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Organ and Tissue Donation Policy

Introduction

1.1 This Policy provides clear guidance and procedures for organ and tissue donation and has been written to reflect public opinion, current legislation and existing codes of practice (including NICE guidance CG 135 – Organ donation for transplantation: improving donor identification and consent rates for deceased organ donation 2011).

1.2 In line with General Medical Council (GMC) guidance 2012 ‘Treatment and care towards the end of life: good practice in decision making’, the consultant staff who have clinical responsibility for patients who are recognised as dying and are potential donors should exercise a duty to consider organ donation as part of the Priorities for Care of the Dying Person. (Leadership Alliance for the care of dying patients, 2014).

1.3 When patients die in hospital, the option of donation is not considered in all cases. This can result in a failure to identify and respect an individual’s wishes. It may also potentially add to the distress of the donor family who are denied the option of donation and the potential of a positive benefit in terms of lives saved or lives enhanced through transplantation.

1.4 The Brighton & Sussex University Hospital’s NHS Trust (BSUH) recognises and supports the need to maximise the opportunities for donation in support of an individual’s wishes and embraces the acceptance of donation as an integral part of discussions around the Advance Care Planning process and discussions around the Priorities for Care of the Dying Person in all areas across the Trust.

1.5 On average, three patients die every day in the UK on the transplant list due to a shortage of available organs.
Organ and Tissue Donation Policy

2. Purpose

2.1 This policy aims to ensure that the wishes of an individual in relation to organ and/or tissue donation after their death is verified, acknowledged and respected and where appropriate, referred to external specialist teams to be carried out in a respectful, sensitive and dignified manner.

2.2 This policy aims to assist staff in identifying and notifying potential donors in a timely fashion to the Specialist Nurse in Organ Donation (SN-OD) or Tissue Donation Specialist Nurse (TDSN). This ensures that discussions around organ and tissue donation are an integral component of all Advance Care Planning and ensures that the donor family are offered the opportunity to consider donation in a timely and sensitive manner by qualified staff with access to specialist advice. Early notification ensures the SN-OD is present for a collaborative approach to support the family and health care professionals in discussing the process involved and offering the donor family the best chance to make an informed decision (NICE, 2011).

2.3 This policy aims to ensure staff who are directly involved in the identification and care of potential donors have appropriate knowledge, skills and training. This field of medicine continues to change rapidly and this policy therefore aims to reflect current practice.

2.4 This policy applies to all Trust staff who have direct contact with patients recognised as dying (and/or those identified as important to them or those who have recently died). It applies to babies, children, young people and adults. This policy does not include ‘living’ donation.

2.5 For clarity, all major religions support the right of the individual to consider donation. Information leaflets regarding individual religions and organ donation are available on the NHS Blood & Transplant (NHSBT) website (www.organdonation.nhs.uk).

2.6 Solid organ donation is normally but not exclusively facilitated in Intensive Care Units (ICU) or the Emergency Department (ED). Tissue donation can be considered in all patients in all care settings.

3. Definitions

Asystole The cessation of an effective heart beat and spontaneous respiratory effort causing cardiac arrest.

Brain stem The site in the human brain responsible for maintaining breathing, heart rate, blood pressure and level of consciousness. The brain stem connects the spinal cord to the brain, and relays all vital information between the body and the brain.

Brain stem death Irreversible loss of the capacity to breathe and the capacity of consciousness as a result of irreversible and complete loss of brain stem function is the UK criteria for brain stem death.
Orga and Tissue Donation Policy

(AORMC, 2008). Diagnosis of brain stem death is laid down in the Code of Practice for Diagnosis and Confirmation of Death (2014)

**CL-OD**
Clinical Lead in Organ Donation is responsible for leading clinical practice within the Trust.

**DCD**
Donation after Circulatory Death refers to retrieval of organs and tissue for transplantation after death that has been confirmed using ‘traditional’ cardio-respiratory criteria (AORMC, 2008). This was previously known as non-heart beating donation. This pathway refers exclusively to ‘controlled’ DCD (Maastricht Category III and IV) – i.e. donation which follows a cardiac death that is the result of the withdrawal or non-escalation of cardio-respiratory support which is no longer considered to be in a patient's best interests.

**DBD**
Donation after Brain Stem Death refers to the retrieval of organs and tissue for the purposes of transplantation after brain stem death. This was previously known as Heart Beating Donation.

**Donor family**
Term used generically to refer to those identified as important to the potential donor. This may include family members but also friends.

**ED**
Emergency Department

**Human Tissue Act**
The Human Tissue Act 2004 is an act of UK parliament applying to England, Northern Ireland and Wales. It consolidated previous legislation and created the Human Tissue Authority to regulate the removal, storage, use and disposal of human bodies, organs and tissues.

**ICU**
Intensive Care Unit

**NHSBT**
NHS Blood and Transplant is a special Health Authority within the NHS responsible for managing the National Blood Service, Bio Products Library and organ donation and transplantation. It is responsible for maintaining the ODR, managing the National Database and auditing and analysing organ donation and transplantation.

**Nominated Representative**
Adults may nominate one or more people to represent them after death over the issue of consent for the removal; storage and use of organs and tissues for transplantation. A nominated representative may be appointed orally in the presence of two witnesses or in writing with a witness present.
to confirm the signature. A nominated representative will take precedence over a person in a qualifying relationship.

NORS
National Organ Retrieval Service consisting of a specialist surgical team responsible for retrieving organs from deceased donors.

ODR
Organ Donation Register is a confidential computerised database managed by UK Transplant holding details of people who have signed up to become organ donors in the event of their death.

ODC
Organ Donation Committee consisting of a group of key stakeholders from within the Trust and NHS Blood & Transplant who promote and facilitate organ and tissue donation within the Trust.

Organs for transplantation
These include heart, lungs, kidneys, pancreas, small and large bowel, abdominal wall and liver.

Qualifying relationship
In the absence of a nominated representative, the Human Tissue Act 2004 ranks persons in a qualifying relationship for the purpose of obtaining consent.

a. Spouse or partner
b. Parent or child
c. Brother or sister
d. Grandparent or grandchild
e. Niece or nephew
f. Stepfather or stepmother
g. Half-brother or half-sister
h. Friend of longstanding

Consent should be obtained from the person in the highest ranking qualifying relationship.

SaBTO
Advisory Committee on the Safety of Blood, Tissues and Organs advising UK ministers and health departments on the most appropriate ways to ensure the safety of blood, cells, tissues and organs for transfusion/transplantation.

SN-OD
Specialist Nurse Organ Donation is a specialist in donor care, employed by NHSBT responsible for leading donation practice and providing advice, support and education on all donation issues. They obtain written consent for donation from the donor family. They have an on call commitment.

TDSN
A Specialist Tissue Donation Nurse, employed by NHSBT Tissue Services and responsible for consent and coordinating retrieval of tissues for transplantation.
Tissue donation

Many tissues can be used for transplantation including skin, eyes and bone.

4. Responsibilities, Accountabilities and Duties

4.1 Duties within the Organisation

4.1.1 The Chief Executive Officer will be aware of their legal duties as the responsible person for meeting this policy. They will ensure that there are adequate resources available.

4.1.2 The Trust Board is responsible for the overall process of organ and tissue donation within the Trust. Assurance for implementation of this policy is delegated to Divisional Quality and Safety Committees.

4.1.3 Directorate directors, assistant and associate directors, business managers and governance leads must ensure systems are in place for appropriate staff to read and understand relevant procedural documents. Their role is to identify training needs of staff to allow implementation of new and up to date procedural documents. They should ensure review, audit and compliance testing of procedural documents. They should ensure there are systems in place so that all available procedural documents are current and obsolete documents are removed and destroyed.

4.1.4 Medical Director and Chief Nurse have overarching responsibility for professional leadership and for overview of the development and implementation of all clinical documents.

4.1.5 Clinical Lead in Organ Donation (CL-OD) has a leadership, education, training and awareness responsibility within the BSUH.

