



Blood and Transplant

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

**REPORT FOR
1 MARCH 2020 – 2 SEPTEMBER 2020**

PUBLISHED 4 SEPTEMBER 2020



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

All figures quoted in this report are as reported to NHS Blood and Transplant by 2 September 2020.

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. A breakdown of waiting list characteristics is not possible for heart and lung patients 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 have since been steadily increased with 67 performed in the week commencing 24th August.
- 816 of the 56,708 (1.4%) recipients with a functioning graft are reported as testing positive for SARS-CoV-2. Of these, 26% (n=211) are reported as died as at 2 September 2020.
- The infection rate across England ranges from 0.8% in the South West to 2.8% in London in recipients with a functioning graft.
- 228 of the 6136 (3.7%) patients on the active waiting list at 1 February 2020 are reported as testing positive for SARS-CoV-2. Of these, 11% (n=25) are reported as died as at 2 September 2020.
- The infection rate across England ranges from 0.7% in the South west to 8.0% in London for patients on the active waiting list.
- Of the 2311 transplants performed so far in 2020, 79 (3.4%) recipients have tested positive for SARS-CoV-2 with 10 (0.4%) reported as died.

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

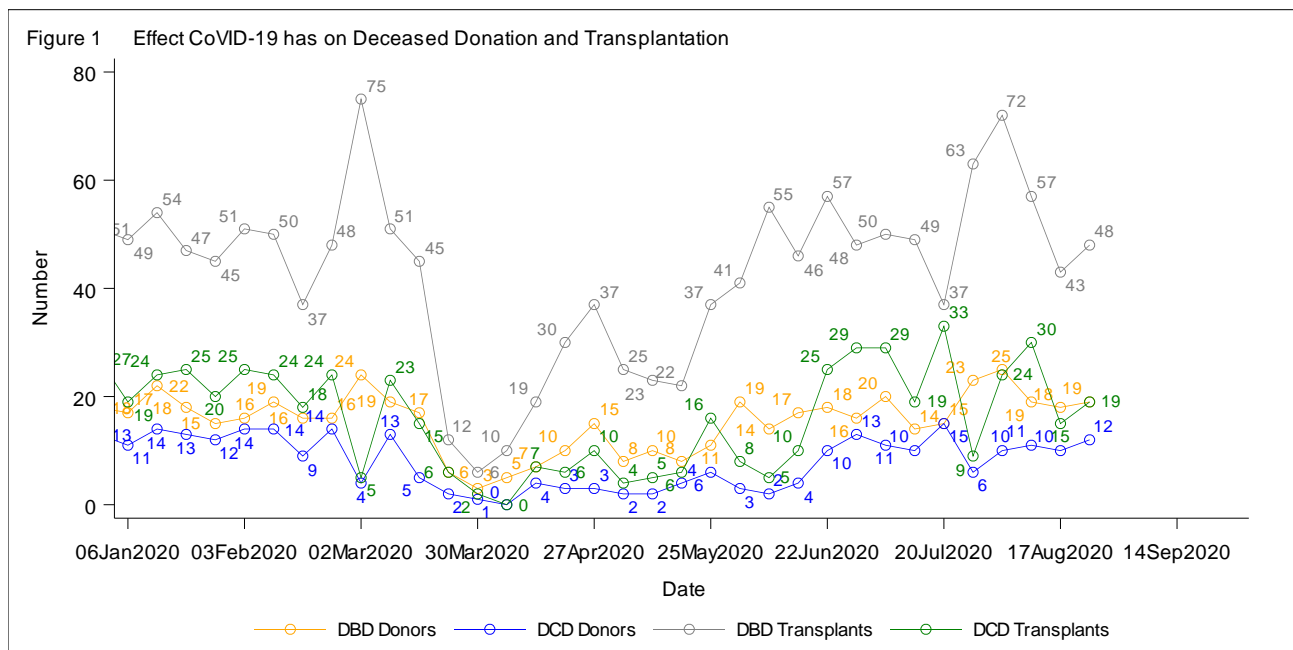


Figure 2 shows the cumulative incidence of SARS-CoV-2 positive patients and the cumulative deaths by week separately for transplanted recipients and active wait listed patients since Monday 3rd February 2020.

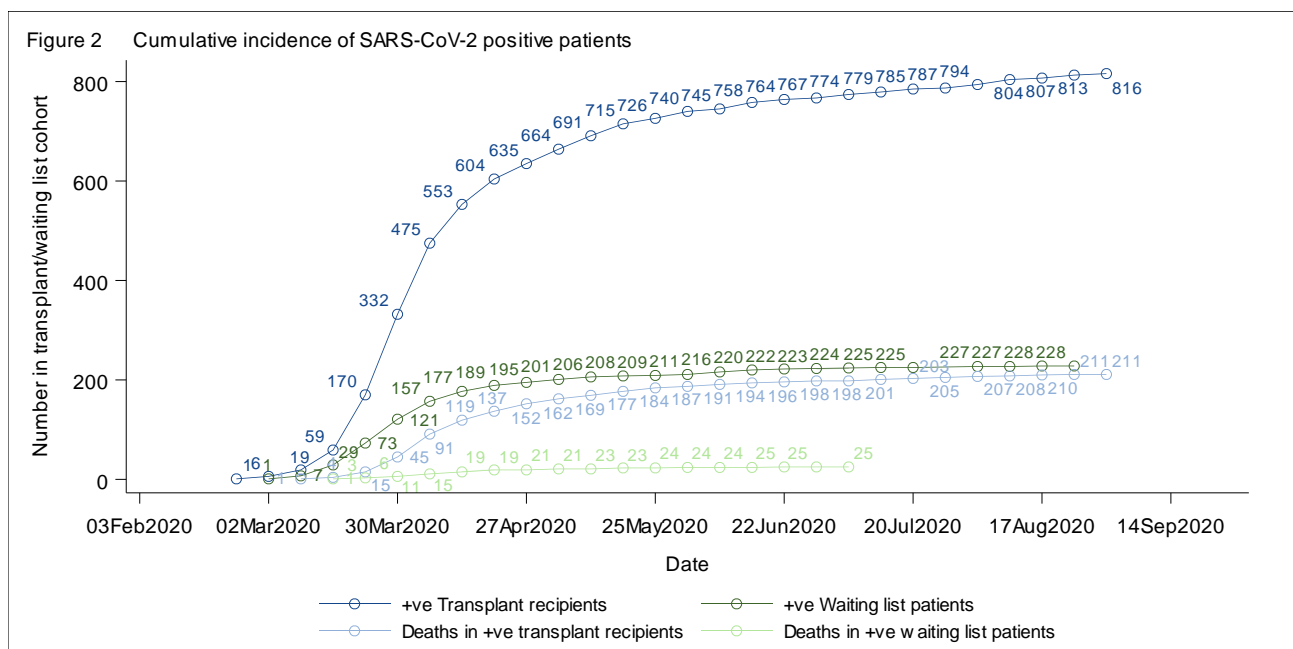


Figure 3 shows the incidence and deaths of SARS-CoV-2 positive patients by organ for transplanted recipients and active wait listed patients.

