

COVID-19 Second Surge Planning

Changes in this version

New

1.0 Foreword

The attached document has been drawn up by the Clinical Team - huge thanks to them - the members are listed in [appendix 1](#).

Organ and Tissue Donation and Transplantation in the UK was maintained for the most urgent patients during the first COVID-19 surge and the service recovered from that surge remarkably quickly. This was due to top level teamwork across the whole of the NHS and collaborative working with transplant commissioners.

But we are not complacent.

It is highly probable that we will see a second surge, and, in preparation, the Clinical Team have drawn up plans and considerations herein.

Lay Member and Patient Voice

In the first surge, events happened very quickly - in response the Clinical Team made decisions and tried to communicate these clearly to clinicians and consult with patient representatives where possible.

In preparation for a second surge we will have provision for regular input from Lay Members and we will consult with patient representatives through established networks – those formal links through patients' representative committees attached to organ specific advisory groups and our informal links. Please see [appendix 2](#) for further details.

Thank you again to the whole Clinical Team; we hope you find this document useful.

Professor John Forsythe

Medical Director

Organ and Tissue Donation and Transplantation Directorate (OTDT)

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2.0 Introduction

- 2.1 In response to the coronavirus (COVID-19) pandemic the United Kingdom enacted unprecedented policies designed to slow down the rate of spread, including measures such as closing schools, restricting populations to their homes, and closing NHS services.
- 2.2 Due to concerns around patient safety almost all transplant units in the UK stopped transplanting from living donors (except for a few paediatric liver recipient/donor pairs) and the majority of units closed their deceased donor kidney and pancreas transplant programs. Cardiothoracic, liver and some islet units continued to offer transplantation to a restricted number of high priority patients on their waiting list. At the height of the pandemic deceased donation and transplantation was down over 80%.
- 2.3 Towards the end of March and into April 2020, a number of key actions were implemented. These are listed in [appendix 3](#).
- 2.4 Following a peak in mid-April the rate of infection declined during May, coincident with significant falls in hospital bed occupancy.
- 2.5 Throughout June, OTDT have been encouraging units to consider their 'recovery' plan (NHSBT [POL296/4](#) – Re-opening of Transplant Programmes: Issues for Consideration). Unfortunately, based on previous experience of pandemics, the World Health Organization has warned against further waves of COVID-19. It is therefore essential that UK organ and tissue transplant units reflect on their experiences since March, and adequately prepare themselves for the possibility of a second surge of COVID-19.
- 2.6 Although a second wave is not inevitable, it is important to plan for it in order to minimise future possible disruptions. It is also very likely that localised areas of infection will occur leading to a regional 'lockdown'.
- 2.7 The OTDT Clinical Team have noted that most centres have found that recovering from complete closure has been more difficult than anticipated. This response has been conditioned by the variable impact of the pandemic in different geographical areas, making optimum use of NHS resources and the understandable need to focus managerial and clinical attention on re-opening other urgent services.
- 2.8 The support from Commissioners across all 4 countries has been valuable with recovery planning, as well as collaboration with NICE in producing relevant guidance.
- 2.9 The statement on 23rd June 2020 from The Royal College of Surgeons of England on behalf of all four surgical Colleges strongly supported the recovery of solid organ transplant services (from deceased and living donors) and included transplantation as a priority for hospitals/ Trusts/ Health Boards as part of their recovery programmes.
- 2.10 This document combines the shared experiences and analyses of the OTDT Clinical Team during the March-June pandemic and provides guidance for units planning for a potential second surge.
- 2.11 The intention of the document is to provide accurate, up-to-date issues for consideration and clinically relevant data to guide decision-making.
- 2.12 The document should be used in conjunction with local hospital/ Trust guidance to aid decision making and planning. It references latest guidance from the professional societies on the clinical management of transplant recipients in context of suspected or diagnosed COVID-19, which is regularly updated.

3.0 Deceased Donor Criteria

Throughout the pandemic, OTDT altered the national age criteria for deceased donation. National deceased donor criteria are complex and include many variables that might have been altered. Donor age was used as the primary restriction criterion because it was felt to be a clear and unambiguous metric, that was easily changed centrally. As the pandemic lessened and in light of experience, age restrictions were able to be eased.

Figure 1 shows the changes in deceased donor age criteria from March to June 2020, with Figure 2 demonstrating donation after circulatory death (DCD) and donation after brain death (DBD) donor numbers in the same time period. Contemporaneous data on deceased donor numbers can be found at: <https://www.odt.nhs.uk/deceased-donation/covid-19-advice-for-clinicians/>.

Figure 1. Number of deceased donor referrals, donors, and organ retrieved for transplantation in the UK, March-June 2020, with national deceased donor age criteria.

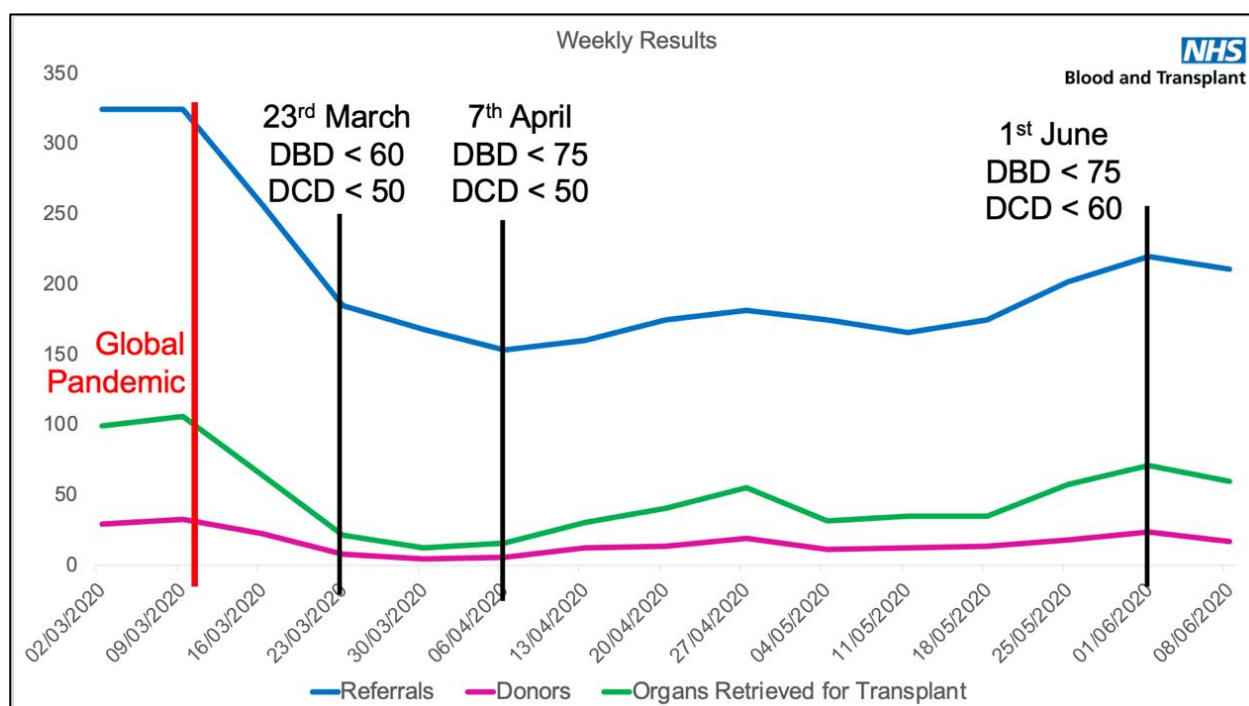
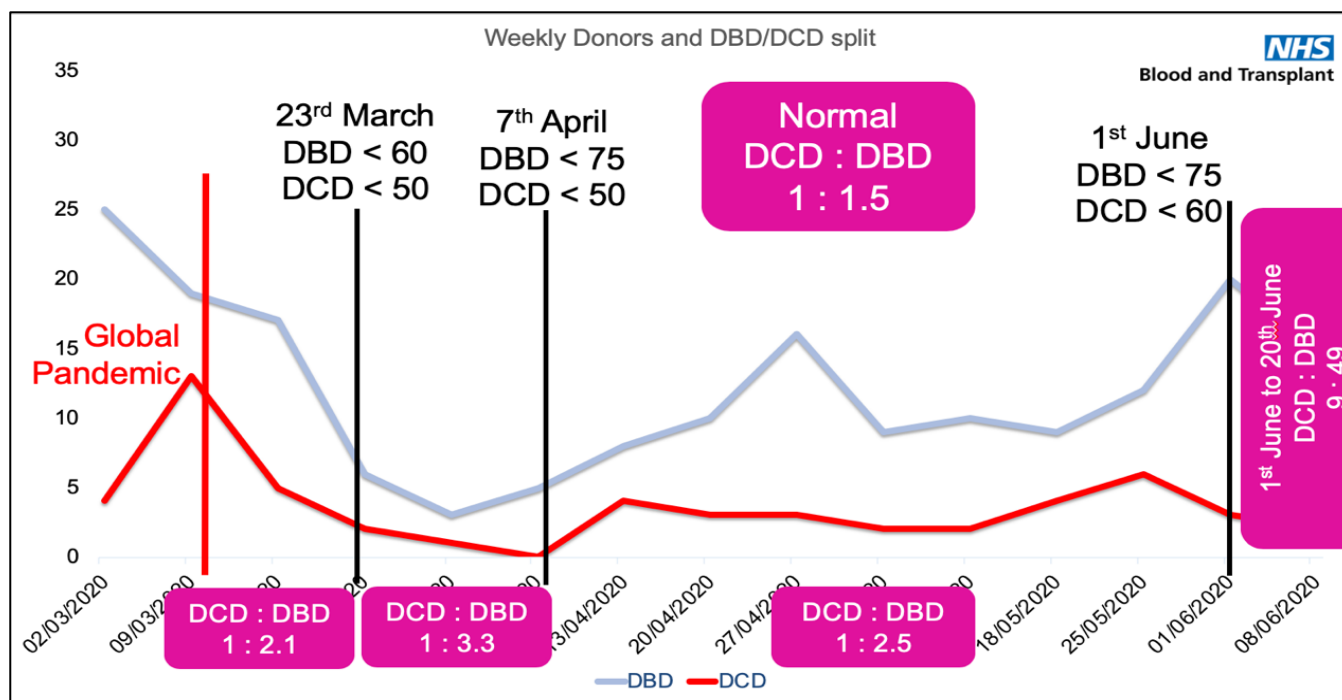