4.1.6 ICU and ED medical and nursing leads have a responsibility to ensure that all staff involved in the care of dying patients consider the option of organ/tissue donation and follow best practice as laid out in NICE guidance CG135.

4.1.7 Specialist Nurse in Organ Donation (SN-OD) work closely with ICU and ED to support early identification and referral of all dying patients. Legal consent for donation is undertaken by the SN-OD who will then facilitate the donation process. They audit all deaths within the ED and ICU. In addition they provide education and support to health care professionals to promote knowledge, understanding and increase awareness of the donation choices available to patients and donor families.

4.1.8 Tissue Donation Specialist Nurse (TDSN) has the responsibility for obtaining legal consent (either in person or on the telephone) to remove tissues for transplantation.

4.1.9 Theatre managers are responsible for ensuring that a BSUH staff member is present in theatre during the retrieval process and maintains safety in theatres whilst National Organ Retrieval Service (NORS) is present.

4.1.10 Mortuary Technicians are responsible for any people who enter and leave the mortuary and must comply with the Service Level Agreement for retrieval of tissues.
4.1.11 All BSUH staff are responsible for co-operating with the implementation and monitoring of all procedural documents as part of their normal duties and responsibilities. If communication or language barriers are identified, staff are responsible for ensuring that information is made available in a suitable format, including use of a qualified interpreter.

5. Policy

Organ donation pathway

Organ donation can occur via two pathways; donation after brain stem death (DBD, section 5.5.1) and donation after circulatory death (DCD, 5.5.2). In both pathways early identification and notification of the patient to the SN-OD will facilitate a timely assessment of a patient’s wishes and their potential to become an organ donor and allow early comprehensive support of the family.

5.1 Identification of potential organ donors

5.1.1 General considerations

It is important to identify all patients who are potentially suitable as donors as early as possible using a systematic approach. Whilst recognising that clinical situations vary, identification should be based on either of the following criteria:

1) patients who have had a catastrophic brain injury, namely:
   o the absence of one or more cranial nerve reflexes and
   o a Glasgow Coma Scale (GCS) score of 4 or less that is not explained by sedation
   o and/or a decision has been made to perform brainstem death tests.

2) the intention to withdraw life-sustaining treatment in patients with a life-threatening or life-limiting condition which will, or is expected to, result in circulatory death.

In line with best practice, it is recommended that donation should not be discussed with those identified as important to the patient prior to notification of the SN-OD unless they spontaneously mention it. This will ensure that donor families are only approached if donation is a real possibility.

5.1.2 ED

A small number of potential donors may be identified in the ED (Appendix 7). Ideally these patients would be transferred to ICU for ongoing assessment and management as patients in the ED should be offered the same opportunity to donate as those in an ICU (UK DEC, 2014). The final decision on whether ICU admission is appropriate rests with the on call ICU consultant.

Donation should still be considered even if transfer to ICU is not considered appropriate. Advice should be sought from the SN-OD in liaison with the site management team and medical staff in the ED, ICU and anaesthetic departments as to the best location for ongoing management of these potential donors.
Organ and Tissue Donation Policy

Royal College of Emergency Medicine Best Practice Guideline (End of life care for adults in emergency department) should be followed (2015).

5.1.3 ICU

The majority of potential organ donors will be cared for in the ICU and require ventilator and multi-organ support. When it is recognised that the patient is dying or further treatment is not in their best interests (BSUH Mental Capacity Act policy), organ donation should be considered.

5.1.4 Contra-indications to donation

There are very few absolute contra-indications to donation and these change from time to time. All patients must therefore be discussed with the SN-OD.

5.2 Notification to SN-OD

Following potential donor identification, the SN-OD should be notified at the earliest possible opportunity (Appendix 3). The notification can be made by any healthcare professional caring for the patient. The consultant in charge of the patient’s care should be informed of this. Early notification ensures timely attendance of the SN-OD to allow a collaborative approach involving ICU medical and nursing staff. This maximises the information and support available to the donor family, allowing them to make a decision which best meets their needs and expectations.

SN-OD Pager 07659 590 529 (24hr service)

The SN-OD will try to return your call within 20 minutes.

If this fails contact NHSBT Duty Office
01179 75 75 75 immediately.

The SN-OD will typically ask for the information found in the Situation Background Assessment Recommendation (SBAR) tool (Appendix 4) to inform an initial assessment of suitability for donation.

5.3 Approaching the donor family to offer the option of organ donation

5.3.1 General considerations

Two factors influence a family’s decision to consent to organ donation (Simpkin, 2009)

1) separating the request for donation from the explanation of death or futility

2) ensuring the individual approaching the donor family is a trained requester.

The option of donation should only be discussed after the donor family understand and accept that the patient has died in the case of brain stem death or the patient will die following the withdrawal of life sustaining treatment.
The ODR is one source of information about a patient’s expressed wishes and will be checked by the SN-OD. It is recognised that not everybody will register their wish to donate in this way. It is therefore important to involve the donor family to determine the patient’s and families’ wishes.

For patients who are recognised as dying without the option for solid organ donation, tissue donation can still be offered after death. Following the patient’s death, staff can contact the TDSN who will assess suitability and contact the donor family and offer the chance of tissue donation.

5.3.2 Responsibilities

5.3.2.1 ICU Consultant

The ICU consultant or nominated representative is responsible for communicating with the potential donor’s family to ensure they understand that the patient is either brain stem dead or that ongoing treatment is futile and no longer in the patient’s best interests. It is essential that the potential donor’s family understands this information whilst including consideration regarding an Advance Care Plan or existing Advance Decisions to Refuse Treatment (ADRT) or wishes conveyed to a person with Lasting Power of Attorney for Health & Welfare for the patient. It is best practice (NICE 2011) for the SN-OD to accompany the ICU consultant in this meeting if appropriate. The SN-OD is introduced to the family as a specialist nurse who supports families in these situations. This early involvement of the SN-OD will ensure a consistent message regarding death during all further discussions and allows the SN-OD to carry out an assessment of the family’s understanding of the situation.

Once the family understand that their relative will die, it is appropriate for the ICU consultant and SN-OD to identify the patient’s potential wishes in terms of their Advance Care Plan. This will include their wishes around organ donation. If the patient is on the ODR, this represents legal consent of the individual for donation (Human Tissue Act, 2004).

5.3.2.2 SN-OD

When the SN-OD attends the unit they will carry out a detailed assessment of the patient’s potential for donation. This will include assessment of the patient’s medical, surgical and social history and will be in accordance with current SaBTO guidelines.

The SN-OD will in collaboration with the ICU team assess the donor family’s understanding of the diagnosis of brain stem death or decision for withdrawal of treatment to allow optimal timing of discussions around organ donation.

The use of a collaborative approach i.e. joint approach between the ICU consultant and the SN-OD allows the best environment for donor families to make an informed decision regarding donation (NICE, 2011). The SN-OD with their specialist knowledge of the donation process is best placed to provide all the necessary information to donor families.

It is the responsibility of the SN-OD and the consultant in charge to document all discussions and their outcomes in the patient’s Health Record.
5.4 Consent for donation

5.4.1 General considerations

Organ retrieval is governed by the Human Tissue Act (2004) and regulated by the Human Tissue Authority (HTA).

Registration on the ODR represents legal consent. It is the SN-OD and consultant’s responsibility to inform the potential donor family of the patient’s wishes.

In cases where the patient is registered on the ODR and there is no one in a qualifying relationship, it is lawful to proceed with donation.

The person in a qualifying relationship should be encouraged to accept the patient’s wishes as expressed on the ODR. In the event of disagreement an agreed position should be reached by inclusive discussion with the donor family, ICU consultant and SN-OD. There may, of course, be situations in which donation is inappropriate and each family should be considered individually. It would be very unusual to proceed if the family have expressed direct opposition to donation although they have no legal right to veto the wishes of the patient (HTA, 2004).

If the patient is not registered on the ODR the final decision on whether to proceed with donation rests with the nominated representative or in their absence the person in the highest qualifying relationship. Where there are no nominated representatives, family or friends traceable and in the absence of any known wishes of the individual, donation cannot proceed.