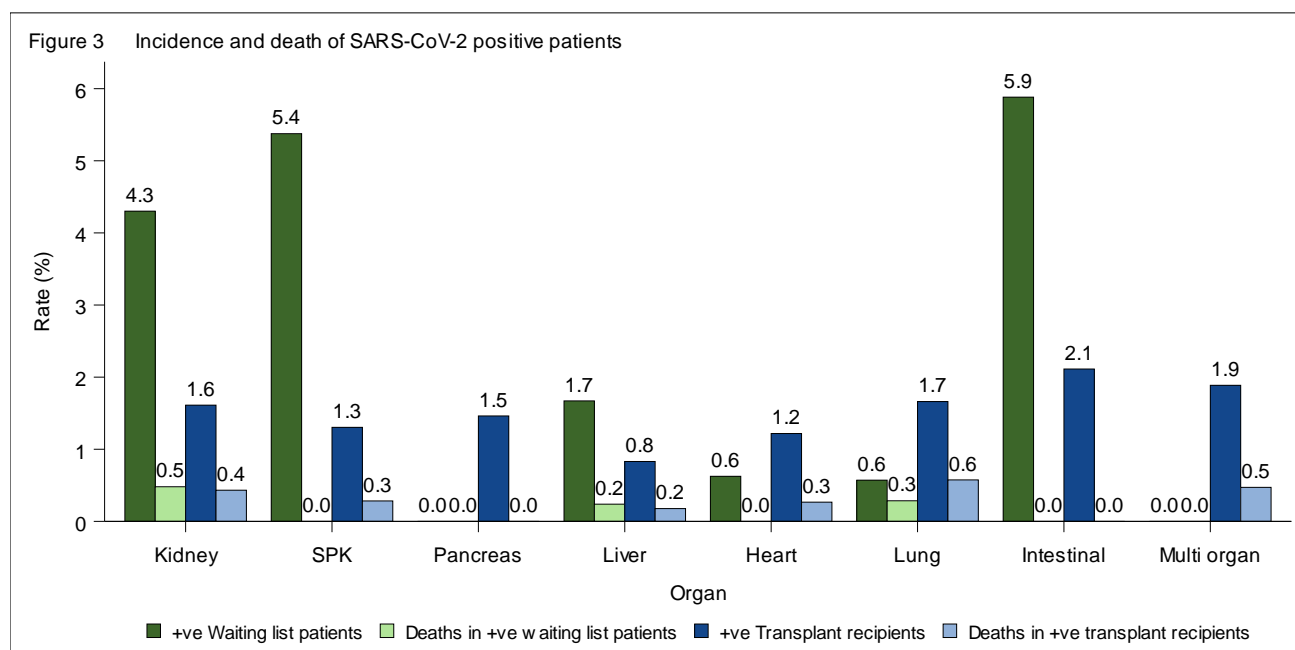


Table 1 shows the number of NHSBT CoVID-19 initial presentation forms returned and the number of NHSBT CoVID-19 follow-up forms returned for transplant recipients and wait listed patients by organ. Total cases include the number of positive SARS-CoV-2 patients in England that have been collected through the PHE data link. Please note that for patients residing in England and Wales the vital status of a patient is checked using the NHS Digital Tracing Service.

| | Form return rates for Initial and Follow-up as at 2 September 2020 | | | | | |
|------------------|--|------------------------|--------------------------|---|------------------------|--------------------------|
| | Transplant Recipients | | | Waiting list patients | | |
| | Total +ve cases known to NHSBT ¹ | Initial forms returned | Follow-up forms returned | Total +ve cases known to NHSBT ¹ | Initial forms returned | Follow-up forms returned |
| Kidney | 634 | 350 | 183 | 206 | 73 | 28 |
| SPK | 23 | 15 | 9 | 10 | 4 | 1 |
| Pancreas / Islet | 5 | 2 | 1 | 0 | 0 | 0 |
| Liver | 89 | 37 | 21 | 7 | 3 | 4 |
| Heart | 32 | 23 | 13 | 2 | 1 | 0 |
| Lung | 26 | 24 | 6 | 2 | 2 | 1 |
| Intestinal | 3 | 1 | 0 | 1 | 0 | 0 |
| Multi-organ | 4 | 1 | 0 | 0 | 0 | 0 |
| Total | 816 | 453 | 233 | 228 | 83 | 34 |

¹ Total positive cases include those reported by Public Health England

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 | | | | | | | | | | |
|---|--------------|-------------|------------|--------------|-------------|-------------|------------|-------------|--------------|--|
| | Kidney | SPK | Pancreas | Liver | Heart | Lung | Intestinal | Multi organ | Total | |
| North East and Yorkshire | 5170 | 146 | 42 | 1371 | 428 | 230 | 19 | 25 | 7431 | |
| North West | 3979 | 134 | 25 | 1052 | 263 | 155 | 17 | 21 | 5646 | |
| Midlands | 5709 | 312 | 51 | 1654 | 426 | 246 | 20 | 33 | 8451 | |
| East of England | 3625 | 229 | 16 | 1122 | 287 | 200 | 23 | 26 | 5528 | |
| London | 6178 | 211 | 29 | 1592 | 287 | 144 | 19 | 42 | 8502 | |
| South East | 4860 | 299 | 28 | 1236 | 315 | 230 | 16 | 28 | 7012 | |
| South West | 3205 | 142 | 62 | 841 | 219 | 126 | 9 | 20 | 4624 | |
| Northern Ireland | 1420 | 23 | 5 | 333 | 67 | 43 | 8 | 2 | 1901 | |
| Scotland | 3348 | 167 | 57 | 1123 | 222 | 122 | 8 | 12 | 5059 | |
| Wales | 1845 | 101 | 27 | 393 | 113 | 69 | 3 | 3 | 2554 | |
| Total | 39339 | 1764 | 342 | 10717 | 2627 | 1565 | 142 | 212 | 56708 | |

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, 816 organ transplant recipients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 211 (26%) have died.

| Table 3 Number of recipients testing positive for SARS-CoV-2 by transplant type and NHS Region, data up to 2 September 2020 | | | | | | | | | | | |
|--|------------|-----------|----------|-----------|-----------|-----------|------------|-------------|------------|------------|--|
| | Kidney | SPK | Pancreas | Liver | Heart | Lung | Intestinal | Multi organ | Total | Died | |
| North East and Yorkshire | 54 | 1 | 0 | 16 | 7 | 1 | 0 | 0 | 79 | 17 | |
| North West | 70 | 2 | 1 | 11 | 5 | 10 | 1 | 1 | 101 | 35 | |
| Midlands | 92 | 2 | 0 | 8 | 7 | 4 | 0 | 1 | 114 | 27 | |
| East of England | 79 | 2 | 0 | 6 | 1 | 1 | 1 | 0 | 90 | 25 | |
| London | 200 | 9 | 2 | 23 | 5 | 3 | 0 | 0 | 242 | 60 | |
| South East | 64 | 5 | 0 | 18 | 4 | 3 | 0 | 1 | 95 | 20 | |
| South West | 29 | 2 | 1 | 3 | 2 | 0 | 0 | 1 | 38 | 11 | |
| Northern Ireland | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2 | |
| Scotland | 29 | 0 | 1 | 3 | 0 | 2 | 1 | 0 | 36 | 9 | |
| Wales | 9 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 13 | 5 | |
| Total | 634 | 23 | 5 | 89 | 32 | 26 | 3 | 4 | 816 | 211 | |

