

# **Donor Characterisation Manual**

Effective date: 09APR2025

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#### SUMMARY OF CHANGES

- Section 2 Importance of recording admission bloods and urine tests.
- Section 3 Clarity of requirement for regular ABG monitoring during cardiothoracic offering.
- Section 4 Addition of requirement to document Stop-Pause-Check and clinical conversations relating to confirmation of biological blood group in sequence of events.
- Section 13 Signposting to INF 1466, 1583, 1712 and 1713 outlining primary and back up laboratories and contact details.
- Section 13 Addition of reference to Post Donation Action Tracker.
- Section 19 Addition of MPD 1100.
- Section 21 Clarity of requirement to upload CXR image on attachments section and addition of MPD1100.
- Section 22 Caution added to consider impact of physical conditions, such as scoliosis and amputation, in the measurements of patients.
- Addition of SOP6589 Advanced Multi Organ Screening (AMOS).
- Section 23 Addition of Suitability Assessment for DCD Donation tool.
- Appendix 2 Addition of Post donation Actions Tracker for outstanding results to 10 point plan.
- Related Documents Addition of new documents.
- Removal of reference to obsolete documents, grammatical and spelling changes.

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#### INTRODUCTION

#### POLICY

Organ donation requires a thorough suitability assessment, known as characterisation, performed by a SN. It is ultimately the implanting surgeon's decision to accept an organ for transplant.

The Quality and Safety of Organs Intended for Transplantation Regulations (2012) stipulates that the procurement of organs shall be carried out only after all the requirements relating to the characterisation of the donor are completed.

### **PURPOSE**

This manual centralises all guidance relating to donor assessment and characterisation, outlining the role and responsibilities of the SN. The exception is documents relating to microbiology, which can be located in Clinical Microbiology Manual **SOP6514**. This manual is intended to support both adult and paediatric organ donation, however please be cautious to use in conjunction with **SOP5874** for specific details regarding the paediatric process.

A minimum data set must be collected for each donation. It is imperative that the SN acts in accordance with guidance from the <u>Advisory Committee for the Safety of Blood, Tissues and Organs (SaBTO)</u> in addition to national guidance from NHSBT. The SN must access all relevant sources of information to determine and obtain the most complete medical and social history possible. These sources of information may include, but are not limited to:

- Patient's medical notes from the current admission
- Patient's medical notes from previous admissions (where possible)
- General Practitioner information
- Communication with specialist practitioners
- Communication with the patient's family to obtain key information about the patient's medical, social, behavioural and travel history.

Characterisation requires the SN to undertake a full physical examination and assessment of the patient, including ascertaining physical parameters, and the undertaking of diagnostic testing procedures. It is vital that the SN only undertake those aspects of the physical assessment process in which they have received the appropriate training and feel confident and comfortable to do so. This manual is to be utilised by a qualified and trained SN. Expert advice must be sought for any area of practice in which the SN does not have the necessary experience, knowledge and training. If the SN is in training, this manual is to be utilised under supervision.

When establishing donor suitability there is a requirement to assess for clinical absolute or organ specific contraindications as per **POL188**, this may be identified at any point in characterisation. In the circumstance of identifying an absolute contraindication stand down donation. If assessment has identified an organ specific contraindication proceed with characterisation of other potential transplantable organs.

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Where required expert advice on transplant potential can be sought from a clinician in the form of a suitability phone call (screening) as per **SOP5003**. LN or ODMT on call are able to provide support and guidance in decision making in clinically complex cases should this be required.



In the event of standing down on organ donation consider suitability for tissue donation and referral to the NRC as per **SOP5024**. Ensure relevant information is documented to support tissue services assessment.

#### **TECHNOLOGY AND DOCUMENTATION**

DonorPath is designed to be a complete clinical record of assessment, actions and communications. It includes the function to upload clinically significant documents, images and videos, limiting the requirement for unnecessary alternative written communications (e.g. email or messaging) which is visible to Transplant Centres via the TransplantPath application.

Voice record clinical conversations, documenting the time and date they occur on DonorPath or **FRM4212** in line with **SOP3649**.

In the case of DonorPath, TransplantPath or IT failure complete FRM4212, FRM4211, FRM4193 as stipulated in SOP3925.

### **Advice**

All clinically significant information must be communicated on the CDDF ( a Wifi symbol area of DonorPath) and focus on contemporaneous documentation to ensure interface with TransplantPath.

Care should be taken when uploading/copying documents and use of highlighters discouraged due to difficulty reading results.

#### **RESPONSIBILITIES**

- Specialist Nurses (SN) To undertake a comprehensive patient assessment and perform all functions outlined within the donor characterisation process. To collate, deliver and explain all necessary information to the Recipient Centre Points of Contact, Tissue Establishments, Hub Operations and other relevant healthcare professionals.
- Lead Nurse (LN) / Organ Donation Management Team (ODMT) on call Advise and guide the SN should they require support.
- **Transplant Centres** To review information on TransplantPath and request additional appropriate diagnostics to inform clinical decision-making regarding organ suitability.
- Organ Allocations Specialists (OAS)'s Collaborate with SN in the registration call, following Stop Pause Check method to accurately document blood group and other information for offering.
- Donor Family Care Service (DFCS) Receive, share and file relevant results or information.

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#### **MEDICAL NOTES REVIEW**

- 1.1. A thorough review of medical notes should be conducted by the SN, including but not limited to:
  - a) Patient's medical notes from the current admission
  - b) Patient's medical notes from previous admissions (where possible)
  - c) General Practitioner information
  - d) Blood results
  - e) Imaging
  - f) Clinic letters
- 1.2. Where possible the assessment of medical notes should occur prior to undertaking conversations with the donor family.
- 1.3. Many sites have electronic medical records. If the SN is familiar with the Trust/Health Board electronic system a thorough assessment should be performed. In the circumstance of the SN being unfamiliar or unable to access the medical record assistance should be sought from either the embedded SN or record reviewed with an individual who has access and is familiar with the system.
- 1.4. There may be circumstances where consideration of accessing medical records from sites outside the donating hospital would assist with donor characterisation, all reasonable attempts should be made to access this information, and clear communication regarding requests and responsibilities documented. Documenting on a handover form only is not an acceptable practice and risks information not being accessed in a timely manner.
- 1.5. In the event that the SN is unable to access a section of the patients record this should be clearly documented on DonorPath.
- 1.6. Upload **all relevant documents** to DonorPath as an attachment (visible in DonorPath, TransplantPath and TissuePath).

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#### **BLOOD & URINE TESTS REQUIRED FOR ORGAN DONATION**

#### 2. INITIAL ASSESSMENT

- 2.1 There is a requirement for additional blood testing including: Group & Save, FBC, U&Es, LFTs, Amylase, HbA1c and clotting screen. As clinically indicated or requested consider CRP, eGFR, Gamma GT, glucose, blood cultures.
- 2.2 Request full set of routine blood results (if >12 hours old).
- 2.3 Review the results, including the trends and discuss any abnormal results with the medical practitioner caring for the patient.
- 2.4 Identify any actions/interventions if required for abnormal results.
- 2.5 HbA1c must be completed for <u>all organ donors</u>. If the result is pending at the time of donor registration/offering, please document that this is pending under the LFTs section 'other' free text box.
- 2.6 Document the results on DonorPath, communicating to Hub Operations & RCPoC(s) if required. Ensure RCPoC(s) are aware of any actions/interventions for abnormal results.
- 2.7 Request repeat or additional testing as requested by the RCPoC(s).
- 2.8 Request urine dipstick and send MC&S if indicated + urinary protein creatinine ratio if appropriate.
- 2.9 Upload all relevant documents to DonorPath as an attachment (visible in DonorPath, TransplantPath and TissuePath).
- 2.10 Ensure admission blood and urine tests are uploaded to DonorPath in an area visible on TransplantPath and TissuePath. Admission results must not be deleted or replaced in the fields. Admission bloods are an important measure of function and clinical journey.