The SN-OD will obtain consent through a formal process in abidance with guidance from the Human Tissue Authority.

A child who is ‘Gillick’ competent (GMC, 2012) can legally make decisions about donation in the same way as an adult. In the case of a child <18 years of age who has not registered on the ODR, consent must be obtained from a person with parental responsibility. Where there are two individuals with equal responsibility, consent only needs to be obtained from one. Where there is no one with parental responsibility consent for organ and tissue donation can be sought from someone in a qualifying relationship. Children cannot appoint nominated representatives.

5.4.2 Documenting consent

Consent can only be obtained after the SN-OD has provided the family with detailed information about the donation process. This includes information on:

- Blood tests that are required e.g. HIV, Hepatitis, HTLV, Syphilis.
- Organs/tissues that may be donated.
- Other tissues e.g. lymph nodes, spleen that will be retrieved.
- Storage arrangements for organs and tissues.
- Potential research projects.
- Realistic time frames.
- The withdrawal process in DCD.
- Post mortem viewing and follow up arrangements.
- Contact with the patient’s General Practitioner.
Following the donation process the SN-OD will remain in contact with the donor family to provide additional information and support as required. The family are given the SN-OD’s contact details.

5.4.3 Obtaining the Coroner’s agreement

If under normal circumstances, the death would meet the criteria for referral to the Coroner (Appendix 8) or the cause of death is unknown or uncertain the patient must be discussed with the Coroner before donation can proceed. The Consultant or their designate must be available to discuss directly with the Coroner. The SN-OD must be involved in this discussion. The Coroner’s or their officer’s details and decision must be documented clearly in the patient’s health records.

5.4.4 Requested Allocation of a Deceased Donor Organ

The fundamental principle of all deceased organ donation is that it must be unconditional. A request for the allocation of a donor organ can be considered in exceptional cases. The SN-OD will liaise with NHSBT senior management in these circumstances.

5.4.5 Withdrawal of Consent

Consent can be withdrawn up until the point of an incision being made to remove the organs for transplantation, in line with Human Tissue Authority guidance.

5.5 Organ Donation Process

5.5.1 Donation following Brain Stem Death (DBD)

All patients, in whom brain stem death is suspected, must undergo brain stem testing. This allows accurate diagnosis of brain stem death. If brain stem death is a likely diagnosis but brain stem testing is not performed the reason must be clearly documented in the Health Record.

Where brain stem death is suspected management of the patient must follow the catastrophic brain injury pathway (Appendix 4). This will pre-optimise the patient to allow accurate brain stem death testing.

Brain stem testing must follow the recommendations of the Academy of Royal Medical College’s Code of Practice 2008 (Appendix 5) and the results documented on the associated form (Appendix 6).

Following diagnosis of brain stem death and whilst discussions about donation are in progress, patient management must continue to optimise organ perfusion and the catastrophic brain injury pathway must be continued. Other sources of information include the DBD donor optimisation extended care bundle (Appendix 10) and Donor optimisation ‘smart phone app’. Transplant centres may also provide additional advice.

It is the responsibility of the SN-OD to contact the person in charge for theatres as soon as possible to discuss a proposed theatre time.
An anaesthetist must be available. If there is no anaesthetist available, the ICU consultant must consider the best way to proceed. In theatre the anaesthetist must ensure physiological stability of the deceased and continue organ preservation measures throughout the retrieval process as directed by NORS.

If retrieval of cardiothoracic organs is planned, NORS may carry out additional investigations e.g. bronchoscopy and/or echocardiogram and insert additional monitoring. Occasionally, these investigations will reveal that the thoracic organs are unsuitable for transplantation and the visiting cardiothoracic team will depart leaving the abdominal retrieval team to continue.

5.5.2 Donation after Circulatory Death

The decision to withdraw treatment should be made in accordance with current best practice guidance and comply with the Mental Capacity Act (2005).

The decision to withdraw treatment should:

- Be based on a consensus that it would no longer be of overall benefit to the patient to continue or escalate life-sustaining cardio-respiratory support
- Be documented, signed and dated in the patient’s Health Record
- Be fully independent from any subsequent discussion regarding organ donation
- Not involve members of staff potentially involved in transplantation of organs retrieved from the patient following death

As death has not occurred, the patient’s ongoing management must be in their best interest (including symptom control measures) and includes taking into account an Advance Care Plan including their potential wish to be an organ donor. Continued cardio-respiratory support would be appropriate to facilitate organ donation if this is the patient’s or family’s wish. Maintenance and escalation of physiological support for organ optimization prior to retrieval may be considered at the discretion of the ICU consultant in line with guidance from the Department of Health (2009).

There is no ethical dilemma if the treating consultant wishes to make contact with the SN-OD at an early stage, while the patient is seriously ill and death is likely but before a formal decision has been made to withdraw life-sustaining treatment (UK DEC 2011). The SN-OD can then determine the potential suitability of the patient as a donor.

The donor family are given detailed information regarding the withdrawal process, ongoing patient care and the process if the patient were not to die in a time frame to allow donation to proceed.

The timing of withdrawal of treatment is determined by the time required for consultation with recipient centres, mobilisation of NORS and theatre availability.

5.5.2.1 Withdrawal of treatment

Withdrawal of treatment will occur in an anaesthetic room for all BSUH patients. The SN-OD in conjunction with the theatre co-ordinator must ensure that all possible preparations for retrieval are complete prior to the patient and donor family’s arrival in the theatre department. A team briefing and WHO checklist will commence prior to the patient and family arriving. NORS members must be prepared and wait quietly in theatre.
The environment should be adapted to allow patient and donor family comfort and privacy. An ICU nurse must be present throughout the process to provide ongoing nursing care. It is the responsibility of the ICU Consultant or their designate to remain throughout the withdrawal period until asystole occurs and to certify death following a 5 minute period of asystole (AORMC, 2008).

It is the responsibility of the SN-OD to confirm time of withdrawal of treatment and update NORS.

Withdrawal of treatment should take into account the Priorities for care for the Dying Person but will usually include withdrawal of ventilator support, extubation and discontinuation of inotropic support. Monitoring of the patient’s cardiovascular status must be maintained until asystole or a decision to abandon donation. Comfort measures can be administered as appropriate for symptom management.

If the dying process is prolonged, the decision to abandon the plan for organ donation lies with the transplant recipient centres in liaison with the SN-OD.

Following verification of death (at 5 minutes after asystole) the deceased person will be moved to theatre where the NORS surgeons will be ‘scrubbed’ and ready to proceed. The donor family must be escorted at all times and assisted to leave prior to the deceased person’s transfer into theatre. The ICU nurse will be responsible for this.

If lung retrieval is planned in a DCD donor, a suitably trained anaesthetist must be present to re-intubate the potential donor after verification of death (Appendix 11). This should have been discussed during the WHO checklist.

It is essential that the patient is rapidly transferred to the operating table after verification of death and an incision performed to establish cannulation of the major vessels in order to commence preservation and cooling of the organs. Once preservation is established the surgical retrieval of organs is performed in a manner similar to that after DBD.

5.5.2.2 Failure to proceed to donation

If the dying process is prolonged and the donation is not possible, the patient will be transferred back to ICU or an appropriate ward and the focus of care will be on symptom management. The family are fully informed during the consent process that this is a possibility.

5.6 Retrieval operation

A member of BSUH theatre staff must be available to support NORS with local orientation to equipment and procedures and to ensure that additional equipment is available. A WHO check list should be used as per Trust policy (Appendix 9).

The SN-OD will provide a detailed handover to the NORS surgeons. Good communication between all persons involved in the retrieval process is essential and involvement of the theatre staff is encouraged.

The SN-OD must remain with the donor throughout the retrieval process and continues to coordinate with recipient centres and will need to spend additional time discussing arrangements on the phone.
Once the organs have been removed the incision is sutured.

It is the responsibility of NORS to ensure documentation in the health records.