Figure 2. Number of deceased donors with national deceased donor age criteria by donor type, March-June 2020.



- 3.1 The strengths of restricting deceased donor age criteria were that:
- 3.1.1. It represented a strong statement of intent and support for creating hospital and Intensive Care Unit (ICU), bed capacity.
 - 3.1.2. It achieved the intended aim of a 50% reduction of donation activity.
 - 3.1.3. It enabled relative preservation of cardiac, liver and paediatric transplantation.
 - 3.1.4. It ensured that the potential donors that were explored had a higher chance of progressing to actual donation.
 - 3.1.5. It ensured that donations that did proceed had the best chance of success and rapid discharge for the recipient, reducing the chance of contracting COVID-19 post-transplant whilst in-hospital.
 - 3.1.6. It reduced strain on National Organ Retrieval Service (NORS), teams and reduced NORS teams travel, potentially spreading or becoming infected with COVID-19.
 - 3.1.7. It tried to match donation offers to transplant capacity.
- 3.2 The weaknesses of restricting donor age criteria were that:
- 3.2.1. A centralised approach restricted donation in regions that continued to have capacity to explore donation.
 - 3.2.2. It led to the lack of ability to explore donation in those over the age restriction criteria, causing frustration in some donation teams.
 - 3.2.3. It may have contributed to a greater drop in donation (87%) and transplantation (88%) than that required.

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- 3.2.4. It may have held back the recovery in deceased donation numbers as, once implemented, it has proven more difficult to relax criteria quickly, especially in DCD donation.
- 3.2.5. It may have contributed to a more severe reduction in kidney donation, because of the relative importance of DCD donation in UK kidney transplantation.
- 3.2.6. It required process deviations in specialist nurse standard operating procedures, and communication of these process deviations was difficult when age criteria were raised in steps.
- 3.2.7. It may confuse or undermine the aim of 100% potential donor referral.
- 3.3 Other factors considered:
- 3.3.1. 'Lockdown' and ICU bed pressures are not linearly linked. Local lockdown is designed to prevent hospital and ICU admissions so it can be possible (e.g. Leicester) that though there is community lockdown the hospitals in that area are not stretched.
- 3.3.2. Centrally determined donor age criteria may risk undermining local ICU support for organ donation.
- 3.3.3. Donor testing is now well established and is relatively independent of the intensity of local infection (i.e. the presence or absence of other COVID-19 patients within an ICU unit is less likely to alter acceptance of organs for donation).
- 3.3.4. Thus far, there have been no reported cases of donor-derived transmission of COVID-19, worldwide.
- 3.4 After considering feedback from key stakeholders, and taking the above into account, NHSBT supports the adoption a model of local flexibility built around individualised decision-making carried out through enhanced screening/assessment, and regional leadership.
- 3.5 Recommendations in case of a second surge:
- 3.5.1. Specialist nurse risk assessments will include considering if the referring hospital is in an area of increased 'lockdown' compared to their respective nation (as defined by UK governments) or if there are high COVID-19 numbers on the ICU.
- 3.5.2. If yes, then the specialist nurse will escalate decision-making to the team manager or regional manager who will consider and balance the following factors when deciding if donation will be explored further:
- Staff factors, e.g. staff location and individual capacity
 - COVID-19-related factors, e.g. assessment of COVID-19 risk within the potential donors' ICU
 - Donation factors
 - Early screening for donation potential (patient age will be a factor and guidance (not rules) can be given).

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- Consideration of likelihood of a potential DCD donor proceeding to donation.
 - The organs being explored for donation (e.g. heart or liver)
 - Patient (donor) and family considerations, e.g. registration on the organ donor register, or a strong family request for donation.
 - ICU capacity factors, e.g. the ICU has expected capacity for the next 24 hours to facilitate donation. Expedited organ offering via fast-track triggers will be considered.
 - Retrieval factors.
 - NORS capacity (e.g. other activity regionally and nationally expected within the next 24 hours).
 - Establish the most suitable time for the donation hospital to carry out organ retrieval (e.g. night-time may be preferred).
 - Personal Protective Equipment (PPE), considerations and planning.
- 3.6 Local decisions taken after considering the above factors may need to be reconsidered if new information is received.
- 3.7 Sometimes donation will not be able to be explored when in ordinary circumstances it would have. Explanation should be provided to families and teams.
- 3.8 At the time of writing, there are no restrictions on either DCD or DBD referral criteria. They are back to pre-COVID- 19 criteria

4.0 Personal Protective Equipment

- 4.1 In the event of a second wave we advise that the guidance below on risk assessment and personal protective equipment (PPE) is considered to ensure the health and safety of specialist nurses in organ donation (SNODs) and National Organ Retrieval Service (NORS) team members.
- 4.2 This document should be read in conjunction with national guidance (e.g. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>, and <https://www.hps.scot.nhs.uk/guidance/> <https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19> and <https://www.hps.scot.nhs.uk/>), and local policies of employing and host Boards/Trusts.
- 4.3 Guidance for SNODs.
- 4.3.1. Volunteering to front line clinical practice duties. NHSBT's priority in the event of a second wave is to maintain donation and transplantation services. SNODs should discuss any requests to work in front line clinical practice duties in critical care areas with their manager.
- 4.3.2. Donor facilitation.
Before going to the unit, the SNOD will speak to the nurse referring the patient to assess the unit's COVID-19 situation.
The following issues will be considered:
- Are there any possible or confirmed COVID-19 patients on the unit?
 - Are all the possible or confirmed COVID-19 patients in side-rooms?
 - Are all the possible or confirmed COVID-19 patients segregated?
 - If the unit is free of COVID-19 patients we advise that colleagues facilitating donation should work to the infection control procedures and policies on the unit.
 - If the potential donor is being cared for in an area with possible or confirmed COVID-19 patients, Public Health England recommended PPE should be adhered too. This includes wearing the model of FFP3 mask that the SNOD has been fit tested for, undertaking a fit check this every time a new FFP3 mask is donned, and adhering to local infection control procedures and policies on the unit.
- 4.3.3. Visiting hospitals to undertake the Potential Donor Audit (PDA).
Maintaining donation and transplant activity is critical and understanding the donation potential during any second wave is important, therefore conducting the PDA will be essential. When visiting hospitals to undertake embedded duties such as collecting PDA, we request that SNODs follow the guidance below:
- Talk to the nursing team prior to entering the unit and assess the unit situation with respect to the COVID-19 status.

