

Organ Donation Activity

Key messages

- There has been a 6% increase in deceased donors (to 1,364) and a 2% fall in living organ donors (to 1,075) compared with last year
- Compared with 809 deceased donors in 2007-2008, there has been an increase of 69% to 1,364 in 2015-2016
- There has been an increase in donors after brain death of 2% to 785 and an increase of 14% in donors after circulatory death to 579, compared with last year
- Donors after circulatory death provide, on average, one less organ for transplantation than donors after brain death
- Donor characteristics are continuing to change: donors are older, more obese, and less likely to have suffered a trauma-related death, all of which have adverse effects on transplant outcomes
- On 1 December 2015, The Human Transplantation (Wales) Act 2013 became operational in Wales, introducing a soft opt-out system for organ donation (deemed consent).

3.1 Summary of activity

There was a 6% increase in the number of deceased organ donors in 2015-2016 (1,364), one short of the target of 1,365 donors set for the year. This was the result of an increase in donors after brain death (DBD) of 2% and a more substantial increase of 14% in donors after circulatory death (DCD). The 1,364 donors represented a 69% increase over the number of organ donors in 2007-2008 (809).

The 1,364 deceased organ donors gave 4,658 organs compared with 1,282 donors and 4,360 organs in 2014-2015. This represents a 7% increase in organs donated. **Table 3.1** shows deceased organ donors according to the organs they donated.

Nearly all deceased donors (95%) gave a kidney and of these the majority (76%) also donated at least one other organ. Only 12% of donors after brain death were single organ donors, the majority (55%) of these just donating their kidneys. By contrast, 47% of donors after circulatory death were single organ donors, the majority (93%) of these donating just their kidneys.

Although the vast majority of living organ donors donated a kidney, 40 donated part of their liver. Of these 40 living donor livers, one was not transplanted due to anatomical reasons. All living donations are approved by the Human Tissue Authority.

Table 3.1 Solid organ donors in the UK, 1 April 2015 - 31 March 2016, by organ types donated				
	DBD	DCD	Living donor	TOTAL
Kidney only	52	252	1035	1339
Kidney & thoracic	7	10	-	17
Kidney & liver	285	160	-	445
Kidney & pancreas	3	15	-	18
Kidney, thoracic & liver	52	11	-	63
Kidney, thoracic & pancreas	5	1	-	6
Kidney, liver & pancreas	138	77	-	215
Kidney, liver, pancreas & bowel	1	-	-	1
Kidney, thoracic, liver & pancreas	178	31	-	209
Kidney, thoracic, liver & bowel	1	-	-	1
Kidney, thoracic, liver, pancreas & bowel	14	-	-	14
Thoracic only	3	4	-	7
Thoracic & liver	3	1	-	4
Thoracic & pancreas	-	1	-	1
Thoracic, liver & pancreas	2	-	-	2
Liver only	39	16	40	95
Liver & pancreas	2	-	-	2
TOTAL	785	579	1075	2439

Bowel may include abdominal wall/colon/stomach/spleen

3.2 Organ donors

Organ donor rates per million population (pmp) for 2015-2016 are given by country and former Strategic Health Authority according to where the donor lived in **Table 3.2** while the number of deceased donors are shown based on location of the hospital in which they died in **Table 3.3**. **Table 3.4** shows the number of deceased donors by Organ Donation Services Team. **Appendix I** shows a more detailed breakdown of the number of donors from the donating hospitals and **Appendix III** details the populations used. Number and rates of utilised donors are given in Chapter 4.

On 1 December 2015, Wales moved to a soft opt-out system for organ donation. Under the soft opt-out system, if a person has not registered an organ donation decision to either opt-in or opt-out or appoint a representative, is aged 18 or over, has lived for longer than 12 months and is ordinarily resident and also died in Wales, and had the capacity to understand the notion of deemed consent for a significant period before their death, then consent can be deemed.