#### 3. ARTERIAL BLOOD GASES (ABGS)

- 3.1 Review previous ABGs, including any ABGs performed during neurological death testing.
- 3.2 For CT offering the ideal standard for assessment is a reference gas on ventilator settings of:

FiO2 100%, PEEP 5cmH2O (PEEP up to 8cmH2O acceptable).

- 3.3 An ABG should be obtained 20 minutes after ventilatory adjustments. If this is not able to be performed, for example due to clinical condition of the patient and following discussion with the clinical team, document detail on DonorPath.
- 3.4 Return to baseline settings, or agree requirements with clinical team, following completion. If the donating unit have a requirement for undertaking the reference ABG in a different way please follow local protocols and document on DonorPath, for communication with RCPoC(s).
- 3.5 During cardiothoracic offering 2 hourly 100% ABGs will be required and should be reviewed, documented on DonorPath, and any interventions required discussed with medical practitioner and communicated to RCPoC(s).
- 3.6 Request any additional ABGs as required by the RCPoC(s)

#### 4. BLOOD GROUP



There is a risk, where a patient has received multiple blood transfusions, that their ABO group may be recorded on a hospital system as an O blood group, where this is in fact not their true biological blood group.

To mitigate the risk of ABO incompatible organ transplantation occurring as a result of the donor blood group being recorded incorrectly, confirmation is required from the donor hospital transfusion laboratory to exclude an inconclusive/indeterminate result.

4.1 Safety is paramount in the checking and recording of the patient's blood group. For this reason, the phonetic alphabet must be used when discussing patient blood group verbally with anyone (such as biomedical scientist or during registration call with Hub Operations).

Phonetic alphabet	
A	Alpha
В	Bravo
0	Oscar

4.2 For hospital laboratories to safely confirm a patient's blood group, all patients are required to have two blood samples tested. Some patient treatments such as Bone Marrow transplant can alter a patient's historic blood group therefore certainty regarding patient history and confirmation is essential.



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#### **↑** Caution

Even in circumstances where a patient has a historical sample within the donor hospital, it is required for the Specialist Nurse to re-confirm the patient's blood group as part of donor characterisation. Ensure two samples.

- 4.3 Request a Group and Save as per donor hospital policy ensuring it is clearly documented on the request that confirmation of the patient's blood group is for the purposes of solid organ transplant.
- 4.4 Contact laboratory to notify and anticipate repeat sample and clarify purpose is to support solid organ transplantation.
- 4.5 Request BMS provides you with LIMMS system details of all blood products issued for patient. This can be cross referenced against those recorded as transfused. Consideration must be given to pre-hospital transfusion.
- 4.6 If a donor has been transfused with blood products prior to the blood group sample being sent (either in the form of pre-hospital transfusion of the use of major haemorrhage packs in trauma departments), the ABO (and Rh D) group results may be indeterminate.
- 4.7 Certainty regarding blood products transfused prior to Group and Save sampling is essential for the determination of the ABO group.
- 4.8 JPAC define mass transfusion as a result of major haemorrhage as:
  - Loss of more than one blood volume within 24 hours (around 70 mL/kg, >5 litres in a 70 kg adult)
  - 50% of total blood volume lost in less than 3 hours
  - Bleeding in excess of 150 mL/minute.
- 4.9 Once the volume of blood transfused in any 24-hour period is equivalent to the patient's own blood volume (8-10 units for adults and 80-100 mL/kg in children). ABO and Rh D compatible blood can be issued without the need for a serological crossmatch. Transfusion management of major haemorrhage (transfusionguidelines.org).

### **↑** Caution

For a potential organ donor who is recorded as an O blood group and received any transfusion within the last 7 days the process detailed on flow chart page must be followed.

Controlled if copy number stated on document and issued by QA



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For a potential organ donor who is recorded as an O blood group and received any transfusion within the last 7 days:

Review volume of transfusion in past 7 days clearly noting number of hours since last transfusion. Has the patient received 8 or more units for adults and 80-100ml/kg in children in any 24hr period over the last 7 days?

Transfusion management of major haemorrhage (transfusionsguidelines.org)



NO? Proceed with issued blood group

Contact laboratory, inform BMS this patient is an organ donor and confirm the BMS has received the repeat sample for the purposes of organ donation and transplantations.

Clearly state this patient's biological blood group (non-transfused) is needed for the purpose of organ donation and transplantation.

Ascertain whether due to the patients transfusion history the crossmatch sample shows a mixed field reaction?



NO? P

Proceed with issued blood group

Request to speak with a Senior BMS/Clinician

Clearly state this patient's biological blood group (non-transfused) is needed for the purpose of organ donation and transplantation.

Ascertain whether due to the patients transfusion history the crossmatch sample shows a mixed field reaction?

Establish whether the patient's biological blood group as opposed to the transfused blood group can be established for the purposes of organ donation and transplantation?

If clarification of biological blood group unclear the NHSBT PBM or RCI Consultant on call should be contacted for support if needed.



Determine when patient's blood group will be available.

Escalate to ODMT on call to advise of above pathway and intention to proceed.



Follow SOP5732 guidance in the event that ABO and Rh D Group in a potential donor is indeterminate

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4.10 Following collation of information above if this is a confirmed final result then it is safe to continue. All clinical conversations require documentation on DonorPath and utilisation of voice recording as per **SOP3649**.

4.11 In circumstances where the blood group is indeterminate SNs must follow **SOP5732**. Only use a Blood Group that has been confirmed by serological testing within a blood bank. Whilst other areas can process a blood group, the results may not be validated.

**STOP - PAUSE - CHECK** 

- 4.12 Obtain a hard copy blood group. Hospital guidance on access can be found within the Regional Donor Handbooks located on File director.
- 4.13 Review the hard copy blood group taking time to fully assess the layout and any conflicting information that may be contained within the hard copy report. Any information that is unfamiliar or not clear when reviewing must be discussed with the Biomedical Scientist (BMS).
- 4.14 Check against the known patient 3 points of PID, as available from patients' medical notes comparing with the PID on DonorPath, to ensure the correct donor record is accessed.
- 4.15 Check the hard copy blood group with a qualified Health Care Professional (HCP) against patients' ID band to confirm name, date of birth, and NHS number/hospital number / CHI number (Scotland).
- 4.16 There are two essential components to this witnessed check:
  - Ensuring the blood group is that of the correct patient.
  - Confirming the blood group on the hard copy matches that recorded on DonorPath.
- 4.17 Confirm verbally using the phonetic alphabet the recorded hard copy blood group to the witnessing qualified HCP.
- 4.18 Open DonorPath displaying and confirming the patient's 3 points of PID. Once satisfied add the blood group to DonorPath paying attention to confirmatory notifications on DonorPath.
- 4.19 The SN and qualified HCP must sign, print name, date and time on the paper hard copy.
- 4.20 The above must be completed prior to the SN registering the patient as a donor with Hub Operations. SNs should refer to **MPD1382** for further guidance on the registration call.

**STOP-PAUSE-CHECK** 

- 4.21 The patient's blood group must be confirmed at SN to SN handover, on all occasions where there is a change in staffing. This must be undertaken as per **MPD921**.
- 4.22 All clinical conversations relating to confirmation of blood group require to be clearly documented in Sequence of Events, including name and role of staff member.
- 4.23 Upload a copy of blood group to DonorPath.

#### 5. ESSENTIAL CHARACTERISATION BLOODS

#### **Pregnancy β-HCG blood test**

Patients with reproductive capacity between the ages of 12 and 55 years (before their 56th birthday) should be considered as patients who could potentially be pregnant.

Establishing pregnancy status is mandatory and a β-HCG blood test is required to exclude pregnancy (unless the individual is already known to be pregnant or documented total abdominal hysterectomy with bilateral salpingo-oophorectomy). A urine sample is not acceptable, in line with recommendation from National Organ Donation Committee.

- 5.1 As part of the donor characterisation process, SN should confirm with the relevant HCP whether a β-HCG blood test has already been performed on the patient during this admission to hospital.
- 5.2 If β-HCG blood test has not been performed during current admission the SN must inform the next of kin/nearest relative/partner that for donation to proceed and as part of routine donor assessment a blood test will be required to exclude pregnancy.
- 5.3 Request test.
- 5.4 Upload result to DonorPath. Refer to Establishing Pregnancy Status and Pregnancy in Donation **MPD891** for specific guidance regarding documentation and action in circumstance of positive result.

