OTDT Manual 4: Offering and Retrieval

Restrictions

This Manual is to be utilised by qualified and trained Specialist Nurse (SN). If the SN is in training, this Manual is to be utilised under supervision. In the circumstance of requiring additional support or guidance please escalate to an appropriate colleague, such as a Lead Nurse (LN) or Organ Donation Leadership Team (ODLT).

INDEX (HYPERLINKED)

SUMMARY OF CHANGES

New additions (In Purple)

OTDT Manuals Project:

The following documents are now obsolete and have been incorporated either in full or in part within this manual:

- **MPD1682** – Offering Deceased Donor Organs to Republic of Ireland / Europe
- **MPD891** – Establishing Pregnancy Status and Pregnancy in Donation
- **SOP5048** – Forearm Sentinel Skin Flap Donation to Detect Rejection (Multivisceral transplantation)

References to other documents and processes have been updated to reflect the locations of the processes amongst the wider OTDT Manual suite.

Removals Summary

- Reference to FRM1602 removed as obsolete in 2026.

INTRODUCTION

PURPOSE

The organ retrieval/removal process requires a co-ordinated approach to ensure the safe and timely retrieval of organs for transplantation and research. The Specialist Nurse (SN) is responsible for organising and co-ordinating the donation pathway, ensuring full completion of DonorPath, maintaining clear communication, and safeguarding the dignity and respectful care of the patient.

This document supports the SN in planning and facilitating the pre and peri-operative processes for Donation following Circulatory Death (DCD) and Donation following Neurological Death (DBD), including supporting the patient's family. It outlines the joint responsibilities of the SN and Organ Preservation Practitioner (OPP), including the SN's role in theatre to ensure a co-ordinated, timely process that minimises disruption to the donor hospital while upholding donor respect and recipient safety. It also provides guidance on the correct collection, labelling and transport of organs and samples for transplantation and other authorised purposes, ensuring full traceability in line with HTA regulatory requirements.

ADVICE

A Donor Record must be completed for all consented/authorised organ donors as confirmation of actions below through the utilisation of DonorPath. All clinically significant information must be communicated on the CDDF Wifi symbol area of DonorPath and focus on contemporaneous documentation to ensure interface with TransplantPath. In the event of unavailability follow the manual process as described in SOP6651 OTDT Manual 11 which may include completion of FRM4212.

INCIDENT REPORTING:
An incident may occur within the chain of organ donation and transplantation for which there is a legal requirement to report under the Regulations. Additionally, an incident may occur for which we may benefit from organisational or national learning.
Incidents should be reported to the OTDT Patient Safety team via the Incident Submission Form

ABBREVIATIONS & GLOSSARY:
More details of abbreviations and glossary items can be found in **INF1277** and **INF1693**.

1. UK AND EUROPEAN OFFERING

Section Contents - Hyperlinked

1.1. UK ORGAN OFFERING

1.1.1. Hub Operations will ensure that all potential donor organs are offered to transplant centres, subject to **POL188**. The Hub will also offer organs which have been consented/authorised for removal for other/scheduled purposes which are contraindicated for transplant (**POL188**), and those that were offered and declined by all centres for transplantation. Whole heart removal for valves and tissues will take priority over heart removal for research/scheduled purposes (**SOP6658 OTDT Manual 10)**.

1.1.2. If a potential DCD donor is subsequently diagnosed dead by neurological criteria during preparations for retrieval/removal and consent/authorisation for DBD donation is in place, organ retrieval/removal may be delayed whilst the organs are re-offered by Hub Operations. This will only occur if the SN has gained agreement for subsequent delays from the patient's family. If recipients have already been identified and notified for transplant through the DCD process, these recipient centres may still allocate those organs for these recipients, as per **MPD1043.**

1.1.3. Hub Operations will not commence offering of cardio-thoracic organs until the HLA has been received.

1.1.4. If organs fulfil fast track criteria and fast track offering is commenced, organs must not be deemed un-transplantable until the end of the fast-track period. Hub Operations should confirm with the SN at the end of the fast-track period whether an organ has been accepted. This also applies when organs are accepted and then subsequently declined and fast tracked during the theatre process.

1.1.5. If transplantable organs cannot be placed in the UK, the SN must contact Hub Operations to discuss the possibility of placing the organs in Europe/ROI. Any potential delays required in the process should be considered and balanced against family and hospital needs. The SN must document these discussions in the donor record. If organs cannot be placed for transplant in the UK +/- Europe/ROI, then Hub Operations will commence offering of organs for other/scheduled purposes if there is appropriate consent/authorisation.

1.2. EUROPEAN / REPUBLIC OF IRELAND (ROI) ORGAN OFFERING

1.2.1. European centres will receive the Transplant Record (CDDF and MaSH) when an offer is made, as per **SOP5934**. They do not have access to TransplantPath, and are unable to view any documents, images or videos attached to DonorPath.

1.2.2. SNs must identify any key information in attachments and email the relevant documents/images to ODT Hub Operations, who will then upload to the relevant platform for European centres to view. It

may not be possible to share all images/attachments that have been added to DonorPath and original copies may need to be scanned and emailed. The SN will need to inform HUB Operations if there is information that is unable to be shared.

1.2.3. As a minimum SNs should endeavour to share a chest X-ray image, ECG and ECHO report, and any pertinent scan reports/information where the full detail has not been captured on the CDDF.

1.3. EUROPEAN / ROI ORGAN OFFERING DECISION FLOWCHART

Responsibilities/ Key Actions
Hub Operations
SN - Organ Donation

When Organ specific offering in the UK has been completed including fast tracks, Hub Operations will inform the SN that the offering has been completed.

The SN should ask Hub Operations if the reasons for organ declines are based on logistics or no suitable recipients?

NO → If the reason for decline is function or PMH from multiple offers, DO NOT offer to Europe/ROI.
Go to group 2 or INOAR.

YES

IT IS IMPORTANT TO CONSIDER EUROPEAN / ROI OFFERING

Factors that the SN needs to consider before European/ROI offering are as follows:

- Donor hospital has capacity on ITU and in theatre to support retrieval timings.
- Anticipate an additional 4-6 hours of time from this point if there is organ acceptance in Europe.
- The donor is anticipated to remain stable up until retrieval time.
- NOK have not placed any requests on retrieval timing that would impact European/ROI offering/retrieval.
- UK accepting centres have no clinical need to expedite retrieval (e.g. urgent recipient who is deteriorating rapidly)
- Consideration should be given to NORs capacity. HUB can advise if they foresee retrieval service in UK being challenging. If this is of concern escalate to the ODLT on-call to discuss.

If all considerations have been met, the SN may request Hub Operations to begin European/ROI offering.
The SN must email the key DonorPath attachments to HUB Operations.
The SN should expect an outcome within 2 hours.
European centres often request attendance. UK NORS teams will be required to attend and lead the retrieval.

ADVICE
If European / ROI offering completes and there is no acceptance, proceed to offering for INOAR (SOP6658 OTDT Manual 10) OR stand down on that organ.

End of Section Procedure

2. ORGANISING THEATRE RETRIEVAL

Section Contents - Hyperlinked

2.1. COORDINATING WITH THEATRES AND ORGANISING THEATRE RETRIEVAL

2.1.1. Post consent/authorisation, inform Theatre Coordinator of planned retrieval and exchange contact details.

2.1.2. Estimated retrieval times to be discussed with local theatre and critical care staff.

2.1.3. The SN must inform the local theatre team of the equipment required during the retrieval process as per **INF1424**.

ADVICE

In the circumstance of an implantable device (pacemaker, defibrillator, temporary pacing wire) being identified on physical assessment or medical notes review, it is essential to consider management during end-of-life care and any actions required. Management of these devices must be led by the treating clinical team, involving cardiology as required.

2.2. ACTIVATING AND MOBILISING THE NATIONAL ORGAN RETRIEVAL TEAMS (NORS)

2.2.1. Once an abdominal and/or cardiothoracic organ is accepted, Hub Operations will notify the SN. The NORS team will not be mobilised purely for removal of organs for other/scheduled purposes.

2.2.2. Agree theatre time based on organs to be retrieved, theatre space and local staff availability, and any specific study requirements (if applicable) with the local theatre and critical care staff.

2.2.3. The SN must confirm the planned theatre time to Hub Operations, who will mobilise the NORS team in line with **SOP4574**. A NORS team cannot be mobilised more than 5 hours before the planned theatre time. In exceptional cases, the SN may seek ODLT on-call advice to work outside the 5-hour rule.

2.2.4. For organs accepted by European or ROI centres, Hub Operations will arrange surgeon transport from the airport to the donating hospital (**SOP4574**) if this is required. Any transport requests received directly by the SN must be redirected to Hub Operations and the agreed NHSBT transport provider.

2.2.5. If coronial/procurator fiscal restrictions may affect the retrieval, the SN must ask Hub Operations to request the NORS team contact them to discuss the details.

2.2.6. The SN must relay any specific recipient-centre requests to Hub Operations during NORS activation, enabling the NORS team to arrive with appropriate resources as guided by **MPD1043**.

2.2.7. Advise the theatre coordinator as soon as possible if an expedited process may be required for a potential Super Urgent recipient, providing rationale and expected timings.

2.2.8. For DBD full abdominal and cardiothoracic retrievals, Hub Operations will schedule the cardiothoracic team to arrive one hour before the abdominal team.

2.2.9. For DCD full abdominal and cardiothoracic retrievals, both NORS teams will arrive at the same time. For DCD heart retrievals, refer to **SOP4746** for the full DCD heart guidance and specific arrival timings.

2.2.10. Inform the theatre coordinator and HUB Operations as soon as possible if there are any developments or changes that may impact the planned theatre retrieval. Hub Operations will notify the NORS team and, if applicable, the accepting researcher. The SN should ensure all accepting centres are updated with this information. Hub Operations will also update the SN should there be delays affecting the NORS planned attendance time.

2.2.11. The NORS team will communicate with the SN to confirm the organs/tissues to be retrieved. The SN must also relay any organs accepted for research or other/scheduled purposes in line with **SOP6658 OTDT Manual 10**.

2.2.12. If an approved research team will be attending theatre, the SN must inform the NORS team. Any queries/clarification should be discussed directly between the NORS and research teams at handover. Refer to **SOP6658 OTDT Manual 10** for guidance.

2.2.13. Document all communication with the NORS team and any other parties regarding organ transport, transport boxes, and equipment in the Sequence of Events (SoE) section of DonorPath.

2.2.14. Record NORS mobilisation and arrival times in DonorPath.

INFORMATION

In a QUOD Hospital (England, Wales and Northern Ireland), where there is appropriate consent/authorisation for removal of organs for other/scheduled purposes, Hub Operations will update the NORS team that the necessary kit must be brought. This applies to any Hospital in Scotland where a licence is not required to remove relevant material.

2.3. DCD CONSIDERATIONS

2.3.1 Confirm the withdrawal of life sustaining treatment (WLST) location with the theatre coordinator and critical care staff, following local DCD policy.

2.3.2 Assess the WLST area to ensure it supports end-of-life care and provides appropriate family privacy.

2.3.3 Ensure all relevant hospital staff understand the WLST process, their roles, and the need to respect family wishes regarding death, declaration timing and communication, and transfer to theatre.

2.3.4 Advise staff that the patient may not reach asystole within the required timeframe and ensure plans for repatriation to critical care or a ward are agreed before WLST.