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 | | | | | | | | | |
|---|-------------|------------|-----------|------------|------------|------------|------------|-------------|-------------|
| | Kidney | SPK | Pancreas | Liver | Heart | Lung | Intestinal | Multi organ | Total |
| North East and Yorkshire | 592 | 19 | 7 | 47 | 64 | 53 | 3 | 4 | 789 |
| North West | 527 | 20 | 2 | 49 | 29 | 44 | 2 | 3 | 676 |
| Midlands | 788 | 29 | 5 | 68 | 49 | 61 | 3 | 4 | 1007 |
| East of England | 334 | 9 | 1 | 37 | 26 | 18 | 2 | 3 | 430 |
| London | 1128 | 28 | 1 | 43 | 41 | 42 | 3 | 6 | 1292 |
| South East | 415 | 27 | 4 | 40 | 38 | 40 | 3 | 6 | 573 |
| South West | 312 | 13 | 1 | 43 | 23 | 25 | 1 | 1 | 419 |
| Northern Ireland | 88 | 1 | 0 | 17 | 14 | 22 | 0 | 0 | 142 |
| Scotland | 423 | 25 | 6 | 51 | 25 | 31 | 0 | 1 | 562 |
| Wales | 182 | 15 | 0 | 24 | 11 | 14 | 0 | 0 | 246 |
| TOTAL | 4789 | 186 | 27 | 419 | 320 | 350 | 17 | 28 | 6136 |

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, 228 patients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 25 (11%) have died.

| Table 5 Number of patients testing positive for SARS-CoV-2 by organ awaited and NHS Region, data up to 2 September 2020 | | | | | | | | |
|--|------------|-----------|----------|----------|----------|------------|------------|-----------|
| | Kidney | SPK | Liver | Heart | Lung | Intestinal | Total | Died |
| North East and Yorkshire | 13 | 0 | 1 | 0 | 0 | 0 | 14 | 1 |
| North West | 13 | 1 | 2 | 1 | 0 | 0 | 17 | 3 |
| Midlands | 25 | 1 | 3 | 0 | 1 | 0 | 30 | 4 |
| East of England | 24 | 2 | 0 | 0 | 1 | 1 | 28 | 1 |
| London | 99 | 5 | 0 | 0 | 0 | 0 | 104 | 12 |
| South East | 16 | 0 | 0 | 0 | 0 | 0 | 16 | 3 |
| South West | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Scotland | 7 | 1 | 1 | 0 | 0 | 0 | 9 | 0 |
| Wales | 6 | 0 | 0 | 1 | 0 | 0 | 7 | 1 |
| TOTAL | 206 | 10 | 7 | 2 | 2 | 1 | 228 | 25 |

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 2 September 2020 | | | | | | | | | |
|--|------------------|-------------------|------|----------------------|------|------------------------|-----------------------|------------|------------------------|
| 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 | 34336 | 60.5 | 516 | 63.2 | 1.5 | 131 | 25.4 | 0.4 |
| | Female | 22345 | 39.4 | 300 | 36.8 | 1.3 | 80 | 26.7 | 0.4 |
| | Unknown | 27 | 0.0 | - | - | - | - | - | - |
| Blood Group | O | 24456 | 43.1 | 292 | 35.8 | 1.2 | 70 | 24.0 | 0.3 |
| | A | 22799 | 40.2 | 336 | 41.2 | 1.5 | 89 | 26.5 | 0.4 |
| | B | 6964 | 12.3 | 144 | 17.6 | 2.1 | 39 | 27.1 | 0.6 |
| | AB | 2469 | 4.4 | 44 | 5.4 | 1.8 | 13 | 29.5 | 0.5 |
| Ethnicity | White | 43685 | 77.0 | 480 | 58.8 | 1.1 | 123 | 25.6 | 0.3 |
| | Asian | 5777 | 10.2 | 176 | 21.6 | 3.0 | 48 | 27.3 | 0.8 |
| | Black | 2721 | 4.8 | 101 | 12.4 | 3.7 | 26 | 25.7 | 1.0 |
| | Other | 1394 | 2.5 | 25 | 3.1 | 1.8 | 7 | 28.0 | 0.5 |
| | Unknown | 3131 | 5.5 | 34 | 4.2 | 1.1 | 7 | 20.6 | 0.2 |
| Age group | 0-17 | 2044 | 3.6 | 8 | 1.0 | 0.4 | - | - | - |
| | 18-29 | 3518 | 6.2 | 36 | 4.4 | 1.0 | - | - | - |
| | 30-39 | 5732 | 10.1 | 67 | 8.2 | 1.2 | - | - | - |
| | 40-49 | 8905 | 15.7 | 122 | 15.0 | 1.4 | 19 | 15.6 | 0.2 |
| | 50-59 | 14379 | 25.4 | 209 | 25.7 | 1.5 | 45 | 21.5 | 0.3 |
| | 60-69 | 13714 | 24.2 | 233 | 28.6 | 1.7 | 81 | 34.8 | 0.6 |
| | >70 | 8414 | 14.8 | 139 | 17.1 | 1.7 | 66 | 47.5 | 0.8 |
| Organ | Kidney | 39339 | 69.4 | 634 | 77.7 | 1.6 | 170 | 26.8 | 0.4 |
| | SPK | 1764 | 3.1 | 23 | 2.8 | 1.3 | 5 | 21.7 | 0.3 |
| | Pancreas | 342 | 0.6 | 5 | 0.6 | 1.5 | - | - | - |
| | Liver | 10717 | 18.9 | 89 | 10.9 | 0.8 | 19 | 21.3 | 0.2 |
| | Heart | 2627 | 4.6 | 32 | 3.9 | 1.2 | 7 | 21.9 | 0.3 |
| | Lung | 1565 | 2.8 | 26 | 3.2 | 1.7 | 9 | 34.6 | 0.6 |
| | Intestinal | 142 | 0.3 | 3 | 0.4 | 2.1 | - | - | - |
| | Multi organ | 212 | 0.4 | 4 | 0.5 | 1.9 | 1 | 25.0 | 0.5 |
| NHS Region | North East | 7431 | 13.1 | 79 | 9.7 | 1.1 | 17 | 21.5 | 0.2 |
| | North West | 5646 | 10.0 | 101 | 12.4 | 1.8 | 35 | 34.7 | 0.6 |
| | Midlands | 8451 | 14.9 | 114 | 14.0 | 1.3 | 27 | 23.7 | 0.3 |
| | East of England | 5528 | 9.7 | 90 | 11.0 | 1.6 | 25 | 27.8 | 0.5 |
| | London | 8502 | 15.0 | 242 | 29.7 | 2.8 | 60 | 24.8 | 0.7 |
| | South East | 7012 | 12.4 | 95 | 11.6 | 1.4 | 20 | 21.1 | 0.3 |
| | South West | 4624 | 8.2 | 38 | 4.7 | 0.8 | 11 | 28.9 | 0.2 |
| | Northern Ireland | 1901 | 3.4 | 8 | 1.0 | 0.4 | 2 | 25.0 | 0.1 |
| | Scotland | 5059 | 8.9 | 36 | 4.4 | 0.7 | 9 | 25.0 | 0.2 |
| | Wales | 2554 | 4.5 | 13 | 1.6 | 0.5 | 5 | 38.5 | 0.2 |