5.7 Care of the person’s body following their death and Follow up

Personal care of the person’s body following their death will be carried out by the SN-OD and theatre staff. Transferring the patient to the anaesthetic room should be considered so this can then be carried out. The SN-OD is responsible for ensuring that the donor family’s wishes regarding e.g. hair locks, hand prints are met. Any cultural and religious rituals will be accommodated before or after death.

If the donor family have requested to view the deceased following donation, an appropriate area within the theatre complex should be identified by the SN-OD and theatre staff. Donor families may alternatively view the deceased in the mortuary viewing room. This can be arranged through the Bereavement Office during working hours or by contact with the ICU out of normal working hours.

If the donor family have left the hospital, it is the responsibility of the SN-OD to maintain communication as previously arranged and agreed prior to the retrieval.

It is the responsibility of the theatre staff to ensure the deceased person is transferred to the mortuary as per hospital policy.

Where consent has been given for tissue donation, tissue retrieval arrangements will be made by the SN-OD

The SN-OD will complete appropriate documentation in the Health Record entry prior to leaving the hospital.

Following donation the SN-OD may write to the healthcare professionals involved to thank them for their support. Further information will only be provided if the donor family are in agreement. These letters will not usually be sent to staff until the family have received this information.

5.8 Paediatric Donor

The death of paediatric patients (≤ 18years) is a rare event. Specialist early involvement of the SN-OD will allow donor family to explore the options of organ and tissue donation if they wish. (Appendix 12).

5.9 Tissue donation

5.9.1 General considerations

Guidance for staff responsible for care after death (2015) includes the need by nursing staff to take responsibility for ‘facilitating people’s wishes for organ and tissue donation’.

A patient’s wishes around tissue donation should be explored in all patients prior to death if possible but with their families after death. After death, this discussion should occur before the family leave the hospital as referral for tissue donation must be made as soon as possible and within 24 hours.
Prior to approaching the family, the Healthcare Professional should check the ODR by telephoning the NHSBT Duty Office (0117 9757575). The patient’s name, date of birth, NHS number and post code are required.

5.9.2 Approaching the family

If the patient is registered on the ODR, inform the donor family that the patient is registered. If the donor family are supportive of donation, document the discussion clearly in the patient’s Health Record and inform them that they will be contacted by the TDSN within a few hours or on the following day if the death occurs overnight. Ensure that the donor family’s contact details are correct. The TDSN will then contact the donor family to assess the possibility of donation.

If the donor family do not support the patient’s wish, this must be documented in the patient’s Health Record. Advise the donor family that if they change their minds they must contact the Bereavement Office within 24hrs during working hours or the ward/ICU outside normal working hours.

Even if the patient is not registered on the ODR, the option of tissue donation should be offered.

Suggested opening statements to the donation discussion include,

‘It may be possible for ‘John’ to be a tissue donor. Is this something that you would like to speak to a Specialist Tissue Donation Nurse about?’

‘This leaflet explains a little more and has the phone number on the back page for you to contact the TDSN yourself or I can call them for you.’

If the donor family are supportive of tissue donation, document the discussion in the Health Record and contact the TDSN.

5.9.3 Contacting the TDSN

Contact the TDSN on 0800 432 0559. If you experience difficulty contact the NHSBT Duty Office on 01179 757575.

The TDSN will require information which is summarised in Appendix 13. The referral should be made as soon as possible after death.

Ensure the date and time of the referral call is documented in the patient’s Health Record.

The TDSN responsibilities include

- Communicating with the donor family
- Gaining consent
- Arranging the retrieval with mortuary staff and/or theatre staff.
- Feeding back to the donor family.
It is imperative that the patient is transferred to the Mortuary without delay. Please ensure that the portering service is aware of this requirement.

5.9.4 Donation for research purposes.

Some patients may be registered for donation to specific research or educational studies. In this situation consent will have been obtained prior to their death. These patients will carry information that provides instructions to those caring for them when they die. As with donation for transplantation, donation for research/education is time sensitive. It is therefore essential that when staff are made aware of the patient’s wishes that they document this in the patient’s Health Record and ensure effective handover of the information to ensure no delays after the patient’s death. The Bereavement office and organisation to which the patient wishes to donate must be contacted as soon as possible after death. Examples of some of the organisations who support patients to enter into research/education are below:

- **UK Multiple Sclerosis Tissue Bank** at Imperial College London
  http://www.imperial.ac.uk/medicine/multiple-sclerosis-and-parkinsons-tissue-bank/

- **UK Parkinson’s disease Society Tissue Bank** at Imperial College London
  http://www.parkinsons.org.uk/content/parkinsons-uk-brain-bank

- **Whole body donation** at London Anatomy Office
  http://www.kcl.ac.uk/lsm/study/departments/anatomy/lao/donation/index.aspx

Tissue donation for transplantation, research and education is possible for patients who die out of hours, at the weekend and over bank holiday. Out of hours, the site manager should be contacted and arrangements made with the tissue donation nurse and on call mortuary team.

6. Training Implications

There are internal and external training opportunities for staff.

6.1. Internal training

The SN-ODs organise teaching sessions for medical and nursing staff in various departments but particularly ED and ICU. Tissue donation is promoted and discussed during regular ‘End of Life’ study days and educational series. Medical student teaching is also undertaken at the medical school. The SN-ODs organise an annual study day, open to medical, and nursing and allied health professionals in the Trust. If departments want to discuss specific training requirements, they should contact the SN-ODs.

6.2 External training

The CL-OD and SN-ODs have ongoing training and education via the twice yearly South East Collaborative meetings and the Annual National Congress on Organ Donation.

Other external teaching opportunities for staff are available and organised by NHSBT. Simulation training opportunities are also available.
7. Monitoring Arrangements

All NHS Trusts should have an ODC to promote organ and tissue donation within the trust and to monitor donation practice. The committee is led by a Lay Chair, the CL-OD and SN-ODs. The committee must report directly to the Trust board. The BSUH ODC meets quarterly.

The terms of reference include:

- Influence policy and practice in order to ensure that organ donation is considered an integral part of the Advance Care Planning process in patients within the Trust and to identify and resolve any obstacles to this.
- Ensure that a discussion about donation features in Advance Care Planning process for all patients, wherever located and wherever appropriate, recognising and respecting the wishes of individuals.
- Maximise the overall number of organs donated through better support to potential donors and those identified as important to them.

The SN-OD is responsible for collecting data on all deaths that occur within ICU and ED as part of the national NHSBT Potential Donor Audit. This data is reported to the ODC for review against national NHS performance indicators and to the ICU Clinical Governance group. The SN-OD will identify any patients who fit the notification criteria but where notification did not then occur. The CL-OD and SN-OD will aim to identify reasons for a ‘missed’ notification and where appropriate complete an incident report.

All donation related critical incidents must be reported to determine if any potential barriers to organ donation need to be addressed. NHSBT is usually also involved in this process. The ODC will review all incident reports at the quarterly meetings.
## Monitoring compliance and effectiveness table

<table>
<thead>
<tr>
<th>Element/Activity being monitored</th>
<th>Lead Role</th>
<th>Methodology to be used for monitoring</th>
<th>Frequency of monitoring and Reporting arrangements</th>
<th>Acting on recommendations and leads</th>
<th>Change in practice and lessons to be shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDA</td>
<td>ODC</td>
<td>PDA</td>
<td>ODC, CL-OD, SN-OD</td>
<td>ODC Patient Safety Committee</td>
<td>Education, Feedback to ICU, QSPE/M&amp;M committees monthly, Feedback to ED, Feedback to Cardiac ICU as indicated, Annual feedback to Medical Director and CEO</td>
</tr>
<tr>
<td></td>
<td>CL-OD</td>
<td></td>
<td>3 monthly reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SN-ODs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical incidence</td>
<td>ODC</td>
<td>Datix system, NHSBT reporting system</td>
<td>ODC, CL-OD, SN-OD</td>
<td>ODC Patient Safety Committee</td>
<td>Education, Feedback to relevant clinical groups</td>
</tr>
<tr>
<td></td>
<td>CL-OD</td>
<td></td>
<td>3 monthly reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SN-ODs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Due Regard Assessment Screening
As an NHS organisation, BSUH is under a statutory duty to set out arrangements to assess and consult on whether their policy and function impact on equality with regard to race, ethnic origin, nationality, gender, culture, religion or belief, sexual orientation, age, marriage and civil partnership status, pregnancy and maternity status and disability. A review of the assessed impact of this policy against these criteria can be seen (Appendix 13). This policy has had a full impact assessment and no amendments were found necessary.