2.3.5 For donors with death confirmed using Neurological Criteria progressing on a DCD pathway, respect if family request to be present at end of life when cardiac activity ceases. In such circumstances it is unacceptable for the heart to restart, even if the confirmation of death remains valid. Five minutes is the safe standard for the prevention of autoresuscitation, as supported by the NEJM 2021 paper, and this should be the standard in the UK in all DCD pathways

ADVICE
For donors with death confirmed using Neurological Criteria progressing on a DCD pathway, heparin may be given prior to WLST if requested by NORS team/accepting centres.

2.3.6 In the case of DCD lung donation, the use of **INF1425** can be utilised for discussion with anaesthetists.

ADVICE
DCD Lung Removal for Research Note: If there is a competent member of the local hospital or cardiothoracic retrieval team to intubate post diagnosis of death as per INF1425, DCD lungs may be removed ventilated and perfused for research.
If intubation cannot be performed, DCD Lungs will be removed uninflated and un-perfused by the cardiothoracic team. These lungs can be successfully used for research and researchers will be willing to accept them. Removal of lungs for research will only happen if the lungs have been accepted by an approved research study.

2.4. COMMUNICATION WITH RECIPIENT CENTRES

2.4.1. As part of organising the retrieval, clarification and agreement must be sought regarding the following with recipient co-ordinators (RCPoCs), and must be clearly documented on DonorPath:

- Mode of communication, including telephone number (email address if required) and document this on **FRM5544**.
- Times of communication which are required for the retrieval.
- When using DonorPath / TransplantPath, ensure key touchpoints are agreed as TransplantPath will not alert RCPoCs.
- Who will be responsible for the communication?
- Please refer to **MPD1382** for communication points with Hub Operations.

CAUTION
Where the pancreas or split liver requires additional vessels, the SN must facilitate discussion between the Lead Abdominal Retrieval Surgeon and the Transplanting Surgeon(s) to determine vessel allocation. Additional vessels, carotid arteries or superior mesenteric artery, should only be requested in exceptional circumstances, such as re-transplantation or creation of an arterial conduit, and must be agreed through the implanting liver consultant to pancreas consultant discussion.

2.5. THEATRE PREPARATION AND PRINCIPLES FOR COMPLETION OF THE ORGAN RETRIEVAL SAFETY CHECKLIST

2.5.1. The SN must speak with local theatre staff to confirm their experience with organ retrieval/removal and outline their required roles.

2.5.2. If normothermic regional perfusion is to be used, consider in planning with guidance within Abdominal Normothermic Regional Perfusion (ANRP) section.

2.5.3. Where lungs are to be retrieved, the SN must ascertain the location of the blood gas analyser and confirm that this can be accessed by local staff during the retrieval.

2.5.4. The SN must ensure that arrangements have been made for the safe transfer of the donor to the allocated theatre.

2.5.5. The SN must ensure a witnessed hard-copy blood group is available for each organ for transplant and that sufficient pre-theatre blood samples are taken. If organs retrieved for transplant are later declined and accepted for research, they are packed the same way, with lymph, spleen and blood samples (or 40 ml EDTA for DCD/DBD hearts over 16 yrs) and the HTA-A form. For organs removed solely for other/scheduled purposes or specific research, lymph, spleen and blood are not sent, and the HTA-A Research form must accompany the organ.

2.5.6. **FRM7307** Organ Retrieval Safety Checklist, based on the WHO Surgical Safety Checklist, is a patient-safety tool, not a SN-to-NORS handover form. It provides essential safety checks at critical perioperative points and supports effective communication between NORS teams, the hospital team and the SN.

2.5.7. Team briefing is an opportunity for highly effective face-to-face communication which can enhance team performance; however, it must be focused and supportive. Briefing facilitates delivery of clear messages and reduces misunderstandings. The completion of **FRM7307** Organ Retrieval Safety Checklist also serves as a ‘surgical pause’ or ‘time out’, giving team members a designated opportunity to raise any patient-safety or procedural concerns.

2.5.8. Do not complete the DonorPath retrieval checklist. Use **FRM7307** on paper, with all sections completed and the lead surgeon printing and signing their name to confirm responsibility and accountability.

2.5.9. The SN and Lead Surgeon(s) must complete Section 1A of **FRM7307** before the patient is moved to the Anaesthetic room (DCD)/Theatre (DBD).

2.5.10. Before the patient is moved to the Anaesthetic room (DCD)/Theatre (DBD) the NORS Lead(s) must complete section 1B of **FRM7307** in conjunction with the SN, surgical team, anaesthetist (DBD), Organ Preservation Practitioners and local theatre team.

2.5.11. Sometimes it is necessary for DBD patients to be transferred to theatre when the NORS teams are within 30 minutes of the hospital. In this circumstance care must still be taken when completing section 1A and 1B remaining aware of the importance of the surgical pause.

2.5.12. Prior to surgical start for DBD donors the NORS lead surgeon(s) must complete part 2 of **FRM7307**.

2.5.13. In the case of DCD donors Part 3A of **FRM7307** must be completed before withdrawal of life sustaining treatment. Part 3B must be completed prior to surgical start. N.B. section 3B is permitted to be completed by the NORS perfusion practitioner on behalf of the lead surgeon.

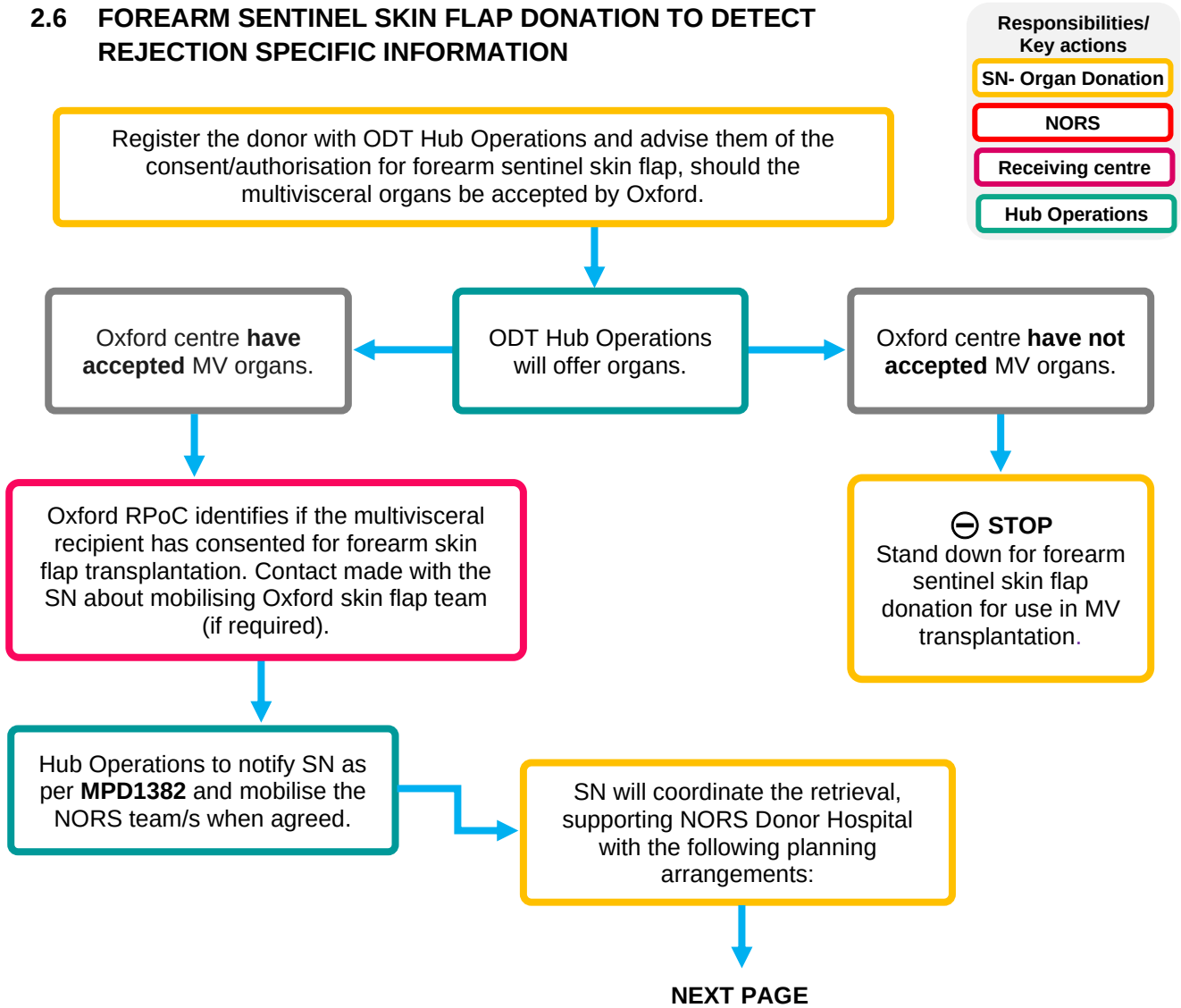
2.5.14. If a research team is attending, they should be present for the Organ Retrieval Safety Checklist to discuss the intended process. Organs to be retrieved for transplantation take priority over research. There must be no delays to the donation process for research. Refer to the supporting study for guidance in **SOP6658 OTDT Manual 10**.

2.5.15. Once completed, **FRM7307** should be uploaded to DonorPath as a document image.

2.5.16. The SN must aim to minimise manual handling risks when assisting the local donating hospital staff transferring the patient from the critical care unit to the operating table. The NHSBT manual handling guidance can be accessed at http://nhsbtweb/userfiles/odt%20gen%20007%2014008.pdf

2.5.17. When visiting local hospitals, the team will be guided by the trust policies and staff to ensure adherence to local policy.

2.6 FOREARM SENTINEL SKIN FLAP DONATION TO DETECT REJECTION SPECIFIC INFORMATION



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NORS PLANNING

- If Oxford abdominal NORS team is being mobilised, they may choose to remove the forearm skin flap as part of their retrieval process. The Oxford NORS team should discuss this plan at handover with any other teams that are also attending.
- Should Oxford abdominal NORS team not be attending, the SN will advise the appropriate retrieving NORS team/s of the Oxford skin flap team attendance and the plan to remove the forearm skin flap during DBD abdominal organ donation
- Should the NORS teams have any queries regarding the forearm skin flap retrieval they may discuss this directly with the Oxford skin flap team.

THEATRE PLANNING

- The donor needs to be positioned in theatre with their arm on an extension board to facilitate forearm skin flap donation.
- The forearm skin flap retrieval will be performed by Oxford NORS team or Oxford skin flap team and will take 30-45 minutes.
- The forearm skin flap closure will demonstrate a high standard of cosmetic closure and be dressed appropriately.
- Oxford NORS team are responsible for packing and packaging the skin flap when removed as additional tissue to support multivisceral donation.
- A copy of the corresponding HTA form will accompany the skin flap.
- The Oxford NORS team or skin flap team will document the retrieval in the hospital notes and complete a witness nine statement if required by the Coroner/Procurator Fiscal.
- The Recipient centre complete a HTA-B form if not transplanting the forearm skin flap.

RECEIVING CENTRE PLANNING

- The forearm skin flap will be transferred to Oxford, either with the Oxford NORS team, or if only the Oxford skin flap team have attended the forearm skin flap would travel with the other accepted organs to the Oxford Transplant Centre.
- Should the forearm skin flap be transferred to Oxford Recipient Centre and subsequently be deemed un-transplantable. The Recipient Centre will inform Hub Operations who will offer the skin flap for research if an approved study is available, or for disposal.