The local hospital is the default laboratory for performing the  $\mbox{\ensuremath{\mathbb{G}}}$ -HCG blood test. If there are difficulties accessing a  $\mbox{\ensuremath{\mathbb{G}}}$ -HCG blood test, engage with local key stakeholders and laboratory staff to seek options for processing including transfer to alternative local laboratory if required.

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### 6. MICROBIOLOGY, TISSUE TYPING AND ADDITIONAL BLOOD TESTING

Blood sample volumes, as agreed with ALL laboratories in UK:

Test	Volume Adult	Volume Paediatric	Sample Type
HLA	6mls	3mls	EDTA
Microbiology*	14mls	Agree volume with lab proportionate to age/size	Clotted
Additional Blood Testing	15mls	Agree volume with lab proportionate to age/size	EDTA

<sup>\*</sup>Where maternal microbiology is required a further sample to accompany any tissue donation should be taken prior to retrieval in line with JPAC guidelines.

	Potential Donor	Bloods for HLA	Bloods for Microbiology
England, Wales & NI	Criteria met for deemed (Not registered a decision) Opted Out	Cannot be taken without discussion & agreement from family. Result will only be released after written consent has occurred.	Cannot be taken without discussion & agreement from family or as part of completion of consent.  The sample will only be processed after written consent has occurred.
I, Wales NI	Expressed opt-in decision On ODR Family expressed decision	May be taken and sent to laboratory. Result will only be released after written consent has occurred.	May be taken and sent to laboratory. The sample will only be processed after written consent has occurred.
Sco	DBD donors – confirmatory DDNC testing has been carried out.	Cannot be taken without discussion & authorisation from family, until after duty to inquire, and checking for unwillingness or change of mind.  Result will only be released after written authorisation has occurred.	Cannot be taken without discussion & authorisation from family, until after duty to inquire, and checking for unwillingness or change of mind. The sample will only be processed after written authorisation has occurred.
Scotland	DCD donors – or prior to DDNC testing	Cannot be taken without discussion & authorisation (for donation & Type A PDPs) from family, until after duty to inquire, and checking for unwillingness or change of mind.  Result will only be released after written authorisation has occurred.	Cannot be taken without discussion & authorisation (for donation & Type A PDPs) from family, until after duty to inquire, and checking for unwillingness or change of mind. The sample will only be processed after written authorisation has occurred.

## **⚠** Caution

Large volume blood loss requiring intravenous fluid replacement therapy may result in false negative screening test results due to dilution of specific antibodies or antigens below the lower limit of detection.

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6.1 The volume of fluid that may be infused before false negative results may occur depends on the size of the individual, amount of blood loss and the nature of the infused fluid. If haemodilution calculation is >50%, a pre-dilution sample must be sought. If this sample cannot be found, then the Microbiology laboratory, RCPoC(s) & TE's must be informed and documented on DonorPath/FRM4211.

#### **↑** Caution

Particular 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. See **SOP5874** for guidance on haemodilution calculation for children.

- 6.2 If the patient has been transfused with blood, blood components or plasma expanders (these include but are not limited to colloid, HAS, immunoglobulin therapy etc) in the immediate pre-donation period (within 48 hours of donation) then the sample obtained prior to transfusion should be sought and tested. If a pre-transfusion sample is not available for testing, then this must be recorded in DonorPath/FRM4211 and reported to clinicians transplantation.
- 6.3 If a pre-transfusion/pre-dilution blood sample is obtained for microbiology testing, then there is no requirement to send an additional posttransfusion/post-dilution sample. However, if pre-transfusion/pre-dilution blood sample results are obtained AFTER post-transfusion/post-dilution results, both results should be included onto DonorPath to ensure that both are visible.
  - Consider impact of transfusions/haemodilution on samples.
  - Inform the relevant laboratory staff that samples are being sent and provide details of the potential donor and an estimated time of arrival of the samples.
  - Confirm the contact details for the laboratory staff.
  - If a pre-transfusion sample is required, ensure that the Coroner/Procurator Fiscal's permission has been sought if applicable - refer to MPD865. Ensure sufficient samples remain should Coroner/Procurator Fiscal require. Ensure date, time and location (i.e. hospital) the sample was taken is clearly written on the sample tube.
  - All specimens, including maternal samples, MUST be clearly and unequivocally identified with a minimum of three key identifiers which must be cross-checked to positively identify that the information on the sample matches the patient and the information given on the request form prior to packaging and sending.

- Complete FRM4278 and FRM4279 and package the blood samples, including maternal samples if applicable, using the bio-pouch, with the correlating form. If a donor number has not yet been generated, ensure the DonorPath referral ID and a minimum of 3 points of PID including the donors name are used.
- Image and upload to DonorPath completed blood forms ahead of packaging for reference and in the event of any incident or follow up.
- Access Microbiology Manual SOP6514 for guidance on receipt of microbiology results, for laboratories live with ERT and non-ERT processes and issues in event of IT failure.
- Check results entered onto DonorPath for accuracy.

#### 7. BREAST FEEDING AND MATERNAL SAMPLES

- 7.1 For patients under 18 months and any child who has been breast-fed in the last 12 months, microbiological samples, including a sample to accompany tissue donation if applicable, will be required for testing from the child's mother or individual who breast fed the child as per the Medical and Social History (MaSH) rationale document **INF947**.
  - Maternal samples must be labelled with at least 3 PID and include date, time and location (i.e. hospital) the sample was taken. These 3 maternal PID must be recorded on DonorPath and provided on all documentation including DFCS handover FRM5499.

#### 8. HEV AND HHV8 TESTING

- 8.1 HEV and HHV8 testing is performed routinely on all donors.
- 8.2 For detailed guidance regarding indication and instructions regarding samples refer to **SOP6514**.

#### 9. BBV NAT TESTING

- 9.1 England, Wales, Northern Ireland If high risk factors are identified during travel, behavioural risk and sexual history assessment testing is indicated.
- 9.2 Scotland BBV NAT testing is performed routinely on all donors.
- 9.3 For detailed guidance regarding indication and instructions refer to Microbiology Manual **SOP6514.**

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#### 10. MALARIA AND TRYPANOSOMA CRUZI (T.CRUZI) TESTING

- 10.1 Risks for Malaria and T.Cruzi should be established during completion of MaSH, medical notes or GP assessment. There is a requirement to check the GDRI for advice on indication of testing.
- 10.2 For detailed guidance regarding indication and instructions refer to Microbiology Manual **SOP6514**.

#### 11. WEST NILE VIRUS TESTING

- 11.1 Risks for West Nile Virus should be established during the completion of MaSH, medical notes or GP assessment. There is a requirement to check the GDRI for advice on indication of testing.
- 11.2 For detailed guidance regarding indication and instructions refer to Microbiology Manual **SOP6514**.

#### 12. TROPICAL DISEASES

- 12.1 Including Chikungunya, Dengue, Yellow Fever and Zika.
- 12.2 For detailed guidance regarding indication and instructions refer to Microbiology Manual **SOP6514**.

#### 13. LABELLING AND TRANSPORT OF SAMPLES

- 13.1 Fill bottles as per manufacturers guidance to FILL line.
- 13.2 Collection of samples and labelling of tubes must be performed as one uninterrupted process.
- 13.3 Blood taken must always be labelled at the bedside by the HCP (SN or bedside nurse) who has taken the sample. Sample tubes must never be pre-labelled.
- 13.4 All handwritten labels must be legible with at least three PID and include date, time and location (i.e. hospital) the sample was taken. If used, pre-printed labels must adhere to hospital and laboratory requirements.
- 13.5 Package samples in bio-pouch for transfer.
- 13.6 If a donor number has not yet been generated, ensure the DonorPath referral ID and a minimum of 3 PID including the donors name are used.
- 13.7 Identify local Virology and HLA Laboratories from Regional Handbook.
- 13.8 If usual Virology or HLA laboratory is not available please see INF1583 and/or INF1466 for details of back-up laboratories. Contact details and delivery addresses can be found in INF1712 and INF1713.
- 13.9 Inform laboratory of pending samples, including additional samples to be forwarded on to MSL Virology/SNBTS. Ensure that any delays in obtaining

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- and/or sending of the samples is communicated with the relevant laboratory staff.
- 13.10 Arrange transport of the samples to the local testing laboratories. Record estimated and actual time for collection on DonorPath.
- 13.11 Document conversations and actions in Sequence of Events in DonorPath.
- 13.12 Ensure that any additional tests triggered as part of donor characterisation are documented in a section that is visible to transplant centres.
- 13.13 Ensure any additional blood tests requested are added to Post Donation Action Tracker for follow up.