Table 6 Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020

| 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 | 37114 | 65.4 | 466 | 57.1 | 1.3 | 133 | 28.5 | 0.4 |
| | 2016 | 3869 | 6.8 | 61 | 7.5 | 1.6 | 18 | 29.5 | 0.5 |
| | 2017 | 4198 | 7.4 | 55 | 6.7 | 1.3 | 11 | 20.0 | 0.3 |
| | 2018 | 4556 | 8.0 | 55 | 6.7 | 1.2 | 18 | 32.7 | 0.4 |
| | 2019 | 4660 | 8.2 | 100 | 12.3 | 2.1 | 21 | 21.0 | 0.5 |
| | 2020 | 2311 | 4.1 | 79 | 9.7 | 3.4 | 10 | 12.7 | 0.4 |
| Time from transplant | 0-3 months | - | - | 46 | 5.8 | - | 9 | 19.6 | - |
| | 3-6 months | - | - | 37 | 4.7 | - | 11 | 29.7 | - |
| | 6-12 month | - | - | 44 | 5.6 | - | 6 | 13.6 | - |
| | 12+ months | - | - | 663 | 83.9 | - | 185 | 27.9 | - |

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 2 September 2020 | | | | | | | | | |
|--|------------------|------------------------|------|----------------------|------|-------------------|-----------------------|------------|-------------------|
| 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 | 3627 | 59.1 | 141 | 61.8 | 3.9 | 20 | 14.2 | 0.6 |
| | Female | 2500 | 40.7 | 87 | 38.2 | 3.5 | 5 | 5.7 | 0.2 |
| | Unknown | 9 | 0.1 | - | - | - | - | - | - |
| Blood Group | O | 3354 | 54.7 | 116 | 50.9 | 3.5 | 11 | 9.5 | 0.3 |
| | A | 1547 | 25.2 | 53 | 23.2 | 3.4 | 10 | 18.9 | 0.6 |
| | B | 1097 | 17.9 | 53 | 23.2 | 4.8 | 4 | 7.5 | 0.4 |
| | AB | 138 | 2.2 | 6 | 2.6 | 4.3 | - | - | - |
| Ethnicity | White | 4085 | 66.6 | 90 | 39.5 | 2.2 | 9 | 10.0 | 0.2 |
| | Asian | 1074 | 17.5 | 65 | 28.5 | 6.1 | 9 | 13.8 | 0.8 |
| | Black | 625 | 10.2 | 50 | 21.9 | 8.0 | 3 | 6.0 | 0.5 |
| | Other | 254 | 4.1 | 16 | 7.0 | 6.3 | 2 | 12.5 | 0.8 |
| | Unknown | 98 | 1.6 | 7 | 3.1 | 7.1 | 2 | 28.6 | 2.0 |
| Age group | 0-17 | 190 | 3.1 | 4 | 1.8 | 2.1 | - | - | - |
| | 18-29 | 396 | 6.5 | 10 | 4.4 | 2.5 | 1 | 10.0 | 0.3 |
| | 30-39 | 766 | 12.5 | 22 | 9.6 | 2.9 | 1 | 4.5 | 0.1 |
| | 40-49 | 1136 | 18.5 | 47 | 20.6 | 4.1 | 2 | 4.3 | 0.2 |
| | 50-59 | 1806 | 29.4 | 73 | 32.0 | 4.0 | 7 | 9.6 | 0.4 |
| | 60-69 | 1414 | 23.0 | 56 | 24.6 | 4.0 | 12 | 21.4 | 0.8 |
| | >70 | 428 | 7.0 | 16 | 7.0 | 3.7 | 2 | 12.5 | 0.5 |
| Organ | Kidney | 4789 | 78.0 | 206 | 90.4 | 4.3 | 23 | 11.2 | 0.5 |
| | SPK | 186 | 3.0 | 10 | 4.4 | 5.4 | - | - | - |
| | Pancreas | 27 | 0.4 | - | - | - | - | - | - |
| | Liver | 419 | 6.8 | 7 | 3.1 | 1.7 | 1 | 14.3 | 0.2 |
| | Heart | 320 | 5.2 | 2 | 0.9 | 0.6 | - | - | - |
| | Lung | 350 | 5.7 | 2 | 0.9 | 0.6 | 1 | 50.0 | 0.3 |
| | Intestinal | 17 | 0.3 | 1 | 0.4 | 5.9 | - | - | - |
| | Multi organ | 28 | 0.5 | - | - | - | - | - | - |
| NHS Region | North East | 789 | 12.9 | 14 | 6.1 | 1.8 | 1 | 7.1 | 0.1 |
| | North West | 676 | 11.0 | 17 | 7.5 | 2.5 | 3 | 17.6 | 0.4 |
| | Midlands | 1007 | 16.4 | 30 | 13.2 | 3.0 | 4 | 13.3 | 0.4 |
| | East of England | 430 | 7.0 | 28 | 12.3 | 6.5 | 1 | 3.6 | 0.2 |
| | London | 1292 | 21.1 | 104 | 45.6 | 8.0 | 12 | 11.5 | 0.9 |
| | South East | 573 | 9.3 | 16 | 7.0 | 2.8 | 3 | 18.8 | 0.5 |
| | South West | 419 | 6.8 | 3 | 1.3 | 0.7 | - | - | - |
| | Northern Ireland | 142 | 2.3 | - | - | - | - | - | - |
| | Scotland | 562 | 9.2 | 9 | 3.9 | 1.6 | - | - | - |
| | Wales | 246 | 4.0 | 7 | 3.1 | 2.8 | 1 | 14.3 | 0.4 |