Hub Operations – for SN awareness

- If there is family consent/authorisation for tissues/organs to be used for scheduled /other purposes if removed and subsequently found to be untransplantable, the forearm skin flap will be offered out to approved research studies on the NHSBT research registry.
- Hub Operations will advise the accepting researcher of any family research consent/authorisation restrictions.
- If the family decline for untransplantable tissue/organs to be offered for scheduled/other purposes, the forearm sentinel skin flap will be disposed of at the recipient centre.

- SN to complete the SN to DFCS handover form including forearm skin flap donation in the tissues/organs donated – ‘other’ section (**FRM5499**).
- If a multivisceral organ and forearm skin flap were donated, ensure the family are advised of this donation in the family letter, if they wish for this information (**SOP5049 OTDT Manual 8**).

End of Section Procedure

3. PRE-THEATRE GUIDANCE

Section Contents - Hyperlinked

N.B. to be read in addition to Organising Theatre Retrieval chapter.

3.1 PRE- THEATRE COLLECTION OF BLOOD SAMPLES

3.1.1 The SN must obtain relevant blood samples pre theatre for DCD and DBD retrieval and ensure that sufficient blood samples are available to accompany all of the organs for transplant. The SN must ensure that relevant blood samples are also taken, if the family have consented/authorised to tissue donation.

3.1.2 Where a maternal microbiology sample is required, a further sample should be taken immediately prior to theatre transfer in circumstances where tissue donation is being facilitated, in line with JPAC guidance. This sample should be appropriately labelled and should accompany the tissue donation.

3.1.3 It is the responsibility of the cardiac OPP to obtain relevant blood samples for transplant, when facilitating a DBD retrieval. The SN must document all relevant communication with the recipient centres in the SoE section of DonorPath.

3.1.4 Direct cross match request: If requested by the accepting centre, **only 40mls of blood in EDTA bottles** is required by all tissue typing laboratories.

3.1.5 By exception, bespoke requests for other cross-match blood can be considered, where clinically appropriate for the donor.

3.1.6 No additional bloods are required for research, including INOAR.

3.1.7 Organ specific bloods – Organ advisory groups have agreed a reduction in the volume of blood and type of samples that are required with each organ – see table below:

Organ	Blood Bottle Type and Number Required		Additional Information	Centre Variance / Comments
	EDTA	Clotted		
Lungs	0	**1**	Blood cultures may be requested	Glasgow and GOSH require NO clotted samples. Harefield require 2 clotted samples.
Heart	**Donors over 16yrs ONLY** **40ml EDTA** (Replacing Lymph & Spleen)	**1**		Glasgow and GOSH require NO clotted samples. Harefield require 2 clotted samples.
Liver	0	0		Centres may request additional blood samples if positive virology is identified and the local laboratory is unable to process the clotted samples that accompany the vessels.
Hepatocytes	0	**2**		
Vessels	0	**2 – for each set of vessels**	Minimum volume 14mls	If the liver is being split, ensure you send 2 separate sets of bloods (i.e. 4 clotted samples) to allow the vessels to be split with the liver. This also applies if the liver is being split and some segments are sent for hepatocytes.
Kidney	0	**1**		
Pancreas / Islets	**2**	**2**		
Small bowel	0	**1**		

ADVICE

Consideration should be made when sampling from paediatric patients, especially those under 30 kgs. Cumulative sampling of as little as 5% of the total blood volume can result in cardiovascular instability, please see SOP5874 OTDT Manual 9 for further information.
Paediatric blood sampling bottles should be used and minimum volumes determined with transplanting centres.
Where instability is considered a risk, consider sampling just prior to WLST or cross clamp.

3.1.8 The SN must ensure that the sample(s) include the patient's name plus 3 points of identification:

- ODT/Donor Number
- Date of Birth
- NHS number/CHI Number (Scotland)
- (On the rare occasion that the donor does not have an NHS number, then please use the hospital number)

3.1.9 Additionally, the date, time and location that the sample was taken must be clearly written on the label of each tube by the SN.

3.1.10 Once all of the blood samples have been appropriately labelled, the SN must handover the blood samples to the OPP, who must then place the blood samples in a sealable sample pouch and store in the relevant organ box in preparation for organ handover.

3.1.11 **FRM6723** (Sample Form) is available for the SN to accompany blood samples as needed.

ADVICE

The SN and OPP must ensure that they utilise Universal Precautions when handling blood, blood vessels, organs and tissue samples. Refer to POL173 Infection Prevention and Control in NHSBT for details of Universal Precautions.

3.2 ABDOMINAL NORMOTHERMIC REGIONAL PERFUSION (ANRP)

3.2.1 Hub Operations to advise SN, abdominal and cardiothoracic organ Receiving Centre that ANRP is being used. It may be necessary to add an extra 30-minute theatre setup time in addition to the muster time. However, for established ANRP retrieval teams the standard 90 minute set up time is usually sufficient. Hub Operations will notify the ANRP group by daily email for all ANRP retrievals: noveltechnologynotification@nhsbt.nhs.uk

3.2.2 ANRP NORS team will arrive 1-2 hours before the proposed withdrawal time. For combined procedures with cardiothoracic teams, the scheduled arrival should be 2 hours ahead of proposed withdrawal time to enable full communication of the steps involved in retrieval to ensure a successful outcome for both teams.

3.2.3 SN to put lead ANRP surgeon in contact with cardiothoracic surgeon to discuss ANRP protocol if cardiothoracic organs are also being retrieved.

3.2.4 SN will agree timings for organ stand down with lead surgeon and implanting centre. **N.B.** This can be different to normal DCD protocol.

3.2.5 SN to establish with ANRP team if they have equipment to process blood samples during retrieval (i.e. Piccolo machine), if no machine is available, SN to ensure donor hospital labs are aware that blood samples will be taken during procedure and will need to be processed as urgent samples.

3.2.6 SN to advise local ITU and theatre teams of the potential longer set up time and that the case itself will take 2 hours longer than the standard DCD procedure. SN to ensure that the theatre floor space is large enough for DCD/ANRP, and that withdrawal is as close to the theatre as possible.

3.2.7 All ANRP donors will require diathermy machine and the patch attached as with a standard DBD retrieval. SN to review **INF1424** with theatre coordinator, to ensure availability of any additional equipment required by the retrieval team specifically for NRP.

3.2.8 Ensure that 4 units of blood is cross matched to the donor and will be available for theatre. For abdominal ANRP where cardiothoracic organs will be retrieved under direct procurement, 8 units of blood will be required. Ideally these units of blood will be released from the lab and stored within the theatre complex prior to the start of surgery. SN to identify if any logistical challenges in donor hospital to obtaining and storing blood prior to retrieval and establish alternative plan.

3.2.9 SN and Advanced Perfusion/Organ Preservation Specialist (APOPS) to liaise with local theatre team to ensure any unused blood is returned to the blood bank within the specified time frame and return blood traceability forms for any blood used as per local hospital guidance.

3.2.10 APOPS to inform SN if blood sampling for liver function tests (LFTs) during retrieval will take place at donor hospital lab or by POCT (portable blood analyser) 'Piccolo'. If required at donor hospital:

- SN to advise labs that bloods will be sent
- LFTs X 5, will be sent together to the labs at the end of the 2-hour ANRP procedure
- To be tested as urgent samples.

3.2.11 In the event of a device failure of POCT, 2 LFT samples will be taken (as back-up) at 0hrs and 2hrs to be sent to the donor hospital lab and processed urgently. SN to follow up with labs and liaise with NORS team.

3.2.12 Blood cultures may be taken at 0 and 2 hours and processed as per table below:

Centres	Sample Collection	Sample Processing	Sample Result
Edinburgh	Sample obtained by NORS team	Sample processed at the donating hospital.	Sample results obtained by NORS identified individual.
Cardiff Royal Free Addenbrookes Birmingham Newcastle Kings	Sample obtained by NORS team	Sample transported with NORS to base hospital and processed at NORS base hospital.	Sample results obtained by NORS identified individual.

3.2.13 The NORS centre will be responsible for notifying NHSBT if there are any positive results and all results will be passed to other accepting centres as per **SOP4938 OTDT Manual 5** and **SOP6651 OTDT Manual 11**.

3.2.14 In the planned SN and NORS team surgical team handover, SN must check that cross matched units of blood are available and agree a plan with APOP and local staff on how and when to collect units from blood bank. Ideally, they need to be in the theatre complex prior to WLST.

3.2.15 Unlike usual DBD cases, ensure that a member of the surgical team is allocated to attach diathermy machine to the donor for management of the DCD undergoing ANRP.

3.3 PREPARATION FOR WLST/ORGAN RETRIEVAL

3.3.1 The SN must confirm and identify:

- The location where WLST will take place.
- Mode of WLST
- End of life care comfort measures/pathways instigated.

⚠ CAUTION
DCD retrieval only in cases of pregnancy:
Donation in pregnancy should only occur after the withdrawal of life sustaining treatment (Maastricht 3 DCD) or after circulatory arrest in patients who have had death confirmed via neurological criteria (Maastricht 4 DCD). In both scenarios, an organ retrieval must only proceed after the death of the foetus. Senior clinical support and a multi-disciplinary approach is essential to plan the retrieval and make decisions regarding maternal and foetal diagnosis of death, on a case-by-case basis.

3.3.2 Wherever the location of WLST, the SN must consider the logistics of patient transfer. The SN must also clarify:

- Location on critical care unit for WLST.
- Location of anaesthetic room for WLST – size to accommodate family members, if relevant.
- Path for transfer to theatre– location of theatres in relation to location/area of WLST.
- Personnel required – portering staff/HCP requirements for transfer of patient.
- Communication pathway – contact details of NORS team for critical information during WLST, to minimise any organ damage secondary to ischaemic times.

3.3.3 Prior to WLST the SN must confirm the following with the Lead Retrieval or Implanting surgeon(s):

- Method of communication between SN and retrieval team. If using DonorPath and TransplantPath to communicate withdrawal observations, both parties to check connectivity prior to WLST. Key touchpoints, including asystole must continue verbally.
- Frequency of update on patient's clinical condition.
- Stand down times.
- Roles and responsibilities of theatre team/NORS retrieval team/SN/local anaesthetist/OPP's/research team (if applicable)
- The SN must confirm the volume and type of blood samples required to accompany each transplant/tissue retrieval with the NORS retrieval team(s)/RCPOC's/Tissue Establishment. The SN must facilitate the collection of blood samples prior to WLST and ensure that they are labelled with the patient's name plus 3 points of identification:
- ODT/Donor Number
- Date of Birth
- NHS Number/CHI Number (Scotland)
- Additionally, the date, time and location that the sample was taken must be clearly written on the label of each tube.
- Please note- the CT OPP will collect any additional bloods, for example blood cultures, during DBD retrieval.

3.3.4 As per **FRM7307** Organ Retrieval Safety Checklist the SN must identify the medical practitioner who will verify death following WLST. A discussion must be held between the SN, the appropriate medical practitioner and nurse, to include:

- Availability of the medical practitioner following WLST and methods of communication to ensure they return to the location of WLST, when circulatory death is imminent if unable to remain present.
- An explanation of the critical time points during the WLST process.
- The importance of timely documentation of verification.
- Pre-populated verification of death paperwork must not be utilised.

- A discussion surrounding the possible re-intubation between the local anaesthetist and the NORS must be facilitated by the SN if the patient is for DCD lung retrieval/removal, as per **INF1425**.
- Instigation of end of life comfort measures to minimise any potential distress to the patient and patient's family, if present.
- Repatriation of patient if donation does not proceed. This may be applicable if WLST occurs outside of the ICU.

⚠ CAUTION
In Guernsey, two registered practitioners must verify death for organ donation to proceed. This is usual practice for DDNC but is also required for all DCD verification (DAT3612).

