

## A trust wide policy for Organ and Tissue donation

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Ratified by:	Clinical Advisory Board
Date ratified:	13.05.15
Name of originator/author:	Dr R K Dulai/Mrs J Kennedy/Dr N Marsden
Director responsible for implementation:	Medical Director
Date issued:	13 <sup>th</sup> May 2015
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Target audience:	Trust Wide

## Version Control Schedule

Version	Date	Author	Status	Comment
V0.1	30.05.15	Dulai/Kennedy/Marsden	Draft	Draft, to replace existing obsolete policy when finalised.
V1.0	08.06.15	Dulai/Kennedy/Marsden	Final	To replace existing obsolete policy

## Consultation and Ratification Schedule

Name and Title of Individual	Date Consulted
Clinical Advisory Board	13 <sup>th</sup> May 2015
Organ Donation Committee – sent to members	1 <sup>st</sup> May 2015
Patient Safety Board	5 <sup>th</sup> May 2015
Intensive Care Steering Group – Sent to members	5 <sup>th</sup> May 2015
Emergency medicine Clinical lead	5 <sup>th</sup> May 2015
Coroners (only relevant section)	5 <sup>th</sup> May 2015
Anaesthetic Leads WHH, K&C and QEQM	5 <sup>th</sup> May 2015
Theatre Matrons WHH, K&C and WHH (only relevant sections)	5 <sup>th</sup> May 2015

Name of Committee	Date Reviewed
Organ Donation Committee – sent to members	1 <sup>st</sup> May 2015

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## 1. Introduction, Background and Purpose

The Organ Donation Taskforce was established, at the request of the Government. The Taskforce achieved a 50% increase in organ donation after death in the UK within five years. This was achieved through donor identification and referral; collaborative approach to consent, donor co-ordination and organ retrieval arrangements. Across these categories there are a number of matters that continue to need attention: legal and ethical issues, the role of the NHS, organisation of co-ordination and retrieval, training and public recognition and public promotion of donation.

The new strategy for the UK set out by the Organ Donation Taskforce -Taking organ transplantation to 2020 (2013), sets a target for the consent/authorisation of organ donation rate in excess of 80% by 2020. Therefore, all parts of the NHS must embrace organ donation as a usual, not an unusual event. Local policies constructed around national guidelines should be put in place. Discussions about donation should be part of all end-of-life care when appropriate. Each Trust should have an identified clinical donation champion and a Trust donation committee to help achieve this<sup>1</sup>.

## 2. Definitions

BSD	= Brain Stem Death
CLOD	= Clinical Lead for Organ Donation
DBD	= Donation after Brain Death
DCD	= Donation after Circulatory Death
ED	= Emergency Department
HTA	= Human Tissue Authority
ICU	= Intensive Care Unit
NHSBT	= National Health Blood and Transplant
ODR	= Organ Donation Register
SNOD	= Senior Nurse Organ Donation
TROD	=Trainee Representative in Organ donation

## 3. Scope

This policy covers all East Kent University Hospitals Foundation Trust sites. The aim is to ensure the identification of the wishes of dying patients with regard to organ and tissue donation and to fulfil those wishes wherever practical. Standardising and promoting best practice for organ and tissue donation will help to ensure that patients of all ages who fulfil the criteria for organ and tissue donation are reliably identified in a timely manner allowing their early referral to the Specialist Nurse in Organ Donation (SNOD) / tissue services. Optimal management of potential donors will result in organs/tissues remaining viable for transplant.

This policy ensures that the patient's next of kin or significant other is approached collaboratively by a multidisciplinary team including the SNOD at an appropriate time for

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<sup>1</sup> DH Jan 2008 Organs for Transplant: A report from the Organ Donation Task Force. [www.dh.gov.uk](http://www.dh.gov.uk).

discussion of organ donation consent, such that all relevant information can be provided in the best possible manner. This policy allows health-care professionals to be aware of their role in caring for the potential donor and their family and their need for adequate support. It also provides healthcare professionals with information and support when dealing with organ and/or tissue donation. Having up-to-date information available to health-care workers will ensure the indemnification of and maximise the number of potential donors.

This policy is adherent to National Policy produced by UK Transplant (2004 and 2013), Human Tissue Act (2004), Human Tissue Authority (2006), Guidelines for Organ Donation from the Intensive Care Society (2004), Code of Practice for diagnosis of Brain Stem Death from the Academy of Medical Royal Colleges (2008) & Organs for Transplant (2008) from the Department of Health, NICE CG 135 Organ donation for Transplantation (2011), NHSBT Timely Identification and Referral of Potential Organ Donors (2013).

## **4. Policy**

### **4.1 Consent for organ / tissue donation**

It is essential that the Specialist Nurse for Organ Donation (SNOD) be informed of all potential organ/tissue donors as soon as possible. Patients should be referred as a minimum:

- when a patient presents with a catastrophic brain injury with loss of one or more cranial nerve reflexes and a GCS of 4 or less not explained by sedation
- when the intention to confirm death by neurological criteria (i.e. brain stem death testing) has been made
- when a clinical decision to withdraw active treatment to allow natural death has been made.

This can be done by the nurse in charge, bedside nurse or doctor (please use Appendix D, E and F).

Under normal circumstances no one other than the SNOD should broach discussions about organ donation with a patient's family or NOK. Families should only be approached once they have accepted the patient's death or the inevitability of death. This approach should be in a collaborative manner by the SNOD with the consultant in charge and a senior nurse. The SNOD is responsible for planning and leading the approach. The only exception to this is when the family bring the matter of organ donation up and ask for information.

Families are generally not in a suitable frame of mind to discuss organ donation until they have either accepted the death of their loved one or that their death is inevitable. SNODs are especially trained in communication skills and how to recognise this acceptance, and effectively communicate this difficult subject matter. As a result of this training they have a much greater rate of success in gaining consent for organ donation. Having the SNOD broach the subject with relatives also helps prevent any perceived

conflicts of interest for the clinical team looking after the patient. SNODs will have access to up to date donor criteria and will be able to assist with the identification of all suitable donors. In cases of organ donation the SNOD will be present throughout the organ donation process.

For tissue donation the SNOD will only take the consent if they are seeing the patient as a referral for organ donation and they have approached the family.

The Human Tissue Act (2004) states the wishes of the patient must be fulfilled. Consent from the patient may be available by written communication, verbal communication or by means of registering their wishes on the Organ Donation Register (ODR). However, if the patient's relatives refuse, their refusal currently supersedes the patient's wishes. If the wishes of the patient are not known (e.g. the patient is not on the ODR) this does not necessarily prevent the patient from becoming a donor, the patients nominated representative or person in the highest qualifying relationship need to be identified and approached to gain organ donation consent.

The Organ Donation Register (ODR) will be checked by the SNOD or can be checked by the clinical team (Telephone 01179 757575). All telephone conversation to the ODR will be recorded by NHS Blood and Transplant (NHSBT) and archived so a permanent record is available. The outcome of the ODR should also be documented in the patient's notes. "Consent" will be established by the SNOD following an interview with the family. The Human Tissue Act (2004) ranks persons in a qualifying relationship for those who can give consent if the views of the patient cannot be established. Consent should be obtained from the person in the highest qualifying relationship. In circumstances where a person in the highest qualifying relationship is unable to do so, the next available ranked person should be approached and this should be documented in patients' notes. The rankings are as follows:

- Spouse or partner (including civil or same sex partner)
- Parent or child
- Brother or sister
- Grandparent or grandchild
- Niece or Nephew
- Stepfather or stepmother
- Half-brother or half-sister
- Friend of longstanding

In situations where the next of kin/significant other are unable to sign the consent form (e.g. living overseas and communicate their decision by telephone) it is acceptable for the person who has taken the consent to document the details in the patient's case notes and obtain a witness signature. In most cases of tissue donation consent will be confirmed by a telephone interview where the documentation will be held by the co-ordinators. The local healthcare professional is required to document the discussion regarding organ/tissue donation in the patient's medical records. In most cases the interview between the tissue co-ordinator and the family will be recorded. If there is no family available, advice should be sought from the SNOD.