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 2 September 2020 | | | | | | | | | |
|---|------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 24115 | 61.3 | 399 | 62.9 | 1.7 | 104 | 26.1 | 0.4 |
| | Female | 15200 | 38.6 | 235 | 37.1 | 1.5 | 66 | 28.1 | 0.4 |
| | Unknown | 24 | 0.1 | - | - | - | - | - | - |
| Blood Group | O | 17075 | 43.4 | 227 | 35.8 | 1.3 | 53 | 23.3 | 0.3 |
| | A | 15528 | 39.5 | 254 | 40.1 | 1.6 | 71 | 28.0 | 0.5 |
| | B | 4983 | 12.7 | 118 | 18.6 | 2.4 | 36 | 30.5 | 0.7 |
| | AB | 1736 | 4.4 | 35 | 5.5 | 2.0 | 10 | 28.6 | 0.6 |
| Ethnicity | White | 28982 | 73.7 | 343 | 54.1 | 1.2 | 92 | 26.8 | 0.3 |
| | Asian | 4468 | 11.4 | 147 | 23.2 | 3.3 | 42 | 28.6 | 0.9 |
| | Black | 2234 | 5.7 | 90 | 14.2 | 4.0 | 25 | 27.8 | 1.1 |
| | Other | 1056 | 2.7 | 20 | 3.2 | 1.9 | 4 | 20.0 | 0.4 |
| | Unknown | 2599 | 6.6 | 34 | 5.4 | 1.3 | 7 | 20.6 | 0.3 |
| Age group | 0-17 | 844 | 2.1 | 2 | 0.3 | 0.2 | - | - | - |
| | 18-29 | 2225 | 5.7 | 25 | 3.9 | 1.1 | - | - | - |
| | 30-39 | 4105 | 10.4 | 52 | 8.2 | 1.3 | - | - | - |
| | 40-49 | 6543 | 16.6 | 100 | 15.8 | 1.5 | 15 | 15.0 | 0.2 |
| | 50-59 | 10410 | 26.5 | 171 | 27.0 | 1.6 | 36 | 21.1 | 0.3 |
| | 60-69 | 9130 | 23.2 | 169 | 26.7 | 1.9 | 64 | 37.9 | 0.7 |
| | >70 | 6082 | 15.5 | 114 | 18.0 | 1.9 | 55 | 48.2 | 0.9 |
| Organ | Kidney | 39339 | 100.0 | 634 | 100.0 | 1.6 | 170 | 26.8 | 0.4 |
| NHS Region | North East | 5170 | 13.1 | 54 | 8.5 | 1.0 | 11 | 20.4 | 0.2 |
| | North West | 3979 | 10.1 | 70 | 11.0 | 1.8 | 25 | 35.7 | 0.6 |
| | Midlands | 5709 | 14.5 | 92 | 14.5 | 1.6 | 20 | 21.7 | 0.4 |
| | East of England | 3625 | 9.2 | 79 | 12.5 | 2.2 | 21 | 26.6 | 0.6 |
| | London | 6178 | 15.7 | 200 | 31.5 | 3.2 | 54 | 27.0 | 0.9 |
| | South East | 4860 | 12.4 | 64 | 10.1 | 1.3 | 15 | 23.4 | 0.3 |
| | South West | 3205 | 8.1 | 29 | 4.6 | 0.9 | 10 | 34.5 | 0.3 |
| | Northern Ireland | 1420 | 3.6 | 8 | 1.3 | 0.6 | 2 | 25.0 | 0.1 |
| | Scotland | 3348 | 8.5 | 29 | 4.6 | 0.9 | 8 | 27.6 | 0.2 |
| | Wales | 1845 | 4.7 | 9 | 1.4 | 0.5 | 4 | 44.4 | 0.2 |
| Year of transplant | <=2015 | 25730 | 65.4 | 366 | 57.7 | 1.4 | 105 | 28.7 | 0.4 |
| | 2016 | 2691 | 6.8 | 45 | 7.1 | 1.7 | 13 | 28.9 | 0.5 |
| | 2017 | 2929 | 7.4 | 43 | 6.8 | 1.5 | 9 | 20.9 | 0.3 |
| | 2018 | 3163 | 8.0 | 43 | 6.8 | 1.4 | 15 | 34.9 | 0.5 |
| | 2019 | 3313 | 8.4 | 78 | 12.3 | 2.4 | 18 | 23.1 | 0.5 |
| | 2020 | 1513 | 3.8 | 59 | 9.3 | 3.9 | 10 | 16.9 | 0.7 |

Table 8 Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020

| 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 | - | - | 37 | 6.0 | - | 9 | 24.3 | - |
| | 3-6 months | - | - | 29 | 4.7 | - | 10 | 34.5 | - |
| | 6-12 month | - | - | 32 | 5.2 | - | 4 | 12.5 | - |
| | 12+ months | - | - | 520 | 84.1 | - | 147 | 28.3 | - |

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 2 September 2020 | | | | | | | | | |
|---|------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 2849 | 59.5 | 126 | 61.2 | 4.4 | 18 | 14.3 | 0.6 |
| | Female | 1932 | 40.3 | 80 | 38.8 | 4.1 | 5 | 6.3 | 0.3 |
| | Unknown | 8 | 0.2 | - | - | - | - | - | - |
| Blood Group | O | 2646 | 55.3 | 103 | 50.0 | 3.9 | 11 | 10.7 | 0.4 |
| | A | 1099 | 22.9 | 48 | 23.3 | 4.4 | 9 | 18.8 | 0.8 |
| | B | 930 | 19.4 | 49 | 23.8 | 5.3 | 3 | 6.1 | 0.3 |
| | AB | 114 | 2.4 | 6 | 2.9 | 5.3 | - | - | - |
| Ethnicity | White | 2954 | 61.7 | 76 | 36.9 | 2.6 | 7 | 9.2 | 0.2 |
| | Asian | 956 | 20.0 | 61 | 29.6 | 6.4 | 9 | 14.8 | 0.9 |
| | Black | 575 | 12.0 | 48 | 23.3 | 8.3 | 3 | 6.3 | 0.5 |
| | Other | 232 | 4.8 | 15 | 7.3 | 6.5 | 2 | 13.3 | 0.9 |
| | Unknown | 72 | 1.5 | 6 | 2.9 | 8.3 | 2 | 33.3 | 2.8 |
| Age group | 0-17 | 110 | 2.3 | 2 | 1.0 | 1.8 | - | - | - |
| | 18-29 | 277 | 5.8 | 7 | 3.4 | 2.5 | 1 | 14.3 | 0.4 |
| | 30-39 | 553 | 11.5 | 17 | 8.3 | 3.1 | 1 | 5.9 | 0.2 |
| | 40-49 | 885 | 18.5 | 40 | 19.4 | 4.5 | 1 | 2.5 | 0.1 |
| | 50-59 | 1396 | 29.2 | 69 | 33.5 | 4.9 | 7 | 10.1 | 0.5 |
| | 60-69 | 1158 | 24.2 | 55 | 26.7 | 4.7 | 11 | 20.0 | 0.9 |
| | >70 | 410 | 8.6 | 16 | 7.8 | 3.9 | 2 | 12.5 | 0.5 |
| Organ | Kidney | 4789 | 100.0 | 206 | 100.0 | 4.3 | 23 | 11.2 | 0.5 |
| NHS Region | North East | 592 | 12.4 | 13 | 6.3 | 2.2 | 1 | 7.7 | 0.2 |
| | North West | 527 | 11.0 | 13 | 6.3 | 2.5 | 3 | 23.1 | 0.6 |
| | Midlands | 788 | 16.5 | 25 | 12.1 | 3.2 | 2 | 8.0 | 0.3 |
| | East of England | 334 | 7.0 | 24 | 11.7 | 7.2 | 1 | 4.2 | 0.3 |
| | London | 1128 | 23.6 | 99 | 48.1 | 8.8 | 12 | 12.1 | 1.1 |
| | South East | 415 | 8.7 | 16 | 7.8 | 3.9 | 3 | 18.8 | 0.7 |
| | South West | 312 | 6.5 | 3 | 1.5 | 1.0 | - | - | - |
| | Northern Ireland | 88 | 1.8 | - | - | - | - | - | - |
| | Scotland | 423 | 8.8 | 7 | 3.4 | 1.7 | - | - | - |
| | Wales | 182 | 3.8 | 6 | 2.9 | 3.3 | 1 | 16.7 | 0.5 |