3.3.5 The SN must confirm which HCP will remain with the patient and their family during the process of WLST. The SN must also ensure that a member of the local hospital staff is available to accompany the family to an appropriate location and provide support, whilst the SN is in theatre.

3.3.6 The SN must confirm the plan for WLST with the theatre co-ordinator so that all members of the donating hospital team are aware of the planned course of action.

3.3.7 The SN must facilitate a discussion with the patient's family to confirm with them the planned course of action, giving as much or as little information as requested by them. The patient's family must be prepared for potential physiological changes that can occur following WLST. This must be done in conjunction with the donating hospital staff. Areas to discuss may include but are not limited to:

- Confirmation of mode of withdrawal of treatment.
- End of life comfort measures.
- Documentation of observations.
- Asystole and five-minute period prior to verification of death (pronouncement of life extinct).
- Verification of death prior to transfer.
- Transfer to theatre for organ retrieval/removal.
- Support for family post verification of death.
- Family plans following verification of death.

3.3.8 The SN must confirm the family's understanding of the possible eventuality that donation may not proceed, as per the discussion during the consent/authorisation process. Any questions and concerns raised by the family must be addressed and their immediate needs met, prior to proceeding further, and documented in the donor record.

3.3.9 The SN must document, in the donor record, all relevant conversations held with HCP's and any agreements reached in relation to WLST and transfer plans.

3.4 ACTIONS TO BE TAKEN PRIOR TO AND FOLLOWING WLST

3.4.1 As per Theatre Preparation and Principles for Completion of the Organ Retrieval Safety Checklist section, the SN must complete **FRM7307** sections 1A, 1B, 3A and 3B with the NORS Lead(s) prior to the organ retrieval process commencing.

3.4.2 The SN must record the necessary key time points in the DonorPath DCD section and DCD observations during the withdrawal of treatment process. Key timings relating to DCD theatre must be inputted on DonorPath in the 'Retrieval Information' tab labelled with a Wi-Fi symbol in real time (as soon as able). This makes the timings available to receiving centres via TransplantPath. This does not however replace verbal communication of these timings as per **MPD1382** and any agreed centre requests. If DonorPath is unavailable utilise **FRM4131** and **FRM4153**. This must also be documented in a visible place within the theatre.

3.4.3 Once death has been certified by the medical practitioner, the SN must follow the plan of action agreed with the patient's family (if applicable) and relevant HCP's.

3.4.4 In some DCD donors where death has not occurred at 3 hours post WLST: There may be occasions where the NORS Lead surgeon may feel that the kidneys are still likely to be transplantable and wish to wait longer. This situation is often associated with a decline from the initial recipient centre, which prompts re-offering. In this situation, the process should continue, including organ retrieval, until offering has been exhausted, or until the kidneys are retrieved and sent to the accepting centre, or the NORS team wish to stand down. In this circumstance, if offering is still in progress when the NORS team, having retrieved the organs, are departing, they should take the organs with them whereupon transport can be arranged by recipient centres from the NORS base.

4.0 PROCEDURAL GUIDANCE IN THEATRE

Section Contents - Hyperlinked

4.1 OVERVIEW GUIDANCE

4.1.1 The SN, in collaboration with the NORS team(s) must verify donor identity using an agreed method from handover for both DCD and DBD, considering theatre environment and staffing etc.

4.1.2 The SN must maintain a presence in theatre to ensure co-ordination of the retrieval/removal process.

4.1.3 The SN must take into consideration the requests of the Recipient Centres and communicate these with the NORS Team. Such requests may include photographs of the organs, weight or extra vessels. All organ media (images and videos) should be taken via the DonorPath app. The actions taken need to be documented within Donorpath as per Manual 11: Operational Process, Guidance and Principals – Donor Related Files, Images and Video.

4.1.4 Best practice is for the SN to endeavour to complete DonorPath retrieval section in real time to allow visible sections to be viewed by recipient teams in TransplantPath.

4.1.5 It is the responsibility of the SN to upload images of organs to DonorPath as per **SOP6651 OTDT Manual 11**.

4.1.6 The SN must support the theatre staff and aid communication between the theatre staff and visiting teams.

4.1.7 Please refer to NORS standards **(MPD1043)** regards surrounding tissue.

4.1.8 Perfusion will be undertaken by the OPP as per **MPD889**.

4.1.9 As part of the organ retrieval/removal process, blood and tissue samples (i.e. lymph and spleen) must accompany a transplant to allow the recipient centres to undertake any necessary tissue typing and additional microbiological testing. 40ml EDTA will accompany a DCD/DBD heart instead of lymph and spleen for donors over 16yrs. In addition, blood vessels may also be required to aid the implanting surgeon during the transplant operation. In circumstances for example H.M. Coroner or Procurator Fiscal restrictions where this is not possible discussions must be escalated and clear communication to recipient centres in advance is essential to ensure necessary Tissue Typing testing.

4.1.10 A DBD heart, not on a perfusion device, must be boxed and ready for dispatch within 30 minutes after cross clamp. Clear plans and observation of this time frame should be communicated in NORS handover and surgical planning between SN and NORS.

4.1.11 Organs removed for other/scheduled purposes do not require lymph, spleen and blood to accompany the organ. The organs will be packed as for a transplant organ with the HTA-A Research form accompanying.

4.1.12 There is a vital role in ensuring that the required blood vessels and tissue samples are identified, retrieved, stored and labelled appropriately by the OPP, with the pre-populated stickers which are completed by the SN.

4.1.13 The OPP must facilitate the appropriate packaging of an organ for transplant, with the required blood, blood vessels, tissue samples and relevant paperwork, to ensure that any risk to the organ recipient is minimised.

4.1.14 It is the responsibility of the SN to complete the demographic sections within the HTA-A and HTA-A Research forms.

4.1.15 It is the responsibility of the OPP to complete the perfusion fluid batch numbers, and timings on the HTA-A and HTA-A Research forms.

4.1.16 ANRP considerations:

- Laparotomy, cannulation and connection to the ANRP circuit. ANRP will run for up to 2 hours.
- If ANRP is unable to be established, the normal DCD process will be followed with an immediate conversion to standard cold perfusion. SN to inform accepting centre (Liver and CT) and Hub Operations that ANRP has been stood down. Hub Operations to inform any other accepting centres. If accepting centre decline, Hub Operations to fast track the liver as per standard practice.
- If the NORS team establish NRP and the function of an organ (liver or kidneys) improves and is felt to be transplantable, but has not been accepted, the SN should have a conversation with Hub Operations to agree a plan for possible re offer of Liver/Kidney.

- After 2hrs, the ANRP process will convert to standard cold perfusion and organ retrieval proceeds in a similar manner to DBD donation. Heparin will be administered via the ANRP pump, and the organ preservation practitioner will also add heparin to the perfusion fluid as per standard DCD process.
- For the purposes of Hub Operations offering organs in theatre, the start of standard cold perfusion marks the beginning of cold ischaemic time, and this time must be communicated to Hub Operations.

4.2 COMMUNICATION DURING THE RETRIEVAL PROCESS

4.2.1 The SN must liaise with the respective RCPOC's/Hub Operations/Tissue Establishments to identify what information they require during the procedure and communicate it accordingly e.g. information about the progression of the retrieval/removal.

4.2.2 The SN must ensure that all relevant information regarding the retrieval/removal has been entered into the Donor Record. In the event of limited/no connectivity, updated information should be communicated to Hub Operations by the SN.

4.2.3 For any INOAR organs declined by all transplanting centres and that are not suitable for tissues, inform Hub Operations and follow **SOP6658 OTDT Manual 10** for further information for research/other/scheduled purposes organs.

4.2.4 If an organ is accepted at an **Assessment and Recovery Centre (ARC)**, the SN must ensure that the Receiving Centre that are ultimately accepting the organ for transplant are the main point of contact for any communication regarding the donation case.

4.2.5 Hub Operations are to be advised if NORS team are able or unable to stay to remove research organs or the donor is non-proceeding. Researchers are to be updated by Hub Operations of this. The researchers will also be informed if the CT team have stood down, which will mean that the heart will now be removed by the abdominal team but will be un-perfused.

4.2.6 Refer to **MPD1382** for communication points with Hub Operations.

4.3 RECORD OF TIMINGS DURING RETRIEVAL/REMOVAL PROCESS

4.3.1 The SN must record all the necessary key time points during the retrieval/removal process, as required for the Donor Record and for each of the organ specific HTA-A and HTA-A Research forms.

4.3.2 Agreed timings must be reported to the RCPOC as arranged at the time of acceptance of an organ.

4.3.3 Prior to Cross Clamp, please ensure that the drivers for the heart (for transplantation), lungs, liver and small bowel are on site, and contact numbers available. Contact must also be made to Hub Operations to arrange the transport for kidneys and pancreas. And if appropriate, arrange transport for Heart for Valves as per **SOP5024 OTDT Manual 7**.

4.3.4 All timings must be recorded in a visible area within the theatre. A scan image using NHSBT approved scanning application must be taken and added to the DonorPath file, ensuring that the scanned image is uploaded in accordance with **SOP6651 OTDT Manual 11**. Attach to DonorPath file as miscellaneous labelled as 'Theatre Timings'.

4.4 RE-OFFERING OF LIVERS PREVIOUSLY DEEMED UNTRANSPLANTABLE

4.4.1 There will be times where a donor liver is offered following characterisation but is declined by all centres as they have deemed the organ untransplantable. However, with novel technologies being used, a liver may be found to have improved during the retrieval process by the NORS team and believed to be transplantable.

ADVICE

NORS team inspection of any liver believed to be suitable for transplantation following previous full centre decline, must also be with consideration of the donors past medical history and any information known to have led to the organ not being accepted previously.

4.4.2 The NORS team are responsible for notifying the SN if during retrieval the liver is found to have improved and it is appropriate to re-offer during retrieval.

4.4.3 Collaboratively with the SN and attending NORS team, all relevant and completed NRP/Organ Passport and any required updates to sections of CDD in DonorPath must be completed.

4.4.4 Following completed uploads and any required CDD updates to DonorPath, the SN must contact Hub Operations and request the organ is re-offered from donor theatre to all centres. Hub Operations will offer the organ as a fast-track and contact the SN if accepted or declined.

4.4.5 If the liver remains declined by all centres, and there is appropriate research consent/authorisation in place, the SN can explore offering for research with Hub Operations. Any accepted organs must be packed and dispatched as per routine practice.

4.5 HEARTS AND LIVERS DECLINED ON INSPECTION DURING THE RETRIEVAL

4.5.1 Refer to **DAT4034** if hearts or livers are declined on inspection during the retrieval process.

4.6 FINDINGS REQUIRING ADDITIONAL ACTION DURING THE RETRIEVAL PROCESS

4.6.1 Any findings requiring additional action must be reported by the SN to Hub Operations/ RCPoC's/accepting transplant surgeon as quickly as possible, as per **SOP4938 OTDT Manual 5**. The SN must also update the action tracker system used in their region at the time of donation to inform ODST team on post donation follow up.

ADVICE

If organ accepted for ARC assessment, any NORS to Receiving Centre surgical discussions must also include the ARC centre for consideration of suitability concerns.

4.6.2 During retrieval, If the NORS team considers a kidney or pancreas unsuitable for transplant, the organs must be fast-tracked in accordance with **SOP6388**. Final decisions on transplant suitability rest with the wider implanting community.

4.6.3 The Lead Surgeon must document any abnormalities/anomalies, organ damage, sub-optimal perfusion or donor instability during the procedure on the HTA-A Organ Specific and/or HTA-A Research form and in the patient's medical records.

