



Blood and Transplant

**MONTHLY REPORT ON SARS-CoV-2 POSITIVE
PATIENTS IN TRANSPLANTATION**

**REPORT FOR
1 MARCH 2020 – 6 OCTOBER 2021**

PUBLISHED 8 OCTOBER 2021



This report has been produced by Statistics and Clinical Research, NHS Blood and Transplant.

All figures quoted in this report are as reported to NHS Blood and Transplant by 6 October 2021.

This report contains information on all patients registered with NHS Blood and Transplant active on the waiting list for an organ transplant or in follow-up after receiving an organ transplant that have tested positive for SARS-CoV-2.

The data collected are deliberately limited so as not to add significantly to the burden of work in transplant centres.

Information on the vital status of a patient has been supplemented from the NHS Digital Tracing Service for patients who reside in England and Wales. Only deaths reported within 28 days of a positive test result are included.

All English patients on the UK Transplant Registry on the waiting list and post-transplant have been linked with Public Health England to obtain whether a patient has tested positive for SARS-CoV-2. This data is updated on a weekly basis.

All Scottish patients on the UK Transplant Registry on the waiting list and post-transplant have been linked with Public Health Scotland to obtain whether a patient has tested positive for SARS-CoV-2. This data is updated on a monthly basis

Detailed breakdown by organ is possible for kidney, SPK, liver, heart and lung transplants only due to small numbers.

Further analysis is planned in future reports to include univariate and multi-variable analysis.

Caveats

Data are only reported for patients that have tested positive for SARS-CoV-2, patients that may have CoVID-19 but were not tested are not available for analysis. During the period in question, SARS-CoV-2 swab testing was in the main restricted to patients presenting to hospital and as such there is a selection bias towards symptomatic, sicker patients. Cause of death information is not available at this time and therefore recent deaths should not be assumed secondary to COVID-19.

Data linkage has only been possible so far for English and Scottish patients, we are working with other UK nations to get a data linkage in place as soon as possible.

Supplemented death data is only reported for English and Welsh patients and includes all causes of death. For other UK nations we are reliant on the return of centre reported follow-up information.

Acknowledgements

NHS Blood and Transplant would like to thank all those responsible for providing data to the NHSBT CoVID-19 Registry, without whom this report would not be possible.

We would also like to thank Richard Little at NHSBT who has largely contributed to obtaining the death information from the NHS Digital Tracing Service.

We would also like to thank Ines Ushiro-Lumb (NHSBT), Rommel Ramanan (Kidney Advisory Group Chair) and James Thomas (PHE) who have largely contributed to obtaining information on positive test results for SARS-CoV-2 from Public Health England.

We would also like to thank Hester Ward (National Services Scotland) and Alison Smith-Palmer (PHS) who have largely contributed to obtaining information on positive test results for SARS-CoV-2 from Public Health Scotland.

Publications

<https://onlinelibrary.wiley.com/doi/abs/10.1111/ajt.16247?af=R>

Executive Summary



Key Findings

- The number of deceased donor transplants fell from 80 transplants performed in one week at the beginning of March to just 8 at the end of March. Deceased donor transplants are now nearing normal figures, with 77 transplants performed in the week commencing 27 September 2021.
- 6,016 of the 59,936 (10.0%) recipients with a functioning graft are reported as testing positive for SARS-CoV-2. Of these, 11% (n=670) are reported as died as at 6 October 2021.
- The infection rate across England ranges from 7.5% in the South West to 14.8% in the North West in recipients with a functioning graft.
- 1,487 of the 12,787 (11.6%) patients on the active waiting list at 1 February 2020 and new registrations since 1 February 2020 are reported as testing positive for SARS-CoV-2. Of these, 4% (n=66) are reported as died as at 6 October 2021.
- The infection rate across England ranges from 4.8% in the South west to 19.4% in London for patients on the active waiting list.
- Of the 6,463 transplants performed so far in 2020 and 2021, 541 (8.3%) recipients have tested positive for SARS-CoV-2 with 52 (0.8%) reported as died.

Figure 1 shows the number of donors and transplants by week and donor type since Monday 6th January 2020.

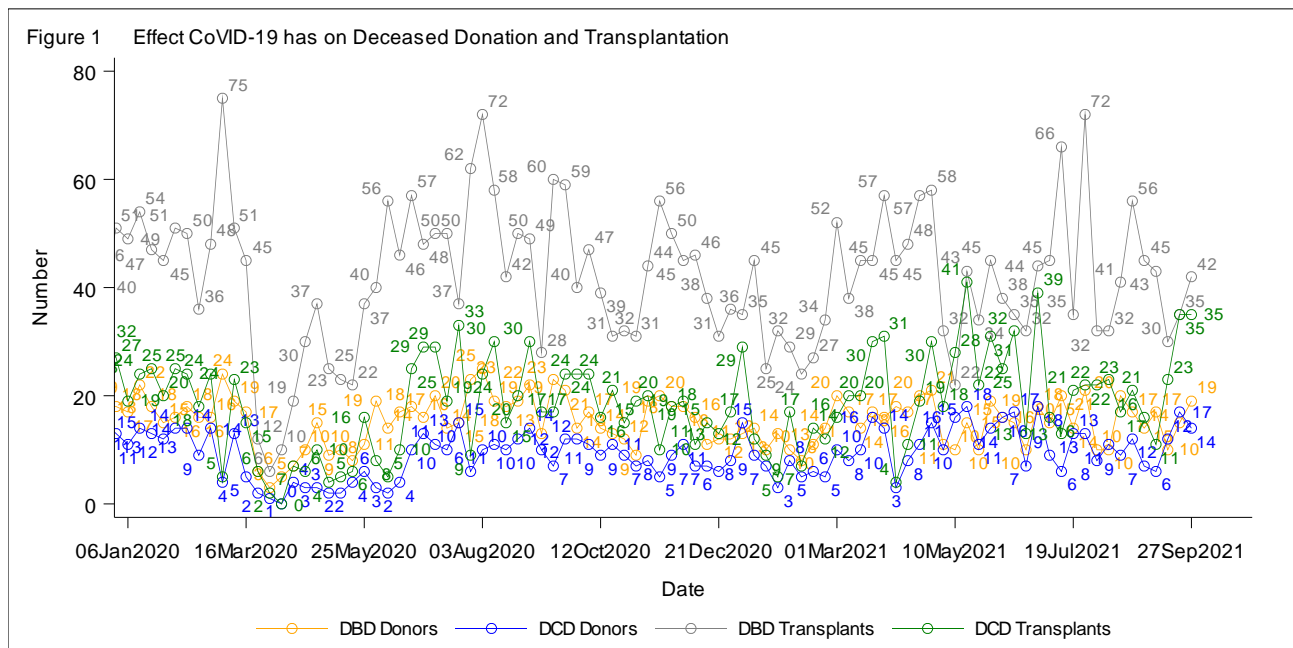


Figure 2 shows the cumulative incidence of SARS-CoV-2 positive patients and the cumulative deaths by week separately for transplanted recipients and active wait listed patients since Monday 3 February 2020.

