmp)</b>		<b>Total (pmp)</b>
Actual donors	705	(11.1)	507	(8.0)	1212 (19.1)
Utilised donors <sup>1</sup>	685	(10.8)	436	(6.9)	1121 (17.7)

<sup>1</sup> Utilised donors defined as donors where one or more organs were retrieved and transplanted

- 32 **Figures 2.1 and 2.2** show offering, retrieval and transplantation of organs, in terms of percentages. Charts start at 100% for each organ, representing all organs from the 705 DBD and 507 DCD donors. The charts indicate the proportion of those organs following the pathway through each step to transplantation e.g. meeting national donor age criteria, having consent (authorisation in Scotland), being offered out to transplant centres, being retrieved for transplant and resulting in transplantation. For example, **Figure 2.1** shows that 28% of the pancreases from the 705 DBD donors were transplanted, but that 37% of pancreases from donors within the nationally agreed age limit of 60 years were transplanted. Transplant rates of kidneys and livers are generally high, while other organs, even allowing for the agreed age limits, are less often transplanted.

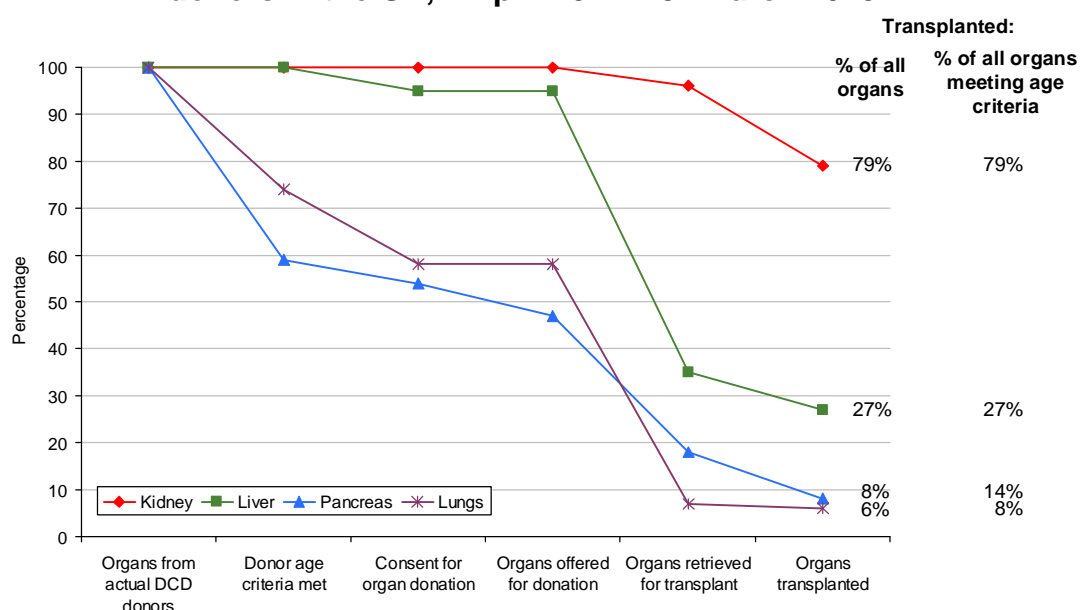
**Figure 2.1 Donation and transplantation rates of organs from DBD organ donors in the UK, 1 April 2012 – 31 March 2013**



<sup>1</sup> Hearts – in addition to age criteria, donors who died due to myocardial infarction are excluded

<sup>2</sup> Bowels – in addition to age criteria, donors who weigh > 100kg and donors with a BMI >30 kg/m<sup>2</sup> are excluded

**Figure 2.2 Donation and transplantation rates of organs from DCD organ donors in the UK, 1 April 2012 – 31 March 2013**



- 33 Reasons for organs not being offered for transplant, being offered but not accepted and retrieved and for being retrieved but not subsequently transplanted are shown in **Table 2.3** for abdominal organs from DBD donors, **Table 2.4** for abdominal organs from DCD donors and in **Table 2.5** for cardiothoracic organs. Reasons for the medical unsuitability of a donor include infections, tumours, anatomy and disease. Non-medical reasons include donor size. Clinical unsuitability of an organ encompasses poor perfusion, prolonged ischaemia time, past history of donor and, in the case of pancreases for islets, insufficiency of viable islet yield. Reasons reported under 'other' include logistical and recipient related issues in addition to un-coded reasons reported of a miscellaneous nature.
- 34 These tables also indicate the number of organs from UK donors that were transplanted overseas. These organs were not accepted for transplant by any UK transplant centre, but were accepted for suitable recipients identified elsewhere, usually in Europe. Other than livers fulfilling an arrangement for the transplantation of super-urgent patients in the Republic of Ireland, only hearts and lungs were exported for transplant outside the UK. Organs from outside the UK are occasionally imported for transplant. In 2012/13 these were 7 hearts (including 2 from ROI) and 24 livers (including 21 from ROI).