4.6.4 If there is a finding which requires histopathology assessment, **SOP4938 OTDT Manual 5** should be followed and **FRM5867** be completed.

4.6.5 Because research biopsies (e.g. QUOD) can conflict with biopsies already taken for clinical assessment — particularly in kidneys, where governance incidents have occurred — the SN and lead surgeon must prioritise biopsy decisions carefully. For the agreed priority, see below:

Kidney Biopsy Prioritisation Guidance	
Priority 1	Organ Safety Assessment. • These biopsies are obtained as there is concern relating to malignancy or other serious disease. Adequate material should be taken to secure a pathological diagnosis, excluding or confirming the diagnosis definitively. • Biopsies may be wedge, punch or other as appropriate. The NORS surgeon **must discuss with recipient centres.**
Priority 2	Organ Quality Assessment. • Biopsies are taken on the clinical request of the implanting centre for their allocated kidney to determine quality. • A punch biopsy is recommended. • Only one quality assessment biopsy should be taken from that kidney. • A quality assessment biopsy may be taken in addition to an organ safety assessment biopsy (Priority 1), if deemed necessary and **requested** by the recipient centre.
Priority 3	QUOD Biopsies. • QUOD biopsies should only be taken if **no other biopsies are requested or taken**. • Only one attempt should be made to take a QUOD biopsy, and only one QUOD biopsy should be taken from a kidney. • For the avoidance of doubt, if a biopsy has been taken for organ safety and/or organ quality, **a further research biopsy must not be taken.**

4.6.5 All findings requiring additional action, must be documented in a section of DonorPath that is visible to transplant centres (Wifi symbol area of DonorPath). Significant findings or new clinical information identified during retrieval that require further explanation must be documented in the specific 'Organ Retrieval / New significant clinical information' box, within the 'Retrieval Information' section of DonorPath. This process is detailed within **SOP4938 OTDT Manual 5**.

4.7 UNEXPECTED PREGNANCY DISCOVERED DURING ORGAN RETRIEVAL

4.7.1 In the exceptionally unlikely event that pregnancy is discovered during organ retrieval – organ retrieval must immediately stop and urgent advice sought from RM/on call RM.

4.7.2 The SN must then postpone the organ donation process by contacting Hub Operations/RCPoCs and hold a discussion with the medical practitioner in charge of the patient's clinical care on how to proceed. Please refer to **SOP4938 OTDT Manual 5** regarding managing and sharing clinical information.

4.7.3 The SN must confirm with the medical practitioner the clinical decisions relating to patient care.

4.7.4 The medical practitioner, in conjunction with the specialist practitioner in obstetric medicine (where appropriate), must lead the conversation when discussing the pregnancy status with the patient's family member(s).

4.7.5 The SN should provide support to the patient's family and answer any questions in relation to organ and/or tissue donation only. Detailed guidance on how to facilitate conversations with patients' families can be found at **SOP4938 OTDT Manual 5**.

ADVICE
The SN must record details of all conversations with the patient's family, all HCPs involved in the donation process, HM Coroner/Procurator Fiscal, and any other relevant parties. This should be recorded in SoE on DonorPath. Guidance on good documentation can be found in MPD385.

4.8 COLLECTION AND LABELLING OF TISSUE SAMPLES AND BLOOD VESSELS IN THEATRE

4.8.1 It is the OPP's responsibility to obtain the organ specific tissue samples i.e. lymph nodes and spleen, and blood vessels to accompany organs for transplant. Ensuring that each container seals appropriately and has no faults (for example - cracks, faulty lid). 40ml EDTA will accompany a DCD/DBD heart instead of lymph and spleen for donors over 16yrs. Donors under 16 yrs will continue to have lymph and spleen sent as the large volume of blood has the potential to cause donor instability. If necessary, in order not to delay the heart the lymph and spleen can be sent on after the heart has left.

4.8.2 Lymph and spleen samples may not always be required to accompany organs, if there are Any Coronial restrictions on lymph and spleen samples must be escalated as needed (refer to **SOP6633 OTDT Manual 6**). Donation and ultimately transplantation may still be able to proceed. Clear communication of samples that will be available to HI Laboratories and transplant centres is essential.

4.8.3 Blood vessels must accompany the liver and pancreas/pancreas for islets for transplantation.

4.8.4 In the event of cardiothoracic only organs, these tissue samples are still required to accompany the organ. The agreed responsibility must be recorded in the 'Organ Packaging' section of the Donor Record.

4.8.5 At the appropriate time during the organ retrieval/removal process, the OPP must confirm with the retrieval surgeon and scrub practitioner directly the quantity of tissue samples required. The OPP must ensure that there are sufficient samples of lymph nodes and spleen to accompany each organ for transplant to the recipient centres. Refer to **MPD1043**.

4.8.6 It is the OPP's responsibility to attach the label, which the SN has pre-populated to each sample/vessel container, with the specific tissue or vessel contained. This must include the patient's name plus 3 points of identification:

- ODT/Donor Number
- Date of Birth
- NHS number/CHI Number (Scotland)
- (On the rare occasion that the donor does not have an NHS number, then please use the hospital number)

4.8.7 The OPP will present the tissue sample containers which will be filled with preservation fluid prior to the tissue samples (lymph and spleen) being placed in the containers by the NORS scrub practitioner.

4.8.8 The blood vessel container(s) must remain sterile at all times. The OPP must ensure that the blood vessels are secured inside a sterile container before accepting them from the scrub practitioner.

4.8.9 When directed by the scrub practitioner/retrieval surgeon, the OPP must facilitate the receipt of the tissue samples/blood vessels into the containers, confirming verbally the specific tissue/vessels received.

4.8.10 The OPP should then place the tissue sample/blood vessels containers into the sealable sample pouch, containing the blood sample taken earlier, and store this in the relevant organ box in preparation for organ handover.

4.8.11 If an organ is subsequently declined for transplant, and is now for other/scheduled purposes, the blood, lymph, spleen samples and vessels will still accompany the organ. The HTA-A form must accompany the Organ. An organ needs to have been accepted by a research study prior to theatre for HTA-A Research form to be accompanying the organ.

4.8.12 If the SN/OPP is informed by the lead abdominal retrieval surgeon that it is not possible to fulfil requirements, for example extra vessels, then the SN must contact the RCPOC as a matter of urgency to ensure that the implanting surgeon is aware and a decision can be made on whether to continue to accept the organ for transplant. The SN must document any relevant communication with RCPOC in DonorPath SoE. The SN must ensure any deviation from normal vessel requirement is documented in a section visible to accepting centres (Wifi symbol area of DonorPath).

ADVICE

If the liver is split in situ at the donor hospital, the recipient consultant surgeons who will receive the two liver grafts must discuss in advance which graft will be retrieved with the native arteries in continuity, and which graft will be allocated the donor iliac artery and vein.
Only in exceptional circumstances, such as for re-transplantation and the creation of an arterial conduit, should additional vessels be requested at the time of retrieval (Carotid arteries or superior mesenteric artery). In this situation, consultant (liver) to consultant (pancreas) discussion must take place to determine which vessels will travel with which organs.

4.8.13 The Vessels form (**FRM6199**) must be completed in full with the following responsibilities:

- OPP/Retrieval Surgeon responsibility - complete section B
- SN responsibility - complete section A
- The receiving centre responsibility – complete section C
- It is the SN's responsibility to take a scan image, using NHSBT approved scanning application, of the **FRM6199** and attach to DonorPath, ensuring that the scanned image is taken in accordance with **SOP6651 OTDT Manual 11.** Attach to DonorPath file as miscellaneous, labelled as 'Vessel Form'
- The OPP must place the blood vessels inside the specimen bag.

4.8.14 Refer to **SOP5685** for packing requirements of Ad-Hoc vessels.

4.8.15 The completed **FRM6199** with the relevant vessels must be sealed within a sample pouch and placed within the organ box with the relevant organ, in readiness for organ handover, by the OPP.

4.9 ANRP SAMPLE CONSIDERATIONS

4.9.1 QUOD samples (if consent/authorisation) taken and processed as normal, except for liver and kidney biopsies. These are placed in the ANRP box with variances documented in the associated box paperwork. All other biopsies taken (spleen and left ureter) remain stored in QUOD box. This process is carried out by the retrieval team.

4.9.2 Service Evaluation for NRP – For each NRP case the following biopsies and blood samples may be taken by the retrieval team:

- Blood samples at time 0hrs, 1hr and 2hrs
- Liver biopsy at 0hrs and 2hrs
- Kidney biopsy at 2hrs
- Urine at 2hrs

4.9.3 These samples are taken for the purpose of service evaluation to revisit if there are any clinical impacts on recipients. As such, consent/authorisation is implicit in the consent/authorisation for transplantation.

4.9.4 These samples are stored in the NRP sampling box and documented on the NRP samples worksheet (sent inside the NRP box). ANRP sampling box and paperwork is provided by the biobank QUOD and is clearly marked NRP Service Evaluation, this is separate to the QUOD boxes for research.

4.9.5 **NRP Passport** - ANRP retrieval team will complete **FRM6725** – NRP Passport

4.9.6 A copy of the completed form (FRM6725) will be made available for each retrieved abdominal organ (not required for cardiothoracic organs due to retrieval process and cardiothoracic HTA-A form informing recipient centres of NRP being performed)

4.9.7 The retrieval team will provide and retain the original hardcopy of the completed form. The SN will upload to DonorPath under the 'NRP passport' category. The completed paper NRP record will stay with the NORS teams.

4.10 DOCUMENTATION TO ACCOMPANY AN ORGAN

4.10.1 The SN must ensure that the patient details, demographic sections are completed on all the HTA-A forms including the HTA-A Research form if organ removed for other/scheduled purposes.

4.10.2 The OPP must complete the perfusion fluid section and the timings on the HTA-A Form and HTA-A Research form, including batch numbers.

4.10.3 The SN can, if they feel able to do so, in collaboration with the surgeon, write the kidney anatomy and populate the fields on the HTA-A Form and HTA-A Research form.

4.10.4 All the forms must include a legible name and contact telephone number of the appropriate lead retrieval surgeon. The top copy of the organ specific forms should be retained for the donor file.

4.10.5 It is the retrieval surgeon's responsibility to ensure completion of and to sign HTA-A, HTA-A Research and necessary vessel forms.

4.10.6 SNs must complete section A of Transplant Vessels & Tissues Form (**FRM6199**).

4.10.7 It is the SN's responsibility to ensure that the following documentation is sealed within the organ box. The documents must be sealed in a waterproof bag and placed in the box alongside the organ and associated samples**:**

- HTA-A Organ Specific Form accompanies transplant organs and/or HTA-A Research form accompanies other/scheduled purposes organs.
- Photocopy of witnessed blood group form accompanies all organs for transplantation.
- If kidneys are retrieved, there is no requirement to differentiate between left and right on the envelope. Only 'kidney' to be inscribed on the envelope.

4.11 SUPPLEMENTARY GUIDANCE ON NORS RESPONSIBILITIES

4.11.1 The NORS surgeon is responsible for the following actions:

- Ensuring the completion and signing of the HTA-A and HTA-A Research forms and completing section B of **FRM6199**.
- Completion of medical entry in medical notes.

4.11.2 The abdominal OPP is responsible for the following actions:

- Perfusion and perfusion documentation including timings on HTA-A form and HTA-A Research form.
- Ensuring the tissue samples, vessels, are identified, retrieved, stored and labelled appropriately for organs for transplant.
- Completion of section B of **FRM6199**

4.11.3 The cardiothoracic OPP is responsible for the following actions:

- Perfusion and Perfusion documentation and timings on HTA-A and HTA-A Research forms.
- To collect additional blood samples during DBD - for example blood cultures.
- Ensuring tissue samples and vessels are identified, retrieved, stored and labelled appropriately for organs for transplant.

