

Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust

Please Note: This policy is currently under review.

# Adult Organ Donation Policy Departments of Critical Care

**This procedural document supersedes:** PAT/PA 8 v.4 – Adult Organ Donation Policy Departments of Critical Care



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Executive Sponsor(s):	Chief Nurse	
Author/reviewer: (this version)	Vinesh Vincent - Clinical Lead in Organ Donation Jane Tute – Specialist Nurse – Organ Donation	
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# Amendment Form

Please record brief details of the changes made alongside the next version number. If the procedural document has been reviewed **without change**, this information will still need to be recorded although the version number will remain the same.

Version	Date Issued	Brief Summary of Changes	Author
Version 5	January 2021	<ul> <li>Update on new Legislation</li> <li>Updated contraindications to donation</li> <li>Updated new organ donation referral line.</li> </ul>	Vinesh Vincent Jane Tute
Version 4	April 2018	<ul> <li>Updated to new Trust Format</li> <li>Included Equality Impact Assessment details.</li> <li>Update nomenclature, minor changes to ensure that the wording of this policy complies with the latest National guidance from NICE.</li> <li>Addition of a flow chart to aid donation from the Emergency Department</li> </ul>	David Wood Jane Tute
Version 3	November 2009	<ul> <li>Version 2 does not appear to have been published.</li> <li>Full review an rewrite of policy document, Non Heart Beating Protocol included</li> <li>This policy will need to be read in full</li> </ul>	David Wood
Version 2	September 2007	<ul> <li>Significant changes made throughout the policy will need to be read in full.</li> </ul>	Val Colquhoun

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# **1** INTRODUCTION

This policy provides a framework for the identification of potential donors, approaching potential donors' families, donor management and organ retrieval. The circumstances surrounding each referral will vary, in all cases the SN-OD (Specialist Nurse – Organ Donation) will be available for advice and support.

It is the responsibility of the staff caring for the patient and family to consider organ donation, and to refer all potential cases to the on call SN-OD.

#### Each and every family whose relative has died should be offered the chance to donate.

Organs can be donated from Patients who are Brain Stem Dead – DBD (Donation after Brain Death) and with appropriate preparation some organs can be retrieved from patients shortly after their hearts stop beating- DCD (Donation after Circulatory Death) It may also be possible for some patient's to donate tissue (e.g. Corneas, Skin, Bone and Heart Valves) for some time after death – Tissue Donation. For Clarity each of the above areas will be considered separately in this document.

#### 1.1 New Legislation from May 2020

From 20 May 2020 all adults in England will now be considered to have agreed to be an organ and tissue donor when they die unless they have recorded a decision not to donate or are in one of the excluded groups, this is also referred to as an opt-out system. This means that if a patient has not confirmed whether they want to be an organ donor - either by recording a decision on the NHS organ donor register or by speaking to friends or family - it will be considered that they agreed to donate their organs when they die. Organ donation remains an act of great generosity and patients still have the right to choose whether to be an organ donor. Patient's families will still be consulted about organ donation following a referral to the SN-OD.

# 2 PURPOSE

This policy provides the framework and guidance for clinical teams for the identification of potential donors, approaching potential donors' families, donor management and organ retrieval. The circumstances surrounding each referral will vary, in all cases the SN-OD (Specialist Nurse – Organ Donation) will be available for advice and support.

#### **3 DUTIES AND RESPONSIBILITIES**

#### **3.1** Role of the Specialist Nurse – Organ Donation (SN-OD)

The main aim of all SN-OD's is to ensure that all families have the opportunity to consider donation when their loved one has died. To achieve this all families must be given timely

access to good quality information and support as well as the opportunity to discuss organ or tissue donation with well-informed staff.

We have a Specialist Nurse attached to the Trust. In addition to being involved in the donation process the Embedded SN-OD will be involved in the development of local policies, develop a training program with respect to Organ Donation issues and act as a point of reference.

#### For all donation enquiries and referral contact the on call SN-OD:

Telephone: 03000 20 30 40 Mobile: 07525 299 087

When contacted, the SN-OD will:

- Check the Organ Donor Register
- Advise on latest guidance for the management of the potential organ donor
- Liaise with the Transplant Surgical Teams
- Take a lead on advising families and obtaining consent for donation.
- Communicate with the Coroner or at least indicate the level of need for discussion with the coroner.