#### 14. CONTACTING LABORATORIES

- 14.1 In circumstances where bloods have been sent for processing and a subsequent risk factor has been identified following completion of MaSH, there is a requirement to e-mail the laboratory.
- 14.2 In circumstances when small samples are taken for paediatric donors <30kgs the mandatory tests will be prioritised. Note: If small samples (2mls) are sent this is sufficient for HEV ONLY.

# 15. RECONCILIATION (RECIEPT & CHECKING) OF ADDITIONAL TESTING RESULTS POST DONATION

- 15.1 The DFCS receive notification via email from reference laboratory to confirm receipt of samples. DFCS will check anticipated results from the handover **FRM5499** and update visual management system.
- 15.2 If no result in 7 days following donation the DFCS will follow up.
- 15.3 Refer to Microbiology Manual **SOP6514** for detail and information on actions when receiving microbiological blood results.
- 15.4 Results from additional testing may need to be recorded on DonorPath where there is no dedicated result field. In this scenario ensure clear documentation of receipt of results and actions performed in sequence of events.

### 16. BLOOD TESTS IN NON-PROCEEDING ORGAN DONORS

16.1 In cases where organ donation stands down and HLA and routine microbiology (HIV, HCV HTLV etc) have not yet been completed please inform HLA and



microbiology laboratories to stand down. TES complete their own routine microbiology.

16.2 Stand down additional testing (HEV, HHV8, Malaria, T Cruzi, WNV) with MSL via email on <a href="https://www.NTMRL@nhsbt.nhs.uk">NTMRL@nhsbt.nhs.uk</a> or <a href="https://www.NSS.SNBTS-Tissues-Seniors@nhs.scot">NSS.SNBTS-Tissues-Seniors@nhs.scot</a> (Scotland) as if tissue donation is occurring, TES will request and complete their own additional testing.

### **↑** Caution

The exception to this is a rare circumstance where heart for valves are retrieved by NORS in theatre but are the only organ/tissue being donated (e.g. stand down of all organs in theatre and no other consented tissues) and are going to an external heart valve bank. In this situation, the SN will need to request additional testing

- 16.3 Where positive virology has been identified during donor characterisation, BBV NAT should continue to be completed by MSL/SNBTS as confirmatory testing as the patient's family may need to be informed if there is a risk to their health.
- 16.4 If FRM5499 has already been sent to DFCS then please notify DFCS that donation has stood down, so they do not pursue outstanding Microbiology results.

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#### SARS-CoV-2

- 17.1 All potential deceased organ donors in the UK require nose and throat swabs and endotracheal aspirates tested for SARS-CoV-2 RNA.
  - Obtain samples and complete request FRM6445.
  - Complete FRM6439 with background detail and results.
  - Upload **FRM6439** to DonorPath as an attachment (visible in DonorPath, TransplantPath and TissuePath).
- 17.2 Unless COVID-19 is suspected, a single set of negative nose & throat and endotracheal aspirate results for SARS-CoV-2 RNA preferably within 24 hours (and no longer than 48 hours) of organ retrieval is sufficient to complete characterisation. These results will be in addition to hospital and intensive care unit admission tests, if performed.
- 17.3 NHSBT does not currently recommend the routine use of SARS-CoV-2 antibody results for donor characterisation purposes. When available, a complete set of molecular and serological tests can be used to inform assessment of specific cases.
- 17.4 NHSBT does not recommend the routine use of chest computed tomography (CT) for donor characterisation purposes or clinical decision-making on suitability to be an organ donor due to insufficient sensitivity and specificity.
- 17.5 In potential deceased donors without a diagnosis of COVID-19 (where COVID-19 is not felt to contribute to the cause of death) SARS-CoV-2 RNA positivity is no longer a contraindication for full assessment and donation of non-lung organs, even when results are consistent with a current infection. It is no longer essential to have an interpretation of test results from the testing laboratory virologist in all potential donors with positive SARS-CoV-2 screening tests.
- 17.6 Refer to SARS-CoV-2 Assessment and screening in organ donors and recipients **POL304**.

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#### INFECTION TESTING

The therapeutic use of organs for transplantation demands that their quality and safety should be such as to minimise any risks associated with the possible transmission of infections and diseases.

If any suspected infection is identified as part of the characterisation process (physical assessment, during review of medical notes, family or GP discussion) the SN should confirm that microbiological testing has been requested. If not, the SN should speak with medical practitioner to ascertain if this can be facilitated.

If the SN has instigated the testing of any microbiological samples, then they must follow up these results, document on DonorPath and ensure these results are shared with all receiving centres as per SOP4938.

#### SUITABILITY ASSESSMENT (SCREENING)

There are occasions where clinical expertise is required to establish organ suitability, in the absence of an absolute or organ specific contraindication.

It is important to assess each organ individually to establish if a suitability phone call to a transplant centre is required. Please refer to SOP6589 Advanced Multi Organ Screening (AMOS)



#### ∧ Advice

In the event of standing down on organ donation consider suitability for tissue donation and referral to the NRC as per SOP5024. Ensure relevant information is documented to support tissue services assessment.



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#### TESTS AND IMAGING REQUIRED FOR ORGAN DONATION

The purpose of this section is to inform and guide the SN in requesting that relevant diagnostic imaging have been undertaken as part of characterisation, reported and appropriately uploaded to DonorPath for review by transplant centres and relevant information communicated to RCPoC as per MPD867.

Media (images and videos) can be uploaded to DonorPath and viewed via the TransplantPath application to assist RCPoC(s) and implanting surgeons determine if organs are suitable for organ donation.

#### **⚠** Caution

In Scotland only, Authorisation for Pre-Death Procedures (PDPs) is required for all DCD donors or donors where authorisation is gained prior to confirming Death by Neurological Criteria. 'Type A' are routine ICU tests and 'Type B' PDPs are invasive and less common diagnostic tests requiring additional Authorisation. New diagnostic tests must only be undertaken following the Duty to Inquire (DTI) in line with Scottish Legislation.

Any requests for Coronary Angiography or CT chest in DCD donors must be escalated to the ODMT on call and discussed with an appropriate medical professional prior to facilitating.

#### ∧ Advice

In regions who are participating in image transfer via the PACS system pilot (for CT organs only) there is a requirement to follow process PDV1184. This does not preclude the requirement to upload basic images onto DonorPath.

### 18. **ELECTROCARDIOGRAM (ECG)**

This section applies to **ALL** potential heart donors.

- 18.1 Following confirmation of death using neurological criteria (DBD) or following consent authorisation to proceed with DCD heart donation:
- 18.2 Request the ECG once consent/authorisation for heart donation ascertained.
- 18.3 Inform the family why the ECG is being performed, if asked.
- 18.4 Ask the medical practitioner to review the ECG.
  - 18.4.1 Request a review of the ECG from the medical practitioner. The main points that the medical practitioner should consider are:
    - Evidence of ischaemia
    - Presence of Q waves
  - 18.4.2 Request that the medical practitioner document their review of the ECG in the patient's medical records.
- 18.5 Upload the ECG and report information onto DonorPath.
- 18.6 Add the report information to the Investigations section on DonorPath.

### 19. **ECHOCARDIOGRAMS (ECHO)**

This section applies to **ALL** potential heart donors.

- 19.1 Following confirmation of death using neurological criteria (DBD) or **following** consent to proceed with DCD donation:
  - 19.1.1 Ask the medical practitioner if an ECHO has been performed.
  - 19.1.2 Ask when the ECHO was performed.
  - 19.1.3 Clarify if a report is available.