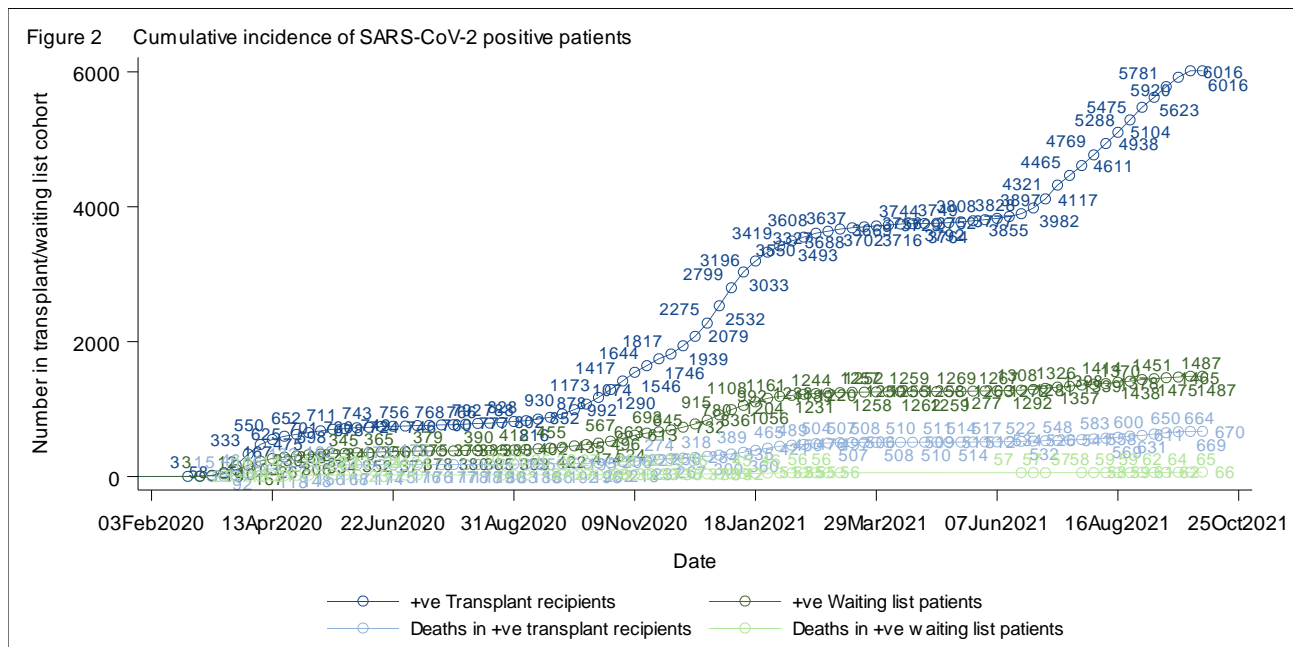


Figure 3 shows the incidence and deaths of SARS-CoV-2 positive patients by organ for transplanted recipients and active wait listed patients.

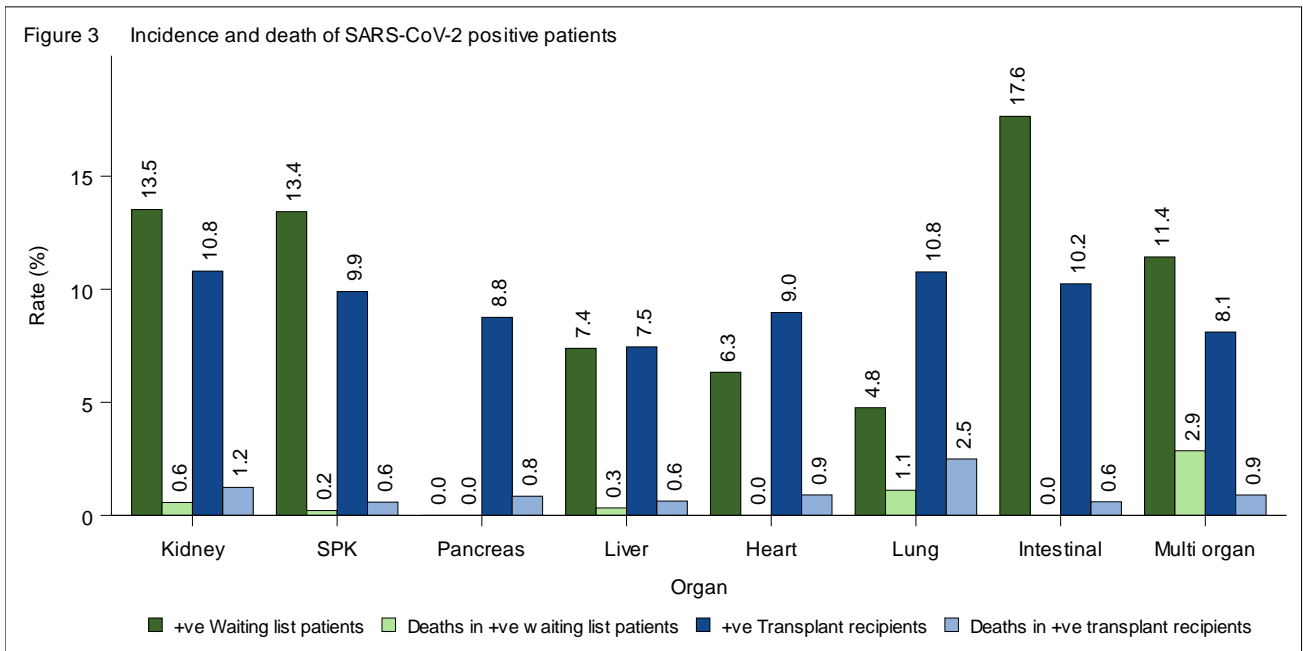


Table 2 shows the number of organ transplant recipients that were alive with a functioning graft at 1 February 2020 by type of organ transplant and NHS Region.