## 4.2 Coroner's Role and Reportable Deaths

### William Harvey Hospital:

Senior Coroner Mrs Rachel Redman requests that ALL potential Organ donors must be referred to the coroner by the duty doctor.

Office hours:

- Monday-Friday via Coroner's officers on: **03000410804**

Out-of-hours:

- Senior Coroner Mrs Rachel Redman: Contact via home number first and then mobile
- Deputy Coroner Miss Tina Freedman: Contact via home or mobile number

Emergency Number in the event that a response cannot be obtained from the above numbers out-of-hours:

- Tony Beldham Coroners` Office Manager: Mobile

These private numbers are available on request by contacting the SNOD or kept in ITU consultant's office and are for Organ Donation patients ONLY. These numbers are not available from the switchboard.

### Kent and Canterbury Hospital & Queen Elizabeth the Queen Mother hospital (Margate):

His Honour Alan Blunsdon requests that all REPORTABLE deaths when organ donation consent is sought must be referred. The reportable death list (see below) is purely a guide and there will be other occasions when a Doctor would feel more comfortable with Coroner input. It is safer to refer than not.

- The cause of death is unknown
- It cannot readily be certified as being due to natural causes
- The deceased was not attended by the doctor during his last illness or was not seen within the last 14 days or viewed after death
- There are any suspicious circumstances or history of violence
- The death may be linked to an accident (whenever it occurred)
- There is any question of self-neglect or neglect by others
- 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)
- The deceased was detained under the Mental Health Act
- The death is linked with an abortion
- 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)
- The death could be due to industrial disease or related in any way to the deceased's employment See the long check list in the Medical Cause of Death Certificate book

- 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)
- The death may be related to a medical procedure or treatment whether invasive or not
- The death may be due to lack of medical care
- There are any other unusual or disturbing features to the case
- The death occurs after admission to hospital within the period of any local rule (unless the admission was purely for terminal care).
- It may be wise to report any death where there is an allegation of medical mismanagement

Office hours:

- Monday – Friday via Coroner's Officers **03000410603**

Out-of-hours:

- His Honour Alan Blunsdon (Senior Coroner): Home number first and then Mobile
- Assistant Coroner Mr James Dillon (in absence of Senior Coroner): Mobile

**Emergency Number** in the event that a response cannot be obtained from the above numbers:

- Mr Tony Beldham Coroners` Office Manager: Mobile

These private numbers are available on request by contacting the SNOD or kept in ITU consultant's office and are for Organ Donation patients ONLY. These numbers are not available from the switchboard.

The Coroner has a legal duty to enquire into deaths in his or her jurisdiction where the cause is unknown or where the death is violent or unnatural or deaths which occur in prison or police custody. He/she must establish who the dead person was, when and where that person died and how that person came by his or her death. In all cases, even in suspicious cases where the police are involved, the coroner is responsible for the final decision as to whether a donation goes ahead. In these circumstances, organ or tissue donation cannot proceed without the agreement of the Coroner who must be satisfied that such donation will not interfere with his/her duty to investigate the death. The Coroner must agree to donation, the Coroner has no power to authorise donation.

The Coroner must conduct a full investigation into the death and, where necessary, ensure that any evidence relevant to the investigation is preserved. A principal concern of Coroners is to ensure that any forensic examination or criminal proceedings arising from the death are not compromised by the retrieval of organs or other interference with the body. Before making a decision in a particular case, where criminal proceedings are likely, it is important that the Coroner discusses the case with the pathologist (forensic or otherwise) who will be carrying out the post mortem examination and the senior investigating police officer. The Coroner may also ask for a forensic pathologist to be present at the retrieval. This may mean that donation can proceed where otherwise it may not have been possible. Requests can be made from the pathologist for a detailed description of organs at the time of organ retrieval. This should be documented clearly by the transplant surgeons at the time of retrieval.

Provided such procedures are followed and there is an appropriate consent either from the donor or from an individual in a qualifying relationship, the Coroner is unlikely to object to organ or tissue donation in most circumstances. Even in deaths entailing a police investigation, if full information is provided, the Coroner, in consultation with the police, may be able to agree to donation of some organs and/or tissues. However, in such cases, it is often useful to contact as soon as possible, the pathologist and senior investigating police officer, in addition to the coroner.

If a Coroner's investigation is not required, then the patient's Medical Certificate of Cause of Death (MCCD) can be issued once death has been confirmed. The following government document on filling in a MCCD should be used as a guide.

[http://www.gro.gov.uk/images/medcert\\_July\\_2010.pdf](http://www.gro.gov.uk/images/medcert_July_2010.pdf)

#### **4.3 Donors Assurances**

The SNOD will undertake a risk assessment on all potential donors to minimise the transmission of infections and disease. As part of this they will attempt to obtain as much information as possible about the potential donors. This will involve reviewing the potential donor's case notes, interviewing the next of kin/significant other, examining the potential donor and contacting the General Practitioner (GP). It is the SNOD's responsibility after undertaking a thorough assessment of the potential donor to discuss all relevant information with the transplant surgeons/relevant tissue banks. The decision on donor suitability is the responsibility of the transplant surgeon/relevant tissue banks.

Solid organs: Kidney, pancreas, liver, heart, lung and small bowel transplantation are established treatments following failure of these vital organs.

Tissue Donation (see Appendix J): The quality of life for many people can be improved by the transplantation of tissue, such as eye tissue, bone, tendon, skin or heart valves. Tissue does not deteriorate immediately following cessation of the heartbeat due to its low metabolic requirements, allowing more time for tissue retrieval (usually within 24 hours after death). This option of donation can therefore be offered in a variety of clinical settings.

#### **4.4 Source of donors: DBD, DCD, Tissue, Anencephalic and Living**

##### Donation after Brain Death (DBD):

Patients with severe brain injury with one or more cranial nerves absent and a Glasgow coma Score is 4 or less that cannot be explained by sedation MUST be considered for BSDTs. BSDTs give a clear and legal diagnosis of death allowing the patient's relatives much greater clarity with regard to their loss. BSDT is covered below in 4.5.

Appendix I is a guide on optimisation of the DBD donor and Appendix H is a guide on the anaesthetic management of the DBD donor.

##### Donation after Circulatory Death (DCD):

Patients in whom circulatory death is anticipated following a decision to withdraw or limit life sustaining treatment in the critical care area, the SNOD's MUST be contacted prior to

withdrawal of treatment and where possible, prior to the discussion with the family. The process of withdrawal of treatment should only commence following discussions with the SNOD. If it is believed that the death will need discussion with the coroner, this must be done before withdrawal of treatment and consent for donation obtained.

The majority of centres in the UK carry out DCD retrieval. DCD donation is a viable option for patients who are being maintained on a ventilator within ITU or the ED who are to undergo a planned withdrawal of treatment.

The criteria for DCD donation include:

- The patient is intubated.
- The decision to withdraw treatment has been made on medical grounds where an imminent death is likely.
- Patient has made wishes clear for organ donation/ next of kin has given consent.

See Appendix G - for anaesthetic management of DCD donor

#### Tissue donation:

Healthcare professionals should always consider the possibility of tissue donation outside the ICU setting. The appropriate time may either be shortly before death (where willingness has already been demonstrated) or once death has been pronounced, on cessation of cardio-respiratory function.