### **∧** Caution

An ECHO performed days prior to confirmation of death using neurological criteria may not show a true picture of the function of the heart at the time of donation.

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19.2 Has an ECHO been performed within the last 24 hours?

If No go to Step 19.3

If Yes go to Step 19.6

- 19.3 Ask the medical practitioner to request an ECHO.
  - 19.3.1 Make this request following family consent/ authorisation for heart donation.
  - 19.3.2 Inform the family why the ECHO is being performed, if required.
- 19.4 Will an ECHO be carried out following your request?

If Yes go to Step 19.5

If No go to Step 19.7

- 19.5 Ask the relevant medical **practitioner if certain minimum information can be recorded.** 
  - 19.5.1 Core information is required by the RCPoC(s)/Implanting surgeons from the ECHO, to determine if a heart is suitable for transplantation. Use INF1705 as a guide when speaking with the relevant medical practitioner.
  - 19.5.2 Document all conversations held with the medical practitioner performing the ECHO, sign and date.



If all the information cannot be obtained, core minimum details should include: any evidence of ventricular hypertrophy or any structural abnormalities.

- 19.6 Upload the information onto DonorPath.
  - 19.6.1 Include all details reported by the relevant medical practitioner.
  - 19.6.2 Images can uploaded and will be subsequently available to be viewed by transplant centre via TransplantPath, refer to MPD1100 for guidance.
- 19.7 On any occasion where an ECHO cannot be performed the SN should refer to **MPD1382**, clearly documenting on DonorPath.
- 19.8 In circumstances where a Transthoracic ECHO is requested and supported INF1705 should be provided to support reporting.

## 20. CT AND MRI SCANS (INCLUDING CT ANGIOGRAMS)

This section applies to **ALL** potential donors.

CT and MRI scans may have been taken of various anatomical regions. These scans may provide detail about the quality and function of potential organs suitable for transplant – for example Thoracic and Abdominal CT scans.

- 20.1 Ascertain from the patient's medical records if any CT and/or MRI scans have been performed during any recent hospital admissions.
- 20.2 Review the patient's medical records.
- 20.3 Determine if a CT/MRI scan has been performed.
- 20.4 Record the date of the CT/MRI scan.
- 20.5 Was a CT/MRI performed?

If Yes go to Step 20.6

If No go to Step 21.1

20.6 Was the CT/MRI scan reported by a specialist radiographer?

If No go to Step 20.7

If Yes go to Step 20.12

- 20.7 Speak with the medical practitioner to ask if a specialist radiographer is able to review the CT/MRI scan.
- 20.8 There may be cases in which specialist radiologists (neurological) have presented a second report on the initial scans which may provide more detail for the recipient points of contact.
- 20.9 Can a specialist radiographer review the CT/MRI scan?

If No go to Step 20.10

If Yes go to Step 20.12

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- 20.10 Document on DonorPath that a specialist review of the CT/MRI scan will not occur.
- 20.11 Document conversations held with medical practitioner(s). Reasons that a specialist review will not occur can include:
  - If medical practitioner does not agree to refer to a specialist radiographer to review.
  - If specialist radiographer does not agree to review.
  - Logistical/process issues that arise preventing specialist review from occurring.
- 20.12 Upload the relevant information onto DonorPath, including both medical entry reports and formal reports.

Include any details as reported by the: -

medical practitioner

#### AND/OR

· specialist radiographer.

The RCPoC will be able to relay this information to the implanting surgeons to inform decision making.

If a patient has not had a CT/MRI scan this does not preclude organ donation.

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### 21. CHEST X-RAY (CXR)

This section applies to **ALL** potential donors.

Plain film x-rays should be reviewed and this information entered onto DonorPath if appropriate.

- 21.1 Establish whether a CXR has been undertaken on the date of **donation**.
- 21.2 Ask the medical practitioner and/or nursing staff date of CXR. To ensure the safety and quality of organs for transplantation a CXR **should** be taken on the day of donation to identify any possible adverse findings (e.g. tumour, tuberculosis).
- 21.3 Has a CXR been taken today?

If No go to Step 21.4.1

If Yes go to Step 21.6

- 21.4 Following confirmation of death using neurological criteria (DBD) OR following consent to proceed with DCD process, request a CXR to be taken:
  - 21.4.1 Make this request following confirmation of consent. Advice can be sought, if necessary, from relevant RCPoC(s).
  - 21.4.2 Inform the family why the CXR is being taken, if asked.

### **∧** Advice

If a CXR has been taken within the past 48 hours, there may be no valid clinical reason to perform a further CXR. The medical practitioner has the final decision to authorise a CXR.

21.5 Will a CXR be taken today?

If Yes go to Step 21.6

If No go to Step 21.14

- 21.6 Ask the medical practitioner to review the CXR.
- 21.7 In circumstances where a formal radiological CXR Report is available on the hospital system this should be used. The SN should document in DonorPath that this is a formal radiology report.
- 21.8 If a formally reported CXR is not available the SN must request this, the formal report can be requested once the CXR is available. In circumstances where it is

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not possible to have a CXR reported on prior to organ offering, the SN should explore whether any admission CXR has been formally reported on and clearly document this on DonorPath.

- 21.9 In all other circumstances the SN must ask the medical practitioner to review the CXR. It is the responsibility of the SN to provide rationale for the review advising the medical practitioner that these results will help the RCPoC(s) and implanting surgeons. The SN should request medical practitioner comments on the following:
  - To the best of their knowledge and ability determine if the lungs are suitable for donation to proceed noting any signs of infection or consolidation to the lungs.
  - Determine to the best of their knowledge that there is no evidence of Tuberculosis or any other notable potential tumour / cancer by detailed review of the CXR. If there is any doubt, then expert advice should be sought from senior medical practitioners.
- 21.10 It is the responsibility of the SN to request that the medical practitioner clearly document their review of the CXR in the patient's medical records noting no evidence of the above.
- 21.11 Upload the relevant information of CXR onto DonorPath.
- 21.12 Upload image of CXR into Media section of attachments on DonorPath refer to **MPD1100** for guidance.
- 21.13 Include any detail as reported by the medical practitioner as well as the role/grade of the individual reviewing the CXR. The RCPoC(s) will be able to relay this information to the implanting surgeons to assist in the decision making process.
- 21.14 In circumstances where the SN requested a formal CXR report as part of donor characterisation which was not available prior to offering organs it is the responsibility of the SN to ensure the findings of this report are followed up and communicated as per **MPD881** and **SOP4938**.
- 21.15 Document on DonorPath reasons why CXR not performed within 48 hours.
- 21.16 Update DonorPath Communicate to RCPoC(s) as required as per SOP4938. If a CXR is not performed within 48 hours, this does not preclude lung donation.

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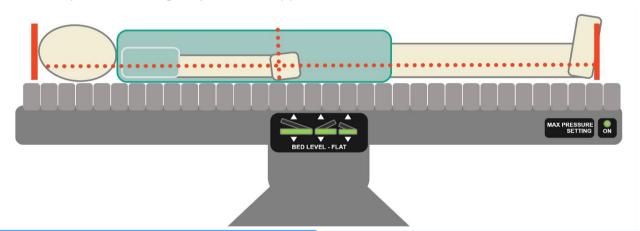
#### PHYSICAL ASSESSMENT

#### 22. BODY MAP

This is NOT a medical examination, rather a physical examination/assessment.

Physical examination and body measurements allow the detection of clinical conditions that might contraindicate the donation and/or suggest laboratory tests to dispel doubts about the eligibility of the donor, in addition to assessing the compatibility between the size of the transplant organ and that of the recipient to prevent size mismatches.

The information required for a complete and thorough physical assessment should be obtained by the SN using a systematic approach.