Table 2 Number of recipients with a functioning graft by transplant type and NHS Region, as at 1 February 2020 including transplants after 1 February 2020									
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total
North East and Yorkshire	5454	160	45	1415	453	236	19	24	7808
North West	4225	149	29	1087	274	164	22	22	5974
Midlands	6007	334	52	1744	445	256	25	34	8897
East of England	3859	239	16	1173	302	222	26	28	5868
London	6628	223	27	1674	301	158	21	45	9079
South East	5099	315	29	1312	341	240	19	30	7386
South West	3385	145	60	884	221	132	9	20	4856
Northern Ireland	1488	25	6	361	70	44	9	2	2005
Scotland	3586	181	61	1161	243	120	13	13	5379
Wales	1947	108	29	407	114	72	3	4	2684
TOTAL	41678	1879	354	11218	2764	1644	166	222	59936

Table 3 shows the number of organ transplant recipients that have tested positive for SARS-CoV-2 by type of organ transplant and NHS Region. In total, 6,016 organ transplant recipients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 670 (11%) have died.

Table 3 Number of recipients testing positive for SARS-CoV-2 by transplant type and NHS Region, data up to 6 October 2021											
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total	Died	
North East and Yorkshire	763	17	8	139	57	30	2	1	1017	96	
North West	659	20	4	129	33	31	3	4	883	109	
Midlands	838	45	6	160	54	35	2	5	1145	129	
East of England	403	25	1	73	25	16	3	0	546	76	
London	954	33	4	170	32	26	4	3	1227	139	
South East	499	33	3	100	30	24	0	4	692	66	
South West	264	10	4	61	15	6	2	2	364	40	
Northern Ireland	9	0	0	0	0	0	0	0	9	2	
Scotland	40	1	1	3	0	2	1	0	48	4	
Wales	73	2	0	1	2	7	0	0	85	9	
TOTAL	4502	186	31	836	248	177	17	19	6016	670	

Table 4 shows the number of recipients on the active waiting list at 1 February 2020 by type of organ transplant and NHS Region.

Table 4 Number of patients on the active waiting list by organ awaited and NHS Region, as at 1 February 2020 including new registrations since 1 February 2020									
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total
North East and Yorkshire	1077	57	9	247	140	99	3	7	1639
North West	937	56	6	224	61	73	2	4	1363
Midlands	1436	87	8	356	115	115	3	4	2124
East of England	682	40	1	204	65	55	2	4	1053
London	1873	58	1	279	82	66	3	6	2368
South East	848	59	4	268	82	69	3	7	1340
South West	616	31	3	187	43	46	1	2	929
Northern Ireland	259	3	0	79	33	31	0	0	405
Scotland	733	53	6	189	69	49	0	1	1100
Wales	301	25	0	92	21	27	0	0	466
TOTAL	8762	469	38	2125	711	630	17	35	12787

Table 5 shows the number of active wait listed patients that have tested positive for SARS-CoV-2 by type or organ awaited and NHS Region. In total, 1,487 patients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 66 (4%) have died.

Table 5 Number of patients testing positive for SARS-CoV-2 by organ awaited and NHS Region, data up to 6 October 2021									
	Kidney	SPK	Liver	Heart	Lung	Intestinal	Multi-organ	Total	Died
North East and Yorkshire	136	4	24	9	5	1	0	179	8
North West	163	11	37	9	4	0	1	225	9
Midlands	217	9	31	10	8	1	2	278	14
East of England	104	9	13	2	2	1	0	131	3
London	403	16	27	6	6	0	1	459	22
South East	115	9	19	5	3	0	0	151	7
South West	33	3	5	3	1	0	0	45	2
Scotland	8	2	1	0	1	0	0	12	0
Wales	6	0	0	1	0	0	0	7	1
TOTAL	1185	63	157	45	30	3	4	1487	66

Table 6 shows the demographic characteristics of organ transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 6 Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	36354	60.7	3645	60.6	10.0	446	12.2	1.2
	Female	23554	39.3	2371	39.4	10.1	224	9.4	1.0
	Unknown	28	0.0	-	-	-	-	-	-
Blood Group	O	25841	43.1	2326	38.7	9.0	260	11.2	1.0
	A	24050	40.1	2488	41.4	10.3	267	10.7	1.1
	B	7396	12.3	895	14.9	12.1	97	10.8	1.3
	AB	2625	4.4	307	5.1	11.7	46	15.0	1.8
Ethnicity	White	46026	76.8	4025	66.9	8.7	411	10.2	0.9
	Asian	6283	10.5	1128	18.8	18.0	146	12.9	2.3
	Black	2973	5.0	454	7.5	15.3	73	16.1	2.5
	Other	1543	2.6	175	2.9	11.3	15	8.6	1.0
	Unknown	3111	5.2	234	3.9	7.5	25	10.7	0.8
Age group	0-17	2280	3.8	205	3.4	9.0	-	-	-
	18-29	3820	6.4	479	8.0	12.5	4	0.8	0.1
	30-39	6173	10.3	713	11.9	11.6	17	2.4	0.3
	40-49	9469	15.8	1025	17.0	10.8	49	4.8	0.5
	50-59	15336	25.6	1590	26.4	10.4	149	9.4	1.0
	60-69	14411	24.0	1318	21.9	9.1	237	18.0	1.6
	>70	8433	14.1	684	11.4	8.1	214	31.3	2.5
Organ	Kidney	41678	69.6	4502	74.8	10.8	516	11.5	1.2
	SPK	1879	3.1	186	3.1	9.9	11	5.9	0.6
	Pancreas	354	0.6	31	0.5	8.8	3	9.7	0.8
	Liver	11218	18.7	836	13.9	7.5	71	8.5	0.6
	Heart	2764	4.6	248	4.1	9.0	25	10.1	0.9
	Lung	1644	2.7	177	2.9	10.8	41	23.2	2.5
	Intestinal	166	0.3	17	0.3	10.2	1	5.9	0.6
	Multi organ	222	0.4	18	0.3	8.1	2	11.1	0.9
	140	-	-	1	0.0	-	-	-	-
NHS Region	North East and Yorks	7808	13.0	1017	16.9	13.0	96	9.4	1.2
	North West	5974	10.0	883	14.7	14.8	109	12.3	1.8
	Midlands	8897	14.8	1145	19.0	12.9	129	11.3	1.4
	East of England	5868	9.8	546	9.1	9.3	76	13.9	1.3
	London	9079	15.1	1227	20.4	13.5	139	11.3	1.5
	South East	7386	12.3	692	11.5	9.4	66	9.5	0.9
	South West	4856	8.1	364	6.1	7.5	40	11.0	0.8
	Northern Ireland	2005	3.3	9	0.1	0.4	2	22.2	0.1
	Scotland	5379	9.0	48	0.8	0.9	4	8.3	0.1
	Wales	2684	4.5	85	1.4	3.2	9	10.6	0.3