**Table 2.3 Reasons for non-retrieval and non-use of abdominal organs from organ donors after brain death (DBD) in the UK, 1 April 2012 – 31 March 2013**

	Kidney	Liver	Pancreas	Bowel
<b>All DBD organ donors</b>	<b>705</b>	<b>705</b>	<b>705</b>	<b>705</b>
Donors from whom organs not offered for donation	4	12	230	480
<b><i>Reasons for organs not being offered</i></b>				
Family permission refused	3	11	19	108
Permission refused by coroner	1 <sup>1</sup>	1	2	3
Donor unsuitable – age	0	0	183	30
Donor unsuitable – past history	0	0	22	4
Donor age >65 and donor weight >100kg and donor BMI >30kg/m <sup>2</sup>	0	0	0	249
Other	0	0	4	86
<b>TOTAL DONORS WITH ORGANS NOT OFFERED</b>	<b>4</b>	<b>12</b>	<b>230</b>	<b>480</b>
<b>Organs offered for donation</b>	<b>1403</b>	<b>693</b>	<b>475</b>	<b>225</b>
<b>Organs not retrieved (% of organs offered for donation)</b>	<b>112 (8)</b>	<b>53 (8)</b>	<b>128 (27)</b>	<b>211 (94)</b>
<b><i>Reasons for non-retrieval</i></b>				
<i>Donor</i>				
Donor unsuitable – medical	19	5	10	7
Donor unsuitable – non-medical	5	0	20	36
Donor age	4	0	11	11
<i>Organ</i>				
Organ unsuitable – clinical	37	33	50	55
Poor function	21	7	19	8
<i>Other</i>				
Other	26	8	18	94
<b>TOTAL ORGANS NOT RETRIEVED</b>	<b>112</b>	<b>53</b>	<b>128</b>	<b>211</b>
<b>Organs retrieved (% of organs offered for donation)</b>	<b>1291 (92)</b>	<b>640 (92)</b>	<b>347 (73)</b>	<b>14 (6)</b>
Organs transplanted in the UK	1196	575	195	14 <sup>3</sup>
Organs transplanted overseas	0	7 <sup>2</sup>	0	0
Organs not transplanted	95	58	152	0
<b><i>Reasons for organ not being transplanted</i></b>				
<i>Donor</i>				
Donor unsuitable – medical	36	8	18	0
Donor unsuitable – non-medical	0	0	0	0
Donor age	0	0	0	0
<i>Organ</i>				
Organ unsuitable – clinical	20	36	108	0
Poor function	2	0	0	0
<i>Other</i>				
Other	37	14	26	0
<b>TOTAL ORGANS NOT TRANSPLANTED</b>	<b>95 (38)</b>	<b>58 (42)</b>	<b>152 (65)</b>	<b>0 (0)</b>
<b>(Number used for research)</b>				

<sup>1</sup> One kidney not offered for donation due to permission refused by coroner  
<sup>2</sup> Transplanted into super-urgent patients in the Republic of Ireland  
<sup>3</sup> Excludes one bowel transplanted from an overseas donor

**Table 2.4 Reasons for non-retrieval and non-use of abdominal organs from organ donors after circulatory death (DCD) in the UK, 1 April 2012 – 31 March 2013**

	Kidney	Liver	Pancreas
<b>All DCD organ donors</b>	<b>507</b>	<b>507</b>	<b>507</b>
Donors from whom organs not offered for donation	1	27	267
<b><i>Reasons for organs not being offered</i></b>			
Family permission refused	1	17	22
Permission refused by coroner	0	10	5
Donor unsuitable – age	0	0	206
Donor unsuitable – past history	0	0	17
Other	0	0	17
<b>TOTAL DONORS WITH ORGANS NOT OFFERED</b>	<b>1</b>	<b>27</b>	<b>267</b>
<b>Organs offered for donation</b>	<b>1012</b>	<b>480</b>	<b>240</b>
<b>Organs not retrieved (% of organs offered for donation)</b>	<b>38 (4)</b>	<b>295 (61)</b>	<b>148 (62)</b>
<b><i>Reasons for non-retrieval</i></b>			
<i>Donor</i>			
Donor unsuitable – medical	1	8	7
Donor unsuitable – non-medical	4	14	17
Donor age	0	72	22
<i>Organ</i>			
Organ unsuitable – clinical	13	97	56
Poor function	4	23	8
<i>Other</i>			
Other	16	81	38
<b>TOTAL ORGANS NOT RETRIEVED</b>	<b>38</b>	<b>295</b>	<b>148</b>
<b>Organs retrieved (% of organs offered for donation)</b>	<b>974 (96)</b>	<b>185 (39)</b>	<b>92 (38)</b>
Organs transplanted in the UK	797	136	41
Organs transplanted overseas	0	0	0
Organs not transplanted	177	49	51
<b><i>Reasons for organ not being transplanted</i></b>			
<i>Donor</i>			
Donor unsuitable – medical	63	7	6
Donor unsuitable – non-medical	0	1	0
Donor age	1	1	0
<i>Organ</i>			
Organ unsuitable – clinical	56	27	33
Poor function	4	0	0
<i>Other</i>			
Other	53	13	12
<b>TOTAL ORGANS NOT TRANSPLANTED (Number used for research)</b>	<b>177 (96)</b>	<b>49 (38)</b>	<b>51 (27)</b>