Table 3.2 Organ donation rates per million population (pmp), in the UK, 1 April 2015 - 31 March 2016, by country/ Strategic Health Authority of donor residence¹								
Country of donation/ Strategic Health Authority	DBD		DCD		TOTAL		Living	
	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
North East	40	(15.3)	31	(11.8)	71	(27.1)	48	(18.3)
North West	80	(11.2)	60	(8.4)	140	(19.6)	140	(19.6)
Yorkshire and The Humber	61	(11.4)	43	(8.0)	104	(19.4)	72	(13.4)
North of England	181	(12.0)	134	(8.9)	315	(20.8)	260	(17.2)
East Midlands	46	(9.9)	43	(9.3)	89	(19.2)	61	(13.1)
West Midlands	62	(10.9)	34	(6.0)	96	(16.8)	84	(14.7)
East of England	65	(10.8)	80	(13.3)	145	(24.1)	81	(13.5)
Midlands and East	173	(10.6)	157	(9.6)	330	(20.2)	226	(13.8)
London	85	(10.0)	48	(5.6)	133	(15.6)	160	(18.7)
South East Coast	81	(17.6)	46	(10.0)	127	(27.7)	73	(15.9)
South Central	60	(14.0)	38	(8.9)	98	(22.8)	70	(16.3)
South West	78	(14.4)	53	(9.8)	131	(24.2)	80	(14.8)
South of England	219	(15.3)	137	(9.6)	356	(24.9)	223	(15.6)
England	658	(12.1)	476	(8.8)	1134	(20.9)	869	(16.0)
Isle of Man	1	(12.5)	1	(12.5)	2	(25.0)	2	(25.0)
Channel Islands	2	(12.5)	1	(6.3)	3	(18.8)	2	(12.5)
Wales	37	(12.0)	38	(12.3)	75	(24.3)	49	(15.9)
Scotland	58	(10.8)	45	(8.4)	103	(19.3)	83	(15.5)
Northern Ireland	29	(15.8)	18	(9.8)	47	(25.5)	70	(38.0)
TOTAL	785	(12.1)	579	(8.9)	1364	(21.0)	1075	(16.6)

¹ Includes 105 donors (13 deceased, 92 living) where the hospital postcode was used in place of an unknown donor postcode

Table 3.2 shows variation in the number of DBD and DCD donors pmp across the UK. There were 12.1 DBD donors pmp for the UK as a whole, but across the former English Strategic Health Authorities (SHA) this ranged between 9.9 and 17.6 pmp. Across the four countries of the UK, Northern Ireland had the highest rate of 15.8 pmp. However, the number of eligible donors pmp also varies and further information can be seen in Chapter 13. It should be noted that these figures are not directly comparable, since not all donors are reported in the Potential Donor Audit. For DCD donors the UK rate is 8.9 pmp, ranging from 8.4 to 12.3 pmp across countries of the UK and from 5.6 to 13.3 pmp in the former English SHAs. No adjustment has been made for any differences in demographics of the populations across countries or SHAs.

Table 3.3 Deceased organ donors in the UK, 1 April 2015 - 31 March 2016, by country/ Strategic Health Authority of hospital of donor death			
Country of donation/ Strategic Health Authority	DBD N	DCD N	TOTAL N
North East	49	35	84
North West	78	65	143
Yorkshire and The Humber	59	41	100
North of England	186	141	327
East Midlands	38	36	74
West Midlands	65	40	105
East of England	52	79	131
Midlands and East	155	155	310
London	147	66	213
South East Coast	54	41	95
South Central	48	35	83
South West	73	51	124
South of England	175	127	302
England	663	489	1152
Isle of Man	1	0	1
Channel Islands	1	0	1
Wales	36	28	64
Scotland	56	43	99
Northern Ireland	28	19	47
TOTAL	785	579	1364

Table 3.4 Deceased organ donors in the UK, 1 April 2015 - 31 March 2016 by Organ Donation Services Team			
Team	DBD N	DCD N	TOTAL N
Eastern	62	79	141
London	108	49	157
Midlands	85	72	157
North West	81	74	155
Northern	52	35	87
Northern Ireland	28	19	47
Scotland	56	43	99
South Central	59	43	102
South East	94	58	152
South Wales	33	19	52
South West	64	46	110
Yorkshire	63	42	105
TOTAL	785	579	1364

The mean number of organs retrieved per donor in 2015-2016 is given by country in **Table 3.5**. Overall, an average of 3.9 organs were donated per DBD donor and 2.8 per DCD donor. For DBD donors, the rate ranged from 3.8 organs per donor in England to 4.3 in Northern Ireland.