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- Work to the individual hospital infection, prevention and control procedures and policies that are appropriate for the area the SNOD will be attending/working in.
 - Local social distancing guidance must be followed.
- 4.3.4. Public transport.
At the time of writing, it is mandatory for face coverings to be worn on public transport (<https://www.gov.uk/government/news/face-coverings-to-become-mandatory-on-public-transport>).
- 4.3.5. Transport in other vehicles or taxis.
A face covering must be worn during transport. See also <https://www.gov.uk/government/publications/staying-safe-outside-your-home/staying-safe-outside-your-home#face-coverings>.
- 4.4 Guidance for NORS Leads and teams: NORS Leads should review their previous risk mitigation/PPE strategies instituted for the pandemic to ensure that any new guidance or information is incorporated.
- 4.4.1. Patients that are confirmed SARS-CoV-2 positive or thought to have COVID-19 will not be considered for organ donation. SNODS will confirm with ICU medical staff that COVID-19 has been reasonably excluded in any potential donor prior to offering/retrieval.
- 4.4.2. If patients are confirmed SARS-CoV-2 positive in the past and SARS-CoV-2 negative at present and have an organ (or organs) that are offered and accepted, NORS teams should mobilise accordingly.
- 4.4.3. NORS team members will be working within PPE protocols for their own Board/Trust, with locally available resources at the donor hospitals. Any additional PPE equipment, over and above that available in any standard theatre, will need to be taken with the team on retrieval. NORS teams must alert the specialist nurse in organ donation (SN-OD) at the donor hospital if this is the case.
- 4.4.4. NORS teams should use their employing hospital's risk assessment protocols to assess the risk of retrieval surgery for each donor on a case-by-case basis. The risk assessment should then be used, with their employing hospital's PPE policy, to decide what PPE is appropriate for retrieval surgery.
- 4.4.5. All potential donors will have had a COVID-19 SNOD checklist ([FRM6439](#)) completed. If desired, this form can be requested by a NORS team prior to departure, so that a risk assessment may be performed. Further discussion may be required with the SNOD or ICU team to enable a full risk assessment.
- 4.4.6. NORS teams must be aware that bronchoscopy and use of high-speed instruments (e.g. a sternal saw) are considered aerosol-generating procedures (AGPs).
- 4.4.7. If the NORS team plans on taking additional PPE, they should inform the donor hospital staff as they may need to source PPE or swap staff around.

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- 4.5 Team transport.
A face covering must be worn during transport. See also <https://www.gov.uk/government/publications/staying-safe-outside-your-home/staying-safe-outside-your-home#face-coverings>.
NHSBT will continue to support wherever possible the use of two vehicles per retrieval to reduce staff proximity and maintain recommended social distancing.

5.0 Donor and Recipient SARS-CoV-2 Testing

- 5.1. Donor scenarios.
- 5.1.1. Donor characterisation and assessment for presence of SARS-CoV-2 is as per NHSBT **POL296** (<https://www.odt.nhs.uk/deceased-donation/covid-19-advice-for-clinicians/>).
Unless there is a historic positive result, a single set of negative nose & throat + endotracheal aspirate results for SARS-CoV-2 RNA within 48 hours of organ retrieval is sufficient to complete potential deceased donor characterisation.
- 5.1.2. NHSBT does not recommend using SARS-CoV-2 antibody results for donor characterisation purposes or clinical decision-making on suitability to be an organ donor.
- 5.1.3. NHSBT does not recommend using CT chest findings for donor characterisation purposes or clinical decision-making or suitability to be an organ donor.
- 5.1.4. In exceptionally rare circumstances, it is theoretically possible (e.g. where there is a late revision of an initial result by the laboratory), that the deceased donor initially tests SARS-CoV-2 RNA negative during donor characterisation but is later found to be positive after organs have been transplanted. In such a scenario, OTDT will contact recipient centres to discuss management options. The event will also be investigated by the OTDT governance team.
- 5.1.5. Planned living donors found to be positive for SARS-CoV-2 RNA (in nose & throat swabs) pre-operatively should not proceed to donation. In the exceptionally rare scenario of very late revision of the previous negative result for the live donor occurring after donation has been completed, the donor should be managed based on clinical need.
- 5.2. Recipient and potential recipient scenarios.
- 5.2.1. Asymptomatic surveillance of potential recipients for SARS-CoV-2 RNA whilst on the waiting list.
- 5.2.1.1. Currently there is no evidence for or against routine surveillance testing with RT-PCR for asymptomatic patients on the waiting list. Centres are encouraged to enrol patients in national research projects that are investigating the utility of screening asymptomatic patients.
- 5.2.2. Asymptomatic surveillance of potential recipients for anti-SARS-CoV-2 antibodies whilst on the waiting list.

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- 5.2.2.1. NHSBT strongly recommends that routine surveillance antibody testing in the wait-listed population should only be performed as part of national research studies. Currently there is no evidence for or against routine antibody testing for asymptomatic patients on the waiting list. A national sero-prevalence surveillance study (iSPY) in wait-listed paediatric kidney-only patients is planned. Two national observational studies aimed at characterising antibody responses are being planned in adult wait-listed & transplanted patients (all organs).
- 5.2.3. Patients on the waiting list with symptoms associated with COVID-19 or significant exposure to another individual/s with known COVID-19 should be tested for SARS-CoV-2 at the earliest opportunity and testing should be repeated as relevant. Patients testing positive should follow the actions set out in NHSBT guidance **POL296** <https://www.odt.nhs.uk/deceased-donation/covid-19-advice-for-clinicians/>.
- 5.2.4. Testing of potential recipients immediately prior to transplantation should proceed as per NHSBT guidance <https://www.odt.nhs.uk/deceased-donation/covid-19-advice-for-clinicians/>, and NICE rapid guidance on renal transplantation <https://www.nice.org.uk/guidance/NG178>.
- 5.2.5. In exceptionally rare circumstances, it is theoretically possible (e.g. where there is a late revision of an initial result by the laboratory), that the recipient initially tests negative for SARS-CoV-2 RNA, but later is found to be positive after the transplant has been undertaken. In such a scenario, the following escalation should be adhered to:
- Call OTDT Hub Operations on 0117 975 7580
 - OTDT HUB staff will inform the Regional Manager/ Director on call about the positive result and the Information Sheet should be followed. The on-call Manager/Director will contact and advise the transplant center using OTDT pre-agreed guidance for this scenario
 - The reporter should formally report to us via the on-line clinical governance reporting system and complete this [online form](#)
- 5.2.6 Clinical management of transplant recipients diagnosed with or suspected of having COVID-19

Refer to Renal Association/British Transplantation Society latest guidance at <https://bts.org.uk/information-resources/covid-19-information/>

For use of Remdesivir in patients (adults and children 12 years or older) hospitalised with COVID-19 refer to UK commissioning guidance at:

England <https://www.england.nhs.uk/coronavirus/publication/interim-clinical-commissioning-policy-remdesivir-for-patients-hospitalised-with-covid-19-adults-and-children-12-years-and-older/>

Northern Ireland <https://www.health-ni.gov.uk/publications/letters-and-urgent-communications-2020>

Scotland <https://www.gov.scot/publications/coronavirus-covid-19-therapeutic-alert-for-remdesivir/>

Wales <https://www.awttc.org/coronavirus-covid-19-therapeutic-advice/covid-19-therapies-alerts-and-advice>

For treatment of vulnerable patients who fall outside these commissioning criteria, an Individual Funding Request (IFR) application can be made.

6. National Organ Retrieval Service

6.1. **Background and management of the National Organ Retrieval Service (NORS) during the COVID-19 pandemic.**

- 6.1.1. NORS was maintained at 100% of normal availability during the peak of the COVID-19 crisis. A number of team leads were in contact to discuss whether they might stand down on an alternating basis. Teams were given the option of looking at alternative rota options and two teams reverted to a previous rota option during the pandemic.
- 6.1.2. It wasn't possible to predict if teams would suddenly become unavailable due to staff absences. Reducing the number of teams to less than 100% simply increased the risk of a critical failure of service.
- 6.1.3. It was considered that the low level of deceased donor activity meant that the system was unlikely to be stressed, even if teams were on-call. It was therefore straightforward to recommend that teams remained on service. In addition, the more teams that were available, the less the burden for each team. So, a reduction of one or two teams due to COVID-19 has less effect if all teams are 'on' than if there are fewer teams on-call.
- 6.1.4. Planning for a second surge of COVID-19.
- 6.1.5. A second wave is unlikely to look like the first; in that a coordinated wave of disease spreading across the UK if there is a resurgence, is unlikely. The next wave may well comprise multiple breakouts happening in an uncoordinated fashion across the country, with regional differences, which are relatively short-lasting.

6.2. **Effect on NORS of a second wave.**

- 6.2.1. Whilst it might have been possible, in retrospect, to estimate the effect of the first wave on regional teams (London teams had the highest risk of disease early on, followed later by teams progressively further north), predictive ability second time round will be much less. There may be a warning if there is a rise in cases in a region prompting increased lock down measures. Such a situation would alert us that a regional team may be at risk. But the ability to predict patterns will be much less than the first time.

6.3. **NORS cover for a second wave**

- 6.3.1. The uncertainty in modelling how disease might affect NORS is unchanged, and there is arguably more uncertainty than before. There will still be unpredicted staffing absences. Therefore, it is suggested that NORS teams remain on service throughout the UK, so that there is maximum resilience to absences, should a second wave occur.
- 6.3.2. It is particularly important for the second wave that there is full availability, as the workload for the teams on average will be much higher than during the first wave. If there is a regional or district level problem, the rest of the country will still be working at normal speed. We therefore need to maintain the highest level of availability to ensure the highest resilience.

