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
Addition of references to INOAR.

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, SOP5563.

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.
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 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.

2.6 The HTA-A form will accompany organs retrieved for transplant. The HTA-A Research form will accompany organs removed for other/scheduled purposes.

2.7 The NORS team OPP is responsible for packaging the PITHIA biopsy (s) and fully completing relevant paperwork, if 2 samples are requested, left and right, pack separately indicating laterality. Samples must not be packed with the kidney even if going to the same centre.

2.8 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.

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 complete the donor demographics and consent section of the vessel form.
3.8 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.

3.9 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.

3.10 The SNOD in conjunction with the OPP, is responsible for checking donor details, contents, sealing and labelling of the organ transport box.

3.11 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.

3.12 The SNOD is responsible for packaging, sealing and labelling of the heart if retrieved for tissues.
4. Abdominal Organ Perfusion and Preservation flow chart

- Ask SNOD to obtain and label necessary blood 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, PITHIA 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

- As directed by lead abdominal retrieval surgeon:
  - Prepare Perfusion line(s) at Knife to Skin

- As directed by lead abdominal retrieval surgeon:
  - Prepare Perfusion line(s) prior to withdrawal of life sustaining treatment

- As directed by lead abdominal retrieval surgeon:
  - Prepare Organ transport boxes with ice in readiness to receive organs. Place labelled blood samples into organ boxes as required.

- As directed by lead abdominal retrieval surgeon:
  - 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

- As directed by lead abdominal retrieval surgeon:
  - 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 appropriately labelled.

- As directed by lead abdominal retrieval surgeon:
  - 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**.

- As directed by lead abdominal retrieval surgeon:
  - Ensure that correct perfusion fluid, volume and LOT numbers are recorded on the HTA forms, complete the last section of the vessel form, ensure that the Lead Surgeon has completed and signed the Vessel form if required. 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 the box ready for dispatch.
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
- **SOP5425** - PITHIA process