

Organ Donation Activity

Key messages

- There has been a 1% fall in deceased donors (to 1,580) and a 4% fall in living organ donors (to 1,001) compared with last year
- There has been a decrease in donors after brain death of 2% to 946 and a decrease of 1% in donors after circulatory death to 634, 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 over the decade: 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 1% fall in the number of deceased organ donors in 2019-2020 (1,580). There was a fall in donors after brain death (DBD) of 2% and a fall of 1% in donors after circulatory death (DCD).

The 1,580 deceased organ donors gave 5,086 organs compared with 1,600 donors and 5,145 organs in 2018-2019. This represents a 1% decrease in organs donated. **Table 3.1** shows deceased organ donors according to the organs they donated.

Note that the COVID-19 pandemic affected the number of organ donors in 2019-2020, and that based on the first 11 months of this year and last year, deceased donor numbers overall had in fact increased by 2%.

Nearly all deceased donors (94%) gave a kidney and of these, the majority (74%) also donated at least one other organ. Only 15% of donors after brain death were single organ donors, with similar proportions being liver only and kidney only donors. By contrast, 51% of donors after circulatory death were single organ donors, the majority (96%) of these donating just their kidneys.

Although the vast majority of living organ donors donated a kidney, 19 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 2019 - 31 March 2020, by organ types donated				
	DBD	DCD	Living donor	TOTAL
Kidney only	72	313	982	1367
Kidney & thoracic	8	22	-	30
Kidney & liver	373	152	-	525
Kidney & pancreas	9	18	-	27
Kidney, thoracic & liver	79	16	-	95
Kidney, thoracic & pancreas	3	2	-	5
Kidney, liver & pancreas	157	66	-	223
Kidney, liver & bowel	1	-	-	1
Kidney, liver, pancreas & bowel	7	-	-	7
Kidney, thoracic, liver & pancreas	141	29	-	170
Kidney, thoracic, liver & bowel	1	-	-	1
Kidney, thoracic, liver, pancreas & bowel	12	-	-	12
Thoracic only	6	1	-	7
Thoracic & liver	5	2	-	7
Thoracic, liver & pancreas	2	-	-	2
Liver only	68	12	19	99
Liver & pancreas	2	1	-	3
TOTAL	946	634	1001	2581

Bowel may include abdominal wall/colon/stomach/spleen

3.2 Organ donors

Organ donor rates per million population (pmp) for 2019-2020 are given by country and NHS region according to where the donor lived in **Table 3.2**, while the numbers 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 2019 - 31 March 2020, by country/NHS region of donor residence								
Country/NHS region of residence	DBD		DCD		TOTAL		Living	
	N	(pmp)	N	(pmp)	N	(pmp)	N	(pmp)
North East and Yorkshire	135	(15.8)	79	(9.2)	214	(25.0)	114	(13.3)
North West	92	(13.1)	68	(9.7)	160	(22.8)	95	(13.6)
Midlands	130	(12.3)	87	(8.3)	217	(20.6)	114	(10.8)
East of England	82	(12.6)	102	(15.7)	184	(28.4)	76	(11.7)
London	120	(13.5)	64	(7.2)	184	(20.7)	116	(13.0)
South East	133	(15.0)	94	(10.6)	227	(25.6)	138	(15.6)
South West	76	(13.5)	52	(9.3)	128	(22.8)	63	(11.2)
England	768	(13.7)	546	(9.8)	1314	(23.5)	716	(12.8)
Isle of Man	2	(25.0)	1	(12.5)	3	(37.5)	1	(12.5)
Channel Islands	3	(18.8)	0	(0.0)	3	(18.8)	2	(12.5)
Wales	57	(18.2)	28	(8.9)	85	(27.1)	35	(11.1)
Scotland	65	(11.9)	35	(6.4)	100	(18.4)	97	(17.8)
Northern Ireland	30	(16.0)	19	(10.1)	49	(26.1)	67	(35.6)
TOTAL¹	939	(14.1)	633	(9.5)	1572	(23.7)	980	(14.8)

¹ Includes 80 donors with an unknown UK postcode and excludes 29 donors resident outside the UK

Table 3.2 shows variation in the number of DBD and DCD donors pmp across the UK. There were 14.1 DBD donors pmp for the UK as a whole, but across NHS regions this ranged between 12.3 and 15.8 pmp. Across the four countries of the UK, Wales had the highest rate of 18.2 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 9.5 pmp, and Northern Ireland had the highest rate of 10.1 pmp across countries of the UK, across NHS regions it ranged from 7.2 to 15.7 pmp. No adjustment has been made for any differences in demographics of the populations across countries or NHS regions.