#### **HEIGHT**

#### Action:

- Measure only on fully flat bed, remove pillow, hard mattress (fully inflated if air mattress) and with body in correct alignment.
- Use hard flat surface (e.g. clipboard) to assist and measure from heel to top of head close to patients' body.
- Measure patient twice one HCP performs measurement whilst other observes, Reverse for confirmation.
- HCP who witnessed/assisted measurements to sign and document on FRM5545

#### Advice:

- If patient on inflatable mattress this should be set to 'hard'. If no hard setting and it is safe and practical to do so, it should be deflated.
- Follow MPD1382 when registering donor.
- If NORS team choose to check donor height they must follow the same procedure.
- Exercise caution in situation of clinical issues such as scoliosis or limb amputation which may present challenges in accurate measurement.

#### **ABDOMINAL GIRTH**

#### Action:

- Measure girth at point of umbilicus.
- If abdominal girth is distended SN should assess reasons why.

#### **WEIGHT**

#### Action:

- Request patient is weighed on date of donation, may only be feasible if bed has weighing facility.
- Document if weight is estimated.

#### Advice:

- All paediatric patients should have an accurate measured weight recorded for correct drug dosages & appropriate allocation and offering particularly of size matched.
- In circumstances when no weight is known and no resources for them to be weighed then weight should be estimated through discussions with medical practitioner and health care staff.



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HEAD AND NECK EXAMINATION	Visible injuries, trauma or swelling to the head, face or neck. Evidence of any surgery/scars. Examine mouth and note size of ETT/Trache and placement. Nasogastric tube presence. All invasive lines (CVC, EVD, ICP Bolt etc.). Raised JVP Neck fractures – if neck collar insitu discuss with medical practitioner if able to be removed for assessment.
CHEST EXAMINATION	Listen to chest for bilateral air entry, wheezes, crackles & secretion retention – consider requirement for intervention.  Previous surgery/scars including implantable devices.  Location of any existing drains, type, activity.  Chest trauma.  Breast assessment for all patients: physical and visual examination for any changes in the breasts and underarm areas of the body.
ABDOMINAL EXAMINATION	Visualise abdomen and note size and shape and any abnormalities. Auscultate bowel (Note hyperactive/hypoactive bowel sounds). Palpate abdomen (Is abdomen soft/distended/tense?). Date of last bowel movement. Any visual signs of pregnancy see MPD891.
PELVIS AND GROIN EXAMINATION	Observe and record any indications of abnormality in pelvic region, including injuries, trauma or swelling.  Central cannula – what type, how many and position.  Vaginal, penile or anal bleeding or discharge.  Testicular assessment.  External evidence of STI's.
SKIN AND BACK EXAMINATION	Observe and document any skin abnormalities including injuries, trauma, swelling and full exam for any masses/enlarged lymph nodes.  Colour, temperature or skin turgor. Signs of exanthema/rashes/mottling. Moles, skin neoplasms of concern and/or Spider naevi. Healed/purulent wounds. Surgical emphysema. Injection and/or Lumbar puncture sites. Surgical/non-surgical wounds and/or scars. Puncture wounds due to suspected or known illegal drug use. Curvature or scoliosis of spine. Tattoos & piercings (location and when performed should be ascertained).
LIMBS AND DIGITS EXAMINATION	Fractures External limb fixators Missing limbs/digits Surgical/Non-surgical wound sites Soft tissue damage and swelling Muscle wastage Injection sites "Track Marks" Peripheral cannula Clubbing Micro emboli Capillary refill

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- 22.1 Specialist clinical advice should be sought if concerns are raised. If a previously unidentified clinical condition is found e.g. suspicious mole or testicular lump, then the SN must request expert clinical guidance to quantify what impact, if any, this condition may have on organ suitability.
- 22.2 A copy of FRM5545 must be completed and uploaded onto DonorPath. Any relevant information that has the potential to impact on donation and transplantation must also be accurately documented within the visible sections of DonorPath as per MPD867.
- 22.3 The findings from the physical assessment will complement the other findings undertaken during the donor characterisation process to ensure that a complete medical, physical and social history is obtained by the SN.

#### 22.4 IMPLANTABLE DEVICES

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.

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### DCD Assessment - Suitability Assessment for DCD donation tool

- 23 Suitability Assessment for DCD Donation
- 23.1 As per **SOP3781**, **FRM7814** should be completed and uploaded to DonorPath during initial assessment and prior to approach. Upload each assessment made. It is expected that re-assessment using **FRM7814** will be completed at various points during the DCD pathway not limited to:
  - SN handovers
  - Change in neurology
  - Change in level of support
  - Prior to offering
  - Prior to NORS mobilisation
- 23.2 **FRM7814** is not a decision making tool. It is to be used as an aid alongside clinical experience when assessing all DCD donors for suitability regarding imminent death. Assessment is to include the clinical condition of the patient over the last 12-24 hours. Excluding potential DBD donors that meet neurological criteria but present with preconditions or instability incompatible with testing, or family requests not to proceed with testing.
- 23.3 As a minimum the assessment will be undertaken by a SN & Senior treating Doctor. Other suggested professions to include but not limited to:
  - Junior Doctors
  - Nurse in charge
  - Bedside Nurse
  - Lead Nurse
  - Regional Head of Nursing
  - Family liaison Nurse
  - ACCP
- 23.4 After each assessment re-visit the question, as the MDT utilising this tool, alongside clinical experience, is DCD an appropriate pathway to proceed with? The decision on whether to proceed with donation is multifactorial and not limited to predicted time to asystole.

- 23.5 If post consent, there is an agreement by the MDT that DCD donation is no longer the correct pathway to pursue due to likelihood of PTA, this **must** be discussed with a Lead Nurse, cluster coordinator or Operational Management Team oncall if out of hours.
- 23.6 It is the SN's responsibility to ensure collaborative assessment takes place.

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### **GP ASSESSMENT**

A conversation with the patients GP is essential to establish relevant clinical information relating to medical, social and behavioural history.

For details of the process and outline of responsibilities please access SOP3632.

### PATIENT ASSESSMENT (FAMILY CONVERSATION)

- 25 A family conversation to gather key information as part of the consent/authorisation process, in relation to the patients' medical, social, behavioural and travel history assists with the identification of potential risks to the quality and safety of organs and tissues for transplantation.
- 25.1 The SNOD must undertake a highly sensitive conversation with the patient's family, obtaining information about medical, social, behavioural and travel history in order to gather the necessary information to relay to the RCPOC and implanting surgeons +/-tissue establishments.
- 25.2 Findings identified during the medical notes review and characterisation will be confirmed discussed, as appropriate, during the family conversation.
- 25.3 The SN should explain, if appropriate, that in order to assess which organs and/or tissues could be donated, it is necessary to ask some questions and confirm information. The family should be informed that:
  - Some of the questions are of an intimate nature
  - The questions are not meant to cause offence
  - The questions are asked about all patients where donation is being considered
  - The questions are the same ones that are asked of blood donors.
- 25.4 The SN should identify who is the most appropriate person(s) to answer the questions on the Medical and Social History Questionnaire (MaSH). It is not necessary for ALL family members to be present for the discussion. Due to the intimate nature of the questions, the SN should exercise clinical judgement by alerting the family to the sensitive nature of some of the questions and support individuals who may wish to leave the room for all or part of the conversation.
  - a. The SN should confirm if there is anyone else who may be able to provide further information. If there is, then the SN should explain that there is a requirement to carry out the MaSH with that other person(s).
  - b. Prior to undertaking the patient assessment process, the SN should ask the family members completing if they have any issues that need to be addressed.
  - c. The SN should undertake a systematic approach to asking the questions utilising **INF947** Rationale for Medical and Social History questionnaire where required, to ensure that any potential risk to the quality and safety of organs and tissues for transplantation is minimised.
  - d. The SN should explain that as part of the donor characterisation process, that they will undertake a physical assessment and that it may be necessary to contact them again if anything comes to light that is not explained in the history that they have provided.

- e. In addition the SN must explain that there may be additional tests that are needed to be performed and answer any questions the family/NOK have regarding these.
- f. To close the patient assessment family conversation the SN should determine what the family members plans are at this time and ensure contact details and expectations around next contact are clear.