- 6.3.3. We also need to be alert to the likelihood that intermittent second or third wave outbreaks may continue for more than a year from now.
- 6.3.4. It remains a theoretical possibility that there will be a more generalised second wave. Should there again be a high level of disease in the country, perhaps even higher than before, it may be necessary to re-think the position above. We should make minimal preparations for this unlikely contingency.

7.0 Waiting List Management

In anticipation of a second COVID-19 surge, it is advised that transplant centres undertake a risk assessment to determine which patients would benefit from transplantation despite an increased risk of infection. Risk assessment of patients on the waiting list could help in three ways:

1. Identifying those patients who should remain on the active transplant waiting list.
2. Identify patients who need more frequent review as they are at risk of rapid deterioration.
3. Establish a list of patients who may need to be transferred to another centre if there is a prolonged but local shutdown involving one or more transplant units. Centres should not wait until a second surge has occurred before doing this work.

7.1. Heart transplant waiting list

Patients with advanced heart failure on the waiting list who cannot be discharged from hospital constitute a group where the benefits of transplantation far outweigh the risks, even during a COVID-19 outbreak. These patients will usually be on the Super-Urgent or Urgent List. In addition, each centre can identify patients who need more frequent clinic review as the risk of clinical deterioration (and consequent need for in-patient treatment) is high.

7.2. Lung transplant waiting list

A very small number of patients (<10) are on the Super/Urgent List. For patients who fail to meet the national criteria, each centre has an in house, priority list. This consists of patients who are deteriorating but fail to meet the national criteria and need frequent review. Examples of patients at increased risk include patients with fibrotic lung disease and a rapidly increasing oxygen requirement, patients with cystic fibrosis and frequent infections, the need for continuous intravenous antibiotics or hypercarbia, or decompensated right heart failure.

7.3. Liver transplant waiting list

Liver transplantation should be offered for patients listed for Super-Urgent transplantation, and for those assessed as urgent. The decision about transplanting less urgent patients must be based on local circumstances – primarily the incidence of COVID-19 in the transplanting hospital. Individual patient factors (e.g. UKELD score) need to be considered, and also that the already substantial waiting list mortality will increase with accumulating numbers.

7.4. Kidney transplant waiting list

The risk-benefit estimation needs to account for individual patient risk factors (e.g. hospital dialysis, age, obesity, diabetes, cardiovascular disease, ethnicity, lifestyle considerations) and environmental factors (e.g. whether transplantation can be offered in a 'COVID-light' hospital environment). Examples of patients where the benefit of transplantation might outweigh the risks include those aged under 40 years, without (significant) cardiovascular morbidity, those with dialysis access

concerns and those Tier A patients expected to have longer waiting times. Patients and families need to be counselled and consented on risks during a COVID-19 surge.

7.5. Pancreas/Islet transplant waiting list

The risk-benefit analysis for pancreas transplant recipients should be assessed in the same way as for kidney transplant recipients, allowing that induction immunosuppression is typically more intensive in this group of patients. Waiting list mortality is high in patients awaiting simultaneous pancreas and kidney transplantation, and also in patients awaiting pancreas transplantation alone for hypoglycaemia unawareness. Another factor to be considered, depending on local practice, is the availability of intensive care capacity in the event of a COVID-19 surge. In patients with life threatening hypoglycaemia and patients who have received a first (routine) islet transplant the risk benefit balance may favour remaining active on the list.

7.6. Multi-visceral and intestinal transplant waiting list

The waiting list mortality and donor constraints for multi-visceral transplantation are such that these patients are generally regarded in the same way as urgent liver transplant recipients. Intestinal and modified multi-visceral transplant recipients need to be considered on a case-by-case basis, assessing the risk to remaining on the waiting list (e.g. line infections, progression of liver disease, progression of cancer), and the barriers to transplantation (e.g. sensitisation status).

7.7. Living kidney or liver donors

In addition to risk-benefit assessment for deceased donor transplantation, the approach to living donation in a second surge must consider:

- 7.7.1. The legitimate caution about exposing healthy donors to undue risk due to COVID-19.
- 7.7.2. The wishes of potential donors and recipients. A NHSBT market research survey disseminated via the kidney charities of previous, present and potential living kidney donors in June-July 2020 elicited 240 responses and indicated a high level of trust in the NHS to deliver living donation safely and a desire for programmes to remain open. <https://www.odt.nhs.uk/deceased-donation/covid-19-advice-for-clinicians/>
- 7.7.3. That living donor liver transplantation has been safely performed for acutely unwell recipients in the COVID-19 era
- 7.7.4. The decision to proceed with living donation must be made by the clinical team on an individual basis considering donor, recipient (and family, if applicable for children and young people), and environmental factors. These include:
 - 7.7.4.1. Generic and specific risks to the donor related to COVID-19, including social circumstances and work and lifestyle commitments that may impact on their exposure to COVID-19

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- pre/post donation and the willingness of the donor to accept these risks.
- 7.7.4.2. Donor clinical complexity and their willingness to consent to proceed to donation +/- accommodate necessary infection prevention and control requirements (e.g. social isolation pre- and post-donation).
- 7.7.4.3. The availability of a 'COVID-free' pathway to mitigate against additional risk to the donor during donor evaluation, in-patient stay for surgery, and post-discharge follow-up.
- 7.7.4.4. Recipient complexity and their willingness (and that of their family, if applicable for children and young people) to proceed with a transplant based upon an individual risk-benefit analysis, including the risk of not being transplanted versus the risks associated with transplantation (as above).
- 7.7.4.5. The willingness of the clinical team to proceed with donor assessment and surgery, considering donor +/- recipient factors, the local environment (e.g. community prevalence of COVID-19, and access to suitable donor-recipient pathways).
- 7.7.4.6. The opportunity for a donor +/- recipient to be transferred to another centre to mitigate local or regional environmental risk factors and to facilitate donation. This is particularly important for non-directed altruistic donors and donor-recipient pairs who contribute to the UK Living Donor Kidney Sharing Scheme, where there is an impact on other donor-recipient pairs and patients on the deceased donor waiting list.

8.0 Minimising Unit Closures

As the UK prepares itself for a potential second surge of COVID-19, and mindful of the best interests of potential transplant recipients throughout the UK, OTDT proposes the following over-arching principles with respect to minimising unit closures outlined below. Further information on the data and its application in providing an early warning of a surge in COVID-19 cases is presented in [appendix 5](#).

- 8.1 Total transplant unit closure should be avoided except in exceptional circumstances. In preparation for a second wave transplant centres should have a plan which can be shared with commissioners, trust management and supported by NHSBT. For any proposed closure, OTDT will consider the wider regional or super-regional solutions for both abdominal and cardiothoracic organs, encouraging dialogue between units and attempts at collective problem solving.
- 8.2 Transplant units must be aware of the above principles and also consider that:
 - 8.2.1 If a centre or region experiences a spike of infections, they should refer to their own internal escalation plan and local triggers. It is essential that the Trust/ Hospital management is made aware and communication with commissioners in response to any increases in infection rates.
 - 8.2.2 Even when transplantation itself cannot go ahead, plans should be made to continue transplant assessment and follow-up activity, as far as is possible to do so - consideration should be given to:
 - 8.2.2.1 Preparation of the waiting list.
 - 8.2.2.2 Review all waiting lists and describe plans for patients categorised based on need.
 - 8.2.2.3 Consideration of joint working with other centres, if this is appropriate
 - 8.2.2.4 Discussion with transplant waiting list patients and, where appropriate, consenting of patients (at the least those of high urgency) to be transferred to another centre for transplantation.
 - 8.2.2.5 Planned staffing models to sustain support for NORS and organ implantation, as appropriate.
- 8.3 If unit closure occurs during a second wave, the following should be considered- since various factors may influence different lengths of closure, this issue is considered in three possibilities; Short, Medium- and Long-term potential closure. The triggers for any closure within a transplant centre will depend on local escalation plans and local internal triggers and will be made in collaboration with Trust/Hospital management team.
 - 8.3.1 Short-term closures (1-14 days).
 - 8.3.1.1 Short-term closures are likely to be due to capacity issues, such as temporary workforce shortages, typically experienced by small teams where resilience will be limited due to sickness, enforced self-isolation, or annual leave. Such disruptions could last days (for