9. Links to other Trust policies
None

10. Associated documentation
Appendix 1: Summary flow sheet of Organ Donation Process
Appendix 2: Notification Criteria
Appendix 3: SBAR tool for notification
Appendix 4: Catastrophic Brain Injury pathway
Appendix 5: Brain stem testing guideline
Appendix 6: Brain stem testing form
Appendix 7: ED prompt card
Appendix 8: Referral criteria for the notification of death to the Coroner
Appendix 9: WHO surgical check list (donation version)
Appendix 10: DCD guidance for management in theatre
Appendix 11: Considerations for neonatal donation
Appendix 12: Tissue services referral

11. References

Academy of Royal Medical Colleges (2008) Code of Practice for diagnosis and confirmation of death

Department of Health (2009) Legal issues relevant to non-heart beating donation.

General Medical Council (2010) Treatment and care towards end of life: good practice in decision making.

General Medical Council (2012) Protecting children and young people. The responsibility of all doctors


Appendix 1: Flow Chart for Organ Donation

Identification of a potential organ donor:
- Patients who have had a cerebrovascular accident (CVA) or severe brain injury
- The presence of one or more of the following:
  - Cardiac arrest
  - Severe head injury
  - Exhausted brain damage
  - Coma

Assess suitability

Family discussion to explain Brain stem death tests (BSDT)

Prepare for BS DT refer to RBI

Approach family regarding donation wish (Doctor, Nurse and SN-OD)

Family decision

Consider tissue donation

SN-OD activities - discussion with family to include written consent, patients past behavioural, medical, social and travel history. Physical exam. Patient will be register as a donor. If organs accepted SN-OD will plan retrieval with the theatre team and arrange NORS.

DBD organs accepted

STAND DOWN Consider referral for tissue donation

DCD organs accepted

Family care

Final activities

Retrieval

Family care

WLST in anaesthetist room

Death is certified within time frame

Assess suitability

Family discussion regarding WLST

Approach family regarding donation wish (Doctor, Nurse and SN-OD)

Family decision

No

Yes
IDENTIFICATION AND REFERRAL OF POTENTIAL ORGAN DONORS

Identify all potential donors as early as possible using either of the following criteria:

CLINICAL TRIGGERS

Patients with severe brain injury
one or more cranial nerve reflexes is absent and
the Glasgow Coma Score is 4 or less and cannot
be explained by sedation, or a decision has
been made to perform brainstem death tests
whichever is the earlier

OR

Patients whose circulatory death is anticipated
following a decision to withdraw or limit life-
sustaining treatment

ACTION
Contact the Specialist Nurse for Organ Donation on
07659 590 529
24 hour pager service

Brighton and Sussex University Hospitals NHS Trust.
National Institute for Health and Clinical Excellence.

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### Appendix 3: SBAR tool

#### Identification of potential organ and tissue donors

**CLINICAL TRIGGERS:** patient with a severe brain injury, one or more cranial nerve reflexes is absent and the Glasgow Coma Score is 4 or less and cannot be explained by sedation or a decision has been made to perform brain stem death tests whichever is the earlier or

Patients whose circulatory death is anticipated following a decision to withdraw or limit life sustaining treatment. It is important to clarify the Consultants plan and complete this form fully prior to discussion with the Specialist nurse. This will allow full consideration of the patients and family wishes. Contact SNOD on 07669 500 529 (24 hours)

#### Situation

A patient has been identified

- with a severe brain injury (meeting the NICE criteria above)
- there is a plan to withdraw/limit life sustaining treatment. (delete A or B as necessary)

<table>
<thead>
<tr>
<th>Patients name</th>
<th>DOB</th>
<th>NHO/Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town</td>
<td>Post code</td>
<td></td>
</tr>
</tbody>
</table>

#### Background

- Admission date
- Diagnosis
- Admission history

#### FMH

#### Assessment

<table>
<thead>
<tr>
<th>Vent mode</th>
<th>Peep</th>
<th>fICO2</th>
<th>Spont RR</th>
<th>HR</th>
<th>BP</th>
<th>Inotrope1</th>
<th>Inotrope2</th>
<th>U/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedation</td>
<td>GCS</td>
<td>Pupils</td>
<td>Blood group</td>
<td>pH</td>
<td>pCO2</td>
<td>pO2</td>
<td>-BE</td>
<td>HCO3</td>
</tr>
<tr>
<td>Na</td>
<td>K</td>
<td>Urea</td>
<td>Creatinine</td>
<td>Urine hrt</td>
<td>INR</td>
<td>PT</td>
<td>APTT</td>
<td>Bilirubin</td>
</tr>
<tr>
<td>ALT</td>
<td>Alk phos</td>
<td>GGT</td>
<td>Amylase</td>
<td>Albumin</td>
<td>Hb</td>
<td>WCC</td>
<td>Platelets</td>
<td>eGFR</td>
</tr>
</tbody>
</table>

#### Recommendation

- Consultants plan

- What is the SN-ODs plan?

- Is the patient a potential organ donor YES/NO
- Is the patient a potential tissue donor YES/NO

If your patient is suitable for tissues only you will need to inform the family of this option. Give them the tissue donation leaflet with the bereavement book. Inform them it may be possible for the patient to be a tissue donor and ask if they would like to speak to a specialist nurse about this? If they do please contact Tissue Services on 0800 432 0859, VE 01/06/2015
Appendix 4: Catastrophic Brain Injury Pathway

Catastrophic Brain Injury Optimisation Care Bundle

Patient Name: ___________________________ Date of Birth: ________________________ Hospital Number: __________________

Prerequisites
Yes N/A
- Do you suspect brain stem death?
- Are pupils fixed, dilated and GCS 3/15
- Is the patient apnoeic (not triggering ventilator)?
- Are cough and gag reflexes absent?
- Has a decision to stop neuroprotection been made?

If ‘Yes’ to all of the above questions commence the following checklist.

Data & Time CBI Started:
Page Specialist Nurse - Organ Donation: 07865560920 (24hr)
Data & Time SN0D called:

Priorities to address
Yes N/A
1. Assess fluid status and correct hypovolaemia with fluid boluses
2. Introduce vasopressin infusion where required introducflow monitoring
3. Perform lung recruitment manoeuvres (e.g. following apnoeas tests, disconnections, deterioration in oxygenation or suctioning)
4. Identify, arrest and reverse effects of diabetes insipidus
5. Administer methylprednisolone (all donors)

Respiratory
Yes N/A
1. Perform lung recruitment manoeuvres (CPAP mode 25-40cm H20 for 30-50 sec)
2. Review ventilation, ensure lung protective strategy (Tidal volumes 4-8ml/kg ideal body weight and optimum PEEP 5-10 cm H2O)
3. Maintain regular chest physio incl. suctioning as per unit protocol
4. Maintain 30 – 45 degrees head of bed elevation
5. Ensure cuff of orotracheal tube is appropriately inflated
6. Patent positioning (side, back, side) as per unit protocol

Cardiovascular
Yes N/A
1. Review intravascular fluid status and correct hypovolaemia with fluid boluses
2. Commence cardiac output / flow monitoring
3. Commence vasoressin (0.5 – 4 units/hour) where vasoressin required, wear or stop catecholamine pressors as able MAP > 60 < 90
4. Consider commencing Lidothroina at 3 units/hour (U- 4 unit bolus)