4.12 PACKAGING AN ORGAN FOR HANDOVER

ADVICE

If the accepting centre wishes to attend the retrieval to enable use of novel technologies, they will be responsible for ensuring all of the above OPP responsibilities are completed (including gaining and labelling of samples and paperwork).

Packaging kidneys, pancreas/pancreas islets, and heart for valves using commissioned boxes

Responsibilities/ Key actions

- SN- Organ Donation
- NORS
- Receiving centre

- Before leaving NORS base, the OPP must check that the organ boxes are intact, ensuring there are enough boxes, that they are structurally sound, contain adequate melting ice, and include pouches for samples and documentation.
- When ice is in the box, ensure the valve is always kept closed.

All commissioned boxes should have a barcode label on two sides of the box which are used for identification and tracking purposes during transportation.

- Ensure there is a barcode on two sides of the box and that they match.
- Ensure that the barcode number quoted on any paperwork/DonorPath is that from the side label.
- Do not open the window section on the lid.
- This is sealed closed on purpose and you may cause permanent damage to the box by forcing this open.

If you identify any other barcode to the lid of the box:

- Make a note of the different lid barcode number and email the number to KidneyTransportBoxes@nhsbt.nhs.uk
- Remove the barcode label from the lid of the box and discard.

The OPP will prepare the box lid by securing one side of the lid (if not already secured) with the supplied organ box sealing tape.

- One 45cm length of tape cut into 2 pieces is adequate to seal both sides of the small organ box.
- The SN or OPP can affix the organ box sealing tape from the top of the organ box, over the grey side panel and then finish fixation on the side of the organ box.

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When an organ is ready to be packed in the organ box the OPP must undertake the following actions:

- The OPP must confirm that the organ has been prepared for packing as per **MPD1043**.
- The OPP must verbally state the organ they are receiving from the scrub practitioner and where appropriate whether this is the left or right organ. The prepared organ must also have a colour coded tie or colour coded organ specific adhesive label on the second bag and on the outer bag/packaging, where appropriate, which verifies the identity of the organ.
- The OPP must ensure that the organ is placed in the box without delay and adequately covered by melting water ice.
- The OPP must ensure that the boxes are prepared for placement of the organ/tissue as soon as is reasonably practicable after commencement of the retrieval/removal operation. Organ specific colour coded identification labels must be placed with the boxes ready for the address to be added prior to the OPP accepting the organ from the NORS team.

- Heart for tissue donation should be packaged by the SN. Documentation must follow NRC/SNBTS requirements.
- If QUOD biopsies are taken, the SN must document the removal of any CT QUOD biopsies on the heart valve form **FRM4213** and, if applicable, in section C of SNBTS **TCATF451**.
- If a heart packed for transplant is later declined, refer to F-CUSTOS **SOP6658 OTDT Manual 10** where consent exists.

The prepared box will have a sample pouch for safely storing the lymph nodes, spleen and Blood samples required to travel with the organ (40ml EDTA will accompany a DCD/DBD heart instead of lymph and spleen for donors over 16yrs).

- These tissue samples will be placed in the box when handed to the OPP.
- A second sample pouch may be used for blood vessels or extra bloods requested by the recipient centre.

The coloured tie around the outside of the packaged organ further denotes the organ within the box – the NORS personnel must additionally verbally confirm with the OPP the organ they are handing over.

- The SN and OPP are responsible for ensuring that all relevant documentation and materials accompany the organ and must checking these match with three patient identifiers (3 PID).
- The SN and OPP must seal the box together.

The coloured label and tie should match and assist in identifying the organ stored inside the box:

BLUE for PANCREAS/PANCREAS ISLETS
WHITE for HEART FOR TISSUE DONATION
YELLOW for LEFT KIDNEY
RED for RIGHT KIDNEY
ORANGE for ORGANS REMOVED FOR RESEARCH

EN-BLOC KIDNEYS must have a **RED** and a YELLOW label attached to the organ box. Where labels are not used, a generic organ sticker supplied in the donor pack must be applied to the organ box **FRM4318**.

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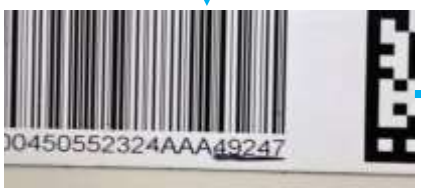
The box number for the organ must be relayed to Hub operations/NRC/SNBTS to assist with identification and organising transport from the donating hospital to the recipient centre.

- The last five digits on the box bar code number (after "AAA") must be recorded on the organ handover form **FRM4217** by the SN and within the 'Organ Packaging' section of DonorPath.
- Transport personnel taking custody of the organ will be informed of the box number by their organisation; this number can be found on the side panel of the box and must be documented by the SN.
- Whoever takes custody of an organ from the donating theatre must complete the label accordingly.



The coloured organ label should remain on the organ box until transplantation. It should then be kept with the recipient's medical records or until the date and time of receipt has been successfully and accurately transcribed on to the HTA B form. The coloured label can then be disposed of.

End of Section Procedure

Packaging cardiothoracic organs and/or multi-visceral organs/novel organs/tissue

When cardiothoracic organs and/or multi-visceral organs/novel organs/tissue are being retrieved, the responsibility for safely packaging the organ, blood and tissue samples lies with the NORS cardiothoracic and/or multi-visceral/specialist surgical team.

When an organ is ready to be packed in the organ box the OPP must undertake the following actions:

- The OPP must confirm that the organ has been prepared for packing as per **MPD1043**.
- The OPP must verbally state the organ they are receiving from the scrub practitioner and where appropriate whether this is the left or right organ. The prepared organ must also have a colour coded tie or colour coded organ specific adhesive label on the second bag and on the outer bag/packaging, where appropriate, which verifies the identity of the organ.
- The OPP must ensure that the organ is placed in the box without delay and adequately covered by melting water ice.
- The OPP must place an extra 45cm length of organ box sealing tape in a sample pouch at this stage to facilitate re-sealing the box where this is necessary. This pouch should be placed above the ice inside the box.
- The OPP must ensure that the boxes are prepared for placement of the organ/tissue as soon as is reasonably practicable after commencement of the retrieval/removal operation. Organ specific colour coded identification labels must be placed with the boxes ready for the address to be added prior to the OPP accepting the organ from the NORS team.
- For CT retrievals, the CT OPP is responsible for final packaging of the organ and required samples. If they cannot step away to complete handover, they must liaise with the SN to determine whether the SN can hand over the organ to transport personnel.

End of Section Procedure

ADVICE

Large organ boxes used for transporting livers, lungs and other larger organs are supplied by the NORS and Receiving Centres, not NHSBT.
The SN must apply their organ-packaging training and work with the OPP and NORS surgeons to ensure correct materials, documentation and the most appropriate sealing method are used.
These large boxes do not require a box number or tag.
The sealed box must be handed over with all relevant documentation completed.
All NORS centres have documented procedures and provide training for OPPs on packing, labelling, sealing, dispatching, cleaning and reusing large organ boxes.
Where an organ is being transported using machine perfusion, such as the LifePort or Transmedics systems, the 'box number' recorded on DonorPath organ packing and FRM4217 must be from the unique machine ID or asset number.

⚠ CAUTION

Boxes contain melting ice, creating a risk of slips, trips and falls; any spillages must be identified and cleaned promptly. Packed boxes may weigh up to 12.5 kg, so appropriate lifting precautions must be taken, particularly in restricted spaces. Avoid manual handling where possible. If manual handling is unavoidable, ensure staff have up-to-date training and use a wheeled trolley to move the organ box.

4.13 DONATION SUMMARY CALL

4.13.1 The SN will transcribe all kidney anatomy/comments/damage from the Kidney HTA-A form **FRM4121** onto DonorPath in the 'Kidney Anatomy' section.

4.13.2 Standard anatomy of a kidney has been defined by the Kidney Advisory Group as: one artery on one patch, one vein, one ureter and no branches tied with no damage. Any deviation from this definition, is non-standard anatomy. A centre may make a request upon offer of a kidney, via Hub Operations, certain anatomical preference for their recipient's needs. Hub Operations will make the SN aware of this on organ acceptance.

4.13.3 Where damage is identified, the SN must clearly document which kidney the comments relate to.

4.13.4 If a pancreas is being retrieved (SPK or single organ), a PDF copy of the Pancreas HTA-A form (**FRM4122**) must be emailed to Hub Operations.

4.13.5 After completing the Kidney Anatomy section and sending the Pancreas HTA-A, the SN must facilitate the donation summary call. As per **MPD1382**, answer all prompted questions. If Hub Operations confirm some details are illegible on the emailed Pancreas HTA-A Form, this must be verbally clarified by the SN to Hub Operations so this can be forward on to the relevant centres.

4.13.6 If it is not possible to upload kidney anatomy or share HTA A PDF forms by email, due to signal issues or IT failure, the SN must verbally communicate the kidney anatomy as obtained from the lead retrieving surgeon, clearly and accurately, to Hub Operations to help identify the most suitably matched recipient. All uploads should be retrospectively completed on DonorPath when available.

4.13.7 The SN must clearly state to Hub Operations if there is damage to any Kidney or Pancreas, or if either Kidney has different perfusion quality by stating either '**NO DAMAGE**' or '**DAMAGE**' pathway (See 'NO DAMAGE' or 'DAMAGE' Pathway flowchart).

4.13.8 If one organ is not damaged, this can still be dispatched ahead of centre update. Please inform Hub Operations which organ(s) is not damaged, and this will be considered on the call.

4.13.9 Please ensure that you communicate with Hub Operations following completion of the donation process (proceeding/non proceeding) to ensure a final handover is given and all details are closed off with the Hub. This is to ensure HUB Operations have accurate records of organs retrieved for transplant, research, or other/scheduled purposes in line with regulatory compliance and donor family communication.

4.13.10 If the SN is unable to send PDF and emails due to signal issues or IT failure, the 'No Damage' and 'Damage' pathways can still be used, but all Kidney Anatomy information will need to be verbally relayed to Hub Operations for transcription, who will forward on to accepting centres verbally.

4.14 'NO DAMAGE' or 'DAMAGE' Kidney Pathway

Responsibilities / Key actions: SN- Organ Donation | Hub Operations

NO DAMAGE PATHWAY

NO CODED anatomical damage for BOTH kidneys.

NO ADDITIONAL COMMENT that relates to damage for BOTH kidneys.

With **IDENTICAL** perfusion quality between the LEFT and **RIGHT** kidney.

N.B. Proceed if Pancreas is retrieved or remains in situ.

DAMAGE PATHWAY

ANY CODED anatomical damage to the LEFT, **RIGHT** or **BOTH** kidneys.

ANY COMMENT(s) that relate to damage to LEFT, **RIGHT** or **BOTH** kidneys.

With **DIFFERENT** perfusion quality between the LEFT and **RIGHT** kidney.

N.B. Proceed if Pancreas is retrieved or remains in situ.

Upload kidney anatomy to DonorPath along with any organ images as per **SOP6651 OTDT Manual 11**, and email the Pancreas HTA A forms (if applicable) to HUB Operations odthub.operations@nhsbt.nhs.uk

SN to call Hub Operations for Donation Summary Call

1. Hub Operations to confirm kidney anatomy uploaded to DonorPath, and Pancreas (if applicable) HTA A form has been received and is legible.
2. If not legible, the SN with support of NORS must confirm all coding verbally and any damage/comments with HUB Operations.
3. The SN will confirm with their NHSBT email address to receive the organ box addresses
4. Hub Operations will complete the rest of the donation summary call questions with the SN.