Table 6 Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Year of transplant	<=2015	36370	60.7	3488	58.0	9.6	430	12.3	1.2
	2016	3822	6.4	418	6.9	10.9	44	10.5	1.2
	2017	4148	6.9	455	7.6	11.0	46	10.1	1.1
	2018	4501	7.5	514	8.5	11.4	47	9.1	1.0
	2019	4632	7.7	600	10.0	13.0	51	8.5	1.1
	2020	3604	6.0	463	7.7	12.8	49	10.6	1.4
	2021	2859	4.8	78	1.3	2.7	3	3.8	0.1
Time from transplant	0-3 months	-	-	164	2.7	-	25	15.2	-
	3-6 months	-	-	141	2.3	-	14	9.9	-
	6-12 months	-	-	221	3.7	-	17	7.7	-
	12+ months	-	-	5490	91.3	-	614	11.2	-

Table 7 shows the demographic characteristics of patients waiting for an organ transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 7 Demographic characteristics of active patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	7793	60.9	916	61.6	11.8	43	4.7	0.6
	Female	4973	38.9	570	38.3	11.5	23	4.0	0.5
	Unknown	21	0.2	1	0.1	4.8	-	-	-
Blood Group	O	6311	49.4	715	48.1	11.3	35	4.9	0.6
	A	4049	31.7	391	26.3	9.7	16	4.1	0.4
	B	2000	15.6	327	22.0	16.4	15	4.6	0.8
	AB	427	3.3	54	3.6	12.6	-	-	-
Ethnicity	White	8967	70.1	721	48.5	8.0	35	4.9	0.4
	Asian	1977	15.5	435	29.3	22.0	17	3.9	0.9
	Black	1102	8.6	221	14.9	20.1	9	4.1	0.8
	Other	504	3.9	77	5.2	15.3	3	3.9	0.6
	Unknown	237	1.9	33	2.2	13.9	2	6.1	0.8
Age group	0-17	544	4.3	59	4.0	10.8	1	1.7	0.2
	18-29	895	7.0	102	6.9	11.4	2	2.0	0.2
	30-39	1611	12.6	202	13.6	12.5	3	1.5	0.2
	40-49	2395	18.7	311	20.9	13.0	9	2.9	0.4
	50-59	3666	28.7	445	29.9	12.1	16	3.6	0.4
	60-69	2890	22.6	299	20.1	10.3	32	10.7	1.1
	>70	786	6.1	69	4.6	8.8	3	4.3	0.4
Organ	Kidney	8762	68.5	1185	79.7	13.5	50	4.2	0.6
	SPK	469	3.7	63	4.2	13.4	1	1.6	0.2
	Pancreas	38	0.3	-	-	-	-	-	-
	Liver	2125	16.6	157	10.6	7.4	7	4.5	0.3
	Heart	711	5.6	45	3.0	6.3	-	-	-
	Lung	630	4.9	30	2.0	4.8	7	23.3	1.1
	Intestinal	17	0.1	3	0.2	17.6	-	-	-
	Multi organ	35	0.3	4	0.3	11.4	1	25.0	2.9
	140	-	-	-	-	-	-	-	-
NHS Region	North East and Yorks	1639	12.8	179	12.0	10.9	8	4.5	0.5
	North West	1363	10.7	225	15.1	16.5	9	4.0	0.7
	Midlands	2124	16.6	278	18.7	13.1	14	5.0	0.7
	East of England	1053	8.2	131	8.8	12.4	3	2.3	0.3
	London	2368	18.5	459	30.9	19.4	22	4.8	0.9
	South East	1340	10.5	151	10.2	11.3	7	4.6	0.5
	South West	929	7.3	45	3.0	4.8	2	4.4	0.2
	Northern Ireland	405	3.2	-	-	-	-	-	-
	Scotland	1100	8.6	12	0.8	1.1	-	-	-
	Wales	466	3.6	7	0.5	1.5	1	14.3	0.2

Kidney



Table 8 shows the demographic characteristics of kidney only transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 8 Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	25547	61.3	2781	61.8	10.9	340	12.2	1.3
	Female	16105	38.6	1721	38.2	10.7	176	10.2	1.1
	Unknown	26	0.1	-	-	-	-	-	-
Blood Group	O	18089	43.4	1748	38.8	9.7	205	11.7	1.1
	A	16430	39.4	1837	40.8	11.2	200	10.9	1.2
	B	5295	12.7	694	15.4	13.1	79	11.4	1.5
	AB	1848	4.4	223	5.0	12.1	32	14.3	1.7
Ethnicity	White	30594	73.4	2830	62.9	9.3	284	10.0	0.9
	Asian	4876	11.7	934	20.7	19.2	129	13.8	2.6
	Black	2447	5.9	385	8.6	15.7	66	17.1	2.7
	Other	1185	2.8	146	3.2	12.3	13	8.9	1.1
	Unknown	2576	6.2	207	4.6	8.0	24	11.6	0.9
Age group	0-17	975	2.3	87	1.9	8.9	-	-	-
	18-29	2469	5.9	321	7.1	13.0	4	1.2	0.2
	30-39	4424	10.6	559	12.4	12.6	11	2.0	0.2
	40-49	6911	16.6	784	17.4	11.3	37	4.7	0.5
	50-59	11059	26.5	1237	27.5	11.2	115	9.3	1.0
	60-69	9667	23.2	974	21.6	10.1	177	18.2	1.8
	>70	6173	14.8	539	12.0	8.7	172	31.9	2.8
Organ	Kidney	41678	100.0	4502	100.0	10.8	516	11.5	1.2
NHS Region	North East and Yorks	5454	13.1	763	16.9	14.0	73	9.6	1.3
	North West	4225	10.1	659	14.6	15.6	78	11.8	1.8
	Midlands	6007	14.4	838	18.6	14.0	89	10.6	1.5
	East of England	3859	9.3	403	9.0	10.4	62	15.4	1.6
	London	6628	15.9	954	21.2	14.4	121	12.7	1.8
	South East	5099	12.2	499	11.1	9.8	49	9.8	1.0
	South West	3385	8.1	264	5.9	7.8	31	11.7	0.9
	Northern Ireland	1488	3.6	9	0.2	0.6	2	22.2	0.1
	Scotland	3586	8.6	40	0.9	1.1	4	10.0	0.1
	Wales	1947	4.7	73	1.6	3.7	7	9.6	0.4
Year of transplant	<=2015	25259	60.6	2621	58.2	10.4	320	12.2	1.3
	2016	2659	6.4	317	7.0	11.9	37	11.7	1.4
	2017	2899	7.0	344	7.6	11.9	37	10.8	1.3
	2018	3136	7.5	385	8.6	12.3	36	9.4	1.1
	2019	3299	7.9	432	9.6	13.1	41	9.5	1.2
	2020	2450	5.9	347	7.7	14.2	42	12.1	1.7
	2021	1976	4.7	56	1.2	2.8	3	5.4	0.2

