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Standards for Human Organs & Tissues Donation Services (Deceased Donor)

Version 1.1

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Health Policies and Standards Department

Health Regulation Sector (2023)





INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of 2021 Amending Law No. (6) of 2018 Concerning the Dubai Health Authority, to undertake several functions including but not limited to:

- Developing regulations, policies, standards, guidelines, and manuals to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure of health facilities (HF) as well as healthcare professionals (HP) and ensuring compliance to best practice.
- Perform audit, and inspection on health facilities (HF) as well as healthcare professionals (HP) to maintain high standards of quality and safety.
- Managing patient complaints and assuring patient and physician rights are upheld;
- Strengthening health tourism and assuring ongoing growth; and
- Assuring management of health informatics, e-health and promoting innovation.

The Standards for Human Organs & Tissues Donation Services aims to fulfil the following overarching DHA Strategic Priorities (2022-2026):

- Make Dubai a lighthouse for healthcare governance, integration and regulation.
- Foster healthcare education, research and innovation.
- Strengthening the economic contribution of the health sector, including health tourism to support Dubai economy.





ACKNOWLEDGMENT

The Health Policies and Standards Department (HPSD) developed this Standard in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector Dubai Health Authority





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EXECUTIVE SUMMARY

Human Organs & Tissues Donation Services, is considered one of the major and vital implementations in the world of health. This standard supports saving lives through organ donation by identifying death by Neurological Criteria who are potential donor candidates. It outlines a clear process towards assessing patients with possible and potential irreversible braindeath due to cessation of all brain functions. This standard is developed in line with applicable laws and legislations that are already in place including the clinical criteria for death determination, the Ministerial Decree No. (19) for the year 2022 related to Death Diagnosis Criteria, the UAE Federal Decree Law No. (4) of 2016 on Medical Liability, the UAE Federal Decree Law No. (5) of 2016 on regulating human organs and tissue transplantation, Cabinet Decision No. (25) of 2020 Concerning the Executive Decree of Federal Decree Law No. (5) of 2016 on Regulating the Transfusion and Transplantation of Human Organs and Tissues.

Key Updates:

- STANDARD THREE: ASSESSMENT OF DEATH BY NEUROLOGICAL CRITERIA (DNC)
- STANDARD FOUR: REPORTING POSSIBLE AND POTENTIAL DNC DONORS
- APPENDIX 1 BRAIN FUNCTIONS ASSESSMENTS FORM OF DEATH BY NEUROLOGICAL CRITERIA
- APPENDIX 2- UAE ORGAN DONATION PROCESS MANAGEMENT PROTOCOL: STANDARDIZED CRITICAL CARE CASE NOTIFICATION AND REFERRAL OF POSSIBLE DECEASED ORGAN DONOR
- APPENDIX 3 WITHDRAWING OF LIFE SUSTAINING EQUIPMENT FORM
- APPENDIX 4- Potential Deceased Brain Death (DBD) Donors Referral Form





DEFINITIONS

Clinical Privileging: Is the process of giving a DHA licensed Healthcare Professional (HP) permission to carry out specific duties as per health facility scope of practice and licensure. This involves the review of credentials and qualifications, training, competence, practical independence and experience, aligning to the needs of the Clinical Privileging Committee (CPC) which is the responsible entity to authorise or deny clinical privileges .

Comatose patients: A patient with Glasgow Coma Scale (GCS < 8) on admission to the health facilities or during ICU management not caused by sedation.

Consent for donation: Legally valid permission from the next of kin for the retrieval of donor and tissues for the purpose of transplantation using the unified consent form.

Cerebral lesion: Any cerebral lesion potentially causing (or being co-factor of or complication) death by neurological criteria in a Hospital (ICU, ER... etc.). This also includes:

- Acute cerebral lesion (brain trauma, postanoxic, stroke etc.) that supervenes as a complication.
- Subacute or chronic disorders such as brain tumors when acute transformation occurs like spontaneous or postoperative intracranial hypertension, hemorrhagic and cerebral oedema occur.