PAUSE – DAMAGE COMMUNICATION

Hub Operations will end the call with the SN to contact the relevant kidney and pancreas centres to confirm acceptance or any allocation changes. Undamaged organs may be dispatched at this point.

Confirmation from Hub Operations with organ addresses

- Hub Operations will verbally confirm organ destination by hospital name only.
- Hub Operations will email the organ addresses to the SN for transcription onto the organ box address labels following the donation summary call (or during if able)
- SN to confirm receipt of email detailing all addresses required for all renal organs by email reply.

If emailed organ box addresses have not been received after 10 minutes post donation summary call, contact Hub Operations by telephone to follow up

When Hub Operations call back to confirm organ allocation, confirm receipt of emailed organ box addresses.

Prepare organs for dispatch

⊖ End of Section Procedure

4.15 ARRANGING TRANSPORT OF AN ORGAN

4.15.1 The table below outlines responsibilities for those involved in the organ retrieval/removal process; (some recipient centres arrange their own kidney/pancreas transport. Hub Operations will advise if this is the case).

4.15.2 In all cases where an organ is not being transported by the NORS retrieval teams, the SN must identify from the RCPOC/Hub Operations which transport company will be arriving to collect the organ for transport and if they have arranged the transport for the organ. Information regarding the transport company will be provided to the SN by the RCPOC/Hub Operations prior to the organ being released for transport.

Mode of Transport	Responsibility to arrange transport
Accompanied – Organ accepted by recipient centre that supplied NORS retrieval team.	NORS retrieval team have responsibility to accompany the organ back to the recipient centre with them.
Unaccompanied - Heart, Lungs, Liver, multi-visceral organs	RCPOC has responsibility to arrange additional transport.
Unaccompanied – Kidney or Pancreas	Hub Operations has responsibility to arrange transport.
Unaccompanied – Heart donated for heart tissue donation	Hub Operations has responsibility to arrange transport.
Unaccompanied – Organ for other/scheduled purposes	The Researcher takes responsibility for arranging the transport.
Unaccompanied – Tissue for other/scheduled purposes	Hub Operations has responsibility to arrange transport.

4.15.3 If heart for tissue and/or research tissue is being donated for tissue and eye service (TES) research and development (R&D), the SN must contact Hub Operations to arrange transport for the collection of the heart and/or other research tissue. Transport arrangements for all tissues may be made on commencement of the retrieval and when notifying Hub Operations of knife to skin time (**SOP5024 OTDT Manual 7**).

4.15.4 The SN must confirm an estimated time for organ handover with the retrieval surgeons during the organ retrieval/removal process. The SN must communicate with the relevant RCPOCs, NRC/SNBTS staff and Hub Operations to ensure that transport arrangements are made in a timely manner. The SN must document any relevant communication with RCPOCs for the donor record.

4.15.5 Update Hub Operations if the NORS Team are unable to stay to retrieve organs for other/scheduled purposes.

4.16 HANDOVER OF AN ORGAN TO TRANSPORT PERSONNEL

4.16.1 The SN must confirm the identity of the transport personnel for each organ being transported utilising photo ID.

4.16.2 The SN must also confirm with the transport personnel their understanding of which organ they are collecting, the box number and its correct destination.

4.16.3 The SN will have completed the corresponding organ box label with the full address. No abbreviations must be used. Please refer to **DAT3968** - Transplant Unit Names and Addresses.

4.16.4 If organ being dispatched to Receiving Centre via an ARC, all cross match material and documentation to be included as per usual practice and only the ARC address needs to be inputted to transport label.

4.16.5 Transport personnel (including NORS staff or implanting theatre staff at donating centre) must enter their details onto the relevant section of the organ box label thereby documenting custody of the organ box from the SN.

4.16.6 The SN must complete the relevant sections of **FRM4217** for each organ/tissue box handed over and document their actions in the 'Sequence of Events' section of the Donor Record. The purpose of **FRM4217** and the organ box label is for traceability of organs and supporting material such as tissue and blood samples where these are contained in a separate organ box.

4.16.7 The research transport driver will provide the SN/OPP with three points of PID to ensure collection of the correct organ:

- ODT number
- Organ
- Researchers' delivery address

This will be provided to the SN by Hub Operations.

ADVICE

SNODS will hand over the appropriately packed and labelled box containing the organ to the agreed transport provider. NHSBT does not endorse the use of the police, who are not an authorised transport provider, for the movement of organs particularly if a speed exemption is taken which currently sits outside of the current road traffic regulations. The use of the police to move organs is a decision made by the accepting transplant surgeon and the SNOD should not be involved in those discussions. The decision to use the police to move organs is the responsibility of the accepting transplant centre and in these situations the SNOD may be required to handover the organ which may not be transplanted otherwise, and document in the donor file.

4.17 EUROPEAN / ROI TRANSPORT CODES

4.17.1 If any organ has been accepted by a European Country, then the below codes must be written clearly and legible on **FRM4318**, by the SN:

Commodity Code 30012010
EORI Number GB654961603000

4.17.2 The SN must also liaise with Hub Operations who will provide additional digits to add to the label.

4.17.3 The agreed NHSBT Transport Provider will not accept the organ for transport unless these codes are present.

4.18 DELAYS IN PLACING ORGANS FOR TRANSPLANT

4.18.1 Where the NORS team are ready to leave theatre and an organ is still to be handed over for onward transport for transplant and/or research, the SN must speak directly with Hub Operations to establish the potential for further delay. If the delay is longer than the anticipated SN presence in theatre, then the SN must speak with the OPP and request that the organ accompany them back to their transplant centre.

4.18.2 The OPP is responsible for taking the organ back to a designated location at the NORS base (e.g. a particular ward or theatre that is staffed 24/7).

4.18.3 The OPP must confirm the location where the organ will be stored at the NORS transplant centre and identify a member of staff (e.g. RCPOC/NORS contact). The OPP will inform the SN of location and contact details.

4.18.4 The SN should provide Hub Operations with a name and direct-line contact number for that location and individual with whom Hub Operations can communicate with to arrange subsequent transport arrangements for the organ. Hub Operations will offer the organ out to approved research studies if there is appropriate consent/authorisation for research. If no response after 45 minutes, then the organ will be disposed of as per hospital policy by the person who has accepted responsibility of the organ, ensuring HTA-B form is completed.

4.19 DELAYS IN PLACING ORGANS REMOVED FOR OTHER/SCHEDULED PURPOSES

ADVICE
Check SOP6658 OTDT Manual 10 for current guidance for the removal of organs for other/scheduled purposes.

4.19.1 If organs that have been removed for other/scheduled purposes are sent to the recipient centre to await collection, the SN must inform Hub Operations that this has happened. Hub Operations will inform the researchers. Should the researchers now be unable to accept the organ, then it will be offered out via the Research Allocation System (**SOP4442**). If it is not accepted after 45 minutes the organ will be disposed of and an HTA-B Research form will be completed.

4.19.2 The staff at the dedicated location will be responsible for the secure accommodation and maintenance of the organ (topping up ice etc) until they are informed of the final destination (onward travel for transplant/research or disposal).

4.19.3 ODT Hub Operations will notify staff at the designated location when a final destination for the organ has been agreed and will arrange transport.

4.19.4 Staff at the designated location will then re-address the organ box as instructed by Hub Operations or dispose of the organ in line with organisational policy and complete an HTA-B Research form.

4.19.5 An organ must never be left unaccompanied in the donating hospital for collection by transport personnel unless the donating hospital is a transplant centre, and a healthcare professional acting in the role of RCPOC, is willing to accept receipt of the organ and be available for contact by Hub Operations. If this is not the case, escalation to the LN / ODLT on-call may be required.

4.19.6 If an organ is declined for transplant and research, and is to be disposed of after the NORS team has left, but the donor is in a non-transplanting centre, then the SN must organise with Hub Operations for the organ to be sent to a transplant centre for disposal. Completion of the HTA-B form to be completed by the person accepting the organ at the transplant centre. There must be a conversation between SN and the accepting centre, and an agreement with the plan. This must be clearly documented within DonorPath/the donor file. HTA-B Research form must also be completed if the organ was initially removed for other/scheduled purposes.

4.19.7 The SN must contact Hub Operations to advise them of the time that the NORS team depart.

4.20 COMPLETION OF THE ORGAN RETRIEVAL PROCESS

4.20.1 The Lead surgeon from each team is responsible for producing an accurate account of the retrieval/removal process in the patient's medical records including all organs/tissues removed and any anomalies found. This should also take account of any Coronial or Fiscal requests for information to be detailed. All entries to be signed and dated and a contact telephone number added as per **MPD1043**.

4.20.2 The NORS team should not be asked to delay leaving the donor hospital once they are ready to do so.

4.20.3 It is the SN's responsibility to ensure that post retrieval, The DFCS Handover **FRM5499** is completed accurately to ensure traceability and accuracy in donor family follow-up. The SN must also ensure that any ad-hoc vessels / rectus fascia retrieved is documented as per **SOP5685** on the SN to DFCS handover.

4.20.4 The SN must also update the action tracker system used in their region at the time of donation to inform ODST team on post donation follow up.

4.21 CARE AFTER DEATH

4.21.1 The SN must attempt to facilitate any specific requests made by the family following the organ retrieval/removal process.

4.21.2 The family may have accepted the offer to participate in care after death and/or sharing in religious or cultural rituals as per **SOP5049 OTDT Manual 8**. The SN must support this decision and facilitate as local policy/practice allows.

4.21.3 The family may wish to spend time with the patient following the organ retrieval/removal process. The SN must always undertake the act of final care as per national guidance and local policy.

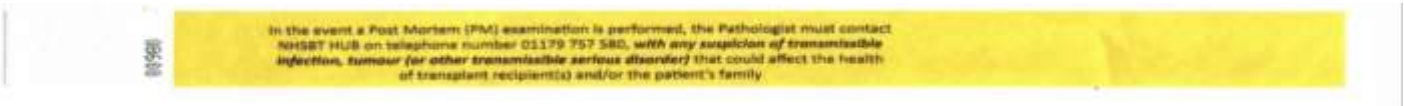
4.21.4 If local policy of the donor hospital mandates that all lines and devices must stay in situ following death/surgery, this must be documented clearly in SOE and the hospital medical notes by the SN. If the donor family are expecting all lines and devices to have been removed following surgery and the SN has been unable to facilitate this, the donor family should be made aware in immediate post donation communication. Where local policy allows and with consideration of bodily fluid leakage and structure support, the SN must aim to remove all or as many invasive lines and devices that are safe to do so.

4.21.5 The SN must document the condition of the patient's body following care after death procedures in the patient's medical records - for example, body cleaned, no oozing or excessive oozing present, incision site dressed appropriately and copied for the donor file.

4.21.6 If the patient is to donate tissues /eye tissue following organ retrieval/removal, then a referral to NRC/SNBTS should be made following the process described in **SOP5024 OTDT Manual 7.**

4.21.7 The SN must liaise with local theatre/portering staff to facilitate the safe transfer of the patient to the mortuary.

4.21.8 A yellow wristband with NHSBT contact details must be attached to all proceeding solid organ and tissue donors (see below). In the event a Post-mortem (PM) examination is performed, the Pathologist will contact NHSBT Hub with any suspicion of transmissible infection, tumour (or other transmissible serious disorder) that could affect the health of transplant recipient(s) and/or the patient's family.