#### Anencephalic donation:

Heart and heart valve donation is possible from infants born with “anencephaly” – a malformation not compatible with life. This condition results from the failure of the cranium and the scalp to develop. It is usually identified early in the pregnancy by ultrasonography.

The infant survives for no more than a few hours/days after birth and a termination may be offered, even in the third trimester of pregnancy. In situations where the pregnancy continues, organ/tissue donation may be an option. Once again Tissue Services are available for advice.

#### Living donation:

The Human Tissue Act (2004) permits altruistic donation (donation between strangers). Refer to transplant co-ordinators and or specialist centres for further advice.

### **4.5 The Donor Family**

Organ/tissue donation is a positive option and can be a comfort at a time of great distress, however, this is not so for everyone and the next of kin’s wishes must be respected. The request to the family should be by a collaborative approach by the healthcare professionals caring for the patient and the SNOD. All communication with the family regarding organ/tissue donation should be clearly documented in the patients’ medical and nursing notes.

Donation is a highly emotive issue, and these discussions are being held at a very sensitive time for the donor family who are also dealing with their bereavement. Great sensitivity and understanding must be shown by all of the multidisciplinary team involved in the patients care.

#### **4.5 Brain Stem Death Tests (BSDT)**

In patients with catastrophic brain injury (due to hypoxia, ischaemia, haemorrhage or abnormal pathology) who are not accepted by a neurosurgical centre it should be considered best practice to provide critical care support until the patient's prognosis is clear or they become brain stem dead such that BSDT tests can then be performed. (See Appendix F for the Catastrophic Brain Injury pathway). All patients suspected of having suffered brain stem death MUST have BSDT tests performed. The following link to the Intensive Care Society (ICS) provides the BSDT form used nationally and is updated for "Red Flags" and other improvements.

<http://www.ics.ac.uk/ics-homepage/guidelines-and-standards/>

The relatives must be kept fully informed throughout this process by hospital staff. The family should not be approached with regard to organ donation until they have had time to understand the significance of the BSDT tests and have come to terms with them.

In children over the age of two months, the brain stem death criteria should be the same as for adults in accordance with "The British Paediatric Association and the Council of the Royal College of Physicians working party. However between 37 weeks of gestation and 2 months of age, it is rarely possible confidently to diagnose brain stem death and below 37 weeks of gestation, the criteria of brain stem death cannot be applied.

#### **4.4 Theatre Team**

The theatre team are required to be informed at an early stage of potential donor retrieval. This is to allow for forward planning to aid the donor retrieval process. A theatre time for the organ donation should be provided by the theatre team. Organ donation should not result in the cancellation of any theatre lists. Therefore if all theatres are occupied in the morning, no organ donation should come to theatres from 4am unless this has been negotiated and a delay in routine theatre lists is expected.

Following an organ retrieval operation the donor transplant co-ordinator and the theatre team usually perform the last offices as the final act of caring. However, ICU staff and the next of kin may also wish to be involved. An anaesthetist is required for both DCD & DBD.

#### **4.5 Follow up**

The SNOD will offer the opportunity to the next of kin/significant other to be given anonymous information regarding the outcome of the transplant operations in writing and give continuing support if required (UK Transplant, Standards of Practice for Donor Transplant Co-ordinators 2003).

The SNOD will write to the staff involved with the donation, thanking them for their support and informing them of the donation outcome (UK Transplant, Standards of Practice for Donor Transplant Co-Ordinators 2003). The donor transplant co-ordinator/tissue co-ordinators will offer a feedback/debrief session as an opportunity to discuss any concerns and ask any questions regarding the donation process.

#### **4.6 Legal considerations**

The Human Tissue Act (2004) states that only the person lawfully in possession of the body or his/her designated other can authorise the removal of organs or tissues from the body. It states: "The person lawfully in possession of the body has powers and duties in connection with the removal of organs. The person authorises the removal of any part from the body for the said purposes (therapeutic or medical education, or research) if having made such reasonable enquiry as may be practicable, he has no reason to believe: (a) that the deceased has expressed an objection to his body being so dealt with after his death, and has not withdrawn it: or (b) that the surviving spouse or any surviving relative of the deceased objects to the body being so dealt with" Where a deceased person is in an NHS Hospital or organisation, the person with control and management of the hospital (usually the Chief Executive/Medical Director) is the person lawfully in possession of the body until such time it is claimed by the person who has right to possession for the purpose of disposal (usually the executor or next of kin of the patient) or, by reason of their statutory obligations the Coroner (Code of Practice for diagnosis of Brain Stem Death from the Academy of Medical Royal Colleges 2008).

In situations where the cause of death was sudden, not due to natural causes or unexpected and/or the doctor has not treated the deceased during his/her last illness, the coroner must be informed (Coroner's Act 1988). The medical staff involved in the care of the patient should contact the coroner to obtain authorisation for organ/tissue donation or the donor transplant co-ordinator/ tissue co-ordinator may do this on behalf of the medical staff. This should be done prior to approaching the family for their consent for donation.

The Human Tissue Act (2004) prohibits commercial dealing in organs including non-regenerative tissue. It is a criminal offence to make or receive payments in return for supplying an organ from a dead or living person intended for transplantation. It is also an offence to broker or negotiate an arrangement involving such payment or to advertise for donors who will be paid.

No conditions should be attached to the donation of organ/tissue in terms of the potential recipient. The only restrictions permitted are with regard to which organ or tissues can be donated.

## 5. Consultation and Approval

Organ Donation Committee – sent to members
Patient Safety Board
Intensive Care Steering Group – Sent to members
Emergency medicine Clinical lead
Coroners (only relevant section)
Anaesthetic Leads WHH, K&C and QEQM
Theatre Matrons WHH, K&C and WHH (only relevant sections)
Approval will be by the Clinical Advisory Group

## 6. Review and Revision Arrangements

A review of this policy will take place in May 2018 by the EKHUFT Organ Donation Committee.

## 7. Document Control including Archiving Arrangements

This policy will replace previous policy on Sharepoint. Archiving of previous policy will be carried out in accordance with trust guidelines.

## 8. Monitoring

Ongoing Potential Donor Audit collected by Senior Nurse Organ Donation and reported to Organ Donation Committee and to NHSBT. Individual cases discussed at Organ Donation Committee and Critical Care Governance meetings.

## 9. References and Associated Documentation

- Academy of Medical Royal Colleges. (2008). A Code of Practice for the Diagnosis and Confirmation of Death.
- British Transplantation Society, United Kingdom Transplant Co-ordinators Association, United Kingdom Transplant Support Services Authority. (1998, updated April and December 2002). Cadaveric Donor Assurances and Damage Reporting.
- Conference of Medical Colleges and Faculties of the United Kingdom. (1988). Working Party on Organ Transplantation in Neonates. London DHSS
- Coroner's Act (1988), London. HMSO
- Department of Health Working Party. (1998), A Code of Practice for the Diagnosis of Brain Stem Death (including Guidelines for the Management of Potential Organ and Tissue Donors).
- Department of Health's Advisory Committee on the Microbiological safety of Blood and Tissue for Transplantation (MSBT). (2000). Guidance on the Microbiological Safety of Human Organs, Tissues and Cells used in Transplantation.