**Table 2.5 Reasons for non-retrieval and non-use of cardiothoracic organs from organ donors in the UK, 1 April 2012 – 31 March 2013**

	Heart (DBD)	Lung (DBD)	Lung (DCD)
<b>All organ donors</b>	<b>705</b>	<b>705</b>	<b>507</b>
Donors from whom organs not offered for donation	203	178	211
<b><i>Reasons for organs not being offered</i></b>			
Family permission refused	56	45	62
Permission refused by coroner	28	20	15
Donor age >65 years	113	113	134
Donor COD of cardiac arrest or MI	6	0	0
<b>TOTAL DONORS WITH ORGANS NOT OFFERED</b>	<b>203</b>	<b>178</b>	<b>211</b>
<b>Organs offered for donation</b>	<b>502</b>	<b>1054</b>	<b>592</b>
<b>Organs not retrieved (% of organs offered for donation)</b>	<b>358 (71)</b>	<b>720 (68)</b>	<b>517 (87)</b>
<b><i>Reasons for non-retrieval</i></b>			
<i>Donor</i>			
Donor unsuitable – medical	19	43	38
Donor unsuitable – non-medical	47	45	70
Donor age	23	26	56
<i>Organ</i>			
Organ unsuitable – clinical	104	195	134
Poor function	116	292	136
<i>Other</i>			
Other	49	119	83
<b>TOTAL ORGANS NOT RETRIEVED</b>	<b>358</b>	<b>720</b>	<b>517</b>
<b>Organs retrieved (% of organs offered for donation)</b>	<b>144 (29)</b>	<b>334 (32)</b>	<b>75 (13)</b>
Organs transplanted in the UK	141	291	59
Organs transplanted overseas	3	18	0
Organs not transplanted	0	25	16
<b><i>Reasons for organ not being transplanted</i></b>			
<i>Donor</i>			
Donor unsuitable – medical	0	0	3
Donor unsuitable – non-medical	0	0	0
<i>Organ</i>			
Organ unsuitable – clinical	0	2	0
Poor function	0	4	4
<i>Other</i>			
Other	0	19	9
<b>TOTAL ORGANS NOT TRANSPLANTED</b>	<b>0 (0)</b>	<b>25 (2)</b>	<b>16 (0)</b>
<b>(Number used for research)</b>			

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## Appendix 1

Table A.1 DBD and DCD key metrics from the Potential Donor Audit, by financial year											
Eligible donor type	Financial year	Number of patients who met referral criteria <sup>1</sup>	Neurological death testing rate (%)	Referral rate (%)	Number of eligible donors	Number of eligible donors whose family were approached	Approach rate (%)	Proportion of family approaches involving a SN-OD (%)	Number of families who consented to/ authorised donation	Consent/ authorisation rate (%)	Number of actual donors <sup>2</sup>
DBD	2010-2011	1676	72.1	84.5	1144	1059	92.6	67.5	683	64.5	617
	2011-2012	1661	74.2	90.7	1169	1090	93.2	71.1	694	63.7	636
	2012-2013	1631	77.7	91.5	1188	1100	92.6	78.9	744	67.6	676
DCD	2010-2011	7221		44.3	2883	1359	47.1	53.5	693	51.0	342
	2011-2012	6902		52.6	2933	1598	54.5	57.9	794	49.7	390
	2012-2013	6960		62.4	3114	1816	58.3	66.7	931	51.3	449
TOTAL	2010-2011	8897		51.9	4027	2418	60.0	59.6	1376	56.9	959
	2011-2012	8563		60.0	4102	2688	65.5	63.2	1488	55.4	1026
	2012-2013	8591		67.9	4302	2916	67.8	71.3	1675	57.4	1125

<sup>1</sup> DBD referral criteria: patients where neurological death was suspected; DCD referral criteria: patients for whom imminent death was anticipated

<sup>2</sup> Actual donors resulting from eligible DBD donors includes 6 DCD donors in 2010-2011, 11 DCD donors in 2011-2012 and 18 DCD donors in 2012-2013