# 4 **PROCEDURE**

#### 4.1 Keeping Transplants Safe

There are very few **absolute** contraindications to donation:-

- Metastatic malignancy (note, a history of malignancy is no longer a contraindication)
- Known or suspected Creutzfeldt Jacob Disease (CJD) or a family history of CJD
- Malignant Melanoma
- Covid-19

It is very important that every possible precaution is taken to prevent the transmission of infections or malignancies to patients who receive a transplant and a review of the patients notes to ensure that you can give the SN-OD as accurate and complete history as possible.

There have been successful transplants of organs from Hep B, Hep C or HIV positive patients to recipients who were already positive. It is therefore very important that **all potential donors are discussed with the SN-OD regardless of their virology or malignancy status**.

#### 4.2 Patient Care

Organ donation from DBD and DCD can only occur from patients who are in the Departments of Critical Care (or in certain circumstances the ED) and are receiving life supporting interventions as part of the therapeutic process.

Introduction of support and admission to Critical Care specifically to facilitate organ donation is unlawful.

Tissue donation can occur from patients dying anywhere in the hospital. Tissue retrieval can occur up to 24 hours after death and so families can still be approached during this time.

# **5 TISSUE DONATION**

Any of the points below must be taken into account for all tissue donors:

- If they have received multiple transfusions a pre transfusion blood sample may be needed which may be held by the Blood Bank.
- Must not have been previously transplanted.
- Must not have had tattoos, acupuncture or body piercing in the last six months, nor been an inmate in prison.

#### NOTE:

Tissue Donation can be organised via the SN-OD or directly with tissue services Telephone 0800 4320559.

A service level agreement is in place for Eye donation between Corneal Transplant Service (CTS) Eye Banks and Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust detailing requirements required by the Human Tissue Authority for this procedure. (Copy held with Medical Director).

# 6 DONATION AFTER BRAIN DEATH (DBD) ORGAN DONATION

#### 6.1 **Potential Donors**

Brain stem death usually occurs secondary to severe head injury; intracranial bleed or other intracranial pathology leading to globally increased intracranial pressure (ICP) with subsequent infarction of the brain stem.

Patients who become brain stem dead usually present deeply comatose with or without respiratory effort. The initial management of these patients is no different to any other patient in that the primary objective of their treatment is to maintain life, determine the cause of a coma and to attempt to restore function.

There will be occasions when the damage to the brain stem is irreversible. The clinical diagnosis of brain stem death in the UK relies upon the lack of brain stem reflexes in a patient in apnoeic coma from a known, irreversible cause, with normal electrolytes, normothermia and in the absence of sedative drugs or muscle relaxants.

The majority of potential donors will be, or become, brainstem dead within 24 hours of admission to ICU. Brain stem death is a legal definition of death in the UK.

#### 6.2 Brain Stem Death Testing

Brain Stem Tests will be performed in accordance with National Guidelines Department of Health (1998), The Intensive Care Society's guidance on Adult Organ & Tissue Donation (2004) and the Diagnosis of Death review by the Academy of Medical Royal Colleges (2008). Documentation used for this process is included in **Appendix 1**.

#### 6.3 Management of Patients Awaiting Brain Stem Tests

It is in the best interests of a patient who presents with a condition likely to lead to brain stem death that they are managed optimally to prevent coning.

When such a patient demonstrates the physiological derangements associated with the autonomic storm of coning then their best interests are served by optimally managing their physiology to keep them Normotensive, Well Oxygenated, Normothermic and Biochemically Normal (this will prevent avoidable delays in actually diagnosing death and thus needless intervention).

- Hypertension can be reduced with GTN infusion or Esmolol infusion.
- Hypotension can be managed acutely with short acting Inotropes Noradrenaline/ Adrenaline but the hypotension generally becomes unresponsive to these agents and Vasopressin will normally be required. Vasopressin is regarded as less damaging to transplantable organs than the Adrenoceptor Agonists and should be used in preference.
- Although fluid boluses may be required it must be recognised that there is a failure of vasomotor tone and that giving large quantities of fluid whilst avoiding vasopressors may adversely affect oxygen and ventilatory requirements.