# 25.5 NON PROCCEDING DONATION (FOLLOWING MEDICAL INFORMATION PROVIDED BY PATIENT FAMILY)

- a. If an absolute contraindication is identified during the family conversations the SN must follow MPD882 and undertake further family discussion where appropriate.
- b. If the SN requires support in the case of a non-proceeding donation, they must contact an appropriate LN, RHN or ODMT on call.
- c. If indicated or advised by senior colleague, the SN must complete an NHSBT incident form at the earliest opportunity post process following **SOP3888**.
- d. Document clearly the sequence of events on DonorPath and the referral/PDA, providing clear details as to the reasons why donation could not proceed.
- e. In the event of standing down on organ donation consider suitability for tissue donation and referral to the NRC as per **SOP5024**. Where appropriate seeking permission from the family to receive a call from NRC. Ensure relevant information is documented to support tissue services assessment.



f. Once the MaSH section on DonorPath is commenced it should be completed in full if there is intention to refer for tissue donation. This is because once the record is pushed through to TissuePath the NRC are unable to populate MaSH and this can inhibit tissue donation e.g. in circumstance of identifying an absolute medical contraindication during assessment and moving the donor to "non-proceeding" with an incomplete MaSH the system will transfer information to TissuePath which can no longer be edited.

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### APPENDIX 1

### **BLOOD TEST ABBREVIATIONS**

Abbreviation	Full Title	Comments
Haematology		
BG (G&S)	Blood Group (Group & Save)	A new BG is required for <b>ALL</b> donors as part of characterisation. BG is required for crossmatching blood for transfusion and to support safe transplantation.
		CAUTION: Potential risks determining blood group associated with transfusions in last 7 days.
		For G&S consider date of last result – is this within the trust/health board timeframe for cross matching units for theatre?
Hb	Haemoglobin	If low consider bleeding, trauma AND confirm Hb levels required pre theatre for Cardiothoracic donation (check with accepting centres)
Plat	Platelets	Consider trauma (relevant transfusion) or portal hypertension (engorged spleen)
WBC	White Blood Cells	If raised consider sepsis
Clotting Screen		
INR	International Normalised Ratio (of PT)	If raised consider liver dysfunction
PT	Prothrombin Time	If raised consider liver dysfunction OR is the patient heparinised?
(A)PTT or PTT	(Activated) Partial Thromboplastin Time	If raised consider liver dysfunction OR thromboembolism
Biochemistry		
Na+	Sodium	Consider hypo or hypernatraemia in relation to neurological death
K+	Potassium	Consider hypo or hyperkalaemia for cardiac donation and treatment to prevent cardiac arrest
Urea	Urea	Consider either dehydration with normal creatinine or consider renal failure if anuric
Creat	Creatinine	Consider renal failure if abnormally elevated
eGFR	Estimated Glomerular Filtration Rate	If eGFR<90 consider Chronic Kidney disease staging
<b>Liver Function</b>	Tests	
Bili	Bilirubin	Consider hepatic dysfunction if raised and if other LFTs are raised and patient is jaundiced
ALP	Alkaline phosphatase	Consider early biliary obstruction if raised ALP with normal GGT
AST	Aspartate aminotransferase	AST is also present in cardiac and skeletal muscle tissue. If ALT and AST both raised consider hepatocytic damage
ALT	Alanine aminotransferase	Consider hepatocytic damage if raised
GGT	Gamma glutamyl transferase	Consider chronic alcohol misuse with an isolated raised GGT
Alb	Albumin	Consider malnutrition or sepsis in addition to hepatic failure when albumin levels are low
ТР	Total Protein	Consider hepatic and/or renal disease with low levels. Consider bone marrow disorder/myeloma with raised levels



Amy	Amylase	Consider pancreatic damage or failure if amylase levels are raised
Other Blood Te	ests	
CRP	C-Reactive Protein	Consider acute infection, inflammatory process, arthritis and/or lupus.
Trop (T or I)	Troponin	Consider myocardial infarction or cardiac damage. Tests are usually performed over 12-16 hrs from time of injury/insult
HbA1c	Haemoglobin A1c	Consider pre-diabetes/diabetes
βhCG	Beta Human Chorionic Gonadotropin	Consider pregnancy if elevated Additional rare causes of elevated βhCG in MPD 891

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#### **APPENDIX 2**

#### **ORGAN DONATION 10-POINT CHECKLIST**

When attending a referral, there are ways in which we can help to expedite the donation process safely and efficiently. The 10 point checklist aide memoire is a clear guide on how this can happen.

For the paediatric version of the checklist please access SOP5874.

Ac	tion The tasks can be undertaken in any order	Tick
1.	HLA and MICROBIOLOGY:	
	• Send to laboratories as per (page 13).	
2.	BLOOD AND URINE TESTS:	
•	Request the following: BLOOD GROUP, FBC, U&E's, LFT's, Amylase,	
	HbA1C, Clotting, CRP, eGFR, Gamma GT, Glucose.	
•	Request urinalysis (+/- M.C&S, urine protein creatinine ratio as clinically	
	indicated or requested by RCPoC(s))	
•	Request Blood Cultures (as clinically indicated)	
•	Add outstanding results to Post Donation Actions Tracker for follow up.	
3.	PATIENT ASSESSMENT:	
•	Body Map - perform as early as possible to allow any potential issues to be	
	explored.	
•	GP Summary - Communication with GP and obtain a summary.	
4.	CHECK AND PLAN:	
•	Check-in with Bedside Nurse (BSN) actions completed and outstanding.	
•	Check patient ID, ODR status, current parameters, clinical treatment plan,	
	resuscitation status.	
•	Meet with Consultant to discuss end of life care and management plan	
	(DCD/DBD/ Neurological Death Testing)	
•	Check Neurological Death Testing form is completed correctly (if	
	appropriate)	
•	Clarify roles and responsibilities - Consultant/SN/Specialist Requester/Trainee	
	SN's/BSN	
•	Arrange timely attendance of interpreters/social worker/chaplaincy or other	
	support (as appropriate).	
5.	DONOR OPTIMISATION CARE BUNDLE:	
	Provide guidance to BSN and Consultant in use of the document to ensure	
	management and stabilisation for Neurological Death testing (haemodynamic	
	and electrolyte parameters, vasopressors, diabetes insipidus and fluid	
	management.	]

• Consider regular suction, positioning and chest physio.

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#### 6. HISTORY:

- Review ALL admissions (review current and historic electronic and paper medical records, charts, blood and micro results.
- Request previous hospital notes where not available.

#### 7. CORONER/PROCURATOR FISCAL:

- Establish requirement for Coroner/Procurator Fiscal referral with Lead Consultant (Note: Ensure documentation in patient medical notes)
- If required or if agreed with the Lead Consultant, contact Coroner/Procurator Fiscal to ascertain donation consent. Local guidance available in Regional Donor Handbook.

**Note:** Where possible SN/Specialist Requester to be present for Coroner/Procurator Fiscal conversation to ensure any questions can be answered regards requested consent for specific organs.

#### 8. RESPIRATORY TESTS:

- Request CHEST X-RAY (reported on/findings) and ABG's on 100%
- Sputum (as clinically indicated)

#### 9. CARDIAC TESTS:

• Request a 12 LEAD ECG and ECHO (<65 yrs.) for all potential cardiothoracic donors.

