

Organ Donation Activity

Key messages

- There has been a 2% increase in deceased donors (to 1,600) and a 3% fall in living organ donors (to 1,039) compared with last year
- There has been an increase in donors after brain death of 1% to 962 and an increase of 3% in donors after circulatory death to 638, compared with last year
- Donors after brain death provide, on average, one more organ for transplantation than donors after circulatory 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

3.1 Summary of activity

There was a 2% increase in the number of deceased organ donors in 2018-2019 (1,600), 32 short of the target of 1,632 donors set for the year. There was an increase in donors after brain death (DBD) of 1% and an increase of 3% in donors after circulatory death (DCD).

The 1,600 deceased organ donors gave 5,147 organs compared with 1,574 donors and 5,260 organs in 2017-2018. This represents a 2% decrease in organs donated. **Table 3.1** shows deceased organ donors according to the organs they donated.

Nearly all deceased donors (94%) gave a kidney and of these, the majority (73%) also donated at least one other organ. Only 15% of donors after brain death were single organ donors, with equal proportions being liver only and kidney only donors. By contrast, 54% of donors after circulatory death were single organ donors, the majority (97%) of these donating just their kidneys.

Although the vast majority of living organ donors donated a kidney, 22 donated part of their liver. All living donations are approved by the Human Tissue Authority.

Table 3.1 Solid organ donors in the UK, 1 April 2018 - 31 March 2019, by organ types donated

	DBD	DCD	Living donor	TOTAL
Kidney only	78	331	1017	1426
Kidney & thoracic	9	20	-	29
Kidney & liver	363	144	-	507
Kidney & pancreas	10	19	-	29
Kidney & bowel	1	-	-	1
Kidney, thoracic & liver	61	21	-	82
Kidney, thoracic & pancreas	3	7	-	10
Kidney, pancreas & bowel	1	-	-	1
Kidney, liver & pancreas	192	51	-	243
Kidney, liver & bowel	2	-	-	2
Kidney, liver, pancreas & bowel	8	-	-	8
Kidney, thoracic, liver & pancreas	145	31	-	176
Kidney, thoracic, liver, pancreas & bowel	9	-	-	9
Thoracic only	4	3	-	7
Thoracic & liver	6	1	-	7
Liver only	64	8	22	94
Liver & pancreas	6	1	-	7
Pancreas only	-	1	-	1
TOTAL	962	638	1039	2639

Bowel may include abdominal wall/colon/stomach/spleen

3.2 Organ donors

Organ donor rates per million population (pmp) for 2018-2019 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.

Table 3.2 Organ donation rates per million population (pmp), in the UK, 1 April 2018 - 31 March 2019, 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	64	(24.2)	28	(10.6)	92	(34.8)	49	(18.6)
North West	110	(15.2)	68	(9.4)	178	(24.5)	107	(14.7)
Yorkshire and The Humber	79	(14.5)	51	(9.4)	130	(23.9)	97	(17.8)
North of England	253	(16.5)	147	(9.6)	400	(26.1)	253	(16.5)
East Midlands	62	(13.0)	57	(11.9)	119	(24.9)	43	(9.0)
West Midlands	73	(12.5)	58	(9.9)	131	(22.4)	62	(10.6)
East of England	85	(13.8)	79	(12.8)	164	(26.6)	67	(10.9)
Midlands and East	220	(13.1)	194	(11.5)	414	(24.6)	172	(10.2)
London	116	(13.1)	69	(7.8)	185	(21.0)	163	(18.5)
South East Coast	83	(17.7)	48	(10.2)	131	(27.9)	58	(12.4)
South Central	62	(14.2)	42	(9.6)	104	(23.8)	89	(20.4)
South West	80	(14.4)	47	(8.5)	127	(22.8)	82	(14.7)
South of England	225	(15.4)	137	(9.4)	362	(24.8)	229	(15.7)
England	814	(14.6)	547	(9.8)	1361	(24.5)	817	(14.7)
Isle of Man	2	(25.0)	0	(0.0)	2	(25.0)	1	(12.5)
Channel Islands	1	(6.3)	0	(0.0)	1	(6.3)	3	(18.8)
Wales	51	(16.3)	45	(14.4)	96	(30.7)	44	(14.1)
Scotland	68	(12.5)	29	(5.4)	97	(17.9)	113	(20.8)
Northern Ireland	26	(13.9)	17	(9.1)	43	(23.0)	61	(32.6)
TOTAL	962	(14.6)	638	(9.7)	1600	(24.2)	1039	(15.7)