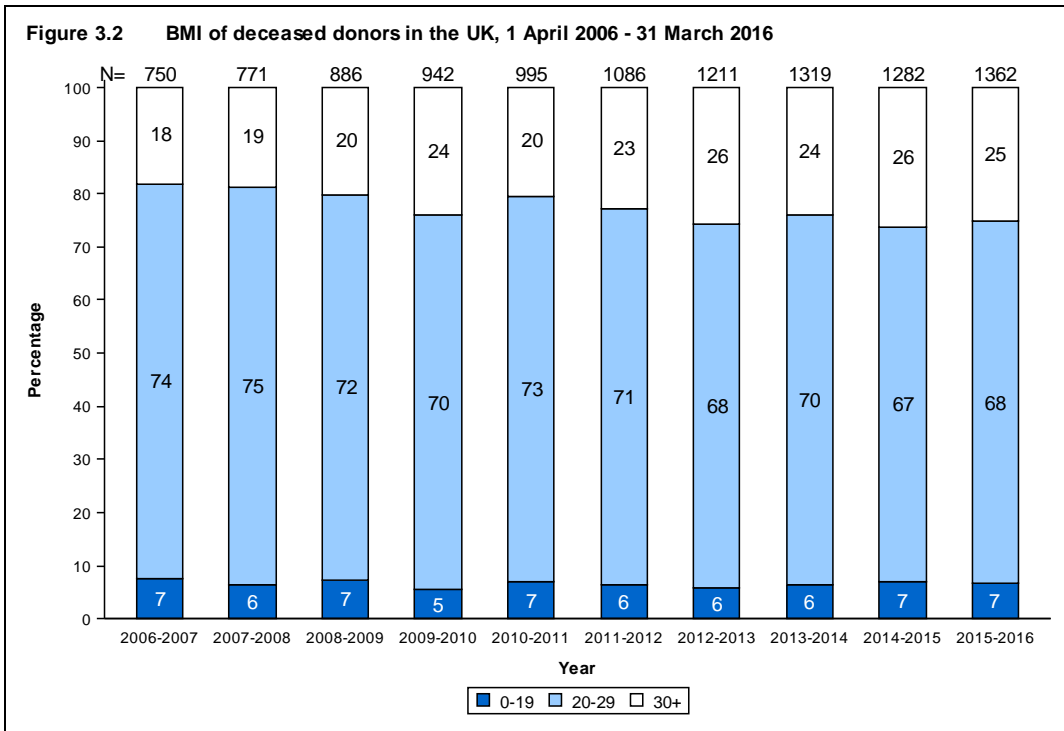
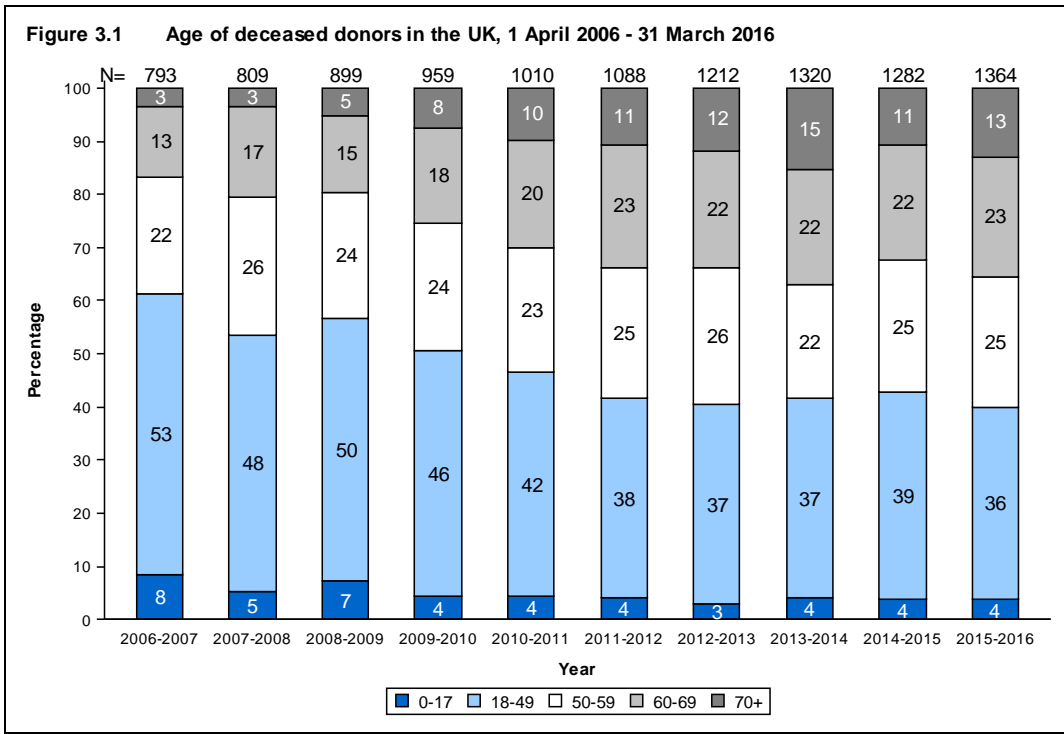
Table 3.5 Organs retrieved per donor, in the UK, 1 April 2015 - 31 March 2016, by country of donor residence									
Country	Adult			Paediatric			All		
	DBD	DCD	TOTAL	DBD	DCD	TOTAL	DBD	DCD	TOTAL
England	3.8	2.8	3.4	5.2	3.7	4.5	3.8	2.8	3.4
Wales	3.8	2.6	3.2	7.0	3.0	5.7	3.9	2.6	3.3
Scotland	3.9	2.9	3.4	5.7	4.0	5.3	4.0	2.9	3.5
Northern Ireland	4.0	2.4	3.4	5.8	3.0	5.3	4.3	2.4	3.6
TOTAL	3.8	2.8	3.4	5.5	3.7	4.7	3.9	2.8	3.4