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- staff to be confirmed swab negative) or up to two weeks (to complete self-isolation).
- 8.3.1.2 The transplant team will initiate such closures in close collaboration with Trust/ Hospital management and relevant parties, and criteria for re-opening confirmed with Trust/hospital management.
- 8.3.1.3 In this scenario, OTDT Information Services will temporarily suspend the centre waiting list as a manual process over the planned closure. It is expected that the centre will continue to receive offers through a pre-determined point of contact with the understanding that the offer will automatically be turned down until such time that the centre can safely re-open. Such measures will enable Hub operations to function logistically and eliminate the need for the centre to formally 'close' and hence minimise the risk of bureaucracy associated with re-opening.
- 8.3.1.4 Requirements for short-term closures.
- 8.3.1.4.1 Clear pre-determined criteria for closure to be activated and Hub operations must be informed as early as possible as to the nature of the closure (see above).
- 8.3.1.4.2 This is best done using an SBAR (situation, background, assessment, and recommendation) tool (see [appendix 4](#)).
- 8.3.1.4.3 Clear communication with the Trust/Hospital management and risk assessment teams that the closure is short-term and that transplantation will be expected to re-commence as soon as the prescribed criteria are met.
- 8.3.2 Medium-term closures (14-28 days).
- 8.3.2.1 Medium-term closures may be as a result of a localised 'outbreak' in the hospital/ transplant ward/dialysis unit/ICU etc. This may typically last a month or longer. In the first instance the waiting list should be reviewed, and centres must confirm with OTDT Hub operations if suspension will be required and discussed with relevant parties.
- 8.3.2.2 There is an expectation that units will stay 'open' for a highly selected group of patients to be transplanted and offers will continue to be accepted for this select list. In addition, there should be a regular review date in place to consider re-opening to 'routine' offers, to discuss with relevant parties
- 8.3.2.3 If the predicted closure is to be longer than four weeks the agreed plan to transfer selected 'routine' listed patients who have approved to have their care transferred to a pre-determined 'partner' centre (or centres) should be activated, the Mutual Aid Assistance programme.
- 8.3.3 Long-term closures (more than 28 days).

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- 8.3.3.1 For activating long-term closures, it is expected that centres may be predicting months of reduced or no activity. This scenario will most likely be as a result of a major local outbreak in a region requiring medical, surgical, and nursing staff to be re-assigned to front-line COVID-19 work and suspension of all non-COVID-19 and /or routine work in the Trust/Hospital due to being overwhelmed. It is clear that in such circumstances, the resources of the Trust/Hospital may need to be diverted solely to the frontline and supporting critical care services.
 - 8.3.3.2 This type of closure may be imposed on transplant units by Trust/Hospital teams. In these situations, internal approval will be needed for a transplant unit to reopen.
 - 8.3.3.3 In this instance OTDT Information Services may be required to suspend the centre's entire waiting list (i.e. no offers to be accepted) and activate the agreed pre-determined plan to transfer patients who are willing to be transferred to the link centre to continue their care.
 - 8.3.3.4 In the face of long-term closures, units should make every reasonable attempt to continue other transplant-related activity, such as transplant assessments, virtual clinics, and management of acute post-transplant emergencies.
 - 8.3.4 Requirements for medium- and long-term closures.
 - 8.3.4.1 Clear reasons given by Trust/ Hospital personnel for closure communicated to NHSBT and appropriate commissioners.
 - 8.3.4.2 Within 14 days of closure there should be a discussion about the urgency and appropriateness of transferring a patient to another centre.
 - 8.3.4.3 There will be an expectation that the SBAR worksheet for re-opening has been agreed/approved by the Trust/ Hospital in discussion with Regional Commissioners.
 - 8.3.5 Transferring activity to another centre should be explored and in collaboration with commissioners and neighbouring units
 - 8.3.5.1 This option must be explored if the anticipated closure is longer than 14 days.
 - 8.3.5.2 All unit waiting list patients should be given the option of having their care transferred to an agreed suitable alternative centre that is open. If patients opt to remain in their 'home' unit this must be clearly documented. Preparations for this step should occur well in advance of a second wave to ensure all waiting list patients are aware that this possibility could arise.
 - 8.3.5.3 If no service level agreement exists between units, Commissioners need to be involved in facilitating the process.
 - 8.3.5.4 Priority consideration for collaboration should be given to Urgent and Super-Urgent recipients in hospital. Again, this should be established in advance of any second wave.
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- 8.3.5.5 The transfer of staff and agreeing honorary contracts may be an option.
 - 8.3.5.6 From Hub operations viewpoint, careful planning and manual changes will be required for each transplant performed in a 'sister' centre. Because of the logistics involved Hub operations must be included from the outset in the planning of these partnerships so that they can support this operationally rather than late notifications and last-minute planning.

8.4 Communication with the OTDT Hub.

For any short, medium- or longer-term closures, OTDT Hub must be informed by telephone on 0117 9757580. Any necessary arrangements regarding the waiting list can then be done.

For any short, medium- or longer-term closures the NICE Guideline: COVID-19 rapid guideline: arranging planned care in hospitals and diagnostic services will be useful

<https://www.nice.org.uk/guidance/ng179>

9.0 Tissue and Eye Services

- 9.1 Tissue donor selection.
 - 9.1.1 The UK Joint Professional Advisory Committee Donor Selection Guidelines (JPAC), already include guidance on the identification and deferral of donors with acute infections. Additionally, specific measures were implemented from 23rd January 2020 to identify donors at risk of being infected with SARS-CoV-2, including geographical deferrals. These were subsequently updated when the UK was identified as an area of sustained transmission. The guidelines are regularly updated in line with information available from Public Health England. These are sufficient to deal with donors where information provided would suggest recent or ongoing SARS-CoV-2 infection.
<https://www.transfusionguidelines.org/dsg/ctd/guidelines/coronavirus-infection-1>
 - 9.1.2 There is a potential that asymptomatic deceased donors could donate and not be identified without routine testing and Tissue and Eye Services (TES) has performed a risk assessment and updated its position statement in July 2020.
- 9.2 Testing of tissue donors.
 - 9.2.1 Given the theoretical and uncertain level of risk of tissue graft-related transmission of SARS-CoV-2, there is currently no consistency in international practice with respect to screening tissue donors for this virus. In the UK, organ donors are currently tested ante-mortem for SARS-CoV-2 by combined nose/throat swab and endotracheal aspirate and are accepted with a negative nucleic acid technology (NAT) test result. Therefore, tissue donors who are also organ donors are tested for SARS-CoV-2 RNA.
<https://nhsbtdbe.blob.core.windows.net/umbraco-assets-corp/19175/tes-covid-19-position-statement-july-2020.pdf>
 - 9.2.2 The European Centre for Disease Control (ECDC) current guidance on the risk of SARS-CoV-2 transmission via substances of human origin (30th April 2020) (<https://www.ecdc.europa.eu/en/publications-data/coronavirus-disease-2019-covid-19-and-supply-substances-human-origin>), recommends that for deceased donors without symptoms or diagnosis of COVID-19, who have lived in or visited areas of sustained community transmission of the virus, tissues should not be collected unless the donors test negative for the presence of SARS-CoV-2 RNA in the upper or lower respiratory tract in specimens collected within 72 hours prior to retrieval, **or** the tissues collected will be treated with a disinfection, sterilisation or microbial inactivation procedure validated to inactivate enveloped viruses.
 - 9.2.3 In line with these recommendations, tissue-specific risk assessments have been performed and have determined that:
 - 9.2.3.1 In NHSBT, corneas, sclera, processed bone, massive allografts, tendons (irradiated & decontaminated), irradiated skin, decellularised dermis, meniscus and osteochondral grafts are submitted to processing steps known to remove or inactivate enveloped viruses.

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- 9.2.3.2 Cryopreserved heart valves, artery and skin grafts undergo different processing which is not aimed at eliminating viable virus should it be present in these tissues. These donations could be taken from donors pre-tested either for organ donor assessment or for routine screening in health care settings. Depending on clinical demand, consideration will be given to requesting SARS-CoV-2 testing by local/regional centres for cardiovascular donations (from asymptomatic donors) consented by the National Referral Centre. This is currently under discussion.
- 9.3 Recovery and second surge planning.
- 9.3.1 A recovery plan for short shelf-life ocular grafts has been developed by the Ocular Tissue Advisory Group (OTAG). In 2019, 50% of corneas have been issued to 14 hospitals (high volume) and 50% to more than 100 hospitals (low/medium volume). Based on this, in case of a second surge of infection at local, regional or national level, the demand for, and allocation of corneas will be influenced by ongoing clinical activity in affected and unaffected transplant centres, which will be regularly monitored to inform decisions on the number of donations required per week. Actions taken will be informed by advice from the OTAG Chair and the Eye Bank Medical Advisors based in Bristol and Manchester.
- 9.3.2 For long shelf-life grafts, the recovery plan will focus on improving graft availability. TES has been liaising with suppliers of critical consumables to minimise impact on TES activity. Information is also being gathered on NHS requirements to develop processing schedules and targets to ensure continued supply of tissues.
- 9.4 Supply chain.
- 9.4.1 Retrieval and processing of tissue. A COVID-19 risk assessment has been carried out for retrieval and processing of tissue. This assessment is currently reviewed on a monthly basis and will be updated as required in the event of a second surge.
- 9.4.2 Staff availability. Business continuity plans within TES provide details on actions to be taken if staffing levels fell below essential levels.
- 9.4.3 Metrics. A number of supply chain metrics are captured and reviewed on a weekly basis which would be used to inform decisions should a second surge impact on TES operating models.