Once the autonomic storm has settled other problems that may become apparent include:

- Losses of vasomotor tone with resultant fall in systolic blood pressure and urine output, decreasing organ perfusion.
- Loss of thermoregulation with hyper or (more commonly) hypothermia Use of forced air warming devices to maintain normothermia may help reduce the degree of instability.
- Arrhythmias, which are multifocal in origin, Bradycardic arrhythmias resistant to atropine are a pre terminal event.
- A reduction in circulating hormone levels, specifically T3 (Triiodothyronine). This has been implicated as a cause of CVS instability.
- Polyuria associated with Diabetes Insipidus:
  - Maintain fluid balance by replacing losses ml for ml, use Hartmanns or Plasmalyte, avoid 0.9% sodium chloride as the incidence of hypernatraemia is excessive. If the patient is already Hypernatraemic then 0.45% Sodium Chloride or 4% Glucose/0.18% Sodium Chloride should be used.
  - Use DDAVP to control the excess urine.

#### 6.4 Who Can Perform Brain Stem Death Tests?

Consultants or senior doctors with at least five years' experience in the field. These are usually the anaesthetists working on the intensive care unit. The doctors conducting the tests must not be members of the transplant team.

#### **Clinical Prerequisites**

Preconditions:

- Cause of the coma is known and known to be irreversible
- Patient is deeply unconscious on a ventilator
- Coma is not due to suppressant drugs or alcohol
- Patient is cardio-vascularly optimised

#### Exclusions:

- Core temperature less than 34<sup>o</sup>C
- Significant Endocrine or metabolic disturbances.
- Inability to be sure muscle relaxants effects are excluded (use peripheral nerve stimulator).
- Inability to be certain that the patient has no circulating drugs that could cause or contribute to coma.

Turing the sedation off to facilitate brain stem testing is a trigger for notifying the On Call SN-OD (03000 20 30 40).

#### 6.5 Children

Brain stem death tests can be performed from gestational age of 37 weeks. Organs for transplantation may be removed from anencephalic infants when two doctors, who are not members of the transplant team, agree that spontaneous respiration has ceased.

#### 6.6 Approach to Relatives

Once the first set of brain stem death tests have been performed, the consultant and nurse will speak to the family to inform them of the outcome of the brain stem death tests. The family should be informed of the proposed timing of the second set of tests and should be advised that they will be told of the findings as soon as the second set of tests is completed, they are told that another specialist who has experience of dealing with families at this time will accompany the nurse and the doctor.

When the tests have been performed and the family have accepted that the patient has been declared dead the SN-OD can approach the family and provide them with information regarding Organ Donation.

#### 6.7 Investigations Required for Organ Donation

The SN-OD will advise you of the specific blood samples and other investigations including ECG, Chest X-ray and possible Echocardiogram. These will only be obtained after consent to proceed has been obtained and should be performed as soon as requested.

#### 6.8 The Retrieval Procedure

#### **The Visiting Teams**

Zonal retrieval teams have been established nationally. The team are relatively self-sufficient; containing two transplant surgeons, a scrub nurse and a perfusionist. However they will need a theatre runner for local knowledge and will also benefit from the presence of a theatre practitioner. They should bring all their own instruments and specialist equipment, however supplementary equipment may be required.

Please treat the team as you would wish to be treated, show them where the coffee room and toilets are for example.

#### **The Procedure**

The retrieval operation should not take more than 2-3 hours if only the kidneys are being donated, if kidneys and liver are taken the procedure may last for 3-4 hours, a full multi- organ retrieval including cardiothoracic organs will take 4-6 hours.

#### **After Donation**

The SN-ODs are happy to assist the theatre staff in performing last offices. Families may want to see the body once the retrieval is completed, this will be facilitated.

# 7 DONCATION AFTER CIRULATORY DEATH (DCD)

DBHNHSFT will facilitate the referral of all patients already in the department of critical care (and ED) with non-survivable pathology who are receiving life supportive treatment that is about to be withdrawn.