¹ Includes 81 donors (13 deceased, 68 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 14.6 DBD donors pmp for the UK as a whole, but across the former English Strategic Health Authorities (SHA) this ranged between 12.5 and 24.2 pmp. Across the four countries of the UK, Wales had the highest rate of 16.3 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 9.7 pmp, again Wales has the highest rate of 14.4 pmp across countries of the UK, across the former English SHAs it ranged from 7.8 to 12.8 pmp. 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 2018 - 31 March 2019, by country/ Strategic Health Authority of hospital of donor death			
Country of donation/ Strategic Health Authority	DBD N	DCD N	TOTAL N
North East	67	29	96
North West	110	66	176
Yorkshire and The Humber	80	52	132
North of England	257	147	404
East Midlands	53	46	99
West Midlands	75	66	141
East of England	69	73	142
Midlands and East	197	185	382
London	175	91	266
South East Coast	50	41	91
South Central	58	43	101
South West	77	47	124
South of England	185	131	316
England	814	554	1368
Isle of Man	2	0	2
Channel Islands	1	0	1
Wales	50	37	87
Scotland	68	30	98
Northern Ireland	27	17	44
TOTAL	962	638	1600

Table 3.4 Deceased organ donors in the UK, 1 April 2018 - 31 March 2019 by Organ Donation Services Team			
Team	DBD N	DCD N	TOTAL N
Eastern	88	79	167
London	132	66	198
Midlands	112	104	216
North West	123	69	192
Northern	69	33	102
Northern Ireland	27	17	44
Scotland	68	30	98
South Central	73	56	129
South East	81	61	142
South Wales	40	31	71
South West	67	38	105
Yorkshire	82	54	136
TOTAL	962	638	1600

The mean number of organs retrieved per donor in 2018-2019 is given by country in **Table 3.5**. Overall, an average of 3.5 organs were donated per DBD donor and 2.7 per DCD donor. For DBD donors, the rate ranged from 3.4 organs per donor in Wales to 3.8 in Northern Ireland.

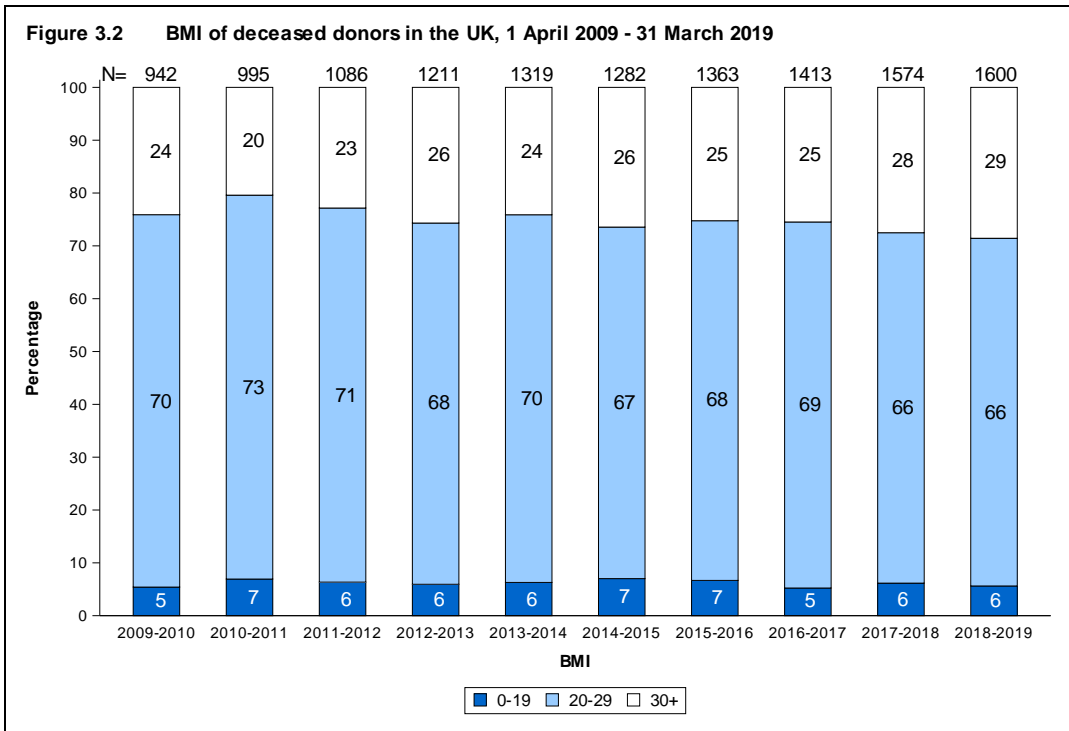
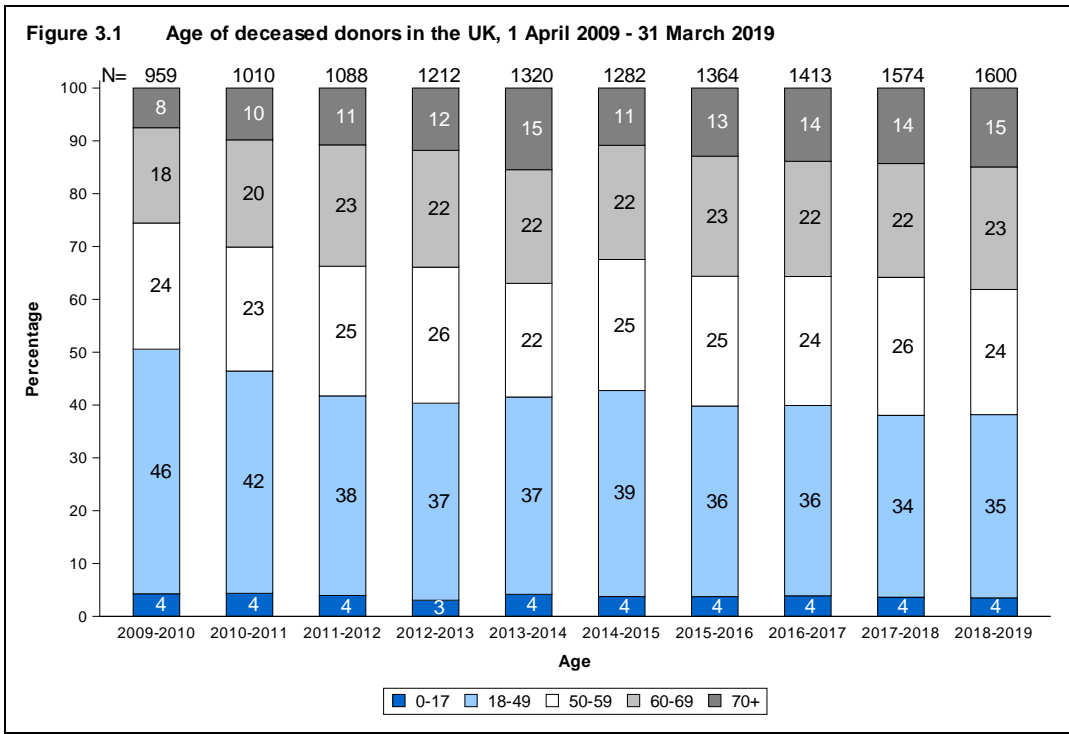
Table 3.5 Organs retrieved per donor, in the UK, 1 April 2018 - 31 March 2019, by country of donor residence									
Country	Adult			Paediatric			All		
	DBD	DCD	TOTAL	DBD	DCD	TOTAL	DBD	DCD	TOTAL
England	3.5	2.7	3.2	4.4	3.6	4.0	3.5	2.7	3.2
Wales	3.4	2.6	3.0	4.3	4.0	4.2	3.4	2.7	3.1
Scotland	3.6	2.6	3.3	4.7	-	4.7	3.7	2.6	3.3
Northern Ireland	3.8	2.5	3.3	4.0	-	4.0	3.8	2.5	3.3
TOTAL	3.5	2.7	3.2	4.4	3.6	4.1	3.5	2.7	3.2