Table 3.3 Deceased organ donors in the UK, 1 April 2019 - 31 March 2020, by country/NHS region of hospital of donor death			
Country of donation/ NHS region	DBD N	DCD N	TOTAL N
North East and Yorkshire	137	79	216
North West	96	64	160
Midlands	126	94	220
East of England	64	87	151
London	182	95	277
South East	108	89	197
South West	72	47	119
England	785	555	1340
Isle of Man	2	1	3
Channel Islands	2	0	2
Wales	51	24	75
Scotland	74	35	109
Northern Ireland	32	19	51
TOTAL	946	634	1580

Table 3.4 Deceased organ donors in the UK, 1 April 2019 - 31 March 2020 by Organ Donation Services Team			
Team	DBD N	DCD N	TOTAL N
Eastern	78	95	173
London	122	70	192
Midlands	102	90	192
North West	106	70	176
Northern	66	30	96
Northern Ireland	32	19	51
Scotland	74	35	109
South Central	73	53	126
South East	105	60	165
South Wales	46	19	65
South West	59	40	99
Yorkshire	83	53	136
TOTAL	946	634	1580

The mean number of organs retrieved per donor in 2019-2020 is given by country in **Table 3.5**. Overall, an average of 3.6 organs were donated per DBD donor and 2.7 per DCD donor. These rates ranged from 3.1 (DBD) and 2.3 (DCD) organs per donor in Northern Ireland to 3.8 (DBD) and 3.0 (DCD) in Wales.