#### 7.1 General Criteria for DCD Donation

Any patient who is having active treatment withdrawn and in whom death is expected to follow shortly can be considered for DCD. The critical care consultant or nurse caring for the patient will discuss all patients in whom treatment is to be withdrawn with the on call SN-OD.

#### 7.2 Decision to Withdraw Active Treatment

The decision to withdraw treatment will be made in accordance with current guidelines from the ICS, BMA and the GMC. There must be consensus among the critical care consultant, the patient's relatives, the referring consultant and nursing staff that the decision is made in the patient's best

interest.

It is mandatory that transplant teams should not be involved in any decision to withdraw treatment. This ensures that the interests of the dying patient remain paramount. The decision should be communicated clearly to the family by the clinician caring for the patient and should be documented in the patient's notes.

#### 7.3 The Donation Process

Discussion of a patients' suitability for DCD with the SN-OD will take place before approaching the patient's family with respect to organ donation. The SN-OD will only become involved with the family when they have understood and accepted treatment futility and withdrawal.

The SN-OD will discuss all the processes and timings at length with the potential donor's family, and explain that consent can be retracted at any time- up to the point of theatre.

Appropriate patients will be discussed with the Coroner at this time.

#### 7.4 The process of Treatment Withdrawal

Once a decision to withdraw treatment has been reached by the critical care consultant, the current level of support should continue until the time to withdraw treatment is agreed with the relatives. It is inappropriate to escalate current treatment, add new therapies (e.g. inotropes, heparin, hormone replacement) or to undertake invasive interventions (e.g. vascular cannulation before death for cold perfusion) to improve organ viability.

The appropriate time to withdraw treatment is influenced by many factors but the wishes and needs of the patients' relatives are the main determinants.

Communication with the family should remain the responsibility of the critical care team and/or the SN-OD.

Withdrawal of active treatment should proceed in accordance with the usual practice of the critical care unit. Withdrawal of active treatment should not vary from local practice because organ donation is being considered.

Withdrawal of active treatment should usually take place within the critical care unit. In exceptional circumstances treatment may be withdrawn within the theatre complex (e.g. an anaesthetic room, recovery area). This should be undertaken only as a way of meeting the patient's and relatives' wish to donate organs.

The same level of critical care nursing skill and expertise in the care of the dying patient should continue to be provided if treatment is withdrawn outside the critical care unit.

#### 7.5 Confirmation of Death in Potential DCD

Following withdrawal of active treatment, ECG and intra-arterial blood pressure monitoring facilitates the identification of the onset and persistence of cardio respiratory arrest. When DCD is being considered, a member of the critical care unit team will certify death by confirming the absence of cardiac output and respiration, the lack of response to supraorbital pressure and absence of the pupillary and corneal reflexes. This is undertaken after five minutes of cardiac or respiratory arrest as currently recommended by the Institute of Medicine. Any return of cardiac or respiratory activity during this period of observation should prompt a further five minutes observation after this time.

#### 7.6 Management Following Death Certification

Following certification of death, the patient will be transferred to theatre- the reasons will be fully explained to the donor family, prior to the procedure commencing.

Procedures that reduce the warm ischaemic time of organs to be transplanted, but that may inadvertently result in changes to cerebral and /or coronary blood flow are not in the patient's best interests and must not be instituted post-mortem. These include chest compressions and cardiopulmonary bypass. Drugs may not be administered to facilitate organ donation (e.g. heparin) until death has been certified, as this would not be in the patient's best interests. Cannulation and organ perfusion will take place in the operating theatre.

#### 7.7 Failure to Proceed with Donation

Some patients continue to breathe spontaneously or with reduced ventilatory support for some time after treatment is withdrawn. They may become profoundly hypotensive during this time. In these situations the organ donation process may have to be abandoned if organ function has deteriorated so that viable transplantation is not possible. The family will have previously been made aware of this possibility. The decision to abandon organ donation is determined by the need to limit the warm ischaemic time and by the availability of an operating theatre and retrieval team.

The dignity, well-being and comfort of the dying patient are paramount at all times.