Table 8 Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	127	2.8	-	23	18.1	-
	3-6 months	-	-	108	2.4	-	13	12.0	-
	6-12 months	-	-	171	3.8	-	15	8.8	-
	12+ months	-	-	4096	91.0	-	465	11.4	-

Table 9 shows the demographic characteristics of patients waiting for a kidney transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 9 Demographic characteristics of active kidney patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	5343	61.0	739	62.4	13.8	35	4.7	0.7
	Female	3401	38.8	445	37.6	13.1	15	3.4	0.4
	Unknown	18	0.2	1	0.1	5.6	-	-	-
Blood Group	O	4411	50.3	573	48.4	13.0	27	4.7	0.6
	A	2538	29.0	296	25.0	11.7	10	3.4	0.4
	B	1520	17.3	276	23.3	18.2	13	4.7	0.9
	AB	293	3.3	40	3.4	13.7	-	-	-
Ethnicity	White	5601	63.9	499	42.1	8.9	23	4.6	0.4
	Asian	1618	18.5	388	32.7	24.0	15	3.9	0.9
	Black	957	10.9	204	17.2	21.3	7	3.4	0.7
	Other	427	4.9	68	5.7	15.9	3	4.4	0.7
	Unknown	159	1.8	26	2.2	16.4	2	7.7	1.3
Age group	0-17	226	2.6	34	2.9	15.0	-	-	-
	18-29	587	6.7	77	6.5	13.1	1	1.3	0.2
	30-39	1057	12.1	142	12.0	13.4	2	1.4	0.2
	40-49	1650	18.8	248	20.9	15.0	5	2.0	0.3
	50-59	2469	28.2	352	29.7	14.3	11	3.1	0.4
	60-69	2031	23.2	265	22.4	13.0	28	10.6	1.4
	>70	742	8.5	67	5.7	9.0	3	4.5	0.4
Organ	Kidney	8762	100.0	1185	100.0	13.5	50	4.2	0.6
NHS Region	North East and Yorks	1077	12.3	136	11.5	12.6	6	4.4	0.6
	North West	937	10.7	163	13.8	17.4	7	4.3	0.7
	Midlands	1436	16.4	217	18.3	15.1	10	4.6	0.7
	East of England	682	7.8	104	8.8	15.2	3	2.9	0.4
	London	1873	21.4	403	34.0	21.5	17	4.2	0.9
	South East	848	9.7	115	9.7	13.6	5	4.3	0.6
	South West	616	7.0	33	2.8	5.4	1	3.0	0.2
	Northern Ireland	259	3.0	-	-	-	-	-	-
	Scotland	733	8.4	8	0.7	1.1	-	-	-
	Wales	301	3.4	6	0.5	2.0	1	16.7	0.3

SPK

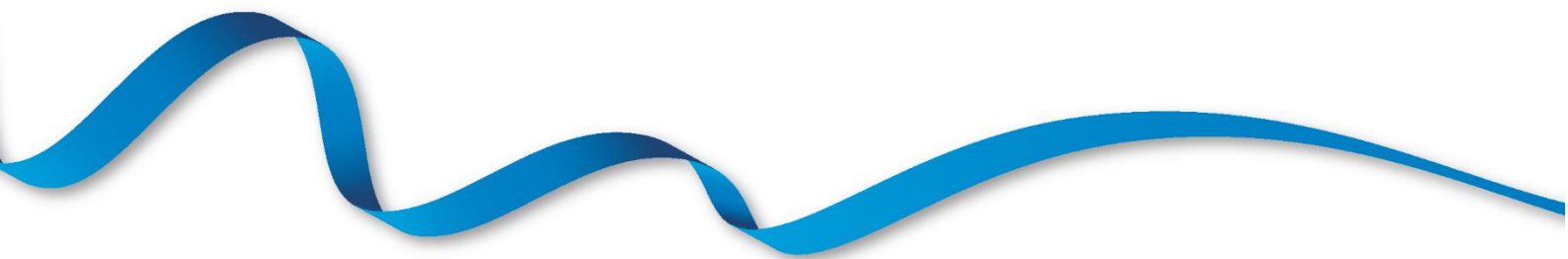


Table 10 shows the demographic characteristics of SPK transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 10 Demographic characteristics of SPK transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	1091	58.1	115	61.8	10.5	9	7.8	0.8
	Female	788	41.9	71	38.2	9.0	2	2.8	0.3
	Unknown	-	-	-	-	-	-	-	-
Blood Group	O	813	43.3	75	40.3	9.2	5	6.7	0.6
	A	774	41.2	74	39.8	9.6	2	2.7	0.3
	B	207	11.0	24	12.9	11.6	1	4.2	0.5
	AB	85	4.5	13	7.0	15.3	3	23.1	3.5
Ethnicity	White	1647	87.7	148	79.6	9.0	7	4.7	0.4
	Asian	108	5.7	17	9.1	15.7	2	11.8	1.9
	Black	83	4.4	18	9.7	21.7	2	11.1	2.4
	Other	23	1.2	1	0.5	4.3	-	-	-
	Unknown	18	1.0	2	1.1	11.1	-	-	-
Age group	0-17	1	0.1	-	-	-	-	-	-
	18-29	41	2.2	3	1.6	7.3	-	-	-
	30-39	324	17.2	24	12.9	7.4	1	4.2	0.3
	40-49	624	33.2	63	33.9	10.1	2	3.2	0.3
	50-59	660	35.1	76	40.9	11.5	6	7.9	0.9
	60-69	214	11.4	17	9.1	7.9	1	5.9	0.5
	>70	15	0.8	3	1.6	20.0	1	33.3	6.7
Organ	SPK	1879	100.0	186	100.0	9.9	11	5.9	0.6
NHS Region	North East and Yorks	160	8.5	17	9.1	10.6	-	-	-
	North West	149	7.9	20	10.8	13.4	3	15.0	2.0
	Midlands	334	17.8	45	24.2	13.5	4	8.9	1.2
	East of England	239	12.7	25	13.4	10.5	2	8.0	0.8
	London	223	11.9	33	17.7	14.8	1	3.0	0.4
	South East	315	16.8	33	17.7	10.5	1	3.0	0.3
	South West	145	7.7	10	5.4	6.9	-	-	-
	Northern Ireland	25	1.3	-	-	-	-	-	-
	Scotland	181	9.6	1	0.5	0.6	-	-	-
	Wales	108	5.7	2	1.1	1.9	-	-	-
Year of transplant	<=2015	1124	59.8	92	49.5	8.2	8	8.7	0.7
	2016	123	6.5	11	5.9	8.9	-	-	-
	2017	146	7.8	14	7.5	9.6	-	-	-
	2018	157	8.4	24	12.9	15.3	-	-	-
	2019	150	8.0	29	15.6	19.3	2	6.9	1.3
	2020	98	5.2	14	7.5	14.3	1	7.1	1.0
	2021	81	4.3	2	1.1	2.5	-	-	-