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 2 September 2020 | | | | | | | | | |
|---|------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 1028 | 58.3 | 15 | 65.2 | 1.5 | 4 | 26.7 | 0.4 |
| | Female | 736 | 41.7 | 8 | 34.8 | 1.1 | 1 | 12.5 | 0.1 |
| Blood Group | O | 769 | 43.6 | 11 | 47.8 | 1.4 | 2 | 18.2 | 0.3 |
| | A | 729 | 41.3 | 5 | 21.7 | 0.7 | - | - | - |
| | B | 189 | 10.7 | 5 | 21.7 | 2.6 | 1 | 20.0 | 0.5 |
| | AB | 77 | 4.4 | 2 | 8.7 | 2.6 | 2 | 100.0 | 2.6 |
| Ethnicity | White | 1549 | 87.8 | 13 | 56.5 | 0.8 | 3 | 23.1 | 0.2 |
| | Asian | 101 | 5.7 | 4 | 17.4 | 4.0 | 2 | 50.0 | 2.0 |
| | Black | 75 | 4.3 | 5 | 21.7 | 6.7 | - | - | - |
| | Other | 21 | 1.2 | 1 | 4.3 | 4.8 | - | - | - |
| | Unknown | 18 | 1.0 | - | - | - | - | - | - |
| Age group | 0-17 | - | - | - | - | - | - | - | - |
| | 18-29 | 31 | 1.8 | - | - | - | - | - | - |
| | 30-39 | 286 | 16.2 | 5 | 21.7 | 1.7 | - | - | - |
| | 40-49 | 594 | 33.7 | 6 | 26.1 | 1.0 | 2 | 33.3 | 0.3 |
| | 50-59 | 627 | 35.5 | 6 | 26.1 | 1.0 | 1 | 16.7 | 0.2 |
| | 60-69 | 211 | 12.0 | 4 | 17.4 | 1.9 | - | - | - |
| | >70 | 15 | 0.9 | 2 | 8.7 | 13.3 | 2 | 100.0 | 13.3 |
| Organ | SPK | 1764 | 100.0 | 23 | 100.0 | 1.3 | 5 | 21.7 | 0.3 |
| NHS Region | North East | 146 | 8.3 | 1 | 4.3 | 0.7 | - | - | - |
| | North West | 134 | 7.6 | 2 | 8.7 | 1.5 | 1 | 50.0 | 0.7 |
| | Midlands | 312 | 17.7 | 2 | 8.7 | 0.6 | - | - | - |
| | East of England | 229 | 13.0 | 2 | 8.7 | 0.9 | 1 | 50.0 | 0.4 |
| | London | 211 | 12.0 | 9 | 39.1 | 4.3 | 2 | 22.2 | 0.9 |
| | South East | 299 | 17.0 | 5 | 21.7 | 1.7 | 1 | 20.0 | 0.3 |
| | South West | 142 | 8.0 | 2 | 8.7 | 1.4 | - | - | - |
| | Northern Ireland | 23 | 1.3 | - | - | - | - | - | - |
| | Scotland | 167 | 9.5 | - | - | - | - | - | - |
| | Wales | 101 | 5.7 | - | - | - | - | - | - |
| Year of transplant | <=2015 | 1120 | 63.5 | 12 | 52.2 | 1.1 | 3 | 25.0 | 0.3 |
| | 2016 | 122 | 6.9 | 2 | 8.7 | 1.6 | 1 | 50.0 | 0.8 |
| | 2017 | 149 | 8.4 | 3 | 13.0 | 2.0 | - | - | - |
| | 2018 | 160 | 9.1 | 2 | 8.7 | 1.3 | 1 | 50.0 | 0.6 |
| | 2019 | 151 | 8.6 | 3 | 13.0 | 2.0 | - | - | - |
| | 2020 | 62 | 3.5 | 1 | 4.3 | 1.6 | - | - | - |
| Time from transplant | 3-6 months | - | - | 1 | 4.5 | - | - | - | - |
| | 6-12 month | - | - | 2 | 9.1 | - | - | - | - |
| | 12+ months | - | - | 19 | 86.4 | - | 5 | 26.3 | - |

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 2 September 2020 | | | | | | | | | |
|---|------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 106 | 57.0 | 7 | 70.0 | 6.6 | - | - | - |
| | Female | 80 | 43.0 | 3 | 30.0 | 3.8 | - | - | - |
| Blood Group | O | 91 | 48.9 | 6 | 60.0 | 6.6 | - | - | - |
| | A | 55 | 29.6 | 2 | 20.0 | 3.6 | - | - | - |
| | B | 35 | 18.8 | 2 | 20.0 | 5.7 | - | - | - |
| | AB | 5 | 2.7 | - | - | - | - | - | - |
| Ethnicity | White | 151 | 81.2 | 5 | 50.0 | 3.3 | - | - | - |
| | Asian | 20 | 10.8 | 2 | 20.0 | 10.0 | - | - | - |
| | Black | 8 | 4.3 | 2 | 20.0 | 25.0 | - | - | - |
| | Other | 6 | 3.2 | - | - | - | - | - | - |
| | Unknown | 1 | 0.5 | 1 | 10.0 | 100.0 | - | - | - |
| Age group | 0-17 | 1 | 0.5 | 1 | 10.0 | 100.0 | - | - | - |
| | 18-29 | 14 | 7.5 | 1 | 10.0 | 7.1 | - | - | - |
| | 30-39 | 64 | 34.4 | 4 | 40.0 | 6.3 | - | - | - |
| | 40-49 | 62 | 33.3 | 2 | 20.0 | 3.2 | - | - | - |
| | 50-59 | 43 | 23.1 | 2 | 20.0 | 4.7 | - | - | - |
| | 60-69 | 2 | 1.1 | - | - | - | - | - | - |
| | >70 | - | - | - | - | - | - | - | - |
| Organ | SPK | 186 | 100.0 | 10 | 100.0 | 5.4 | - | - | - |
| NHS Region | North East | 19 | 10.2 | - | - | - | - | - | - |
| | North West | 20 | 10.8 | 1 | 10.0 | 5.0 | - | - | - |
| | Midlands | 29 | 15.6 | 1 | 10.0 | 3.4 | - | - | - |
| | East of England | 9 | 4.8 | 2 | 20.0 | 22.2 | - | - | - |
| | London | 28 | 15.1 | 5 | 50.0 | 17.9 | - | - | - |
| | South East | 27 | 14.5 | - | - | - | - | - | - |
| | South West | 13 | 7.0 | - | - | - | - | - | - |
| | Northern Ireland | 1 | 0.5 | - | - | - | - | - | - |
| | Scotland | 25 | 13.4 | 1 | 10.0 | 4.0 | - | - | - |
| | Wales | 15 | 8.1 | - | - | - | - | - | - |