# 8 TRAINING/SUPPORT

Please note: The training requirements of staff will be identified through a learning needs analysis (LNA). Role specific education will be co-ordinated/delivered by the topic lead. Alternatively, training may be accessed via an approved e-learning platform where available.

# 9 MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

What is being Monitored	Who will carry out the Monitoring	How often	How Reviewed/ Where Reported to
The referral and facilitation of the donation process.	Specialist Nurse Organ Donation (SNOD) Clinical Lead Organ Donation (CLOD), Organ Donation Committee.	Weekly audit by SNOC/CLOD, annual Organ Donation Committee Meeting once in 4 months.	Reported to Trust Board, NHSBT produce bi-annual reports of donation figures based on data produced by SNOD

# **10 DEFINITIONS**

- CLOD Clinical lead Organ Donation CJD- Creutzfeldt Jacob Disease
- CVS Cardiovascular system
- DBD Donation following brain death
- DCD Donation following circulatory death ECG- Electrocardiogram
- ED Emergency Department GTN- Glyceryl Trinitrate HEP B-Hepatitis B
- HEP C Hepatitis C
- HIV Human Immunodeficiency Virus ICP- Intracranial Pressure
- SNOD Specialist Nurse Organ Donation T3- Triiodothyronine

# 11 EQUALITY IMPACT ASSESSMENT

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and assessing the impact of a procedural document any discriminatory factors must be identified.

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment for All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (See Appendix 5).

# **12 ASSOCIATED TRUST PROCEDURAL DOCUMENTS**

Privacy and Dignity Policy - PAT/PA 28

Death of a Patient - Operational Policy for staff to follow in the event of a patient death – PAT/T 60 Fair Treatment for All Policy - CORP/EMP 4

Equality Analysis Policy - CORP/EMP 27

Mental Capacity Act 2005 Policy and Procedure, including Deprivation of Liberty Safeguards (DoLS) - PAT/PA 19 and the Privacy and Dignity Policy - PAT/PA 28].

# **13 DATA PROTECTION**

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the UK General Data Protection Regulation (GDPR) 2021.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website: <a href="https://www.dbth.nhs.uk/about-us/our-publications/information-governance/">https://www.dbth.nhs.uk/about-us/our-publications/information-governance/</a>

# **14 REFERENCES**

A Definition of Irreversible Coma. Report of the Ad-Hoc Committee of The Harvard Medical School to Examine the Definition of Brain Death. JAMA 1968; 205: 337-40.

Conference of Medical Royal Colleges and their Faculties in the United Kingdom. Diagnosis of Brain Death. Lancet 1996; ii: 1069-70.

Death Rate Trends for RTA's and CVA's, WHO European Health for All database – www.euro.who.int/hfadb.

Guidelines for Adult Organ and Tissue Donation

Prepared on behalf of the Intensive Care Society by the Society's Working Group on Organ and Tissue Donation INTENSIVE CARE SOCIETY.

Guidelines Relating to Solid Organ Transplants from Non- Heart Beating Donors. British Transplantation Society

Kidney donation and retrieval rates for non-heartbeating donors in the UK.

Kootstra G, Daemen JH, Osmen AP. Categories of non-heart beating donors. Transpl Proc 1995; 27: 2893–4

M.G.J. Snoeijs, S. Schaefer, M.H. Christiaans, J.P. van Hooff, P.M. van den Berg-Loonen, C.J. Peutz-Kootstra, W.A. Buurman, L.W.E. van Heurn

Kidney transplantation using elderly non-heart-beating donors.University Hospital Maastricht. Am J Transplant 2006(6) 1066-71.

N.R. Brook, M.L. Nicholson. Kidney transplantation from non heart-beating donors. The Surgeon December 2003 Volume 01 Number 6.

Number of organ donors and transplants in the UK, 1 April 1996 - 31 March 2006 and patients registered for a transplant at 31 March. UK Transplant.