Table 10 Demographic characteristics of SPK transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	6	3.2	-	-	-	-
	3-6 months	-	-	2	1.1	-	-	-	-
	6-12 months	-	-	6	3.2	-	1	16.7	-
	12+ months	-	-	172	92.5	-	10	5.8	-

Table 11 shows the demographic characteristics of patients waiting for an SPK transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 11 Demographic characteristics of active SPK patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	255	54.4	29	46.0	11.4	-	-	-
	Female	213	45.4	34	54.0	16.0	-	-	-
	Unknown	1	0.2	-	-	-	-	-	-
Blood Group	O	211	45.0	29	46.0	13.7	-	-	-
	A	179	38.2	17	27.0	9.5	-	-	-
	B	63	13.4	14	22.2	22.2	-	-	-
	AB	16	3.4	3	4.8	18.8	-	-	-
Ethnicity	White	401	85.5	43	68.3	10.7	-	-	-
	Asian	35	7.5	9	14.3	25.7	-	-	-
	Black	21	4.5	7	11.1	33.3	-	-	-
	Other	10	2.1	3	4.8	30.0	-	-	-
	Unknown	2	0.4	1	1.6	50.0	-	-	-
Age group	0-17	1	0.2	1	1.6	100.0	-	-	-
	18-29	43	9.2	8	12.7	18.6	-	-	-
	30-39	168	35.8	23	36.5	13.7	-	-	-
	40-49	151	32.2	16	25.4	10.6	-	-	-
	50-59	99	21.1	15	23.8	15.2	-	-	-
	60-69	7	1.5	-	-	-	-	-	-
	>70	-	-	-	-	-	-	-	-
Organ	SPK	469	100.0	63	100.0	13.4	1	1.6	0.2
NHS Region	North East and Yorks	57	12.2	4	6.3	7.0	-	-	-
	North West	56	11.9	11	17.5	19.6	-	-	-
	Midlands	87	18.6	9	14.3	10.3	-	-	-
	East of England	40	8.5	9	14.3	22.5	-	-	-
	London	58	12.4	16	25.4	27.6	-	-	-
	South East	59	12.6	9	14.3	15.3	-	-	-
	South West	31	6.6	3	4.8	9.7	-	-	-
	Northern Ireland	3	0.6	-	-	-	-	-	-
	Scotland	53	11.3	2	3.2	3.8	-	-	-
	Wales	25	5.3	-	-	-	-	-	-

Liver



Table 12 shows the demographic characteristics of liver transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 12 Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	6532	58.2	446	53.3	6.8	43	9.6	0.7
	Female	4685	41.8	390	46.7	8.3	28	7.2	0.6
	Unknown	1	0.0	-	-	-	-	-	-
Blood Group	O	4850	43.2	327	39.1	6.7	28	8.6	0.6
	A	4542	40.5	340	40.7	7.5	32	9.4	0.7
	B	1349	12.0	121	14.5	9.0	6	5.0	0.4
	AB	477	4.3	48	5.7	10.1	5	10.4	1.0
Ethnicity	White	9337	83.2	640	76.6	6.9	57	8.9	0.6
	Asian	991	8.8	129	15.4	13.0	10	7.8	1.0
	Black	339	3.0	34	4.1	10.0	3	8.8	0.9
	Other	264	2.4	18	2.2	6.8	-	-	-
	Unknown	287	2.6	15	1.8	5.2	1	6.7	0.3
Age group	0-17	904	8.1	76	9.1	8.4	-	-	-
	18-29	825	7.4	98	11.7	11.9	-	-	-
	30-39	803	7.2	68	8.1	8.5	1	1.5	0.1
	40-49	1173	10.5	108	12.9	9.2	3	2.8	0.3
	50-59	2457	21.9	160	19.2	6.5	13	8.1	0.5
	60-69	3341	29.8	223	26.7	6.7	23	10.3	0.7
	>70	1702	15.2	102	12.2	6.0	31	30.4	1.8
Organ	Liver	11218	100.0	836	100.0	7.5	71	8.5	0.6
NHS Region	North East and Yorks	1415	12.6	139	16.6	9.8	14	10.1	1.0
	North West	1087	9.7	129	15.4	11.9	13	10.1	1.2
	Midlands	1744	15.5	160	19.1	9.2	12	7.5	0.7
	East of England	1173	10.5	73	8.7	6.2	4	5.5	0.3
	London	1674	14.9	170	20.3	10.2	14	8.2	0.8
	South East	1312	11.7	100	12.0	7.6	8	8.0	0.6
	South West	884	7.9	61	7.3	6.9	5	8.2	0.6
	Northern Ireland	361	3.2	-	-	-	-	-	-
	Scotland	1161	10.3	3	0.4	0.3	-	-	-
	Wales	407	3.6	1	0.1	0.2	1	100.0	0.2
Year of transplant	<=2015	6715	59.9	489	58.5	7.3	50	10.2	0.7
	2016	728	6.5	53	6.3	7.3	2	3.8	0.3
	2017	781	7.0	60	7.2	7.7	5	8.3	0.6
	2018	856	7.6	70	8.4	8.2	6	8.6	0.7
	2019	827	7.4	84	10.0	10.2	5	6.0	0.6
	2020	753	6.7	67	8.0	8.9	3	4.5	0.4
	2021	558	5.0	13	1.6	2.3	-	-	-

Table 12 Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	24	2.9	-	1	4.2	-
	3-6 months	-	-	21	2.5	-	1	4.8	-
	6-12 months	-	-	24	2.9	-	1	4.2	-
	12+ months	-	-	767	91.7	-	68	8.9	-