- Department of Health. (2008). Organs for Transplants: A report from the Organ Donation Task Force.
- Department of Health. (2009). Legal issues relevant to non-heart beating organ donation.
- General Medical Council. (2010). Treatment and care towards the end of life
- General Medical Council. (2013). Good medical practice
- Human Organ Transplant Act (1989), London. HMSO.
- Human Tissue Act (2004), London. HMSO.
- Human Tissue Authority. (2006). Code of Practice for the donation of organs, tissues and cells for transplantation. [www.hta.gov.uk](http://www.hta.gov.uk)
- Intensive Care Society. (2004). Guidelines for Organ donation. [www.ics.ac.uk](http://www.ics.ac.uk)
- London British Paediatric Association. (1991). Conference of Medical Royal College and their Faculties in the United Kingdom. Diagnosis of brain stem death in infants and children.
- NICE. (2011). CG135 Organ Donation for Transplantation
- NHS Blood and Transplant. (2012). Timely Identification and Referral of Potential Organ Donors
- Organs for Transplants. (2008). A report from the Organ Donation Taskforce: Department of Health.
- UK Transplant. (2003). Standards of Practice for Donor Transplant Co-ordinators.
- United Kingdom Transplant Co-ordinators Association, British Association for Critical Care Nurses & MORI's Research Unit (1995), Report of a two-year study into reasons for relatives' refusal of organ donation. Department of Health.
- UK Transplant (2003), United Kingdom Hospital Policy for Organ and Tissue Donation.

## Appendices

### Appendix A - Equality and Human Rights Analysis (EHRA)

This Equality Analysis should be attached to any policy, strategy or business case for decision.	
Name of the policy, strategy or business case:	A trust wide policy for Organ and Tissue donation
Details of person completing the Analysis	
Name	Ranjit Dulai
Job Title	CLOD/Anaesthetic consultant
Division/Directorate	Surgical division
Telephone Number	<a href="#">Click here to enter text.</a>
What are the main aims, purpose and outcomes of the policy, strategy or business case?	To provide all EKHUFT staff with a framework enabling understanding of Organ and Tissue donation. To ensure compliance with national regulations and guidance issued by NICE (CG135 Organ Donation)
Does it relate to our role as a service provider and/or an employer?	Yes
Information and research: Outline the information and research that has informed the decision. Include sources and key findings. Include information on how the decision will affect people with different protected characteristics.	N/A
Consultation: Has there been specific consultation on this decision? What were the results of the consultation? Did the consultation analysis reveal any difference in views across the protected characteristics? Can any conclusions be drawn from the analysis on how the decision will affect people with different protected characteristics?	N/A.

Is the policy, strategy or business case relevant to the aims of the equality duty? Guidance on the aims can be found in the EHRC's <a href="#">PSED Technical Guidance</a> .		
Aim	Yes/No	
Eliminate discrimination, harassment and victimisation	No	
Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it	No	
Foster good relations between persons who share a relevant protected characteristic and persons who do not share it	No	
Assess the relevance of the decision to people with different protected characteristics and assess the impact of the decision on people with different protected characteristics. When assessing relevance and impact, make it clear who the assessment applies to within the protected characteristic category. For example, a decision may have high relevance for young people but low relevance for older people; it may have a positive impact on women but a neutral impact on men.		
Protected characteristic	Relevance to decision High/Medium/Low/None	Impact of decision Positive/Neutral/Negative
Age	High	Positive
Disability	High	Positive
Gender reassignment	High	Positive
Marriage and civil partnership	High	Positive
Pregnancy and maternity	High	Positive
Race	High	Positive
Religion or belief	High	Positive
Sex	High	Positive
Sexual orientation	High	Positive
Mitigating negative impact: Where any negative impact has been identified, outline the measures taken to mitigate against it.	Not applicable	
Conclusion: Consider how due regard has been had to the equality duty, from start to finish. There should be no unlawful discrimination arising from the decision (see <a href="#">PSED Technical Guidance</a> ). Advise on the overall equality implications that should be taken into account in the final decision, considering relevance and impact.		
All religions and races accept organ and tissue donation. The purpose of this policy is that the option of donation is offered to all families when appropriate, by a trained specialist nurse, who is able to answer family concerns, fears and support the family through the process.		

Signature of person completing the Analysis	
Name	Click here to enter text.
Signed	Click here to enter text.
Date	Click here to enter text.
Approval and sign-off Head of Department/Director	
Name	Click here to enter text.
Signed	Click here to enter text.
Date	Click here to enter text.
Chair of decision making Board/Group/Committee approval and sign-off	
Name	Click here to enter text.
Signed	Click here to enter text.
Date	Click here to enter text.

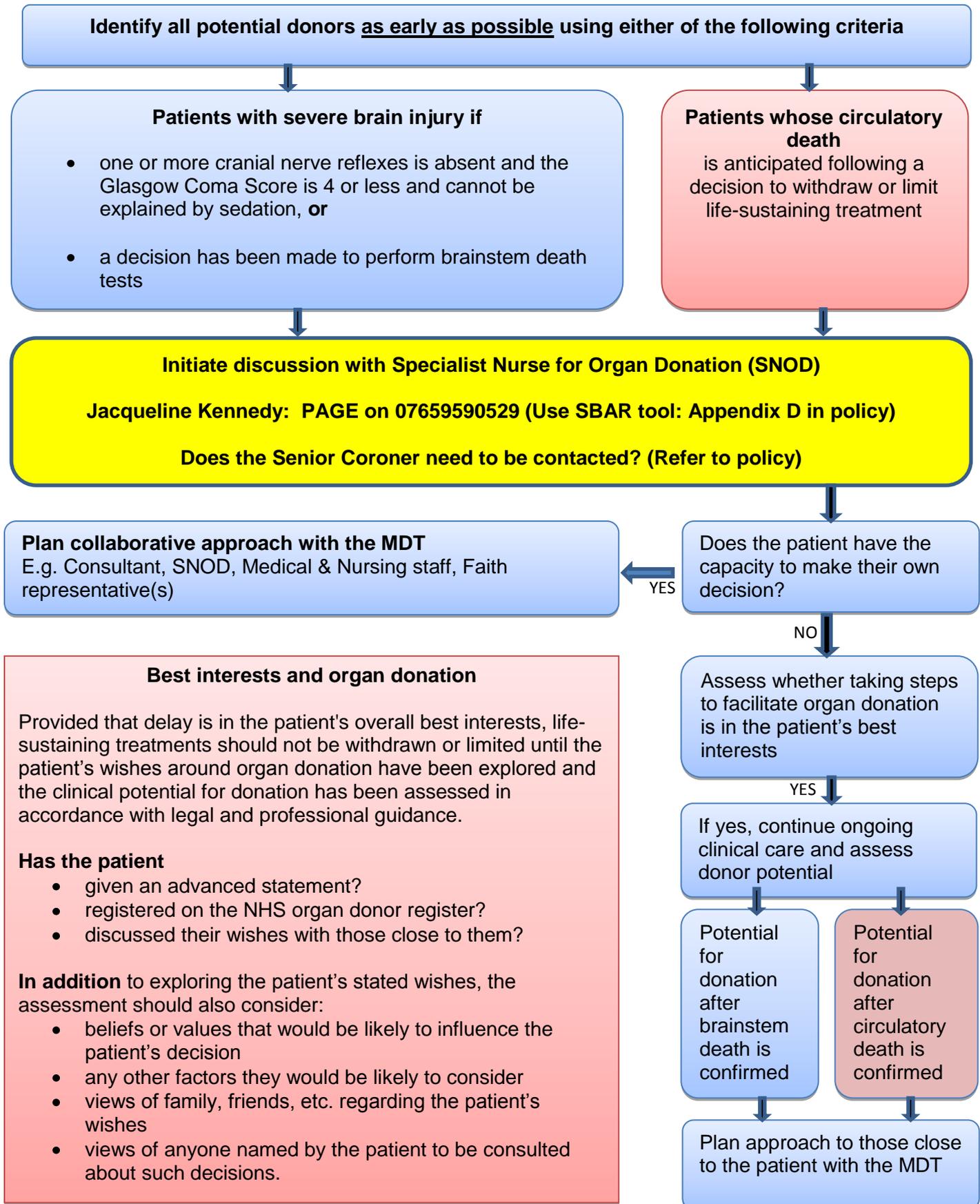
**Appendix B – Author’s Checklist of compliance with the Policy for the Development and Management of Organisation Wide Policies and Other Procedural Documents**