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 2 September 2020 | | | | | | | | | |
|---|------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 6179 | 57.7 | 55 | 61.8 | 0.9 | 9 | 16.4 | 0.1 |
| | Female | 4537 | 42.3 | 34 | 38.2 | 0.7 | 10 | 29.4 | 0.2 |
| | Unknown | 1 | 0.0 | - | - | - | - | - | - |
| Blood Group | O | 4631 | 43.2 | 37 | 41.6 | 0.8 | 9 | 24.3 | 0.2 |
| | A | 4348 | 40.6 | 35 | 39.3 | 0.8 | 9 | 25.7 | 0.2 |
| | B | 1282 | 12.0 | 13 | 14.6 | 1.0 | 1 | 7.7 | 0.1 |
| | AB | 456 | 4.3 | 4 | 4.5 | 0.9 | - | - | - |
| Ethnicity | White | 8942 | 83.4 | 64 | 71.9 | 0.7 | 14 | 21.9 | 0.2 |
| | Asian | 923 | 8.6 | 21 | 23.6 | 2.3 | 4 | 19.0 | 0.4 |
| | Black | 319 | 3.0 | 3 | 3.4 | 0.9 | 1 | 33.3 | 0.3 |
| | Other | 250 | 2.3 | 1 | 1.1 | 0.4 | - | - | - |
| | Unknown | 283 | 2.6 | - | - | - | - | - | - |
| Age group | 0-17 | 842 | 7.9 | 5 | 5.7 | 0.6 | - | - | - |
| | 18-29 | 799 | 7.5 | 7 | 8.0 | 0.9 | - | - | - |
| | 30-39 | 757 | 7.1 | 1 | 1.1 | 0.1 | - | - | - |
| | 40-49 | 1068 | 10.0 | 7 | 8.0 | 0.7 | 2 | 28.6 | 0.2 |
| | 50-59 | 2273 | 21.2 | 20 | 22.7 | 0.9 | 3 | 15.0 | 0.1 |
| | 60-69 | 3212 | 30.0 | 34 | 38.6 | 1.1 | 8 | 23.5 | 0.2 |
| | >70 | 1764 | 16.5 | 14 | 15.9 | 0.8 | 6 | 42.9 | 0.3 |
| Organ | Liver | 10717 | 100.0 | 89 | 100.0 | 0.8 | 19 | 21.3 | 0.2 |
| NHS Region | North East | 1371 | 12.8 | 16 | 18.0 | 1.2 | 5 | 31.3 | 0.4 |
| | North West | 1052 | 9.8 | 11 | 12.4 | 1.0 | 3 | 27.3 | 0.3 |
| | Midlands | 1654 | 15.4 | 8 | 9.0 | 0.5 | 2 | 25.0 | 0.1 |
| | East of England | 1122 | 10.5 | 6 | 6.7 | 0.5 | 1 | 16.7 | 0.1 |
| | London | 1592 | 14.9 | 23 | 25.8 | 1.4 | 2 | 8.7 | 0.1 |
| | South East | 1236 | 11.5 | 18 | 20.2 | 1.5 | 4 | 22.2 | 0.3 |
| | South West | 841 | 7.8 | 3 | 3.4 | 0.4 | - | - | - |
| | Northern Ireland | 333 | 3.1 | - | - | - | - | - | - |
| | Scotland | 1123 | 10.5 | 3 | 3.4 | 0.3 | 1 | 33.3 | 0.1 |
| | Wales | 393 | 3.7 | 1 | 1.1 | 0.3 | 1 | 100.0 | 0.3 |
| Year of transplant | <=2015 | 6943 | 64.8 | 53 | 59.6 | 0.8 | 14 | 26.4 | 0.2 |
| | 2016 | 740 | 6.9 | 6 | 6.7 | 0.8 | 2 | 33.3 | 0.3 |
| | 2017 | 796 | 7.4 | 5 | 5.6 | 0.6 | 1 | 20.0 | 0.1 |
| | 2018 | 878 | 8.2 | 4 | 4.5 | 0.5 | - | - | - |
| | 2019 | 838 | 7.8 | 8 | 9.0 | 1.0 | 2 | 25.0 | 0.2 |
| | 2020 | 522 | 4.9 | 13 | 14.6 | 2.5 | - | - | - |

Table 12 Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020

| 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 | 7.3 | - | - | - | - |
| | 3-6 months | - | - | 3 | 3.7 | - | 1 | 33.3 | - |
| | 6-12 month | - | - | 3 | 3.7 | - | 1 | 33.3 | - |
| | 12+ months | - | - | 70 | 85.4 | - | 17 | 24.3 | - |

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 2 September 2020 | | | | | | | | | |
|---|------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| Factor | Level | Active on waiting list | | SARS-CoV-2 +ve cases | | | SARS-CoV-2 +ve deaths | | |
| | | N | % | N | % | % of waiting list | N ¹ | % of cases | % of waiting list |
| Sex | Male | 232 | 55.4 | 4 | 57.1 | 1.7 | - | - | 0.4 |
| | Female | 187 | 44.6 | 3 | 42.9 | 1.6 | - | - | - |
| | Unknown | - | - | - | - | - | - | - | - |
| Blood Group | O | 225 | 53.7 | 3 | 42.9 | 1.3 | - | - | - |
| | A | 131 | 31.3 | 2 | 28.6 | 1.5 | - | - | - |
| | B | 56 | 13.4 | 2 | 28.6 | 3.6 | - | - | 1.8 |
| | AB | 7 | 1.7 | - | - | - | - | - | - |
| Ethnicity | White | 347 | 82.8 | 5 | 71.4 | 1.4 | - | - | 0.3 |
| | Asian | 38 | 9.1 | 2 | 28.6 | 5.3 | - | - | - |
| | Black | 8 | 1.9 | - | - | - | - | - | - |
| | Other | 7 | 1.7 | - | - | - | - | - | - |
| | Unknown | 19 | 4.5 | - | - | - | - | - | - |
| Age group | 0-17 | 33 | 7.9 | - | - | - | - | - | - |
| | 18-29 | 41 | 9.8 | - | - | - | - | - | - |
| | 30-39 | 51 | 12.2 | 1 | 14.3 | 2.0 | - | - | - |
| | 40-49 | 86 | 20.5 | 5 | 71.4 | 5.8 | - | - | 1.2 |
| | 50-59 | 113 | 27.0 | 1 | 14.3 | 0.9 | - | - | - |
| | 60-69 | 85 | 20.3 | - | - | - | - | - | - |
| | >70 | 10 | 2.4 | - | - | - | - | - | - |
| Organ | Liver | 419 | 100.0 | 7 | 100.0 | 1.7 | - | - | 0.2 |
| NHS Region | North East | 47 | 11.2 | 1 | 14.3 | 2.1 | - | - | - |
| | North West | 49 | 11.7 | 2 | 28.6 | 4.1 | - | - | - |
| | Midlands | 68 | 16.2 | 3 | 42.9 | 4.4 | - | - | 1.5 |
| | East of England | 37 | 8.8 | - | - | - | - | - | - |
| | London | 43 | 10.3 | - | - | - | - | - | - |
| | South East | 40 | 9.5 | - | - | - | - | - | - |
| | South West | 43 | 10.3 | - | - | - | - | - | - |
| | Northern Ireland | 17 | 4.1 | - | - | - | - | - | - |
| | Scotland | 51 | 12.2 | 1 | 14.3 | 2.0 | - | - | - |
| | Wales | 24 | 5.7 | - | - | - | - | - | - |