3.3 Demographic characteristics

While the number of donors overall has increased over the last 10 years, it is important to be aware that there have been changes over time with regard to donor characteristics (**Table 3.6**). In 2015-2016, 36% of deceased donors were aged 60 years or more compared with 17% in 2006-2007 (**Figure 3.1**). In particular the proportion of deceased donors aged at least 70 years has increased from 3% to 13% over the same time period. The proportion of clinically obese donors (Body Mass Index (BMI) of 30 or higher) has increased from 18% to 25% in deceased donors in the last 10 years (**Figure 3.2**). In addition, the proportion of all deceased donors after a trauma death has decreased from 16% to 5% over the same time period. All of these changes may have an adverse impact on the quality of the organs and the subsequent transplant outcome for the recipient.

Table 3.6 also indicates the ethnicity of deceased organ donors, highlighting that 5% of donors are from ethnic minority groups. By contrast, ethnic minority groups represent 11% of the UK population.

Table 3.6 Demographic characteristics of organ donors in the UK 1 April 2015 - 31 March 2016							
		DBD		DCD		TOTAL	
		N	%	N	%	N	%
Age	0-17	30	4	21	4	51	4
	18-49	296	38	196	34	492	36
	50-59	203	26	132	23	335	25
	60-69	165	21	145	25	310	23
	70+	91	12	85	15	176	13
	Mean (SD)	51	(17)	52	(17)	51	(17)
BMI	0-19	53	7	38	7	91	7
	20-29	539	69	388	67	927	68
	30+	193	25	151	26	344	25
	Unknown	0	0	2	0	2	0
	Mean (SD)	27	(5)	27	(7)	27	(6)
Cause of death	Intracranial	694	88	488	84	1182	87
	Trauma	45	6	27	5	72	5
	Other	46	6	64	11	110	8
Ethnicity	White	735	94	561	97	1296	95
	Asian	21	3	6	1	27	2
	Black	15	2	5	1	20	1
	Other	13	2	7	1	20	1
	Not reported	1				1	
Blood group	O	367	47	273	47	640	47
	A	323	41	232	40	555	41
	B	68	9	58	10	126	9
	AB	27	3	16	3	43	3
Donor gender	Male	397	51	353	61	750	55
	Female	388	49	226	39	614	45
TOTAL		785	100	579	100	1364	100



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