Fluids and Metabolic Management
Yes N/A
1. Administer methylprednisolone (dose 15 mg/kg, max 1g)
2. Review fluid administration. IV crystalloid maintenance fluid (or NG water where appropriate) to maintain Na+ < 150 mmol/L.
   - Target Na+ 130-150, K+ 3.5-5.5, Mg2+0.8 mmol/L, Ca ionised 1.0-1.3 mmol/L
3. Maintain urine output between 0.5 - 2.0 ml/kg/hour (f > 4ml/kg/hr, consider Diabetes insipidus and treat promptly with vaspressin and/or DDAVP. Dose of DDAVP 1 - 4 mcg iv titrated to effect)
4. Start insulin infusion to keep blood sugar at 4-10 mmol/L (minimum 1 unit/h add a glucose containing fluid if required to maintain blood sugar)
5. Continue NG feeding (unless SN-OD advises otherwise) 10 - 30ml/hr

Thrombo-embolic Prevention
Yes N/A
1. Target Hb >8, Plt>50 x 10, INR < 2, APTT < 1.2, Fibrinogen > 2
2. Ensure anti-embolic stockings or sequential compression device
3. Continue, or prescribe low molecular weight heparin

General Management
Yes N/A
1. Insert arterial line – left side preferable (radial or brachial)
2. Insert CVC – right side preferable (int jugular or subclavian)
3. Continue hourly observations as per critical care policy
4. Maintain normothermia using active warming where required (35.5-37.5°C)
5. Perform a 12-lead ECG, and CXR (after brain stem death testing)
6. Perform CXR (post recruitment procedure where possible)
7. Send Troponin level in all cardiac arrest cases
   (and follow-up sample where patient in ICU > 24 hours)
8. Who to available, perform an Echocardiogram
9. Review and stop all unnecessary medications

Print Name: ___________________________ Signature: ___________________________
Data & Time: ___________________________

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Appendix 5: Guidelines for Brain Stem Testing

A code of practice for the diagnosis and confirmation of death
Appendix 6: Brain stem testing paperwork

Form for the Diagnosis of Death using Neurological Criteria (abbreviated guidance version)

This form is consistent with and should be used in conjunction with, the AoMRC (2008) A Code of Practice for the Diagnosis and Confirmation of Death and has been endorsed for use by the Faculty of Intensive Care Medicine and Intensive Care Society.

### Evidence for Irreversible Brain Damage of known Aetiology

#### Primary Diagnosis:

#### Evidence for Irreversible Brain Damage of known Aetiology:

Diagnostic caution is advised in certain 'Red Flag' patient groups. See Page 3 for details.

### Exclusion of Reversible Causes of Coma and Apnoea

<table>
<thead>
<tr>
<th></th>
<th>1st Test Dr One</th>
<th>1st Test Dr Two</th>
<th>2nd Test Dr One</th>
<th>2nd Test Dr Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the coma due to depressant drugs? Drug Levels (if taken):</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is the patient’s body temperature ≤34°C?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is the coma due to a circulatory, metabolic or endocrine disorder?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is the apnoea due to neuromuscular blocking agents, other drugs or a non brain-stem cause (eg. cervical injury, any neuromuscular weakness)?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

### Tests for Absence of Brain-Stem Reflexes

<table>
<thead>
<tr>
<th></th>
<th>1st Test Dr One</th>
<th>1st Test Dr Two</th>
<th>2nd Test Dr One</th>
<th>2nd Test Dr Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the pupils react to light?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is there any eyelid movement when each cornea is touched in turn?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is there any motor response when supraorbital pressure is applied?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is the gag reflex present?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is the cough reflex present?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Is there any eye movement during or following caloric testing in each ear?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

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Form for the Diagnosis of Death using Neurological Criteria (abbreviated guidance version)

Patient Name:  
NHS Number:

<table>
<thead>
<tr>
<th>Apnoea Test</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Test Dr One</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Test Dr Two</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Test Dr One</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Test Dr Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial Blood Gas pre apnoea test check: (Starting PaCO&lt;sub&gt;2&lt;/sub&gt; ≥ 6.0 kPa and starting pH &lt; 7.4 or [H&lt;sup&gt;+&lt;/sup&gt;] &gt; 40 nmol/L)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Test</td>
<td>Starting PaCO&lt;sub&gt;2&lt;/sub&gt;\textsubscript{1st}</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Test</td>
<td>Starting PaCO&lt;sub&gt;2&lt;/sub&gt;\textsubscript{2nd}</td>
</tr>
<tr>
<td>Is there any spontaneous respiration within 5 (five) minutes following disconnection from the ventilator?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Arterial Blood Gas Result post apnoea test: (PaCO&lt;sub&gt;2&lt;/sub&gt; should rise &gt; 0.5 kPa)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Test</td>
<td>Final PaCO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Perform lung recruitment</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Test</td>
</tr>
</tbody>
</table>

Document any Ancillary Investigations Used to Confirm the Diagnosis or any required Clinical Variance from AoMRC (2008) Guidance

Completion of Diagnosis

Are you satisfied that death has been confirmed following the irreversible cessation of brain-stem-function?  
YES / NO  
YES / NO

Legal time of death is when the 1<sup>st</sup> Test indicates death due to the irreversible loss of brain stem function.  
Death is confirmed following the 2<sup>nd</sup> Test.

| Dr One | Date:  
<table>
<thead>
<tr>
<th></th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td></td>
</tr>
<tr>
<td>GMC Number</td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

| Dr Two | Date:  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td></td>
</tr>
<tr>
<td>GMC Number</td>
<td></td>
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<tr>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

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Form for the Diagnosis of Death
using Neurological Criteria (abbreviated guidance version)

It remains the duty of the two doctors carrying out the testing to be satisfied with the aetiology, the exclusion of all potentially reversible causes, the clinical tests of brain-stem function and of any ancillary investigations so that each doctor may independently confirm death following irreversible cessation of brain-stem function.

Guidance Summary of the AoMRC Code of Practice
The diagnosis of death by neurological criteria should be made by at least two medical practitioners who have been registered for more than five years and are competent in the conduct and interpretation of brain-stem testing. At least one of the doctors must be a consultant. Testing should be performed completely and successfully on two occasions with both doctors present. It is recommended that one doctor perform the test while the other doctor observe; roles may be reversed for the second test.

Diagnostic caution is advised in the following 'Red Flag' patient groups.
(Based on the literature and unpublished case reports.)

1. Testing < 6 hours of the loss of the last brain-stem reflex
2. Testing < 24 hours where aetiology primarily anoxic damage
3. Hypothermia
   (24 hour observation period following re-warming to normothermia recommended)
4. Patients with any neuromuscular disorders
5. Steroids given in space occupying lesions such as abscesses
6. Prolonged fentanyl infusions
7. Aetiology primarily located to the brain-stem or posterior fossa

Evidence for Irreversible Brain Damage of Known Aetiology
- There should be no doubt that the patient’s condition is due to irreversible brain damage of known aetiology. Occasionally it may take a period of continued clinical observation and investigation to be confident of the irreversible nature of the prognosis. The timing of the first test and the timing between the two tests should be adequate for the reassurance of all those directly concerned. If in doubt wait and seek advice.

Children (one examining doctor should normally be a paediatrician or should have experience with children and one of the doctors should not be primarily involved in the child’s care)
- Older than 2 months post term: This guideline can be used in these children.
- Between thirty seven weeks corrected gestation (post menstrual) age to 2 months of age post term: use the RCPCH Guidance available at www.rcpch.ac.uk
- Infants less than 37 weeks corrected gestation (post menstrual) age: the concept of brain-stem death is inappropriate for infants in this age group.

Drugs
- The patient should not have received any drugs that might be contributing to the unconsciousness, apnoea and loss of brainstem reflexes (narcotics, hypnotics, sedatives or tranquillisers). Where there is any doubt specific drug levels should be carried out (midazolam less than < 10mcg/L, thiopentone <5mg/L). Alternatively consider ancillary investigations.
- There should be no residual effect from any neuromuscular blocking agents (atracurium, vecuronium or suxamethonium), consider the use of peripheral nerve stimulation.
- Renal or hepatic failure may prolong metabolism / excretion of these drugs.

