

Effective date: 16/06/2022

Policy

Organ Preservation Practitioners (OPPs) working as part of the National Organ Retrieval Service (NORS) abdominal retrieval teams will facilitate abdominal organ perfusion and preservation in theatre during the organ retrieval operation. This function supports the surgical team in ensuring the safe and efficient retrieval of organs for transplantation and removal for other/scheduled purposes.

Objective

To provide appropriate information and guidance regarding abdominal perfusion.

Changes in this version

References to PITHIA removed Inclusion of Research labels and when to use Inclusion of prepopulated lymph and spleen pot labels Inclusion of Histology request form Reference to adhoc vessels

Roles

Abdominal Organ Preservation Practitioner - To work to this MPD in undertaking abdominal organ
perfusion and preservation during the organ retrieval process, under the advice and guidance of the
Lead Abdominal Retrieval Surgeon from NORS.
To work collaboratively with the Specialist Nurse for Organ Donation (SNOD) in ensuring that all
organs, tissues, and blood samples retrieved for transplant or removed for other/scheduled purposes
are correctly packaged and labelled for transportation

1. Introduction

- 1.1 Abdominal organ perfusion and preservation is the process of perfusing organs with preservation solutions, as directed by the lead abdominal retrieval surgeon during the organ retrieval/removal operation. It involves perfusing the organs firstly in-situ and, after they have been removed from the body, perfusing them again on the 'back bench'. Perfusion will be performed on organs being retrieved for transplantation and organs being removed for other/scheduled purposes. SOP5567, SOP5663.
- 1.2 Packaging of the Organs and placement in the organ transport boxes are important components of organ preservation. Procurement of blood and tissue samples to support organ transplantation and other/scheduled purposes are an essential aspect in providing positive outcomes for transplant and other/scheduled purposes.
- 1.3 Different perfusion fluids are used dependent upon the form of donation that is occurring (Donation following Brain Death (DBD) or Donation following Circulatory Death (DCD), and on which organs are being retrieved/removed or whether a paediatric donor. This outlines the role of the OPP in abdominal organ perfusion and preservation during the organ retrieval/removal operation.
- 1.4 Organ perfusion and preservation is the responsibility of a registered medical practitioner. In the case of NORS, this is the nominated lead abdominal retrieval surgeon. Therefore, when involved in organ perfusion and preservation, the OPP will work under the advice and direction of the lead abdominal retrieval surgeon.

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2. NORS

- 2.1 The NORS team must include, as a minimum, a lead abdominal retrieval surgeon, a surgical assistant scrub practitioner and organ preservation practitioner.
- 2.2 The NORS team is responsible for providing all equipment, consumables and pharmaceuticals required for organ perfusion and preservation of organs being retrieved for transplantation and those being removed for other/scheduled purposes.
- 2.3 The SNOD is responsible for obtaining and labelling blood samples prior to theatre. The OPP is responsible for obtaining urine, donor vessels (preserved in UW) and lymph node and spleen samples (stored in saline) to support organ transplantation. Samples of blood, lymph nodes and spleen are not required for whole organs removed for other/scheduled purposes.
- 2.4 The NORS team OPP is responsible for completing the timings and perfusion section on the HTA-A form and HTA-A Research form if applicable. The SNOD will complete the donor demographics.
- 2.5 The OPP will attach the pre-populated labels completed and provided by the SNOD to the Lymph/Spleen and Vessel pots.
- 2.6 The OPP will complete section B of the vessel form (FRM6199), the lead surgeon will check details and sign.
- 2.7 The NORS team OPP must attach a QUOD sticker to page 1 of the HTA-A form and HTA Research form, as well as all carbonated copies of page 1, if a QUOD kidney biopsy is taken.
- 2.8 The HTA-A form will accompany organs retrieved for transplant. The HTA-A Research form will accompany organs removed for other/scheduled purposes.
- 2.9 The OPP will provide the appropriate organ specific colour coded organ box label
- 2.10 The OPP will provide an orange research organ box label if appropriate. If a colour coded transport label is already attached and the organ is declined, there is no requirement to change the label.
- 2.11 The NORS team OPP in collaboration with the SNOD is responsible for checking donor details, packaging, sealing and labelling of boxes containing organs for transplant and other/scheduled purposes ready for dispatch.

3. Specialist Nurse in Organ Donation (SNOD)

- 3.1 The SNOD is responsible for obtaining and labelling all donor blood and urine samples prior to withdrawal of life sustaining treatment / arrival in theatre. The SNOD will hand over these samples to the OPP.
- 3.2 The SNOD will maintain a presence in theatre to ensure continued co-ordination of the retrieval/removed process.
- 3.3 The SNOD will record all essential timings on the white board in theatre visible for all team members to see.
- 3.4 The SNOD will ensure that the core donor information has been fully completed on Donorpath.