Note: Utilise INF1705

#### **10. PREGNANCY TEST:**

β-HCG blood testing

**Note: NOT** appropriate until after discussion with the family- please refer to **MPD891**.

#### USEFUL INFORMATION

#### **ASSOCIATED DOCUMENTS**

#### **POLS**

- POL188 Clinical Contraindications to Approaching Families for Possible Organ Donation
- POL304 Sars-Cov-2 Assessment and Screening

#### **MPDs**

- MPD1100 Guidance and Principles Donor Related Images and Video.
- MPD1382 Donation Pathway Communication Touchpoints SNODs and Hub Operations
- MPD865 Obtaining Coroner/Procurator Fiscal Decision
- MPD867 Patient Information to be Communicated to Recipient Centre Point of Contact
- MPD881 Findings Requiring Additional Action
- MPD882 Communication with Families About Adverse Findings
- MPD891 Establishing Pregnancy Status and Pregnancy in Donation
- MPD921 Handover Between Specialist Nurses

#### **SOPs**

- SOP3632 General Practitioner Assessment
- SOP3649 Voice Recording of Organ Donor Clinical Conversations
- SOP3781 Receipt of Referral of a Potential Organ and/or Tissue Donor
- SOP3888 Reporting an Organ Donor or Transplantation Incident to NHSBT
- SOP3925 Manual Organ Donation Processes for a Potential Organ and/or Tissue Donor in the Event of DonorPath/IT Network Unavailability
- SOP4938 Sharing Clinical Information
- SOP5024 Tissue referral process
- SOP5732 Guidance in the Event That ABO and Rh D Group in a Potential Organ Donor is Indeterminate
- SOP5874 OTDT Paediatric Manual
- SOP6514 Clinical Microbiology Manual
- SOP6589 Advanced Multi Organ Screening (AMOS)

#### **INFs**

- INF947 Rationale Document for Medical and Social History Questionnaire
- INF1466 -Back up Laboratories for Deceased Donor Tissue Typing Testing

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- INF1583 Back up Laboratories for Deceased Donor Virology Testing
- INF1712 Out of Hours Contact Details for Back-Up Virology Laboratories
- INF1713 Out of Hours Contact Details for Back-up HLA Laboratories
- INF1705 Donor Heart Transthoracic Echo Assessment

#### **FRMs**

- FRM4193 Core Donor Data SNOD
- FRM4211 Medical and Social History Questionnaire (MaSH)
- FRM4212 Organ Donation Clinical Pathway
- FRM4278 Virology/Microbiology Request Form
- **FRM4279** HLA Typing Request
- FRM5499 SN to DFCS Handover Form
- **FRM5545** Body Map
- FRM6439 SARS-Cov-2 Assessment and Screening (in deceased organ donors)
- FRM6445 Covid-19 Swab and Endotracheal Aspirate Request Form
- FRM7814 Suitability Assessment for DCD Donation
- PDV1184 PACs Process

#### INCIDENT REPORTING

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. These incidents should be reported to the ODT Directorate of NHSBT using the following link <a href="https://safe.nhsbt.nhs.uk/IncidentSubmission">https://safe.nhsbt.nhs.uk/IncidentSubmission</a>.

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#### OTHER USEFUL LINKS

Confidentiality: NHS Code of Practice 2003

https://www.gov.uk/government/publications/confidentiality-nhs-code-of-practice

Council of Europe: Guide to the quality and safety of organs for transplantation <a href="https://www.edqm.eu/en/guide-quality-and-safety-of-organs-for-transplantation">https://www.edqm.eu/en/guide-quality-and-safety-of-organs-for-transplantation</a>

**Donation Actions Framework** 

Donation Actions Framework - ODT Clinical - NHS Blood and Transplant

**Donor Optimisation** 

<u>Donor Management and Optimisation - 2038763967Principles of Donor Management and</u> Optimisation Handbook V2.0.pdf - All Documents (sharepoint.com)

Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q&S Regulations) <a href="https://content.hta.gov.uk/sites/default/files/2021-06/Human%20Tissue%20%28Quality%20and%20Safety%20for%20Human%20Application%29%20Regulations%20licensing%20standards.pdf">https://content.hta.gov.uk/sites/default/files/2021-06/Human%20Tissue%20%28Quality%20and%20Safety%20for%20Human%20Application%29%20Regulations%20licensing%20standards.pdf</a>

JPAC http://www.transfusionguidelines.org/

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

- Donor Identification and Referral
- Checklist for Healthcare Professionals

SaBTO Guidance on the Microbiological Safety of Human Organs, Tissues and Cells used in Transplantation (2023)

https://assets.publishing.service.gov.uk/media/65a95baaed27ca000d27b273/SaBTO-microbiological-safety-guidelines.pdf

SaBTO Guidance on the Transplantation of Organs from Deceased Donors with cancer or a history of cancer 2020 <a href="https://www.gov.uk/government/publications/transplantation-of-organs-from-donors-with-a-history-of-cancer">https://www.gov.uk/government/publications/transplantation-of-organs-from-donors-with-a-history-of-cancer</a>

SaBTO Position statement on West Nile Virus

https://www.gov.uk/government/publications/west-nile-virus-and-solid-organ-transplantation-sabto-statement

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#### **ABBREVIATIONS**

ABG - Arterial Blood Gas

BBV - Blood Borne Virus

BMS - Bio Medical Scientist

BSN - Bedside Nurse

CDDF - Core Donor Data Form

CHI number - Community Health Index number

CT - Computed Tomography Scan

CXR - Chest Xray

DBD - Donation after Brain Death

DCD - Donation after Cardiac Death

DDNC - Diagnosis of Death using Neurological Criteria

**DFCS - Donor Family Care Services** 

DP - DonorPath

**ERT - Electronic Results Transfer** 

ECG - Electrocardiogram

ECHO - Echocardiogram

GDRI - Geographical Disease Risk Index

HAS - Human Albumin Solution

HCP - Health Care Professional

ID - Identifying Data

JPAC - Joint United Kingdom Blood Transfusion Services Professional Advisory Committee

LIMMS system - Laboratory Information System

LN - Lead Nurse

MaSH - Medical and Social History

MSL - Microbiology Services Laboratory

NDT - Neurological Death Test

NOK - Next of Kin

NRC - National Referral Centre

OAS - Organ Allocation Specialist

**ODMT - Organ Donation Management Team** 

ODR - Organ Donor Register

PACS - Picture Archiving and Communication System

PBM - Patient Blood Manager (NHSBT consultant)

PDA - Potential Donor Audit

PDP - Pre Death Procedure (Scotland)

PTA – Prolonged time to asystole

PID - Patient Identifiable Data

RCI - Red Cell Immuno-haematology (laboratory)

RCPoC - Recipient Centre Point of Contact

SABTO - Advisory Committee on the Safety of Blood, Tissues and Organs

SARS - Severe Acute Respiratory Syndrome

SN - Specialist Nurses

SNBTS - Scottish National Blood Transfusion Service

SNTD - Specialist Nurse Tissue Donation

TE - Tissue Establishment

TxP - TransplantPath

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### **Training Plan:**

	Trainee new to the process	Trainee trained to the previous revision.
Recommended Training Method	<training department="" e.g.:<="" each="" for="" identified="" methods="" p="" role=""> <ul><li>Read only</li></ul></training>	<training department="" e.g.:<="" each="" for="" identified="" methods="" p="" role=""> <ul><li>Read only</li></ul></training>
Assessment	<how assessment="" competency="" e.g.:<="" evidenced="" is="" of="" p=""> <ul> <li>FRM511</li> <li>E-mail confirming understanding</li> </ul></how>	<how assessment="" competency="" e.g.:<="" evidenced="" is="" of="" p=""> <ul> <li>FRM511</li> <li>E-mail confirming understanding</li> </ul></how>
Cascade Plan	<who <i="" deliver="" the="" will="">Training Plan, who will train the trainers e.g.: <ul> <li>Author trains department managers or key trainers, who then cascade training to their department.</li> </ul></who>	<ul> <li>Who will deliver the <i>Training Plan</i>, who will train the trainers e.g.:</li> <li>Author trains department managers or key trainers, who then cascade training to their department.</li> </ul>

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, <b>cannot</b> 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 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 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 <b>likely</b> to:		

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	<ul> <li>(i) directly impact product quality, patient/donor safety</li> <li>(ii) result in the discard of a large number of replaceable products</li> <li>(iii) result in the discard of an irreplaceable product and/or</li> <li>(iv) result in a delay to patient treatment.</li> </ul>
5. Very High	A process whose failure, in full or in part, is <b>certain</b> 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)
	An existing process to which no material changes are made.
1. Negligible	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
	A new process of moderate complexity, OR
4. High	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.
	A new process of high complexity, OR
5. Very High	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				
				•
1. Negligible	2. Minor	3. Moderate	4. High	5. Very High

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Criticality of

Change



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4	5			

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	<3>	<3>
Training Score	<12>	<12>

### **Recommended Training Method and Assessment:**

Training Score	Level of Risk	<b>Examples of Training Methods</b>	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