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 2018-2019, 38% of deceased donors were aged 60 years or more compared with 26% in 2009-2010 (**Figure 3.1**). In particular the proportion of donors aged at least 70 years has increased from 8% to 15% over the same time period. The proportion of clinically obese donors (Body Mass Index (BMI) of 30 or higher) has increased from 24% to 29% 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 11% to 3% over the same time period. All of these changes may have an adverse impact on the quality and utilisation of the organs, and the subsequent transplant outcome for the recipient.

Table 3.6 also indicates the ethnicity of deceased organ donors, highlighting that 8% of donors are from the Black, Asian and minority ethnic (BAME) community. By contrast, the BAME community represent 11% of the UK population.

Table 3.6		Demographic characteristics of organ donors in the UK 1 April 2018 - 31 March 2019					
		DBD		DCD		TOTAL	
		N	%	N	%	N	%
Age	0-17	33	3	23	4	56	4
	18-49	370	38	185	29	555	35
	50-59	234	24	145	23	379	24
	60-69	192	20	179	28	371	23
	70+	133	14	106	17	239	15
	Mean (SD)	51	17	54	16	52	17
BMI	0-19	56	6	34	5	90	6
	20-29	660	69	393	62	1053	66
	30+	246	26	211	33	457	29
	Mean (SD)	27	6	28	6	27	6
Cause of death	Intracranial	857	89	536	84	1393	87
	Trauma	26	3	19	3	45	3
	Other	79	8	83	13	162	10
Ethnicity	White	865	90	603	95	1468	92
	Asian	42	4	14	2	56	4
	Black	15	2	5	1	20	1
	Other	34	4	11	2	45	3
	Unknown	6	-	5	-	11	-
Blood group	O	488	51	296	46	784	49
	A	356	37	270	42	626	39
	B	87	9	55	9	142	9
	AB	31	3	17	3	48	3
Donor gender	Male	475	49	396	62	871	54
	Female	487	51	242	38	729	46
TOTAL		962	100	638	100	1600	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.