	Requirement:	Compliant Yes/No/ Unsure	Comments
1	Style and format	Yes	Arial 12
2	An explanation of any terms used in documents developed	Yes	
3	Consultation process	Yes	
4	Ratification process	Yes	
5	Review arrangements	Yes	
6	Control of documents, including archiving arrangements	Yes	
7	Associated documents	Yes	
8	Supporting references	Yes	
9	Relevant NHSLA criterion specific requirements	Yes	
10	Any other requirements of external bodies	Yes	
11	The process for monitoring compliance with NHSLA and any other external and/or internal requirements	Yes	

**Appendix C - Plan for Dissemination of the Policy for the Development and Management of Organisation Wide Policies and Other Procedural Documents**

Title of document:	A trust wide policy for Organ and Tissue donation		
Version Number:	V1.0		
Approval Date:	13 <sup>th</sup> May 2015	Dissemination lead:	
Previous document already being used?	Yes		
If yes, in what format (paper / electronic) and where (e.g. Directorate / Trust wide)?	Electronic Trust wide. All directorates.		
Proposed instructions regarding previous document:			
To be disseminated to:	To all clinical staff when it is finalised.	Format i.e. paper or electronic	
Trust wide	EKHUFT	Electronic	Electronic dissemination

**Appendix D – EKHUFT Clinical triggers for Organ Donation (NICE CG 135)**



S

I am....., nurse/doctor from WHH/K&C/QEQM Hospital ICU/A&E  
My telephone number is.....  
I am calling for advice/to make a referral.  
The patients name is .....,  
Dob....., Postcode.....  
We are planning to brain stem death test/withdraw treatment today/tomorrow at approximately.....am/pm

B

The patient was admitted on the....., with.....  
.....  
PMH includes.....  
.....  
The family are..... and their understanding is.....  
.....  
The consultant is.....he is aware/not aware of the referral to SNOD.  
The patient has/hasn't had a CT showing.....

A

The ventilation mode is .....(RR is .....)  
Most recent ABG on .....FiO<sub>2</sub> is Ph....., PaO<sub>2</sub>....., PaCO<sub>2</sub>....., Most recent Bp is .... /..... and MAP is ..... HR is .....  
Cardiovascular support includes.....  
.....  
Pupils are ....., gag and cough is/isn't present  
Urine output for last hour is .....mls  
Blood results include blood group.....,  
eGFR....., urea....., creatinine....., ALT....., ALP.....

R

Our plan is  
.....  
.....  
and we would like your help/advice.  
I would like you to check the organ donation register and inform us if there is anything we need to do in the meantime.  
Could we have your contact number to update you with any further information?

## APPENDIX F – EKHUFT Catastrophic Brain Injury Pathway (CBI) - Stabilisation for Brainstem Death Testing

The family must understand that their relative has suffered a severe brain injury and is being or will be supported on ITU. This is to allow the family time to come to terms with the diagnosis. Specific tests will be carried out to assess the patient's brainstem. It must be made clear that that this may or may not confirm brain stem death. If brainstem death is not confirmed, then further active treatment will depend on the prognosis which will be assessed by the consultant in ITU.

**DO NOT** discuss organ donation with the family/relatives (liaise with Specialist Nurse in Organ Donation first) as brain stem death tests are carried out for confirmation of diagnosis.

- |  |        |
|--|--------|
| • Do you suspect brain stem death?           | Yes/No |
| • Are pupils fixed and dilated and GCS 3/15? | Yes/No |
| • Is the patient apnoeic?                    | Yes/No |
| • Are cough and gag reflexes absent?         | Yes/No |

If 'Yes' to all of above questions please commence the following checklist.

Date & Time CBI Started ..... Date & Time SN-OD called .....

**Ensure all sedation is switched off and record time .....**

### VENTILATION

**Targets:** pO<sub>2</sub> 8-14 kPa  
pCO<sub>2</sub> 5-6.5kPa

#### Additional Actions:

- Sit up the patient at an angle of approx 30° - 45° and turn 3 hourly
- Recruitment manoeuvre by medical team to optimise lung ventilation (eg.CPAP mode 25-40 cmH<sub>2</sub>O for 30-50 seconds)
- Set PEEP 5-10 cm H<sub>2</sub>O
- Lung Protective ventilation (TV 6-8mls/kg IBW, Peak pressure ≤30cm H<sub>2</sub>O)
- Repeat recruitment manoeuvre if pO<sub>2</sub> ≤ 10.0kPa
- Review ventilation 2 hourly – repeat recruitment manoeuvre if deteriorating

### CIRCULATION

- Insertion of Central Line (RIGHT Internal Jugular or Subclavian)
- Calibrated non-invasive cardiac output monitor (LEFT Radial or Brachial)
- Start cardiovascular algorithm (see below)

### RENAL AND ELECTROLYTES

#### Targets:

- Urine output 0.5-2.0ml/kg/hr
- Na<sup>+</sup> 135-150mmol/L
- K<sup>+</sup> 4.0-5.5mmol/L
- Mg<sup>2+</sup> > 0.8mmol/L
- Ca<sup>2+</sup> ionised 1.0-1.3mmol/L

**Additional Actions:**

- If polyuria (>300mls/hr for 2 hours) ensure adequate volume replacement
- If DI, bolus DDAVP 1-4 mcg IVI - consider Vasopressin infusion if not started
- If oliguria, despite optimisation of CVS, consider Dobutamine (additional inotrope)

**Hormones and Haematology**

**Targets:**

- BM 4.0 – 9.0 mmol/L
- Hb  $\geq$  8g/dL, Plt  $>$   $50 \times 10^9$ /L
- INR  $<$  2.0, APTTR  $<$  1.5, Fib  $>$  2.0g/L
- Temperature 36.0 – 37.5