4.22 LEAVING THEATRE

4.22.1 The SN must liaise with the donating hospital theatre staff to ensure that the operating theatre is left in an acceptable condition as per local hospital policy, post retrieval/removal process. The SN must ensure that following the organ retrieval/removal process that all external equipment and paperwork has been removed.

4.22.2 The SN must provide contact details to the theatre co-ordinator.

4.23 NON-PROCEEDING DONATION

4.23.1 If all recipient centres/tissue/research establishments decline the offer of organs and/or tissues for donation, then the SN must inform the relevant HCPs/Hub operations/ Laboratories that donation will not proceed.

4.23.2 If donation cannot proceed for example, due to patient instability, family circumstances or protracted time to asystole, the SN must inform Hub Operations of stand down time.

4.23.3 The SN must inform the family of reason for non-proceeding donation if no RCPOC's accept organs or if standing down from donation after WLST. If the patient's family is not present, the SN must follow the agreed communication pathway discussed during the consent/authorisation process to outline to the patient's family why organ and/or tissue donation could not proceed.

4.23.4 If the SN requires support in the case of non-proceeding donation, they should contact the LN / ODLT on-call for advice and guidance.

4.23.5 If advised by the LN / ODLT on-call the SN must report the reason for donation not proceeding via NHSBT on-line Clinical Governance system at the earliest opportunity post process so that the management team can analyse the sequence of events, and reasons for non-donation. The SN must ensure their LN is aware that an incident report has been submitted as per **SOP3888**.

4.23.6 The SN must change the status on the Donor Record to non-proceeding explaining the reason why donation could not proceed.

4.23.7 The SN must also clearly document the sequence of events in the donor record, and via the DonorPath and subsequent PDA, giving clear details as to the reasons why donation could not proceed.

4.23.8 In the event of a non-proceeding organ donor, please see **SOP6405 OTDT Manual 1**, for blood testing stand down process.

4.23.9 In the cases of a non-proceeding DCD, the SN must dispose of any blood samples as per local hospital policy and in line with **SOP5024 OTDT Manual 7**.

Associated Documents and References (A-Z)

ABBREVIATIONS & GLOSSARY:

INF1277 - Abbreviations
INF1693 - Glossary of Terms for Deceased Organ and Tissue Donation and Transplantation in the UK

DOCUMENTS:

DAT4034 - Guidance on Assessment of Organs During Deceased Donation Retrieval
DAT3612 - Key Legislation Differences for Consent/Authorisation per Country/Territory
DAT3968 - Transplant Unit Names and Addresses
FRM4121 - Kidney Donor Information
FRM4122 - Deceased Donor Pancreas Information
FRM4131 - DCD Observation Chart
FRM7307 – Organ Retrieval Safety Checklist
FRM4153 - Proceeding and Non-Proceeding Donors after Circulatory Death
FRM4212 - Organ Donation Clinical Pathway
FRM4213 - Heart Valve Donation
FRM4217 - Organ Handover Form
FRM4318 - Organ Box Address Sticker
FRM5499 - SN to DFCS Handover Form
FRM5544 – Organ Acceptance
FRM5867 - National Histopathology Request Form
FRM6199 - Vessels Form
FRM6723 - Sample Form
FRM6725 – NRP Passport
INF1424 - Basic Guidelines for Theatre Staff at Donor Hospital
INF1425 - Care of Potential Lung DCD Donors – Safety Brief
MPD889 - Abdominal Perfusion and Preservation
MPD1043 - National Standards for Organ Retrieval from Deceased Donors
MPD1382 – Donation Pathway Communication Touchpoints- SNODs and Hub Operations
POL173 - Infection Prevention and Control in NHSBT
POL188 - Clinical contraindications to Approaching Families for Possible Organ & Tissue Donation
SOP5024 – OTDT Manual 7: Tissue Donation from Organ Donors
SOP3888 - Reporting an Organ Donation or Transplantation Incident to NHSBT
SOP4574 - Logistics & NORS Mobilisation Manual- Hub Operations
SOP6651 – OTDT Manual 11: Operational Process
SOP4442 - Allocation of Organs and Tissue for Research and Novel Technologies- Hub Operations
SOP4746 - DCD Heart Donation Process
SOP4938 – OTDT Manual 5: Managing and Sharing Clinical Information
SOP5049 – OTDT Manual 8: Post Donation and Family Care
SOP5685 - Ad-hoc Tissue Requests of Blood Vessels and Rectus Fascia from Deceased Organ Donors
SOP5874 - OTDT Manual 9: Paediatric Donation
SOP6388 – Organ Offering Manual – Hub Operations
SOP6405 – OTDT Manual 1: Referral & Donor Characterisation
SOP6633 – OTDT Manual 6: Judicial Process
SOP6658 – OTDT Manual 10: Research
TCATF451/04 - Hearts for valves retrieval checklist (SNBTS)

REFERENCES:

1. **Other Useful Links**

ODT Clinical Website
https://www.odt.nhs.uk

SaBTO Guidance on the Microbiological Safety of Human Organs, Tissues and Cells used in Transplantation (2011)
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_121497

SaBTO Position statement on West Nile Virus
https://www.gov.uk/government/publications/west-nile-virus-and-solid-organ-transplantation-sabto-statement

SaBTO Guidance on the Transplantation of Organs from Deceased Donors with cancer or a history of cancer 2014
https://www.gov.uk/government/publications/transplantation-of-organs-from-donors-with-a-history-of-cancer

Council of Europe: Guide to the quality and safety of organs for transplantation
https://freepub.edqm.eu/publications/PUBSD-88/detail

Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q&S Regulations).
https://www.hta.gov.uk/guidance-professionals/regulated-sectors/human-application/material-covered-human-tissue-quality

Confidentiality: NHS Code of Practice 2003
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4069253

Confidentiality: NHS Code of Practice: Supplementary Guidance: Public Interest Disclosures (Nov 2010)
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_122031.pdf

JPAC Guidelines for the UK Blood and Tissue Services
https://www.jpac.org.uk

Training Plan for Documents:

Type of Change	Change to Existing Process	
Stakeholders who require training	**Trainee new to the process**	**Trainee trained to the previous revision.**
	New trainee SNs will require full training to this document by their ODST Quality Lead SN and Foundation Training programme.	SNs previously trained to SOP4938 can receive training via recorded author presentation delivered by their regional Quality Lead SN
Knowledge required prior to training	NA	Training to Previous version
Critical aspects of process	This document aims to assist the SN in the offering part of the process and organising the organ retrieval operation. It will outline the SN's role in facilitating the pre and peri-operative process of Donation following Circulatory Death (DCD), or Donation following Neurological Death (DBD), including the support for families. This document outlines the joint responsibilities of the SN and OPP regarding the entire retrieval/removal process. The document will outline the SN's responsibility in theatre in ensuring that the organ retrieval/removal process occurs in a co-ordinated and timely manner, with minimal disruption to the donor hospital, and the overriding principle of respect for the consented/authorised donor and safety of potential recipients is ensured. The document is also to guide and inform those involved in the organ donation process on how to collect, label and facilitate the transportation of consented/authorised organs for transplantation (plus accompanying blood and tissue samples) and organs for other/scheduled purposes.	

Training Plan:

	Trainee new to the process	**Trainee trained to the previous revision.**
Recommended Training Method	Practical demonstration and read through of document with Regional ODST Quality Lead. Training material for this version will not cover the whole SOP content.	Train out via standard video from SOP author to ODST Regional Quality Leads train to TBTR. The same video can be disseminated via QLs and record TBTRs
Assessment	FRM511	FRM511
Cascade Plan	Practical demonstration and read through of document with Regional ODST Quality Lead. Training material for this version will not cover the whole SOP content.	Train out via standard video from SOP author to ODST Regional Quality Leads train to TBTR. The same video can be disseminated via QLs and record TBTRs

Training Score – Training Plan Risk Matrix (Collapsible – Click ▸ icon to open/close)

Use the *Training Plan Risk Matrix* to identify the training method and assessment required.

The *Process Criticality Score* is determined by the potential impact on donor/patient safety and/or product quality using the table below for guidance:

	Impact on Donor, Patient safety or product quality
1. Negligible	A process whose failure, in full or in part, **cannot** impact product quality, patient/donor safety or the ability to supply products/services.
2. Minor	A process whose failure, in full or in part, **may**: (i) impact other processes thereby indirectly impacting product quality, patient/donor safety (e.g. harm only results where multiple failures in multiple processes align) (ii) result in the discard of a small number of replaceable products and/or (iii) result in an inconvenient delay to the supply of products/services (e.g. delay of 1-3hrs of non-urgent product/service).
3. Moderate	A process whose failure, in full or in part, **may**: (i) indirectly impact product quality, patient/donor safety (e.g. harm only results where failures in more than 1 process align) (ii) result in the discard of a medium number of replaceable products and/or (iii) result in a temporary delay to the supply of products/services (e.g. delay of 4-12hours of non-urgent products/services).
4. High	A process whose failure, in full or in part, is **likely** to: (i) directly impact product quality, patient/donor safety (ii) result in the discard of a large number of replaceable products (iii) result in the discard of an irreplaceable product and/or (iv) result in a delay to patient treatment.
5. Very High	A process whose failure, in full or in part, is **certain** to: (i) directly impact product quality, patient/donor safety (ii) result in the discard of a large number of replaceable products (iii) result in the discard of an irreplaceable product and/or (iv) result in a delay to patient treatment.
Process Criticality Score	4

The *Criticality of Change Score* is determined by assessing the nature of change(s) and complexity of the process using the table below for guidance.

	Change to Trainee(s)
1. Negligible	An existing process to which no material changes are made. E.g. format changes, minor clarifications of existing practice, fixing typos.
2. Minor	An existing process to which new information is added but where changes to existing knowledge and practices are minimal. E.g. clarifications that tighten existing practices
3. Moderate	An existing process of low complexity with material changes requiring different people to take action and/or people to change the tasks they perform. E.g. new roles/responsibilities, changes to the order of existing tasks, new tasks
4. High	A new process of moderate complexity, OR

	An existing process of moderate complexity with material changes requiring different people to take action and/or changes to the way tasks are performed. E.g. New roles and responsibilities, changes to tasks and/or the order in which tasks are performed, changes in equipment/materials, changes to values, measures or settings.
5. Very High	A new process of high complexity, OR An existing process of high complexity with material changes requiring different people to take action and/or changes to the way tasks are performed. E.g. New roles and responsibilities, changes to tasks and/or the order in which tasks are performed, changes in equipment/materials, changes to values, measures or settings.
Criticality of Change Score	3

Training Plan Risk Matrix:

Process Criticality →

Criticality of Change ↓

	1. Negligible	2. Minor	3. Moderate	4. High	5. Very High
1. Low	1	2	3	4	5
2. Moderately Low	2	4	6	8	10
3. Moderate	3	6	9	12	15
4. High	4	8	12	16	20
5. Very High	5	10	15	20	25

	Trainee new to the process	**Trainee trained to the previous revision.**
Process Criticality Score	4	
Criticality of Change Score	4	3
Training Score	16	12

Recommended Training Method and Assessment:

Training Score	Level of Risk	Examples of Training Methods	Examples of Assessment
1 - 3	Low	Read only	Record on FRM511 only
4 - 8	Manageable	Email, team brief, word brief	Knowledge/Observation Check & FRM511
9 - 14	Medium/Significant	Formal training package	Knowledge/Observation Check & FRM511 or FRM5076
15 - 25	High	Practical	FRM5076 or equivalent