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 2 September 2020 | | | | | | | | | |
|---|------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 1828 | 69.6 | 24 | 75.0 | 1.3 | 6 | 25.0 | 0.3 |
| | Female | 798 | 30.4 | 8 | 25.0 | 1.0 | 1 | 12.5 | 0.1 |
| | Unknown | 1 | 0.0 | - | - | - | - | - | - |
| Blood Group | O | 1019 | 38.8 | 8 | 25.0 | 0.8 | 2 | 25.0 | 0.2 |
| | A | 1174 | 44.7 | 18 | 56.3 | 1.5 | 4 | 22.2 | 0.3 |
| | B | 320 | 12.2 | 4 | 12.5 | 1.3 | 1 | 25.0 | 0.3 |
| | AB | 112 | 4.3 | 2 | 6.3 | 1.8 | - | - | - |
| Ethnicity | White | 2116 | 80.5 | 26 | 81.3 | 1.2 | 6 | 23.1 | 0.3 |
| | Asian | 198 | 7.5 | 2 | 6.3 | 1.0 | - | - | - |
| | Black | 75 | 2.9 | 3 | 9.4 | 4.0 | - | - | - |
| | Other | 50 | 1.9 | 1 | 3.1 | 2.0 | 1 | 100.0 | 2.0 |
| | Unknown | 188 | 7.2 | - | - | - | - | - | - |
| Age group | 0-17 | 262 | 10.0 | 1 | 3.1 | 0.4 | - | - | - |
| | 18-29 | 293 | 11.2 | - | - | - | - | - | - |
| | 30-39 | 302 | 11.5 | 7 | 21.9 | 2.3 | - | - | - |
| | 40-49 | 327 | 12.4 | 6 | 18.8 | 1.8 | - | - | - |
| | 50-59 | 476 | 18.1 | 4 | 12.5 | 0.8 | 1 | 25.0 | 0.2 |
| | 60-69 | 551 | 21.0 | 6 | 18.8 | 1.1 | 3 | 50.0 | 0.5 |
| | >70 | 416 | 15.8 | 8 | 25.0 | 1.9 | 3 | 37.5 | 0.7 |
| Organ | Heart | 2627 | 100.0 | 32 | 100.0 | 1.2 | 7 | 21.9 | 0.3 |
| NHS Region | North East | 428 | 16.3 | 7 | 21.9 | 1.6 | - | - | - |
| | North West | 263 | 10.0 | 5 | 15.6 | 1.9 | 2 | 40.0 | 0.8 |
| | Midlands | 426 | 16.2 | 7 | 21.9 | 1.6 | 2 | 28.6 | 0.5 |
| | East of England | 287 | 10.9 | 1 | 3.1 | 0.3 | 1 | 100.0 | 0.3 |
| | London | 287 | 10.9 | 5 | 15.6 | 1.7 | 1 | 20.0 | 0.3 |
| | South East | 315 | 12.0 | 4 | 12.5 | 1.3 | - | - | - |
| | South West | 219 | 8.3 | 2 | 6.3 | 0.9 | 1 | 50.0 | 0.5 |
| | Northern Ireland | 67 | 2.6 | - | - | - | - | - | - |
| | Scotland | 222 | 8.5 | - | - | - | - | - | - |
| | Wales | 113 | 4.3 | 1 | 3.1 | 0.9 | - | - | - |
| Year of transplant | <=2015 | 1900 | 72.3 | 17 | 53.1 | 0.9 | 6 | 35.3 | 0.3 |
| | 2016 | 162 | 6.2 | 3 | 9.4 | 1.9 | - | - | - |
| | 2017 | 144 | 5.5 | 1 | 3.1 | 0.7 | 1 | 100.0 | 0.7 |
| | 2018 | 146 | 5.6 | 1 | 3.1 | 0.7 | - | - | - |
| | 2019 | 154 | 5.9 | 7 | 21.9 | 4.5 | - | - | - |
| | 2020 | 121 | 4.6 | 3 | 9.4 | 2.5 | - | - | - |

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020

| 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 | 3-6 months | - | - | 3 | 10.0 | - | - | - | - |
| | 6-12 month | - | - | 4 | 13.3 | - | - | - | - |
| | 12+ months | - | - | 23 | 76.7 | - | 7 | 30.4 | - |

Lung



Table 15 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 15 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020 | | | | | | | | | |
|--|------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 852 | 54.4 | 15 | 57.7 | 1.8 | 8 | 53.3 | 0.9 |
| | Female | 712 | 45.5 | 11 | 42.3 | 1.5 | 1 | 9.1 | 0.1 |
| | Unknown | 1 | 0.1 | - | - | - | - | - | - |
| Blood Group | O | 670 | 42.8 | 6 | 23.1 | 0.9 | 3 | 50.0 | 0.4 |
| | A | 713 | 45.6 | 18 | 69.2 | 2.5 | 5 | 27.8 | 0.7 |
| | B | 120 | 7.7 | 1 | 3.8 | 0.8 | - | - | - |
| | AB | 62 | 4.0 | 1 | 3.8 | 1.6 | 1 | 100.0 | 1.6 |
| Ethnicity | White | 1474 | 94.2 | 24 | 92.3 | 1.6 | 7 | 29.2 | 0.5 |
| | Asian | 40 | 2.6 | - | - | - | - | - | - |
| | Black | 7 | 0.4 | - | - | - | - | - | - |
| | Other | 10 | 0.6 | 2 | 7.7 | 20.0 | 2 | 100.0 | 20.0 |
| | Unknown | 34 | 2.2 | - | - | - | - | - | - |
| Age group | 0-17 | 30 | 1.9 | - | - | - | - | - | - |
| | 18-29 | 126 | 8.1 | 4 | 15.4 | 3.2 | - | - | - |
| | 30-39 | 217 | 13.9 | 2 | 7.7 | 0.9 | - | - | - |
| | 40-49 | 242 | 15.5 | 2 | 7.7 | 0.8 | - | - | - |
| | 50-59 | 380 | 24.3 | 7 | 26.9 | 1.8 | 4 | 57.1 | 1.1 |
| | 60-69 | 463 | 29.6 | 11 | 42.3 | 2.4 | 5 | 45.5 | 1.1 |
| | >70 | 107 | 6.8 | - | - | - | - | - | - |
| Organ | Lung | 1565 | 100.0 | 26 | 100.0 | 1.7 | 9 | 34.6 | 0.6 |
| NHS Region | North East | 230 | 14.7 | 1 | 3.8 | 0.4 | 1 | 100.0 | 0.4 |
| | North West | 155 | 9.9 | 10 | 38.5 | 6.5 | 4 | 40.0 | 2.6 |
| | Midlands | 246 | 15.7 | 4 | 15.4 | 1.6 | 2 | 50.0 | 0.8 |
| | East of England | 200 | 12.8 | 1 | 3.8 | 0.5 | 1 | 100.0 | 0.5 |
| | London | 144 | 9.2 | 3 | 11.5 | 2.1 | 1 | 33.3 | 0.7 |
| | South East | 230 | 14.7 | 3 | 11.5 | 1.3 | - | - | - |
| | South West | 126 | 8.1 | - | - | - | - | - | - |
| | Northern Ireland | 43 | 2.7 | - | - | - | - | - | - |
| | Scotland | 122 | 7.8 | 2 | 7.7 | 1.6 | - | - | - |
| | Wales | 69 | 4.4 | 2 | 7.7 | 2.9 | - | - | - |
| Year of transplant | <=2015 | 973 | 62.2 | 11 | 42.3 | 1.1 | 5 | 45.5 | 0.5 |
| | 2016 | 100 | 6.4 | 5 | 19.2 | 5.0 | 2 | 40.0 | 2.0 |
| | 2017 | 137 | 8.8 | 2 | 7.7 | 1.5 | - | - | - |
| | 2018 | 147 | 9.4 | 3 | 11.5 | 2.0 | 1 | 33.3 | 0.7 |
| | 2019 | 140 | 8.9 | 2 | 7.7 | 1.4 | 1 | 50.0 | 0.7 |
| | 2020 | 68 | 4.3 | 3 | 11.5 | 4.4 | - | - | - |

Table 15 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 2 September 2020

| 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 | - | - | 3 | 11.5 | - | - | - | - |
| | 6-12 month | - | - | 2 | 7.7 | - | 1 | 50.0 | - |
| | 12+ months | - | - | 21 | 80.8 | - | 8 | 38.1 | - |

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