10.0 Appendix 1: Members of the NHSBT Clinical Team

Professor John Forsythe - Medical Director OTDT, Chair

Olive McGowan - Assistant Director Education & Governance, NHSBT

Lizzie Abbot-Davies – Business Support Officer, NHSBT

Mr John Asher – Consultant Transplant Surgeon, Clinical Lead Medical Informatics

Liz Armstrong – Head of Transplant Development, NHSBT

Dr Richard Baker – Consultant Nephrologist, National Clinical Lead for Governance

Mr Marius Berman – Consultant Cardiothoracic Surgeon, Associate National Clinical Lead Organ Donation

Lisa Burnapp – Clinical Lead Living Donation, NHSBT

Mr Chris Callaghan – Consultant Transplant Surgeon, Clinical Lead Organ Utilisation - Abdominal

Mr John Casey – Consultant Transplant Surgeon, Chair of Pancreas Advisory Group

Dr Akila Chandrasekar – Consultant Haematologist, NHSBT

Mr Ian Currie – Consultant Transplant Surgeon, National Clinical Lead Organ Donation

Dr Jan Dudley – Consultant Paediatric Nephrologist, Chair, Paediatric Subgroup of Kidney Advisory Group

Professor Peter Friend – Professor of Transplantation, Chair of Multi-Visceral Advisory Group

Dr Dale Gardiner – Consultant in Adult Intensive Care Medicine, National Clinical lead for Organ Donation

Professor Derek Manas – Professor of HPB and Transplantation, Newcastle upon Tyne, NHS Foundation Trust, Director of the Institute of Transplantation. Joint Clinical Governance Lead: OTDT

Lisa Mumford – Head of OTDT Studies, NHSBT

Dr Jayan Parameshwar – Consultant Cardiologist, Chair of Cardiothoracic Advisory Group (Heart & Lung)

Dr Ulrike Paulus – Consultant Haematologist, NHSBT

Mr Gabriel Oniscu – Consultant Transplant Surgeon, Chair of Research, Innovation and Novel Technologies Advisory Group.

Karen Quinn – Assistant Director UK Commissioning

Dr Rommel Ramanan- Consultant Nephrologist, Chair of Kidney Advisory Group

John Richardson – Interim Assistant Director - Organ Donation, NHSBT

Dr Doug Thorburn – Consultant Hepatologist, Chair of Liver Advisory Group

Dr Ines Ushiro-Lumb – Clinical Microbiology Lead for Organ and Tissue Donation and Transplantation, NHSBT. Clinical Director, Microbiology Reference Laboratory (Virology)

Julie Whitney – Head of Service Delivery, NHSBT

11.0 Appendix 2: Planning from Shared Learning- Second Surge: Lay/Patient Voice

Lay and patient representation is well-established within the Organ Advisory Groups and makes a valuable contribution to strategy and policy development and decision-making across the work of OTDT-NHSBT.

In the recent COVID-19 era, where the pace of change and decision-making has been necessarily rapid, the NHSBT Medical Team extended into a wider Clinical Team with representation from internal and external multi-disciplinary colleagues. Dedicated lay or patient representation was not within the wider team. The view of patients / parent or carer (and living donors where relevant) was sourced on an 'ad hoc/as needed' basis through direct contact with donor or recipient organisations rather than being embedded in the infrastructure of the team.

In the event of a future outbreak or similar situation, formal lay/patient / parent or carer representation would support clinical decision-making and ensure that the views of patients and the public are better represented. Using the Organ Advisory Group model, the following recommendations are made:

Proposal

Invite two lay representatives from the current Organ Advisory Groups (OAG) and one from the National Organ Donation Committee (NODC) to join the clinical team meeting on a regular basis.

The invitation for volunteers is open to existing lay members from OAGs and NODC, of whom three will be recruited (ideally, one from an abdominal OAG, one from a cardio thoracic OAG, one from NODC, depending upon volunteers). It is envisaged that this would enable at least two lay members to join each meeting, depending upon their availability.

Patient representation

The 'patient' group is diverse with a range of interests. To be effective, representation needs to be responsive, organ-specific and relevant to:

- Patients waiting for a transplant
- Recipients of a transplant
- Parents /carers if applicable - i.e. for children and young people
- Living donors (kidney and liver)
- Deceased donor families

Recognising that it may be challenging for one or two individuals to reflect the interests of each of these groups and across all organs, the following approaches are recommended to achieve a wider range of views and to engage more meaningfully with patients, living donors and family members:

- Current patient advisory groups attached to organ-specific groups, on which the charities and patient organisations are represented
- Direct approach to relevant charities/donor-recipient/donor family organisations

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- Involvement of patient / parent or carer representation in regular 'COVID-19 management' organ-specific Centre Director/mini AG calls with option to attend CT calls for specific discussion as appropriate
 - Market research surveys, disseminated with support of patient groups

To do this, it is recommended that Terms of Reference (see below) are agreed between the clinical team and the patient advisory groups to support the work of the wider clinical team and in the event of another COVID-19 outbreak (or similar crisis) to:

- Inform ideas/brainstorm
- Support rapid decision-making
- Perform general and targeted consultations
- Contribute to guidance and policy documents

Framework for Terms of Reference: NHSBT Clinical Team engagement with Patient Advisory Groups/Representatives

1. Purpose of representation

To support the work of the NHSBT Clinical Team (CT) during times of COVID-19 management by representing the interests of the following groups of people

- a. Patients waiting for a transplant
- b. Recipients of a transplant
- c. Family members/carers if applicable - i.e. for children and young people and adults without capacity
- d. Living donors (kidney and liver)
- e. Deceased donor families

2. Roles and responsibilities

To contribute to the work of the clinical team by

- a. Informing ideas/brainstorming
- b. Supporting rapid decision-making
- c. Performing general and targeted consultations
- d. Contributing to guidance and policy documents

3. Lines of communication

- a. To and from the CT to Patient Advisory Group/s and / or charity representatives via nominated representative/s in CT and patient groups with direct input into CT discussions as required
- b. Direct representation on organ-specific groups or 2-way communication via nominated representatives (as above)

4. Review of ToR

- a. As required and/or in response to specific situation

12.0 Appendix 3: Key Actions Taken During the Pandemic

COVID-19-week No.	Week commencing	Key Action/Decision	Implementation Date
	2 nd March 2020	MPD617 /3 – shared DAT3717 /1 – shared COVID 19 Guidance Document issued & cascaded to the SNOD workforce Risk Assessment – "Protecting Colleagues from Infection" cascaded to the SNOD workforce Central absence/sickness reporting established – Regional Manager SharePoint page established	
	9 th March 2020	Request to workforce to source FIT in embedded trusts/hospitals & to record FIT Test information on SharePoint page Decision to record SNOD absences daily implemented Updated COVID 19 Guidance Document cascaded to the SNOD workforce & updated risk assessment PHE guidance document communicated to managers only to aid decision making	
1	16 th March 2020	COVID-19 deceased donor testing required to maintain safety of transplant recipients. Supplementary information for SNODs to collate to aid transplant decision making introduced (FRM6439). Decision that guidance on COVID-19 Information for transplant patients required. Decision that COVID-19 Transplant Registry required – established. Living Donation - April Living Donor Sharing Scheme MR suspended 4 pancreas centres suspend transplant activity. Decision taken to instigate daily regional management COVID 19 calls to provide support / information to the operational teams. Various communications to the SNOD workforce including: <ul style="list-style-type: none"> Letter from OTDT Director regarding organisation stance and priorities Letter regarding implementation of COVID screening advice for potential donors and accompanying flowchart COVID 19 potential donor testing - DAT3737 and FRM6445/5025 cascaded to the SNOD workforce	
2	20 th March 2020	COVID-19 deceased donor testing commenced with algorithms for testing, information on testing practicalities and result interpretation available. PITHIA Trial - Decision taken to suspend the PITHIA trail until further notice. Living Donation - Many centres limiting and/or suspending living donation activity. NORS - Letters sent to all NORS teams in relation to PPE. Review allocation policies - Pancreas fast-track scheme suspended. All utilisation challenge measures such as letters regarding declines suspended until further notice.	19 th March 2020