Non-heartbeating Organ transplantation: Practice and protocols. Institute of Medicine, National Academy Press, Washington DC, Jan 2000. ISBN 0-309-06641-7. Weber M, Dindo D, Demartines N, Ambuhl PM, Clavien PA. Kidney transplantation from donors without a heartbeat. New England Journal of Medicine 2002; 347: 248- 55. Department of Constitutional Affairs Mental Capacity Act (2005): Code of Practice, 2007 <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachme</u> <u>nt\_data/file/497253/Mental-capacity-act-code-of-practice.pdf</u>

# **APPENDIX 1 – TESTING FOR THE ABSENCE OF BRAIN-STEM REFLEXES**

Adapted from A Code of Practice for the Diagnosis and Confirmation of Death *Copyright © Academy of Medical Royal Colleges 2008* 

- 1. The pupils are fixed and do not respond to sharp changes in the intensity of incident light.
- 2. There is no corneal reflex care should be taken to avoid damage to the cornea.
- 3. The oculovestibular reflexes are absent. No eye movements are seen during or following the slow injection of at least 50mls of ice-cold water over one minute into each external auditory meatus in turn. Clear access to the tympanic membrane must be established by direct inspection and the head should be at 30° to the horizontal plane, unless this positioning is contraindicated by the presence or suspicion of a cervical spinal injury.
- 4. No motor responses within the cranial nerve distribution can be elicited by adequate stimulation of any somatic area.
- 5. No motor response can be elicited within the cranial nerve or somatic distribution in response to supraorbital pressure.
- 6. There is no cough reflex response to bronchial stimulation by a suction catheter placed down the trachea to the carina, or gag response to stimulation of the posterior pharynx with a spatula.
- 7. The process for testing the respiratory response to hypercarbia (apnoea test) should be the last brain-stem reflex to be tested and should not be performed if any of the preceding tests confirm the presence of brain-stem reflexes. The general availability of end tidal carbon dioxide (ETCO<sub>2</sub>) monitoring and instant access to blood gas analysis allows their routine utilisation to:
  - Eliminate the risk of the development of significant hypoxia during the apnoea test.
  - Minimise the risk of the development of excessive hypercarbia and/or rapid changes in carbon dioxide tension.
  - Minimise the development of changes in mean arterial pressure and as a result, minimise the risk of further injury to potentially recoverable brain tissue, in case death of the brainstem has not actually occurred. For the above reasons and to avoid undue stress or loss of confidence in such tests, they should not be formally carried out unless ongoing bedside observations indicate that brain-stem function has ceased irreversibly.
- 8. When the patient is not acidaemic, the procedure recommended to induce moderate hypercarbia and mild acidaemia is as follows:
  - Increase the patient's FiO<sub>2</sub> to 1.0
  - Check arterial blood gases to confirm that the measured PaCO<sub>2</sub> and SaO<sub>2</sub> correlate with the monitored values.

- With oxygen saturation greater than 95%, reduce minute volume ventilation by lowering the respiratory rate to allow a slow rise in ETCO<sub>2</sub>.
- Once ETCO<sub>2</sub> rises above 6.0KPa, check arterial blood gases to confirm that PaCO<sub>2</sub> is at least 6.0KPa and that the pH is less than 7.40.
- The aim should be to ensure that this, and not a substantially greater degree of hypercarbia and acidaemia is achieved for those with no previous history of respiratory disease or bicarbonate administration.
- In patients with chronic CO<sub>2</sub> retention, or those who have received intravenous bicarbonate, the achievement of a mild but significant acidaemia as described would be achieved by allowing the PaCO<sub>2</sub> to rise to above 6.5KPa to a point where the pH is less than 7.40.
- The patient's blood pressure should be maintained at a stable level throughout the apnoea test.
  - If cardiovascular stability is maintained, the patient should then be disconnected from the ventilator and attached to an oxygen flow of 5L/min via an endotracheal catheter and observed for five minutes.
  - If the maintenance of adequate oxygenation proves difficult, then CPAP (and possibly a prior recruitment manoeuvre) may be used.
  - If, after five minutes, there has been no spontaneous respiratory response, a presumption of no respiratory centre activity will be documented and a further confirmatory arterial blood gas sample obtained to ensure that the PaCO<sub>2</sub> has increased from the starting level by more than 0.5KPa.
- The ventilator should be reconnected and the minute volume adjusted to allow a gradual return of the blood gas concentrations to the levels set prior to the commencement of testing.
- 9. In the case of 1, 2 and 3, testing of these reflexes may be prevented on one or other side by local injury or disease but this does not invalidate the diagnosis of death as a result of cessation of brain-stem reflexes. In the case of bilateral injury or disease, ancillary testing should be considered.