Temperature, Circulatory, Metabolic or Endocrine Disorders
- Prior to testing aim for: temperature > 34°C, mean arterial pressure consistently >60mmHg (or age appropriate parameters for children), maintenance of normocarbia and avoidance of hypoxia, acidaemia or alkalaemia (PaCO2 <6.0 kPa, PaO2 >10 kPa and pH 7.35 – 7.45 / [H+] 45-35 mmol/L).
- Serum Na⁺ should be between 115-160mmol/L; Serum K⁺ should be > 2mmol/L; Serum PO₄³⁻ and Mg²⁺ should not be profoundly elevated (>3.0mmol/L) or lowered (<0.5mmol/L) from normal.
- Blood glucose should be between 3.0-20mmol/L before each brain-stem test.
- If there is any clinical reason to expect endocrine disturbances then it is obligatory to ensure appropriate hormonal assays are undertaken.

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Form for the Diagnosis of Death
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Brain Stem Reflexes
- Pupils should be fixed in diameter and unresponsive to light.
- There should be no corneal (blink) reflex (care should be taken to avoid damage to cornea).
- Eye movement should not occur when each ear is instilled, over one minute, with 50mls of ice cold water, head 30°. Each ear drum should be clearly visualised before the test.
- There should be no motor response within the cranial nerve or somatic distribution in response to supraorbital pressure. Reflex limb and trunk movements (spinal reflexes) may still be present.
- There should be no gag reflex following stimulation to the posterior pharynx or cough reflex following suction catheter placed down the trachea to the carina.

Apnoea Test
- End tidal carbon dioxide can be used to guide the starting of each apnoea test but should not replace the pre and post arterial PaCO₂.
- Oxygenation and cardiovascular stability should be maintained through each apnoea test.
- **Confirm PaCO₂ ≥6.0 kPa and pH < 7.4 / [H+] >40 nmol/L.** In patients with chronic CO₂ retention, or those who have received intravenous bicarbonate, confirm PaCO₂ >6.5 kPa and the pH < 7.4 / [H⁺] >40 nmol/L.
- Either use a CPAP circuit (eg Mapleson B) or disconnect the patient from the ventilator and administer oxygen via a catheter in the trachea at a rate of >6L/minute.
- There should be no spontaneous respiration within a minimum of 5 (five) minutes following disconnection from the ventilator.
- **Confirm that the PaCO₂ has increased from the starting level by more than 0.5 kPa.**
- At the conclusion of the apnoea test, manual recruitment manoeuvres should be carried out before resuming mechanical ventilation and ventilation parameters normalised.

Ancillary Investigations
- Ancillary investigations are **NOT** required for the diagnosis and confirmation of death using neurological criteria. Any ancillary or confirmatory investigation should be considered additional to the fullest clinical testing and examination carried out to the best of the two doctors capabilities in the given circumstances.

Organ Donation
- National professional guidance advocates the confirmation of death by neurological criteria wherever this seems a likely diagnosis and regardless of the likelihood of organ donation.
- **NICE** guidance recommends that the specialist nurse for organ donation (SN-OD) should be notified at the point when the clinical team declare the intention to perform brain-stem death tests and this is supported by GMC guidance.

References

Form authorship and feedback
This form was written by Dr Dale Gardiner, Nottingham and Dr Alex Manara, Bristol. Comments should be directed to dalegardiner@doctors.net.uk

September 2015
Appendix 7: Emergency Department Prompt Card

Organ Donation

1) Does your intubated/ventilated patient fit one of these CLINICAL TRIGGERS?
   → Catastrophic brain injury with absence of >1 cranial nerve reflex and GCS <4 (not sedated)
   → Planned withdrawal of life sustaining treatment in patient with life threatening or life limiting condition

2) Refer to ITU for consideration of ongoing management - brain stem death testing / donation after circulatory death (DCD) (ITU SpR bleep 8413)

2) DO NOT DISCUSS potential of Organ Donation in ED with family

3) Contact Specialist Nurse Organ Donation on 07659 590 529 (24 hours a day)

4) Do not refer the following contraindicated patients:
   - Aged >85
   - Metastatic cancer
   - HIV Disease (not HIV infection)
   - TB: active and untreated
   - Active Haematological malignancy

5) Consider Tissue Donation in ALL patients that die in ED – call 08004320559
Appendix 8: Referral criteria for the notification of death to the Coroner

Deaths which should be reported to the Coroner in England and Wales

1) The cause of death is unknown
2) It cannot readily be certified as being due to natural causes
3) The deceased was not attended by a doctor during their last illness or was not seen within the last 14 days or viewed after death
4) There are any suspicious circumstances or history of violence
5) The death may be linked to an accident (whenever it occurred)
6) There is any question of self-neglect or neglect by others
7) The death has occurred or the illness arisen during or shortly after detention in police or prison custody (including voluntary attendance at a police station)
8) The deceased was detained under the Mental Health Act including Deprivation of Liberty Safeguard.
9) The death is linked with an abortion
10) The death might have been contributed to by the actions of the deceased (such as a history of drug or solvent abuse, self-injury or overdose)
11) The death could be due to industrial disease or related in any way to the deceased’s employment
12) The death occurred during an operation or before full recovery from the effects of an anaesthetic or was in any way related to the anaesthetic (in any event a death within 24 hours should normally be referred)
13) The death may be related to a medical procedure or treatment whether invasive or not
14) The death may be due to a lack of medical care
15) There are any other unusual or disturbing features to the case
16) The death occurred within 24 hours of admission to hospital, unless the admission was for the purposes of terminal care
17) It may be wise to report any death where there is an allegation of medical mismanagement (DoH, 2008)
Appendix 9: WHO Surgical Checklist

Surgical safety checklist for organ donation
To be completed by the BSUH theatre staff. Must only be used for patients suitable for donation after circulatory death (DCD) or donation after brain stem death (DBD)

<table>
<thead>
<tr>
<th>SIGN IN</th>
<th>TIME OUT</th>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before patient arrives in theatre</td>
<td>Prior to withdrawal of treatment (DCD) or Surgery commencing (DBD)</td>
<td>Theatre practitioner to confirm</td>
</tr>
<tr>
<td>BSUH theatre staff member leads briefing</td>
<td>• Equipment checked and available</td>
<td>• Organs retrieved</td>
</tr>
<tr>
<td>Staff to be present: Specialist Nurse Organ Donation (SNOD), ALL members of the National Organ Retrieval Service (NORS), Anaesthetic doctor (+/- Operating Department Practitioner if planned re-intubation), Theatre circulator</td>
<td>• Patient identity name band check - (Anaesthetist &amp; SNOD)</td>
<td>• Instrument, swab and needle counts correct</td>
</tr>
<tr>
<td>• All to identify themselves - Name and role</td>
<td></td>
<td>• Body reconstructed</td>
</tr>
<tr>
<td>• Provide NORS with access to imaging</td>
<td></td>
<td>• Cares after death complete</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NORS surgeon(s) completed surgical notes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Theatre log completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If patient is arriving in theatre with family complete TIME OUT now.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Location PRH/RSHC**

Patient label here
## Appendix 10: DCD management in theatre, including reintubation

### Lung Donation after Circulatory Death

#### Checklist for Lung Optimisation in Theatre

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure diagnosis of death confirmed and recorded in notes</td>
</tr>
<tr>
<td>Record time of onset of circulatory arrest</td>
</tr>
<tr>
<td>Secure the patient’s airway with a cuffed endotracheal tube (if patient has been extubated)</td>
</tr>
<tr>
<td><strong>Ensure TEN minutes from circulatory arrest has occurred before optimising lungs</strong></td>
</tr>
<tr>
<td>Set the flow meter to 15L/min, FiO₂ 1.0 (100% O₂)</td>
</tr>
<tr>
<td>Using the anaesthetic circuit, manually carry out a <strong>SINGLE recruitment manoeuvre</strong> to re-inflate the lungs: maintain 30cm H₂O for 30 seconds using APL valve</td>
</tr>
</tbody>
</table>
| **Record the re-inflation time**  
**Must be a minimum of TEN MINUTES from time of onset of circulatory arrest** |
| Set the APL valve to **CPAP 5cm H₂O** and flow to 15L/min |
| At a later time lung recruitment manoeuvres are often necessary. **HANDOVER care** of the airway to the thoracic team |