Table 13 shows the demographic characteristics of patients waiting for a liver transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 13 Demographic characteristics of active liver patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	1313	61.8	96	61.1	7.3	3	3.1	0.2
	Female	812	38.2	61	38.9	7.5	4	6.6	0.5
	Unknown	-	-	-	-	-	-	-	-
Blood Group	O	975	45.9	74	47.1	7.6	3	4.1	0.3
	A	815	38.4	50	31.8	6.1	3	6.0	0.4
	B	262	12.3	25	15.9	9.5	1	4.0	0.4
	AB	73	3.4	8	5.1	11.0	-	-	-
Ethnicity	White	1742	82.0	115	73.2	6.6	6	5.2	0.3
	Asian	211	9.9	27	17.2	12.8	-	-	-
	Black	67	3.2	6	3.8	9.0	1	16.7	1.5
	Other	47	2.2	4	2.5	8.5	-	-	-
	Unknown	58	2.7	5	3.2	8.6	-	-	-
Age group	0-17	177	8.3	14	8.9	7.9	1	7.1	0.6
	18-29	156	7.3	12	7.6	7.7	1	8.3	0.6
	30-39	212	10.0	22	14.0	10.4	-	-	-
	40-49	369	17.4	31	19.7	8.4	2	6.5	0.5
	50-59	640	30.1	56	35.7	8.8	2	3.6	0.3
	60-69	535	25.2	20	12.7	3.7	1	5.0	0.2
	>70	36	1.7	2	1.3	5.6	-	-	-
Organ	Liver	2125	100.0	157	100.0	7.4	7	4.5	0.3
NHS Region	North East and Yorks	247	11.6	24	15.3	9.7	1	4.2	0.4
	North West	224	10.5	37	23.6	16.5	1	2.7	0.4
	Midlands	356	16.8	31	19.7	8.7	1	3.2	0.3
	East of England	204	9.6	13	8.3	6.4	-	-	-
	London	279	13.1	27	17.2	9.7	1	3.7	0.4
	South East	268	12.6	19	12.1	7.1	2	10.5	0.7
	South West	187	8.8	5	3.2	2.7	1	20.0	0.5
	Northern Ireland	79	3.7	-	-	-	-	-	-
	Scotland	189	8.9	1	0.6	0.5	-	-	-
	Wales	92	4.3	-	-	-	-	-	-

Heart



Table 14 shows the demographic characteristics of heart transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	1914	69.2	167	67.3	8.7	22	13.2	1.1
	Female	849	30.7	81	32.7	9.5	3	3.7	0.4
	Unknown	1	0.0	-	-	-	-	-	-
Blood Group	O	1072	38.8	89	35.9	8.3	7	7.9	0.7
	A	1237	44.8	119	48.0	9.6	12	10.1	1.0
	B	332	12.0	27	10.9	8.1	4	14.8	1.2
	AB	121	4.4	13	5.2	10.7	2	15.4	1.7
Ethnicity	White	2241	81.1	194	78.2	8.7	19	9.8	0.8
	Asian	211	7.6	30	12.1	14.2	4	13.3	1.9
	Black	80	2.9	11	4.4	13.8	1	9.1	1.3
	Other	51	1.8	6	2.4	11.8	1	16.7	2.0
	Unknown	181	6.5	7	2.8	3.9	-	-	-
Age group	0-17	289	10.5	27	10.9	9.3	-	-	-
	18-29	306	11.1	38	15.3	12.4	-	-	-
	30-39	320	11.6	35	14.1	10.9	3	8.6	0.9
	40-49	359	13.0	32	12.9	8.9	-	-	-
	50-59	518	18.7	43	17.3	8.3	4	9.3	0.8
	60-69	560	20.3	47	19.0	8.4	12	25.5	2.1
	>70	411	14.9	26	10.5	6.3	6	23.1	1.5
Organ	Heart	2764	100.0	248	100.0	9.0	25	10.1	0.9
NHS Region	North East and Yorks	453	16.4	57	23.0	12.6	3	5.3	0.7
	North West	274	9.9	33	13.3	12.0	5	15.2	1.8
	Midlands	445	16.1	54	21.8	12.1	9	16.7	2.0
	East of England	302	10.9	25	10.1	8.3	2	8.0	0.7
	London	301	10.9	32	12.9	10.6	1	3.1	0.3
	South East	341	12.3	30	12.1	8.8	3	10.0	0.9
	South West	221	8.0	15	6.0	6.8	2	13.3	0.9
	Northern Ireland	70	2.5	-	-	-	-	-	-
	Scotland	243	8.8	-	-	-	-	-	-
	Wales	114	4.1	2	0.8	1.8	-	-	-
Year of transplant	<=2015	1877	67.9	151	60.9	8.0	16	10.6	0.9
	2016	161	5.8	22	8.9	13.7	1	4.5	0.6
	2017	145	5.2	20	8.1	13.8	4	20.0	2.8
	2018	144	5.2	13	5.2	9.0	-	-	-
	2019	153	5.5	20	8.1	13.1	2	10.0	1.3
	2020	168	6.1	18	7.3	10.7	2	11.1	1.2
	2021	116	4.2	4	1.6	3.4	-	-	-

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	2	0.8	-	1	50.0	-
	3-6 months	-	-	7	2.8	-	-	-	-
	6-12 months	-	-	10	4.0	-	-	-	-
	12+ months	-	-	229	92.3	-	24	10.5	-

Table 15 shows the demographic characteristics of patients waiting for a heart transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 15 Demographic characteristics of active heart patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	507	71.3	32	71.1	6.3	-	-	-
	Female	203	28.6	13	28.9	6.4	-	-	-
	Unknown	1	0.1	-	-	-	-	-	-
Blood Group	O	334	47.0	17	37.8	5.1	-	-	-
	A	269	37.8	18	40.0	6.7	-	-	-
	B	80	11.3	7	15.6	8.8	-	-	-
	AB	28	3.9	3	6.7	10.7	-	-	-
Ethnicity	White	585	82.3	34	75.6	5.8	-	-	-
	Asian	68	9.6	8	17.8	11.8	-	-	-
	Black	32	4.5	2	4.4	6.3	-	-	-
	Other	11	1.5	-	-	-	-	-	-
	Unknown	15	2.1	1	2.2	6.7	-	-	-
Age group	0-17	108	15.2	6	13.3	5.6	-	-	-
	18-29	52	7.3	3	6.7	5.8	-	-	-
	30-39	87	12.2	10	22.2	11.5	-	-	-
	40-49	114	16.0	7	15.6	6.1	-	-	-
	50-59	217	30.5	12	26.7	5.5	-	-	-
	60-69	126	17.7	7	15.6	5.6	-	-	-
	>70	7	1.0	-	-	-	-	-	-
Organ	Heart	711	100.0	45	100.0	6.3	-	-	-
NHS Region	North East and Yorks	140	19.7	9	20.0	6.4	-	-	-
	North West	61	8.6	9	20.0	14.8	-	-	-
	Midlands	115	16.2	10	22.2	8.7	-	-	-
	East of England	65	9.1	2	4.4	3.1	-	-	-
	London	82	11.5	6	13.3	7.3	-	-	-
	South East	82	11.5	5	11.1	6.1	-	-	-
	South West	43	6.0	3	6.7	7.0	-	-	-
	Northern Ireland	33	4.6	-	-	-	-	-	-
	Scotland	69	9.7	-	-	-	-	-	-
	Wales	21	3.0	1	2.2	4.8	-	-	-