# **APPENDIX 2 – DONATION AFTER CIRCULATORY DEATH (DCD) PROCESS**



The Family can stop the retrieval process at any time but not the process of withdrawal of treatment

# **APPENDIX 3 – DCD IN THE EMERGENCY DEPARTMENT**



Facilitate Donation after cardiac death (discuss with Critical Care) Options to consider:

- Admission to DCC for support until withdrawal of treatment
  - If no beds on DCC consider temporary increase in number of beds by bringing in staff from home or theatre recovery
  - Consider continuing support and care in recovery
  - Consider continuing support or care in resus
- Potentially Donation may not be possible due to limitation of facilities to care for the donor until withdrawal of treatment can occur, in this eventuality the potential donors family will need careful and considerate counselling.

#### APPENDIX 4 – ORGAN DONOR REFERRAL LINE



# **Blood and Transplant**

Is your patient being discussed to potentially have life support withdrawn, and/or have they lost brain stem reflexes?

> If so, ensure you support the option of organ donation for your patient by referring them to your Organ Donation Services Team

# Organ Donor Referral Line 03000 20 30 40

Call the above number as soon as you are able and ensure you leave your: <u>full name, contact number (with area code) & the name of hospital you are calling from</u> a Specialist Nurse in Organ Donation (SN-OD) will call you back to discuss further

Please ensure you have the following information ready to speak with the SN-OD

The patients full name, DOB & NHS Number
Is the patient ventilated?
A brief summary from admission to now with dates
All known past medical history
Recent bloods results (U&E, LFT & FBC ideally)
What's the current ITU plan?

Contact your Specialist Nurse - Organ Donation if you need further information



# APPENDIX 5 - EQUALITY IMPACT ASSESSMENT PART 1 INITIAL SCREENING

Service/Function/Policy/Project/	C	Division	Assessor (s)	New or Existing Service or	Date of Assessment
Strategy				Policy?	
Adult Donation Policy	Clinical Specia	lities Division	Vinesh Vincent	Existing Policy	January 2021
1) Who is responsible for this policy	? Name of Divis	sion/Directorate: Depa	artment of Critical Care, Clinica	l Specialities Division	
2) Describe the purpose of the servi	ice / function / p	oolicy / project/ strate	egy? The policy document desc	ribes the background, rationale a	nd processes of organ
donation.					
3) Are there any associated objectiv	ves? Legislation,	targets national expe	ctation, standards: To comply v	vith National Best Practise Guidel	ines
4) What factors contribute or detract	ct from achievin	g intended outcomes	? – Nil specific		
5) Does the policy have an impact in	n terms of age, r	ace, disability, gende	r, gender reassignment, sexua	l orientation, marriage/civil parti	nership,
maternity/pregnancy and religion	n/belief? Details	s: [see Equality Impact	: Assessment Guidance] - No		
If yes, please describe cut	rrent or planned	l activities to address	the impact [e.g. Monitoring, co	onsultation] –	
6) Is there any scope for new measu	ures which woul	d promote equality?	[any actions to be taken] None	Required	
7) Are any of the following groups a	dversely affecte	ed by the policy? No			
Protected Characteristics	Affected?	Impact			
a) Age	No				
b) Disability	No				
c) Gender	No				
d) Gender Reassignment	No				
e) Marriage/Civil Partnership	No				
f) Maternity/Pregnancy	No				
g) Race	No				
h) Religion/Belief No					
i) Sexual Orientation	No				
8) Provide the Equality Rating of the	8) Provide the Equality Rating of the service / function /policy / project / strategy – tick (<) outcome box				
Outcome 1 ✓ Outcome 2	Outco	ome 3	Outcome 4		
*If you have rated the policy as having an outcome of 2, 3 or 4, it is necessary to carry out a detailed assessment and complete a Detailed Equality Analysis form – see CORP/EMP 27.					
Date for next review: January 2024					
Checked by: Jane Tute			Date: Ja	anuary 2021	