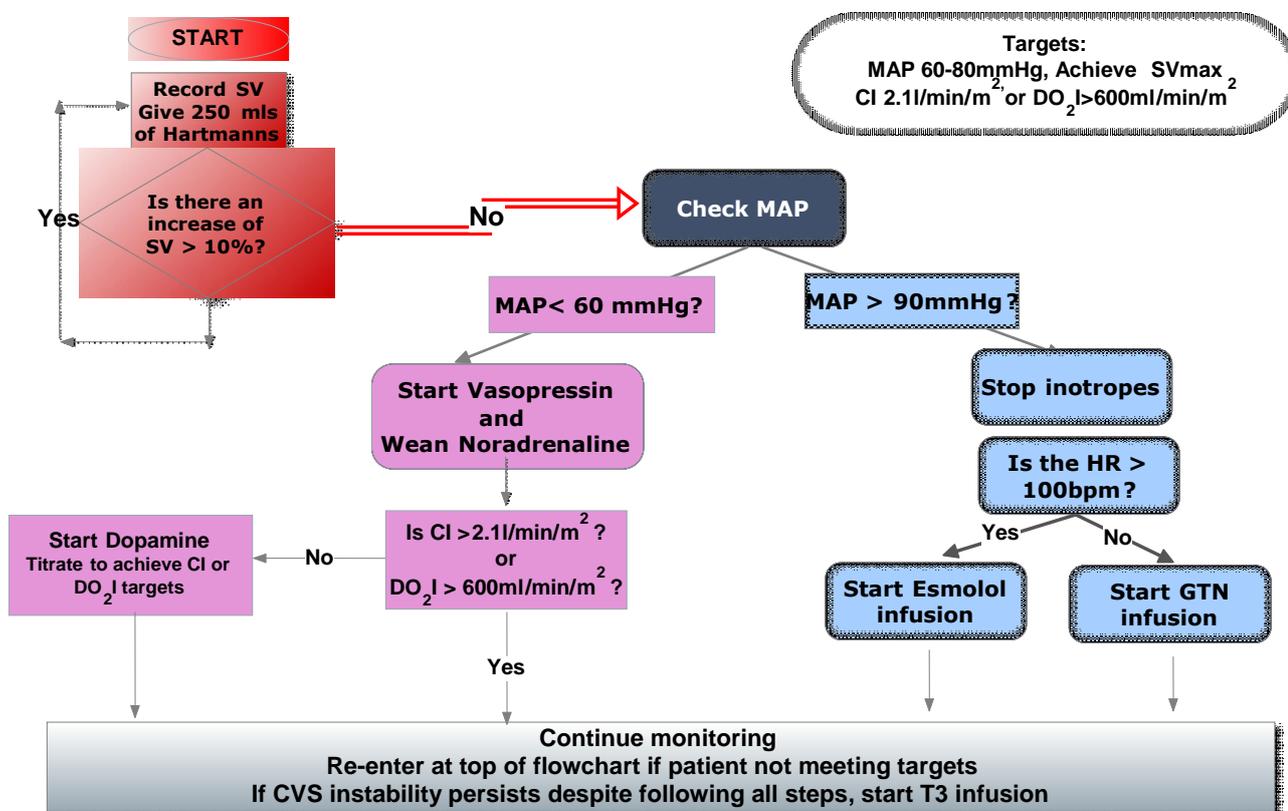
**Additional Actions:**

- Start Insulin at 1 Unit/hr and titrate to achieve BM control of 4-10mmol/L. If hypoglycaemia, continue Insulin and supplement with 20% Dextrose – do not stop Insulin altogether
- Continue enteral feed at low volume (10-30mls/hr)

**Cardiovascular Algorithm**

**Please note:**

High MAP suggests that these patients are likely to be “coning”.  
Dopamine and Vasopressin are usually the preferred drugs (used in organ optimisation).



## APPENDIX G – EKHUFT Anaesthetic management for organ Donation after Circulatory Death (DCD)

Dr R K Dulai (CLOD EKHUFT) and Dr S Hill (ST5 Anaesthetics & ITU)

### Key points

- This takes place in the anaesthetic room.
- Patient has not died but is expected to die after withdrawal of life sustaining support within a 4 hour time frame. If the dying process takes longer than this, organ retrieval is not possible and the patient goes to the ward.
- The Specialist Nurse in Organ Donation (SNOD) is present, as well as the family if they wish it and the ICU nurse.
- The transplant team will be in theatre.
- Palliative care is given to the patient during the dying process to ensure they do not experience any distress or pain. We normally use titrated doses of morphine and midazolam to ensure adequate analgesia and anxiolytics during the withdrawal process. These are administered by intravenous infusion. A Hyoscine patch may also be used.
- Cardiorespiratory death is diagnosed after 5 minutes of observed asystole (long enough for irreversible damage to the brainstem to have occurred).
- Thereafter, the patient is transferred immediately into theatre and onto the operating table to allow surgeons to perform “knife to skin” and minimise donor organ warm ischaemia time.

### Diagnosis of circulatory death

Cardiorespiratory death is diagnosed after 5 minutes of observed asystole:

- **0 minute** - identify asystole by absence of pulsatile flow (via a correctly functioning arterial line if available) and use continuous ECG monitoring in addition or alone if there is no arterial line
- **1 minute** - absence of respiratory activity over 1 minute minimum
- **2 minutes**-absence of carotid or femoral pulse after palpation for 1 minute
- **3 minutes**–absence of heart sounds with stethoscope over 1 minute (minimum)
- **4 minutes**–absence of breath sounds with stethoscope over 1 minute (minimum)
- **5 minutes**–confirm absence pupillary reaction and motor response to corneal stimulation and supraorbital pressure.

Any spontaneous return of cardiac or respiratory activity during this period of observation should prompt a further five minutes observation from the next point of cardiorespiratory arrest.

The time of death is recorded as the time at which these criteria are fulfilled.

Following the diagnosis of circulatory death the deceased should be transferred to theatres immediately in a swift, dignified manner.

## Lung donation after cardiac death

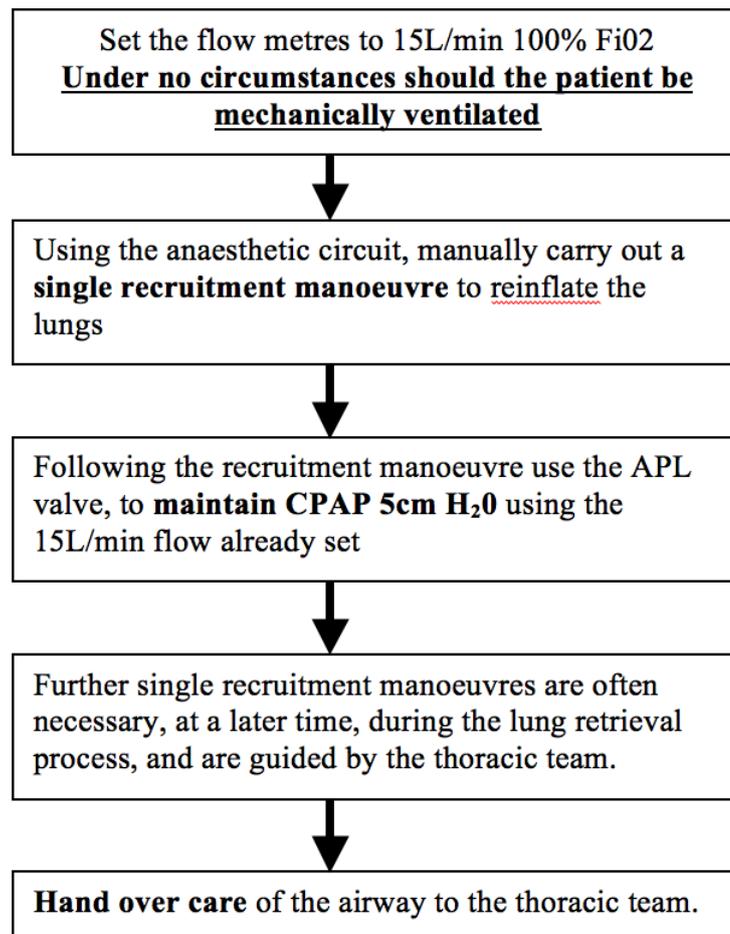
Lung donation has usually taken place in donors who have confirmed brain stem death. However, lung donation from donors after circulatory death is vital to increasing the number of lungs available for transplantation. The airway needs to be secured with a cuffed endotracheal tube to prevent aspiration of stomach contents into the lungs.

There is a potential risk of lung ventilation, following circulatory arrest, restoring cardiac activity and cerebral circulation. Therefore NO lung ventilation manoeuvres should be carried out within 10 minutes of circulatory arrest.