Lung



Table 16 shows the demographic characteristics of lung transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 16 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	907	55.2	107	60.5	11.8	28	26.2	3.1
	Female	737	44.8	70	39.5	9.5	13	18.6	1.8
	Unknown	-	-	-	-	-	-	-	-
Blood Group	O	699	42.5	65	36.7	9.3	13	20.0	1.9
	A	748	45.5	85	48.0	11.4	19	22.4	2.5
	B	131	8.0	18	10.2	13.7	5	27.8	3.8
	AB	66	4.0	9	5.1	13.6	4	44.4	6.1
Ethnicity	White	1540	93.7	156	88.1	10.1	38	24.4	2.5
	Asian	46	2.8	13	7.3	28.3	1	7.7	2.2
	Black	12	0.7	3	1.7	25.0	1	33.3	8.3
	Other	12	0.7	3	1.7	25.0	1	33.3	8.3
	Unknown	34	2.1	2	1.1	5.9	-	-	-
Age group	0-17	34	2.1	7	4.0	20.6	-	-	-
	18-29	130	7.9	12	6.8	9.2	-	-	-
	30-39	225	13.7	25	14.1	11.1	1	4.0	0.4
	40-49	261	15.9	29	16.4	11.1	7	24.1	2.7
	50-59	417	25.4	50	28.2	12.0	10	20.0	2.4
	60-69	478	29.1	43	24.3	9.0	21	48.8	4.4
	>70	99	6.0	11	6.2	11.1	2	18.2	2.0
Organ	Lung	1644	100.0	177	100.0	10.8	41	23.2	2.5
NHS Region	North East and Yorks	236	14.4	30	16.9	12.7	4	13.3	1.7
	North West	164	10.0	31	17.5	18.9	10	32.3	6.1
	Midlands	256	15.6	35	19.8	13.7	12	34.3	4.7
	East of England	222	13.5	16	9.0	7.2	6	37.5	2.7
	London	158	9.6	26	14.7	16.5	2	7.7	1.3
	South East	240	14.6	24	13.6	10.0	5	20.8	2.1
	South West	132	8.0	6	3.4	4.5	1	16.7	0.8
	Northern Ireland	44	2.7	-	-	-	-	-	-
	Scotland	120	7.3	2	1.1	1.7	-	-	-
	Wales	72	4.4	7	4.0	9.7	1	14.3	1.4
Year of transplant	<=2015	951	57.8	96	54.2	10.1	32	33.3	3.4
	2016	97	5.9	13	7.3	13.4	4	30.8	4.1
	2017	133	8.1	12	6.8	9.0	-	-	-
	2018	144	8.8	14	7.9	9.7	3	21.4	2.1
	2019	138	8.4	25	14.1	18.1	1	4.0	0.7
	2020	97	5.9	14	7.9	14.4	1	7.1	1.0
	2021	84	5.1	3	1.7	3.6	-	-	-

Table 16 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 6 October 2021

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	5	2.8	-	-	-	-
	3-6 months	-	-	1	0.6	-	-	-	-
	6-12 months	-	-	7	4.0	-	-	-	-
	12+ months	-	-	164	92.7	-	41	25.0	-

Table 17 shows the demographic characteristics of patients waiting for a lung transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 17 Demographic characteristics of active lung patients on the waiting list testing positive for SARS-CoV-2, data up to 6 October 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	340	54.0	15	50.0	4.4	4	26.7	1.2
	Female	289	45.9	15	50.0	5.2	3	20.0	1.0
	Unknown	1	0.2	-	-	-	-	-	-
Blood Group	O	330	52.4	17	56.7	5.2	3	17.6	0.9
	A	224	35.6	8	26.7	3.6	3	37.5	1.3
	B	61	9.7	5	16.7	8.2	1	20.0	1.6
	AB	15	2.4	-	-	-	-	-	-
Ethnicity	White	562	89.2	24	80.0	4.3	5	20.8	0.9
	Asian	37	5.9	3	10.0	8.1	1	33.3	2.7
	Black	22	3.5	2	6.7	9.1	1	50.0	4.5
	Other	6	1.0	1	3.3	16.7	-	-	-
	Unknown	3	0.5	-	-	-	-	-	-
Age group	0-17	23	3.7	3	10.0	13.0	-	-	-
	18-29	51	8.1	2	6.7	3.9	-	-	-
	30-39	69	11.0	5	16.7	7.2	-	-	-
	40-49	89	14.1	7	23.3	7.9	2	28.6	2.2
	50-59	213	33.8	9	30.0	4.2	3	33.3	1.4
	60-69	184	29.2	4	13.3	2.2	2	50.0	1.1
	>70	1	0.2	-	-	-	-	-	-
Organ	Lung	630	100.0	30	100.0	4.8	7	23.3	1.1
NHS Region	North East and Yorks	99	15.7	5	16.7	5.1	1	20.0	1.0
	North West	73	11.6	4	13.3	5.5	1	25.0	1.4
	Midlands	115	18.3	8	26.7	7.0	3	37.5	2.6
	East of England	55	8.7	2	6.7	3.6	-	-	-
	London	66	10.5	6	20.0	9.1	2	33.3	3.0
	South East	69	11.0	3	10.0	4.3	-	-	-
	South West	46	7.3	1	3.3	2.2	-	-	-
	Northern Ireland	31	4.9	-	-	-	-	-	-
	Scotland	49	7.8	1	3.3	2.0	-	-	-
	Wales	27	4.3	-	-	-	-	-	-

Prepared by:

Statistics and Clinical Studies, NHS Blood and Transplant

Miss Lisa Mumford

In collaboration with:

Rommel Ravanan

Chris Callaghan