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- 3.5 The SNOD will advise the organs to be retrieved for transplant and also those to be removed for other/scheduled purposes at the donor handover.
- 3.6 The SNOD will complete the Donor demographic section on the HTA-A form HTA-A Research form if applicable.
- 3.7 The SNOD will provide the national histopathology request form (FRM5867) should the need for histological assessment of donor tissue be required.
- 3.8 The SNOD will provide pre-populated labels to the OPP for attaching to the Lymph/Spleen and vessel pots.
- 3.9 The SNOD will complete section A, the donor demographics and consent section of the vessel form, inclusive of "adhoc vessel" section if appropriate.
- 3.10 The SNOD will ensure a copy of the donors' blood group form is provided for the OPP for organs being retrieved for transplant and for those being removed for other/scheduled purposes.
- 3.11 The SNOD will ensure that the core donor information has been fully completed on DonorPath and that the Organ Specific donor forms have been fully completed by the surgeons and are dispatched with the retrieved organs and tissue to recipient centres.
- 3.12 The SNOD in conjunction with the OPP, is responsible for checking donor details, contents, sealing and labelling of the organ transport box.
- 3.13 The SNOD will take final responsibility for ensuring the correct organs are packaged and dispatched to the recipient centres and complete the Organ Handover Form **FRM4217**.
- 3.14 The SNOD is responsible for packaging, sealing and labelling of the heart if retrieved for tissues.



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4. Abdominal Organ Perfusion and Preservation flow chart

Ask SNOD to obtain and label necessaryblood and urine samples for all donors prior to withdrawal of life sustaining treatment / arrival in theatre (including those required for other/scheduled purposes e.g., QUOD, etc.)

Confirm with the lead abdominal retrieval surgeon what preservation fluids and volumes are required for retrieval

Receive labelled blood and urine samples from the SNOD

As directed by lead abdominal surgeon:

Prepare Aortic Perfusion line using twin lumen giving set and pressurise bags as directed by national protocol

Prepare Portal Perfusion line using single lumen giving set - No pressurisation required



Prepare Perfusion line(s) at Knife to Skin

Ask Anaesthetist to administer anticoagulant and antibiotics as agreed with lead retrieval surgeon

Prepare Perfusion line(s) prior to withdrawal of life sustaining treatment

Add anticoagulants to the perfusion line(s) as agreed with the lead retrieval surgeon

Place prepared perfusion line(s) into ice box to keep cold. In conjunction with the scrub practitioner ensure that sterile process is followed and no air in lines.

Prepare Organ transport boxes with ice in readiness to receive organs. Place labelled blood samples into organ boxes as required.

Commence in-situ perfusion when directed by the lead retrieval surgeon. Ensure that exact time is recorded a long with fluid volumes and batch numbers used. Ensure that SNOD is informed of exact cross-clamp time.

Inform lead retrieval surgeon when each perfusion bag is complete, how the perfusion is running (fast/slow) and if you encounter any problems.

Prepare additional fluids in preparation for ex-situ (back bench) perfusion of retrieved organs using single lumen giving set. Provide support to lead surgeon in back bench perfusion in line with national protocol

Receive packed organs for transplantation along with biopsies (if taken), lymph nodes and spleen (stored in saline) and vessels if required (preserved in UW) from scrubbed NORS team members and place in appropriate organ transport box. Ensure that all tissue samples are appropriatelylabelled.

Receive packed whole organs for other scheduled purposes along with biopsies (if taken) from scrubbed NORS team members and place in appropriate organ transport box. No other tissue or blood samples required.

Ensure that correct perfusion fluid, volume and LOT numbers are recorded on the HTA forms.

The SNOD will complete section A, donor demographics and consent on the vessel form, the OPP will complete section B, the Lead Surgeon will complete section B, check and sign the Vessel form. The OPP In conjunction with the SNOD, confirm that the donor details and contents of the organ box are present and correct (organ, bloods, tissues, documentation etc as required) and together seal and label the box ready for dispatch.

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Definitions

- Scheduled Purpose In the Human Tissue Act (2004), a licence is generally required if an activity is being undertaken for what the Act calls a scheduled purpose. Consent is required to use human tissue for these purposes. The Scheduled Purposes which apply are: Transplantation, Research, Clinical Audit, Education or training related to human health, Performance Assessment, Public Health Monitoring and Quality Assurance.
- Other Purpose: The Human Tissue (Scotland) Act 2006 states 'part of the body of a deceased person may be removed from the body and used, for the purposes of: (a) transplantation, (b) research, (c) education or training (d) audit.'

Related Documents / References

- MPD1043 National Standards for Organ Retrieval from Deceased Donors
- SOP5499 Theatre Manual for Deceased Organ Donors
- FRM4217 Organ Handover Form
- **SOP5663** Process for Authorisation for the Removal and Storage of Specific Organ/Tissue/Samples for Research and Other Purposes
- SOP5567 Process for Consent for Removal and Storage of Organs/Tissue/Samples for Research and Other Scheduled Purposes in QUOD Licensed Hospitals Only
- SOP5352 Findings During Retrieval Requiring Histopathology Assessment
- FRM5867 National Histopathology Request Form
- FRM6199 Transplant Vessels and Tissue