If the organ retrieval team is planning to retrieve lungs the following guidance should be followed:

- Diagnosis of Death has been confirmed and recorded (see paragraph above).
- Secure the patient's airway with a cuffed endotracheal tube ONLY IN THE OPERATING THEATRE (if patient has been extubated).
- Follow the instructions in the diagram below:

**Ensure 10 minutes after circulatory arrest has occurred before optimising lungs:**



## APPENDIX H - Anaesthetic management for organ Donation after Brain Death (DBD)

### Key points:

- The patient will be taken from the ICU to theatre (not anaesthetic room) following confirmation of brainstem death and death certification.
- Normal physiology should be maintained throughout the retrieval process to ensure optimized organ function for subsequent transplantation (see table below or the donor optimisation bundle – APPENDIX I)
- Hypertension can be controlled with volatile anaesthetic which may also have a role in ischaemic preconditioning for organs. Alternatively, titrated doses of vasodilators may be used
- The patient should receive full neuromuscular blockade (to prevent spinal reflexes)
- Once the proximal aorta is clamped, anaesthetic involvement can cease and monitors can be turned off

The table below summarises the components of the bundle:

Organ system	Intervention
Cardiovascular	Ensure euvolaemia with appropriate fluid boluses but avoid excessive fluid administration Aim MAP 60-80mmHg Cardiac Index >2.1 l/min/m <sup>2</sup> ScvO <sub>2</sub> > 60% CVP 4-10 mmHg Commence vasopressin 0.5-4u/hr if vasopressor required If inotrope required, use dobutamine or dopamine Consider Liothyronine infusion 3U/hr +/- 4U bolus (if high inotrope requirements) Ensure an echocardiogram has been performed
Respiratory	Perform lung recruitment manoeuvres and ensure lung protective strategy Aim PaO <sub>2</sub> ≥ 10 kPa, PaCO <sub>2</sub> 5-6.5 kPa or pH > 7.25 Vt 6-8ml/kg Continue regular chest physio and nurse in 30-45 degree head of bed elevation
Metabolic	Administer methylprednisolone 15mh/kg (upto 1g) Maintain urine output 0.5-2.0 ml/kg/hr (if polyuric consider DDAVP 1-4 mcg) Aim Na<150 if possible Insulin infusion to maintain BG 4-10 mmol/l Temperature 36-37.5
Miscellaneous	VTE prophylaxis Continue NG feeding unless advised to stop by SNOD LEFT sided arterial line if possible RIGHT sided CVC line if possible

During the process of brainstem death, patho-physiological changes may occur such as “catecholamine storm” and cranial diabetes insipidus, leading to significant cardiovascular dysfunction. Multiple infusions are often utilized, including vasopressors, particularly vasopressin, and occasionally infusions of hormones such as T4.

For potential heart and lung donation, the organ retrieval team will often send a “scout” – usually a cardiothoracic SpR who will undertake specific cardio-respiratory diagnostics/ strategies to optimize function for transplantation. This may include the insertion of a PA catheter.



# APPENDIX I - Donation after Brainstem Death (DBD)



## Blood and Transplant

## Donor Optimisation Extended Care Bundle

Patient Name \_\_\_\_\_

Date of Birth \_\_\_\_\_

Unit Number \_\_\_\_\_

Date and Time \_\_\_\_\_

### Priorities to address are

1. Assess fluid status and correct hypovolaemia with fluid boluses
2. Introduce vasopressin infusion where required introduce flow monitoring
3. Perform lung recruitment manoeuvres (e.g. following apnoea tests, disconnections, deterioration in oxygenation or suctioning)
4. Identify, arrest and reverse effects of *diabetes insipidus*
5. Administer methylprednisolone (all donors)

Y N/A

### Cardiovascular (primary target MAP 60 – 80 mm Hg)

1. Review intravascular fluid status and correct hypovolaemia with fluid boluses
2. Commence cardiac output / flow monitoring
3. Commence vasopressin (0.5 – 4 units/hour) where vasopressor required, wean or stop catecholamine pressors as able
4. Introduce dopamine (preferred inotrope) or dobutamine if required
5. Commence Liothyronine at 3 units/hour (+/- 4 unit bolus)    
(in cases of high vaso-active drug requirements or as directed by the cardiothoracic retrieval team)

### Respiratory (primary target PaO<sub>2</sub> ≥ 10 kPa, pH > 7.25)

1. Perform lung recruitment manoeuvres
2. Review ventilation, ensure lung protective strategy    
(Tidal volumes 4 – 8ml/kg ideal body weight and optimum PEEP (5 – 10 cm H<sub>2</sub>O))
3. Maintain regular chest physio incl. suctioning as per unit protocol
4. Maintain 30 – 45 degrees head of bed elevation
5. Ensure cuff of endotracheal tube is appropriately inflated
6. Patient positioning (side, back, side) as per unit protocol
7. Where available, and in the context of lung donation, perform bronchoscopy, bronchial lavage and - toilet for therapeutic purposes

### Fluids and metabolic management

1. Administer methylprednisolone (dose 15 mg/kg, max 1 g)
2. Review fluid administration. IV crystalloid maintenance fluid (or NG water where appropriate) to maintain Na<sup>+</sup> < 150 mmol/l
3. Maintain urine output between 0.5 – 2.0 ml/kg/hour    
(If > 4ml/kg/hr, consider *Diabetes insipidus* and treat promptly with vasopressin and/or DDAVP. Dose of DDAVP 1 – 4 mcg ivi 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)

### Thrombo-embolic prevention

1. Ensure anti-embolic stockings are in place (as applicable)
2. Ensure sequential compression devices are in place (as applicable)
3. Continue, or prescribe low molecular weight heparin

### Lines, Monitoring and Investigations (if not already done)

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
5. Perform a 12-lead ECG (to exclude Q-waves)
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. Where available, perform an Echocardiogram
9. Review and stop all unnecessary medications

Signature \_\_\_\_\_ Print Name \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

# NHS APPENDIX I - Donation after Brainstem Death (DBD)

## Blood and Transplant

## Donor Optimisation Extended Care Bundle



Patient Name \_\_\_\_\_ Date of Birth \_\_\_\_\_

Unit Number \_\_\_\_\_ Date and Time \_\_\_\_\_

Cardiac output / flow monitor used: .....

### Physiological Parameters / Goals

Tick ✓ = achieved, x = not achieved

	O/A	+1hr	+2hrs	+4hrs	+6hrs	+8hrs	+10hrs	+12hrs	+14hrs	+16hrs	+18hrs
PaO <sub>2</sub> ≥ 10.0 kPa (FiO <sub>2</sub> < 0.4 as able)	<input type="checkbox"/>										
PaCO <sub>2</sub> 5 – 6.5 kPa (or higher as long as pH > 7.25)	<input type="checkbox"/>										
MAP 60 – 80 mmHg	<input type="checkbox"/>										
CVP 4 – 10 mmHg (secondary goal)	<input type="checkbox"/>										
Cardiac index > 2.1 l/min/m <sup>2</sup>	<input type="checkbox"/>										
ScvO <sub>2</sub> > 60 %	<input type="checkbox"/>										
SVRI (secondary goal) 1800 – 2400 dynes*sec/cm <sup>5</sup> /m <sup>2</sup>	<input type="checkbox"/>										
Temperature 36 – 37.5 °C	<input type="checkbox"/>										
Blood glucose 4.0 – 10.0 mmol/l	<input type="checkbox"/>										
Urine output 0.5 – 2.0 ml/kg/hour	<input type="checkbox"/>										
<b>Signature</b>											
<b>Print name</b>											
<b>Date</b>											

## **APPENDIX J - Tissue Donation: Identification and referral for tissue donors on the wards.**

Specialist Nurse in Organ Donation (SNOD) from NHSBT will lead this process if the patient has already been referred for organ (not tissue) donation on ITU.

### **When should the potential for Tissue Donation be considered?**

Tissue donation should be considered after the death of all patients. Most people are aware of donation of organs but may not realize that donated tissue such as skin, bone and heart valves can dramatically improve the quality of life for others and even save them.

Patients may have previously expressed a wish to donate to hospital staff, relatives or friends. Alternatively they may have expressed their wishes by registering on the organ donation register. Health care professionals have a duty to respect these wishes and wherever possible ensure that they are fulfilled. If you are unsure as to whether a patient has registered their wish to donate tissues the organ donation register can be contacted via: 01179 757575.

### **Procedure for tissue donation**

- 1 Death must be certified by the doctor and recorded in the medical notes.
- 2 The Organ Donor Register (ODR) should be checked: **01179 75 75 75**
- 3 If the patient is to be referred to the Coroner, consent for tissue donation must be obtained from the Coroner.
- 4 The legal next of kin may be approached and informed that donation is possible.