		Tissue Donation- Live-donor bone programme paused. Serum eye drop programme – collection increased. Tissue and Eye Services record a drop-in request for cornea.	
3	23 rd March 2020	Donor referral and transplant activity- Decision to reduce referral and transplant by 50% therefore SNOD teams asked to: <ul style="list-style-type: none"> • Decline all DBD donors of 60 years and over and • All DCD donors of 50 years and over Redeployment plan update - shared with Regional Management Team. Letter regarding changes to organ offering and allocation cascaded to the SNOD workforce.	23 rd March @ 16:00pm
4	26 th March 2020	Clarity and guidance provided to transplant centres across the UK on decision-making in respect of centre closures. Clarity given that such decisions rest with the commissioners and individual Trusts/ hospitals, supported by NHSBT. By 26 th March 2020: 10 adult kidney transplant centres closed, 7 paediatric kidney transplant centres closed. All pancreas transplant centres closed. NORS - Decision taken to support the use of 2 vehicles per organ retrieval team. To ensure safety of teams and check NORS team resilience, a daily survey of all teams instigated. Guidance on the Management of Transplant Patients with COVID-19 issued. QUOD - Decision taken to pause QUOD - sample collection and for DBD & DCD donors. Guidance issued for clinicians to aid consent process prior to Transplantation. By 26 th March 2020, it appeared that the national approach began to change with more transplant centres considering and pausing transplant activity. <ul style="list-style-type: none"> • Lung – 1 centre closed to transplant • Heart – all centres remain open to super-urgent and urgent cases only. • Liver – 5 of 7 adult liver units open to super urgent & urgent patients with the remaining 2 centres open for super-urgent cases. • Kidney – 12 centres closed to transplantation. • Pancreas – all centres closed. 	
	30 th March 2020	PDV767 distributed to SNOD workforce. Letter cascaded to SNOD workforce regarding donor exclusion criteria. PPE & COVID 19 Guidance Document Version 1 issued & cascaded to the SNOD workforce. Redeployment of nursing colleagues commences in London Hospitals. Decision taken to provide accredited FIT test training "in house" and provide SNODS with a supply of FFP3 masks. Email issued providing interim advice on PPE for SNODS/SRs when working clinically to support donation.	
5	2 nd April 2020	NORS - Communication with the NORS teams to outline the following decisions taken: <ul style="list-style-type: none"> • Use of flights restricted. • Two vehicles may be used for transportation of NORS Teams. 	

		<ul style="list-style-type: none"> Contractual rules lifted e.g. OTDT will not follow-up teams that are unable to mobilise at short notice. Teams invited to consider alternative rotas to maintain Health & Safety, and resilience. <p>PPE - Up to date guidance sent to all stakeholders. Organ Allocation and Offering - Liver – changes made to the liver allocation scheme to allow a greater degree of flexibility to transplant urgent patients (after super-urgent hepatoblastoma liver listed patients). Renal – changes implemented to allow local offering after TIER A patients. Cardiac – no changes to the scheme itself but changes on how CT organ offers made changed. Deceased donor transplantation - Kidney Transplant – only 7 centres open to transplant activity. Islet Cells - Programmes largely suspended except the listed priority patients.</p>	
	7 th April 2020	<p>RPE FIT Testing SharePoint Page established. Head of Operations (SRI) - undertook FIT Tester Training. LC appointed as FIT tester co-ordinator (arrange training sessions, maintain records, provide weekly written updates). Lead Nurse Service Delivery – undertook FIT Tester Training. In total 12 colleagues trained as FIT testers.</p>	
6	8 th April 2020	<p>Decision made to relax the donor exclusion criteria with immediate effect:</p> <ul style="list-style-type: none"> All potential DBD donors will be considered 0-75 years of age. No change to DCD donors with upper age for potential donors restricted to 50 years. <p>Living Donation - July 2020 Matching Run of the UK Living Kidney Sharing Scheme (UKLKS) suspended. By early April, 4 kidney centres open to adult kidney transplantation and 2 paediatric centres open.</p>	
	9 th April 2020	Letter containing redeployment advice for SNODs issued by HR to the workforce	
	13 th April 2020	FIT Testing for SNODs commenced at BVD	
7	16 th April 2020	<p>PPE & COVID 19 Guidance Document Version 2 cascaded to SNOD workforce. Updated risk assessment - protecting colleagues from infection when supporting clinical areas during a pandemic. Briefing call held with management team to explain updated PPE guidance document for SNOD workforce. Decision that next steps must be consideration of the recovery process. Collaboration of the British Transplant Society and NHSBT COVID-19 Webinar scheduled 23rd April 2020.</p>	
	20 th April 2020	<p>FRM6439 distributed. FIT Testing – Leeds. PPE & COVID 19 Guidance Document Version 3 cascaded to the SNOD workforce & accompanying RA updated. FIT Testing</p>	
8	23 rd April 2020	<p>Collaboration of the British Transplant Society and NHSBT COVID-19 Webinar scheduled 30th April 2020. Registry Data on COVID-19 in Transplantation.</p>	

		Commenced weekly distribution of report to all clinical teams UK wide.	
	27 th April 2020	FIT Testing – BVD Managers advised for colleagues not to book shifts in the NHS past 31st May.	
9	28 th April 2020	Guidance written by the Clinical team issued to transplant centres UK wide: <ul style="list-style-type: none"> • Re-Opening of Transplant Programmes. • Kidney Advisory Group (KAG) Guidance for re-opening and/or expansion of Kidney Transplant programmes and COVID-19. Deceased Donor Transplantation - Some centres beginning to re-open to kidney transplantation.	
	1 st May 2020	Letter to all SNOD trainees cascaded providing information on probationary period extensions.	
	4 th May 2020	FIT Testing BVD.	
10	7 th May 2020	Agreement to order disposable and washable face masks for SNOD workforce - Distributed on 14/05 and 15/06 respectively. Call to discuss Planning for TM calls re COVID 19 Checklist Deceased Donor Transplantation: To support transplant centres re-opening communication to Medical Directors in all transplant units UK wide distributed from OTDT. COVID-19 testing of patients prior to transplant COVID-19 testing of patients prior to transplant <ul style="list-style-type: none"> • Decision made to advise transplant centres to engage with microbiology colleagues locally to discuss expected time frames for results. • Letters sent to all Clinical Leads. Living Donation - As kidney centres being to re-open, guidance from the Kidney Advisory Group issued. Decision made to contact the Human Tissue Authority (HTA) to discuss licencing, remote Independent Assessments, and consent.	
	11 th May 2020	FIT Testing reports commenced. Regional Recovery call - S East/Eastern. Regional Recovery call – London. Regional Recovery call – Yorkshire/N Ireland. Regional Recovery call – N West/S Wales/S West.	
	13 th May 2020	Head of Operations delivered Cluster based update training to all Team Managers on COVID19 testing from 13-28/05/20.	
11	14 th May 2020	Guidance updated: The KAG specific guidance for re-opening of transplant centres updated and re-issued. Living Donation - the HTA published licencing guidance for transplant centres distributed. Facilitating Organ Donation - the DCD donor age criteria further relaxed, back to 60 years of age. PPE - as Public Health England revised PPE guidance, revised letter sent to NORS retrieval teams.	
	18 th May 2020	Regional Recovery call – Midlands/Northern/Scotland.	
12	21 st May 2020	Guidance issued Decision made to update guidance previously issued: <ul style="list-style-type: none"> • Updated guidance on re-opening of transplant centres (POL296) and 	

		<ul style="list-style-type: none"> • KAG guidance for re-opening or expansion of kidney transplant programmes re-issued. <p>CAS alert - in response to the recent CAS alert regarding a change to the general case definition for COVID-19, FRM6439 updated.</p> <p>PPE & COVID 19 Guidance Document Version 4 cascaded to the SNOD workforce & updated accompanying RA.</p>	
13	28 th May 2020	<p>Deceased Donor Transplantation</p> <p>By the end of May 2020, transplant centres beginning to re-open</p> <ul style="list-style-type: none"> • Kidney transplantation – 10 out of 23 open. <p>Living Donation</p> <ul style="list-style-type: none"> • 2 centres planning to re-start living donor transplant. <p>Corneal transplantation</p> <ul style="list-style-type: none"> • All orders until 31 July cancelled. 	
	1 st June 2020	<p>NHSBT staff return from redeployment.</p> <p>Return to practice guidance documents issued to support H, S & Wellbeing of those returning from frontline or isolation.</p>	
14	9 th June 2020	<p>Living Donation:</p> <p>Three urgent living donor liver transplants were performed during the COVID-19 pandemic. Three centres have now restarted living donor kidney transplants (LDKT Living Donation)</p> <ul style="list-style-type: none"> • 2 centres planning to re-start living donor transplant. <p>Updated Guidance for Clinicians on Consent.</p> <p>The joint NHSBT / BTS guidance for clinicians on consent for solid organ transplantation in adults, children and young people and living organ donation in the context of COVID-19, updated.</p> <p>COVID-19 Testing of Recipients</p> <p>A letter in relation to Testing of Recipients for Deceased Organ Donation Letter sent to all centres.</p> <p>Delays in the Organ Donation, Organ Retrieval and Transplant Pathway.</p> <p>Delays during the pathway from donor to transplantation reported during the pandemic. Decisions re delays that are permitted and not permitted sent to all stakeholders.</p> <p>PPE & COVID 19 Guidance Document Version 5 cascaded to the SNOD workforce & updated accompanying RA.</p>	
15	18 th June 2020	<p>Guidance Documents Updated.</p> <p>Updated guidance on re-opening of transplant centres (POL296) issued.</p> <p>More transplant centres opening including pancreas transplant centres, 2 pancreas transplants performed.</p> <p>PPE & COVID 19 Guidance Document Version 6 cascaded to the SNOD workforce & updated accompanying RA.</p>	
	22 nd June 2020	<p>PDV767/5 - shared with RM Team.</p> <p>Return to Practice Guidance Documents for Managers cascaded again including PP presentation.</p>	