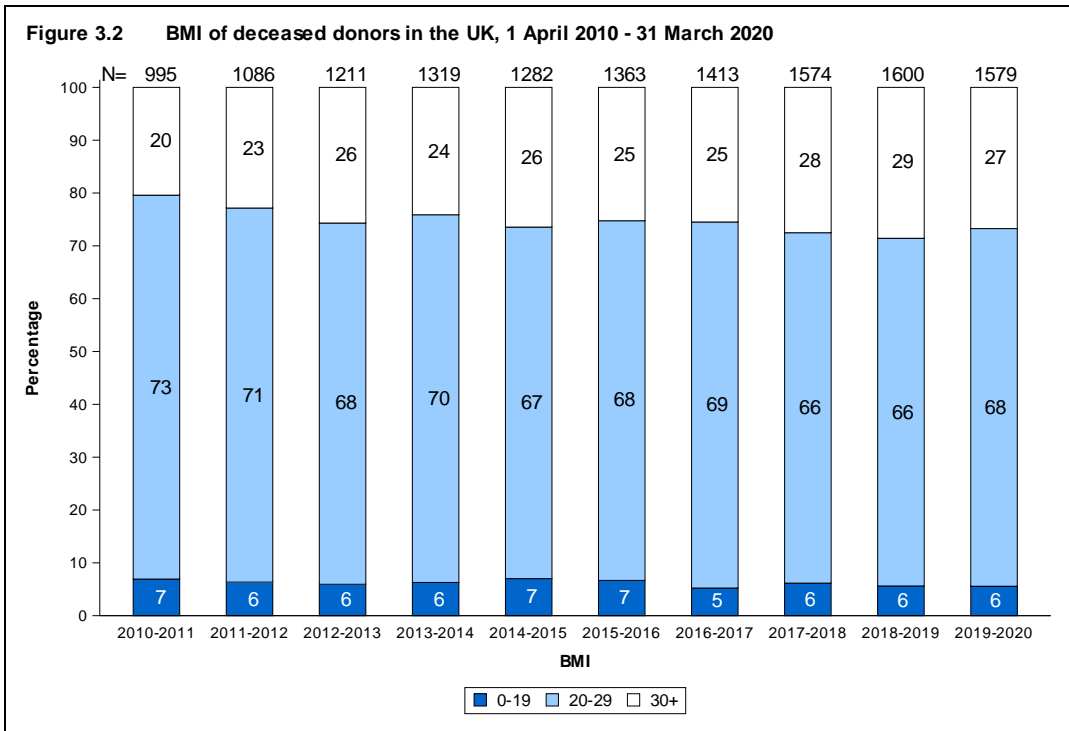
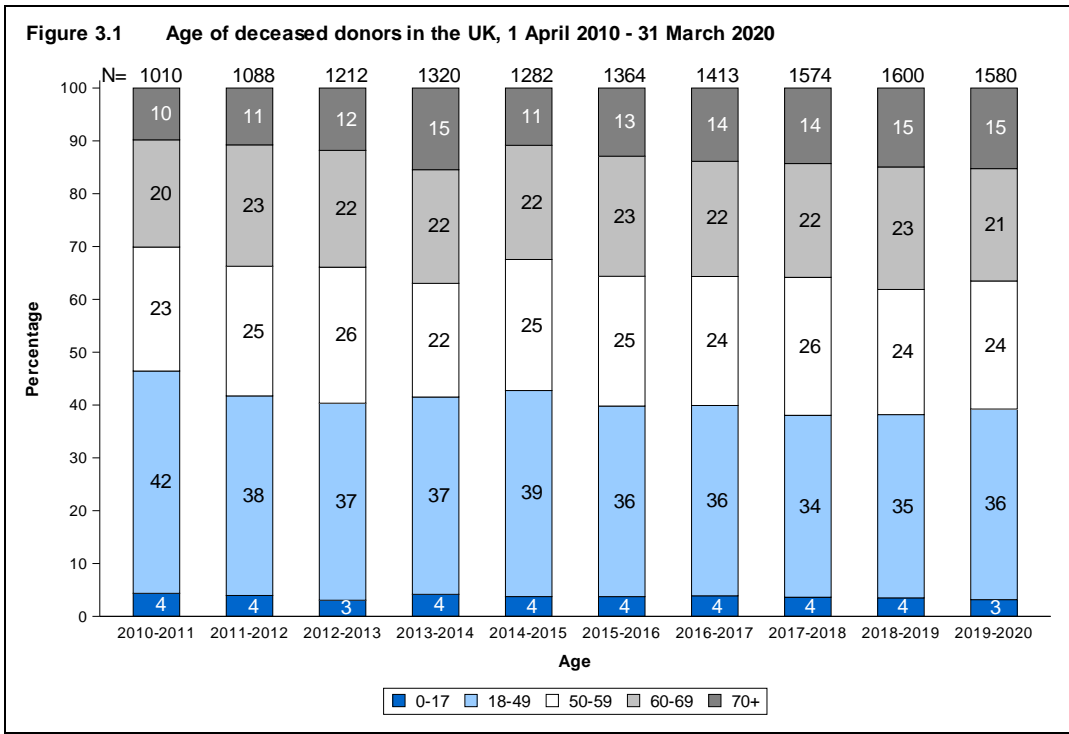
Table 3.5 Organs retrieved per donor, in the UK, 1 April 2019 - 31 March 2020, by country of donor residence									
Country	Adult			Paediatric			All		
	DBD	DCD	TOTAL	DBD	DCD	TOTAL	DBD	DCD	TOTAL
England	3.5	2.8	3.2	4.6	3.0	4.0	3.6	2.8	3.2
Wales	3.7	3.0	3.5	6.0	3.0	5.3	3.8	3.0	3.6
Scotland	3.5	2.6	3.2	3.0	-	3.0	3.5	2.6	3.2
Northern Ireland	2.9	2.3	2.7	6.0	-	6.0	3.1	2.3	2.8
TOTAL	3.5	2.7	3.2	4.7	2.9	4.0	3.6	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 2019-2020, 36% of deceased donors were aged 60 years or more compared with 30% in 2010-2011 (**Figure 3.1**). In particular, the proportion of donors aged at least 70 years has increased from 10% to 15% over the same time period. The proportion of clinically obese donors (Body Mass Index (BMI) of 30 or higher) has increased from 20% to 27% 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 7% 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					
		DBD		DCD		TOTAL	
		N	%	N	%	N	%
Age	0-17	32	3	18	3	50	3
	18-49	368	39	202	32	570	36
	50-59	228	24	155	24	383	24
	60-69	164	17	172	27	336	21
	70+	154	16	87	14	241	15
	Mean (SD)	51	17	53	16	52	17
BMI	0-19	53	6	35	6	88	6
	20-29	662	70	407	64	1069	68
	30+	231	24	191	30	422	27
	Unknown	0		1		1	
	Mean (SD)	27	6	28	7	27	6
Cause of death	Intracranial	858	91	524	83	1382	87
	Trauma	22	2	23	4	45	3
	Other	66	7	87	14	153	10
Ethnicity	White	865	92	589	94	1454	93
	Asian	24	3	16	3	40	3
	Black	24	3	6	1	30	2
	Other	28	3	14	2	42	3
	Unknown	5		9		14	
Blood group	O	439	46	277	44	716	45
	A	382	40	279	44	661	42
	B	98	10	56	9	154	10
	AB	27	3	22	3	49	3
Donor sex	Male	503	53	412	65	915	58
	Female	443	47	222	35	665	42
TOTAL		946	100	634	100	1580	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.