---

**Note:**
- Ensure the diagnosis of death is confirmed and recorded in notes.
- Record the time of onset of circulatory arrest, ensuring it has been at least TEN minutes.
- Secure the patient’s airway with a cuffed endotracheal tube if not already in place.
- Use the anaesthetic circuit to manually carry out a single recruitment manoeuvre to re-inflate the lungs.
- Record the re-inflation time, ensuring it has been at least TEN MINUTES from the onset of circulatory arrest.
- Set the APL valve to CPAP 5cm H₂O and flow to 15L/min.
- At a later time, lung recruitment manoeuvres may be necessary. Ensure handover of care to the thoracic team.
Appendix 11: Considerations for Neonatal Donation
Update December 2015

There have been recent advances in transplant medicine, these, combined with agreement on the
diagnosis of death by neurological criteria (DNC) in infants¹ has led to the following guidance for use on
TMBU.

1. **Donation after Brain Death (DBD)**

   **Background:**
   DBD necessitates the diagnosis of death by neurological criteria (DNC)
   DNC can be diagnosed from 37 weeks (corrected gestational) age¹

   **Preconditions**
   - The patient is comatose and mechanically ventilated for apnoea.
   - The diagnosis of structural brain damage has been established or the immediate cause of
     Coma is known and, in particular:
     a. Drugs are not the cause of coma;
     b. Neuromuscular blockade has been demonstrably reversed;
     c. Hypothermia does not exist (temperature >34°C);
     d. There is no endocrine or metabolic disturbance that could be the primary cause of the state of
        unresponsiveness.
   
   In addition in post-asphyxiated infants, or those receiving intensive care after resuscitation
   (whether or not they have undergone therapeutic hypothermia) there should be
   - a period of at least 24 hours of observation during which the preconditions necessary for
     assessment for DNC should be present before clinical testing for DNC. If there are
     concerns about residual drug-induced sedation, then this period of observation may need to
     be extended.
   
   For DBD to proceed the infant would be transferred to theatre whilst still ventilated. The retrieval
   team commence surgery with ventilation only being stopped immediately prior to retrieval of the
   organs. This minimises warm ischaemic time and provides the best transplant outcomes.

   *It would be very unusual for an infant on TMBU to fulfil these criteria.*

2. **Donation after Cardiac Death (DCD)**

   Donation after cardiac death can be considered in infants >36 weeks gestation.
   Infants who are undergoing withdrawal of intensive care may be eligible to donate in these circumstances
   e.g. HIE grade 3 infants.
   Decisions to withdraw care and our practice of palliative care will be unchanged in these cases except that:
   - infants must be monitored following extubation to allow monitoring of warm ischaemic time and
     accurate timing of cessation of heart beat
   - following withdrawal of ventilation the infant’s heart would have to stop beating within 3-4 hours for
     kidney retrieval and within 1 hour for liver retrieval.
   - Following cessation of the heartbeat there is a 5 minute pause. Death must then be certified by an
     appropriate medical professional and the infant immediately transferred to the operating theatre.
   - In adults extubation would occur in an anaesthetic room to allow immediate transfer to theatre to
     minimise warm ischaemia. In infants the transplant team would accept immediate (within 5 minutes)
     transfer from TMBU to the theatre.
These criteria cannot always be met even when parents understand them and agree. Very careful counselling in conjunction with the Specialist Nurse for Organ Donation (SN-OD) will be essential.

At present in the UK only kidneys and liver hepatocytes have been donated from infants < 2months. With the new criteria for diagnosis of death by neurological criteria this may change to enable donation of other organs. Both kidneys are removed together in their entirety and are usually transplanted into one patient. The liver is removed in its entirety and hepatocytes are isolated and may be used for multiple recipients. If consented for heart valve donation the heart will also be retrieved during surgery. It may sometimes be necessary to remove other organs to aid in the retrieval and subsequent transplantation. Families will be advised of this and the appropriate consent obtained prior to donation. The retrieval operation will take several hours.

Early referral allows time for the SN-OD to make an assessment of the patient’s suitability for donation and for the SN-OD and clinical team to plan a collaborative process.

The South East Organ Donation Services Team can be contacted on 07659 590 529 which is a 24hr pager service.

The BSUH SN-ODs are located on ICU Level 7 Thomas Kemp Tower Ext 7029 for any routine questions and enquiries.

3. **Heart valve donation following death.**

   Infants from 32 weeks gestation weighing >2.5kg can donate whole hearts for donation of heart valves. The whole heart is retrieved within 48hrs after death and the valves are dissected and frozen for later use. They can be kept in storage for up to 10yrs. The infant must be cooled within 6hrs of death to enable heart valve donation. Use of a cooling basket or cool room within a hospice/hospital may be acceptable. To refer for heart valve donation only please contact the National Referral Centre on 0800 432 0559.

**Dr Cassie Lawn**  
**Consultant Neonatologist**

Ref  
1. The diagnosis of death by Neurological criteria in infants less Than two months old- RCPCH 2015
Appendix 12: Tissue Donation

Tissue Referral

If the family have shown a positive interest in tissue donation provide them with the Tissue Donation leaflet and advise that they will be contacted by the Specialist Nurse for tissue donation.

To refer to Tissue Services please call 0800 432 0559 and leave your name, department and contact number.

A nurse from the national referral centre will return your call to obtain more information about the patient. If the patient is referred after 20:00hrs they will call back after 08:00. Information required will include:

- Name, D.O.B, address and hospital number of the deceased
- Patient G.P. details
- Date and time of death and a provisional cause
- Next of kin details including a contact telephone number
- Brief medical history including any recent infection, trauma and medication
- Height and weight of patient
- Results of any blood samples

Ideally the patient’s notes should be kept on the ward until this information can be given to the national referral centre. It is important that referrals are made as soon as possible as tissue donation is time sensitive.
Appendix 13: Due Regard Assessment Tool

<table>
<thead>
<tr>
<th></th>
<th>Yes/ No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the document/guidance affect one group less or more favourably than another on the basis of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Age</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>• Disability</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Gender</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Gender identity</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Marriage and civil partnership</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Pregnancy and maternity</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Race</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>• Religion or belief</td>
<td>No</td>
<td>Section 2.5</td>
</tr>
<tr>
<td>• Sexual orientation, including lesbian, gay and bisexual people</td>
<td>Yes</td>
<td>**</td>
</tr>
<tr>
<td>2. Is there any evidence that some groups are affected differently and what is/are the evidence source(s)?</td>
<td>Yes</td>
<td>See below</td>
</tr>
<tr>
<td>3. If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?</td>
<td>Yes</td>
<td>See below</td>
</tr>
<tr>
<td>4. Is the impact of the document/guidance likely to be negative?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>5. If so, can the impact be avoided?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. What alternative is there to achieving the document/guidance without the impact?</td>
<td></td>
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</tr>
<tr>
<td>7. Can we reduce the impact by taking different action and, if not, what, if any, are the reasons why the policy should continue in its current form?</td>
<td></td>
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</tr>
<tr>
<td>8. Has the policy/guidance been assessed in terms of Human Rights to ensure service users, carers and staff are treated in line with the FREDA principles (fairness, respect, equality, dignity and autonomy)</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

NHS BT guidelines prohibit organ donation in patients over 85 years

# Neonatal organ and tissue retrieval follows specific guidelines – see Appendix 11

** Joint UK blood transfusion and tissue transplantation services professional advisory committee determine that MSM (oral or anal, with/without condom) are not suitable for tissue donation. No restriction on organ donation.

If you have identified a potential discriminatory impact of this policy, please refer it to Clinical Lead 0 for Organ Donation together with any suggestions as to the action required to avoid/reduce this impact.