*E.g. Even though x had died (or is dying) there may be a way for him/her to help others. You may not realise that donated tissue such as skin, eyes and heart valves can save or dramatically improve the quality of life for others. If this is something you would like more information about, we can contact the nurse practitioner for tissue donation at the National Referral Centre.*

- 5 Contact the nurse practitioner for tissue donation on **0800 432 0559**.

The National Referral Centre is open from 8am to 9pm.

If the patient dies after 9pm, you will be prompted to leave a message with the patient's name, date of birth, hospital number, ward and telephone extension. Please do not remove the notes from the ward. The nurse practitioner for tissue donation will make contact with the ward first thing in the morning between 8 and 9 am.

If you contact the National Referral Centre between 8am and 9pm, your details will be taken and the nurse practitioners will be paged. They will normally call back within 5 minutes

When speaking to the nurse practitioners for tissue donation, the following information will be required:

- Name of the deceased
- Date of birth, address and hospital number
- Deceased's G.P. details
- Date of admission
- Date and time of death
- The time the deceased was taken to the mortuary (require 6 hours refrigeration time before taking tissues)
- Cause and circumstances of death
- Whether referral to the coroner is required – is the death reportable?
- Whether the deceased has a pacemaker
- Name, address and relationship of next of kin including a contact telephone number
- Height and weight of patient

There are contraindications to tissue donation but all cases must be discussed with the nurse practitioner for tissue donation. For example, acupuncture in the last 4 months may be acceptable if it was done in the NHS but not if outside the NHS. Other contraindications include: Parkinson's disease, dementia, viral illness, recent piercings, recent tattoos, intravenous drug abuse and blood borne cancers. It may be possible to donate tissues for the purpose of research.

Tissue donation will usually take place within 24 hours after death (sometimes 48 hours).

Please ask the family if there is a preferred time (within 24 hours) for the nurse practitioner for tissue donation to contact them and discuss tissue donation as well as take telephone consent.

### **Questions the family may ask:**

#### ***“Can you tell if someone has donated their eyes for corneas?”***

Experienced and highly skilled specialists perform the retrieval of corneas. The cosmetic result is excellent and there should be no signs whatsoever that the corneas have been donated. The body can be viewed post-donation and an open casket funeral can take place.

#### ***“Will donation delay the funeral?”***

Donation does not delay the funeral arrangements, nor does it add to the cost. There is no disfigurement and a normal funeral service may be held.

#### ***“When will the donation take place?”***

Within 24 hours after someone has died. However, it is possible to donate up to 48 hours after death.

#### ***“Will we still be able to see our relative?”***

Arrangements can be made for the relatives to view the body in the chapel of rest and/or at the funeral home as usual.

***“Will our decision really make a difference?”***

There are many adults and children awaiting corneal grafts whose sight would be restored by receiving a cornea. Heart valve donation is often a life-saving gift for patients suffering congenital defects or valve failure, whilst skin donation significantly helps to reduce the pain that severe burn patients experience and prevents infection which they are very susceptible too.

***“Will we hear about the recipients?”***

The nurse practitioners for tissue donation will inform the families to thank the family for their decision at a time of immense grief and offers anonymous details of the recipients receiving corneal and heart valve tissues only.

The referring nurse will also receive a letter to inform them and thank them for the referral.

**Religious and moral considerations**

- All major religious groups either accept organ donation or the right of the individual or their family to make their own decisions. The exceptions are: Shintoists, Rastafarians and Romany Gypsies.
- Organ/tissue donation is a positive option and can be of comfort at a time of great distress, however, this is not so for everyone and the next of kin's wishes must be respected.

**Staff Support**

The Specialist Nurse in Organ Donation (SNOD) on PAGER 07659590529, the chaplain via switch board and the National referral centre for tissue donation 0800 432 0559 can be contacted for advice.

**Tissues that the patient may be able to donate** (see table guidance below).

WHAT can be donated	Age limit	Time limit	Contra-indications	Special requirements	Comments
CORNEAS	> 2years and < 85 years	Up to 24 hrs after death	<ul style="list-style-type: none"> <li>▪ Alzheimer's disease or dementia</li> <li>▪ Motor neurone disease</li> <li>▪ Blood Cancers</li> <li>▪ Scarring or ulceration of the cornea</li> </ul>	<ul style="list-style-type: none"> <li>▪ The eyes should be left clean and closed</li> <li>▪ no special drops or interventions are required</li> </ul>	A history of poor eyesight, cataracts or cancer are not contra-indications
HEART VALVES	Less than 65 years of age	Up to 24 hrs after death	<ul style="list-style-type: none"> <li>▪ Myocardial Tumours</li> <li>▪ Rheumatic Heart Disease</li> <li>▪ Auto-immune disease (e.g. SLE). Established infection may be resistant to antibiotics (raised CRP).</li> </ul>	<ul style="list-style-type: none"> <li>▪ The heart is retrieved at post mortem by the hospital pathologist or Tissue Services</li> </ul>	Myocardial Infarction is not a contra-indication
SKIN	From 16 yrs of age	Up to 24 hrs after death	<ul style="list-style-type: none"> <li>▪ Alzheimer's disease or dementia</li> <li>▪ Prolonged steroid therapy</li> <li>▪ Chronic skin disease (eg: psoriasis)</li> <li>▪ Auto-immune disease (eg: SLE)</li> <li>▪ Malignancy (except primary brain tumour)</li> <li>▪ Established infection may be resistant to antibiotics (raised CRP).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Last offices – as normal</li> <li>▪ No special creams or lotions required</li> <li>▪ Skin retrieved is the most superficial layer and is removed from the back and backs of thighs</li> <li>▪ No disfigurement</li> </ul>	<ul style="list-style-type: none"> <li>▪ MINIMUM of 1.7m height</li> <li>▪ Weight of 70Kg / 9 Stone</li> <li>▪ Skin is used as a biological dressing for persons suffering from severe, life threatening burns</li> </ul>
Trachea	16-60 yrs	Up to 72 hours after death	<ul style="list-style-type: none"> <li>▪ Smoke inhalation</li> <li>▪ Crush injuries to chest and neck</li> </ul>	<ul style="list-style-type: none"> <li>▪ The trachea is retrieved below the larynx which includes a 2cm section of the bronchi and is removed at post mortem</li> </ul>	<ul style="list-style-type: none"> <li>▪ Used to repair long segment paediatric tracheal stenosis, alleviating the need for long term tracheostomy</li> <li>▪ Very uncommon to be donated</li> </ul>

BONE & TENDONS	From 17yrs	Up to 24 hours after death	<ul style="list-style-type: none"> <li>▪ THR/TKR</li> <li>▪ Malignancy</li> <li>▪ Osteoprosis</li> <li>▪ Auto-immune disease (eg: SLE)</li> </ul>		<ul style="list-style-type: none"> <li>▪ Bone used in complex orthopaedic surgery.</li> <li>▪ Tendons used following sports injuries</li> </ul>
SPINAL CORD AND BRAIN	Any age	Usually within 24 hrs of death	<ul style="list-style-type: none"> <li>▪ Large invasive brain tumours</li> <li>▪ Known hepatitis</li> </ul>	See attached information on "Spinal cord and Brain Donation"	
DONATION OF WHOLE BODY – for medical science	No upper age limit	As soon as possible after death	There are a number of exclusions and no guarantee that a bequest will be accepted. Registration of wish to donate must be made by the patient well in advance of death	See attached advice from the London Anatomy Office	020 8846 1216

Nurse practitioner for tissue donation Karen Hall was contacted on 29.04.15 in producing this document.