13.0 Appendix 4: SBAR Example



Situation:

A 'second wave' of the COVID-19 pandemic has been reported in the region/hospital/community/dialysis population with increasing admissions to ITU or positive infections in the hospital

(This may be different for each centre but there are themes that we can predict will threaten activity in each centre):

- ITU capacity may be reduced
- Diverting elective activity that affect transplant activity
- COVID free pathway difficult to secure
- Staff re-deployment away from transplant activity
- Staff sickness in essential areas to allow transplantation to proceed safely

Background:

The first wave of the COVID-19 pandemic had a major impact on the Trust in terms of staffing, ITU capacity and the resources available to deliver elective activity. This resulted in curtailing of transplant activity in our Trust. Data collected during the first wave does not support total closure of transplantation. With evidence of a 'second wave' of infections (or after-effects of the first wave continuing) we believe the evidence suggests that the Trust must support continuation of transplantation services in some form. If the situation is such that this cannot be delivered, an alternative needs to be actioned.

Assessment:

A new 'spike' of infections has resulted in the need to re-deploy resources away from transplant facilities. This is a balance of risk for patients of continuing transplantation versus stopping the program.

- Short-term closure: this can be managed with intermittent closure to allow services to cope
- Long-term closure: this is predicted to be longer than 10 days and Plan B will be activated

Recommendation:

- Short-term closure: Continue transplantation every second day or close for 3 days etc.
- Long-term closure:
 - We will offer patients the option of going to centre X to be transplanted
 - We will move activity to site Y in the city
 - We will continue to assess potential transplant patient's remotely/transfer patients to centre X for assessment and transplantation.

14.0 Appendix 5: Early Warning of a Surge In COVID-19 Cases

As the cases of COVID-19 begins to decline in the UK, we need to turn our attention to planning for a potential second wave of COVID-19. While this does not mean a second wave is inevitable, it is important for planning purposes and as a precautionary approach.

Available data

Data is available on the government websites: <https://coronavirus.data.gov.uk/> for England and <https://www.gov.scot/publications/coronavirus-covid-19-daily-data-for-scotland/> for Scotland. A breakdown of data by region for Wales and Northern Ireland is currently unavailable.

COVID-19 cases are identified by taking specimens from people and sending these specimens to laboratories around the UK to be tested. If the test is positive, this is referred to as a lab-confirmed case.

There are separate reporting processes for each of the 4 Nations of the UK. All 4 Nations provide data based on tests carried out in NHS (and PHE) laboratories. These represent 'pillar 1' of the Government's mass testing programme. In addition, testing by commercial partners ('pillar 2' of the mass-testing programme) are now added by the individual Nations before being sent to the Department for Health and Social Care (DHSC). These are submitted to Public Health England (PHE) to display on the dashboard. Links to the Welsh data, early warning indicators are provided below.

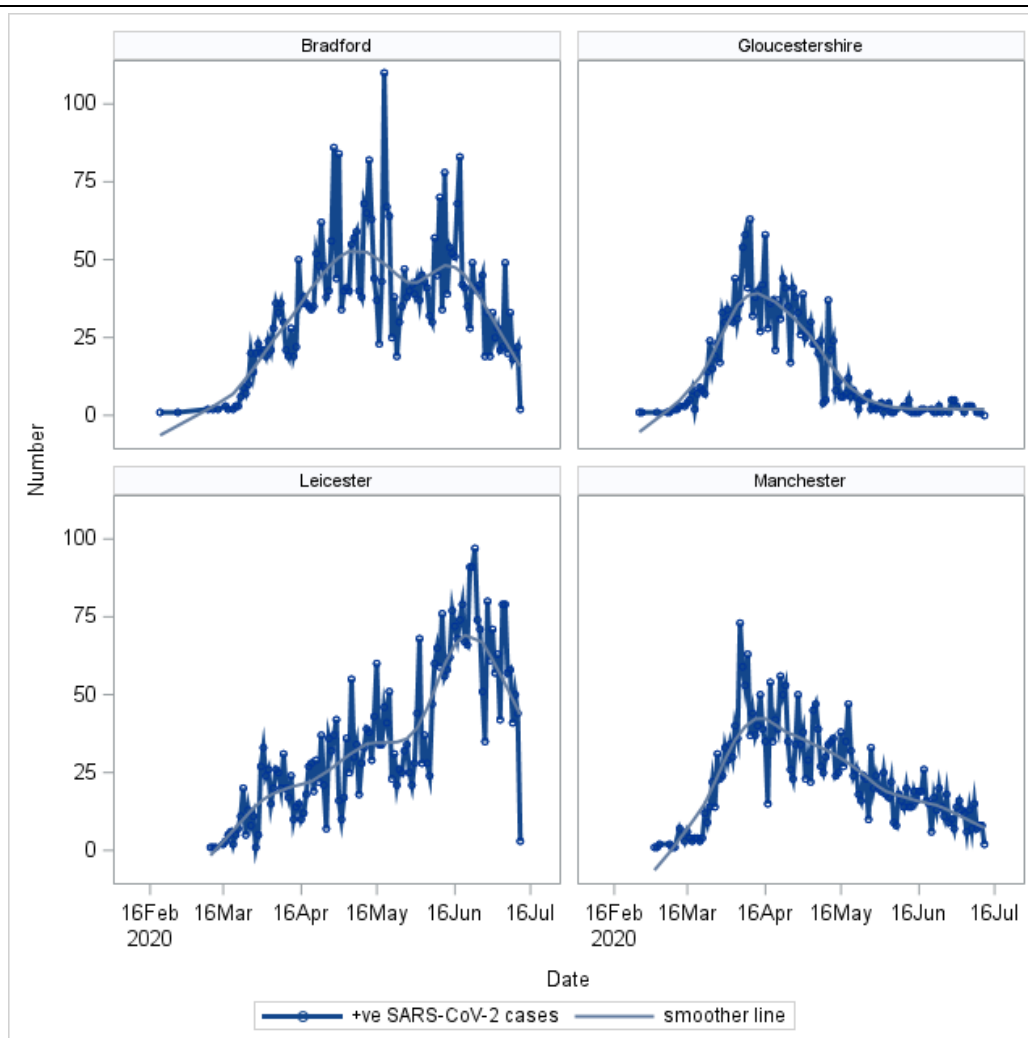
England and Scotland counts are as at 9am on the day of publication; Wales counts are as at 7am on the day of publication; Northern Ireland counts are from different times on the morning of publication.

Data for England is broken down into Regions and Upper Tier Local Authorities.

Further data is available on patients admitted to hospital, patients in hospital and patients on mechanical ventilation beds however this is only broken down by region and not in more granularity.

Process applied to data

Data will be extracted from the government website, automatically, on a daily basis. This data can be directly read into the statistical software SAS and charts are created to monitor the daily lab-confirmed cases. An example of the charts is shown in the figure below.



A statistical process control chart will be used to identify any increase in lab-confirmed cases and an automatic email will be sent to a statistician in the Statistical and Clinical Studies department highlighting the affected areas. This will prompt a further review of the data for the identified upper tier local authority/Region/Nation.

Process following a notification of increase in lab-confirmed cases

Following a 'trigger' of increased COVID-19 activity in an upper tier local authority/Region/Nation, a notification will be sent to the NHSBT clinical team to discuss. A warning may then be sent to the local transplant teams to indicate that there has been a spike in lab-confirmed COVID-19 cases in their local area with a link to the website where they can access the data to monitor cases.

Further information

Once data is available on patients admitted to hospital, patients in hospital and patients on mechanical ventilation beds, by upper tier local authority this will be incorporated into the early warning process. This will more accurately reflect the need for hospital resources and will give further understanding of a true impact of COVID-19 on transplant services.

Close contact with SAGE (Scientific Advisory Group for Emergencies) will be maintained and any information which will help to identify a second wave will be shared.

[Link to circuit breakers and early warning indicators from Wales](#)

<https://gov.wales/coronavirus-covid-19-related-statistics-and-research>

<https://gov.wales/nhs-activity-and-capacity-during-coronavirus-covid-19-pandemic>

<https://gov.wales/advice-coronavirus-technical-advisory-cell>

<https://gov.wales/covid-19-circuit-breakers-and-early-warning-indicators>

<https://gov.wales/technical-advisory-cell-summary-advice-24-july-2020>