Death by neurological criteria (DNC): Is defined as the irreversible cessation of all functions of the entire brain, including the brainstem, loss of the capacity for consciousness combined with the irreversible loss of all brain and brainstem functions, including the capacity to spontaneous breathing. Brain Death determined by neurological criteria is equivalent to the death of the individual, even though the heart continues to beat and spinal cord functions may persist in





accordance with the criteria set out in the Ministerial Resolution No. (19) Of 2022, Concerning the Criteria for the Diagnosis of Death.

Death Determination: is defined by complete and terminal cessation of heart, and breath (cardiopulmonary system) or irreversible termination of all brain functions, and by physicians agreement that this termination is permanent in accordance with criteria mentioned at the document and the Ministerial Resolution No.19, Concerning the Criteria for the Diagnosis of Death.

DNC Donor: A human being declared, death by DNC and from whom organs, tissues or cells were recovered for the purpose of transplantation.

Grandfathering: Is the process by which an external competent entity, which should oversee and support a health facility to meet the requirements in certain services.

Medical Director: Is a DHA licensed healthcare professional who holds responsibility and oversight of medical services within a DHA licensed health facility.

National Center for Donation and Transplantation: Is the federal center under the Ministry of Health and Prevention responsible to regulate and coordinate organ and tissue donation and transplantation in UAE

Next of kin: a person authorized to make decisions on behalf of the patient, in cases where the patient is incompetent, or the relatives up to the forth degree available in the country, based on the below order:

1. Father.	2. Eldest son.
3. Only son in the country.	4. Grandfather.
5. Eldest brother, or eldest half-brother if not available.	6. Only brother in the country.
7 Parental uncle or parental half-uncle if not available	8 Husband or wife





Organ Donation Unit (ODU): 24/7 operating unit within the HF ICU responsible for all organ donation matters, run by the organ donation unit director and coordinator/s.

Organ Donation Unit Director: an ICU intensivist that leads the ODU including all standard operation procedures required for the unit, supervise the organ donation unit team and coordinators, and oversees implementation of all steps of organ donation process.

Organ Donation Unit Coordinator (ODUC): ICU nurse, Intensivist or other trained clinical staff assigned by the health facility management, responsible for ensuring that all organ and tissue donation process steps occurs as per protocol and all communications between the ODU, DHA and the National Center for Donation and Transplant (NCDT) are done on timely manner to facilitate organ donation and transplant.

Possible Death by Neurological Criteria (DNC) Donor: an individual of any age with Glasgow Coma Scale of < 8, on mechanical ventilation and experienced a cerebral lesion with severe neurological insult (post resuscitation, cerebral anoxia, Cerebrovascular Accident (CVA), cerebral haemorrhage, encephalopathy, traumatic brain injury).

Potential Death by Neurological Criteria (DNC) Donor: an individual of any age with Glasgow Coma Scale of < 5, on mechanical ventilation and experienced a cerebral lesion with severe neurological insult (post resuscitation, cerebral anoxia, CVA, cerebral haemorrhage, encephalopathy, traumatic brain injury).

Human Organs and Tissue Services: organ and tissue donation and transplantation are services of removing an organ from one person (the donor) and surgically placing it in another (the recipient) who is in end stage of organ failure.

Most Responsible Physician: refers to the qualified physician who have primary responsibility for





the care of patient in the health facility.

ABBREVIATIONS

DHA:	Dubai Health Authority.
DNC:	Death by Neurological Criteria.
EEG:	Electroencephalogram.
GCS:	Glasgow Coma Scale.
HF:	Health Facility.
HCP:	Healthcare Professional.
ICU:	Intensive Care Unit.
MRP:	Most Responsible Physician.
MD:	Medical Director.
NCDT:	National Center for Donation and Transplant
ODU:	Organ Donation Unit.

ODUC: Organ Donation Unit Coordinator.

1. BACKGROUND

Organ donation not only saves lives but also creates opportunities to improve the quality of

life for patients suffering from end stage organ failure.

Deceased individuals are assessed based on their age and medical history to be viable donors.

The organ donation organization indicates the medical criteria for donation.

Death by Neurological Criteria (DNC), which is based on a set of first-release consensus recommendations for the assessment and diagnosis of brain death, as per the international panel of worldwide experts. The aim of DNC is to standardize the diagnosis of Brain Death





on National level and support Health Care professional in the assessment of viable organs for the purpose of End of life decisions which is either Organ donation or withdrawal of care. Currently, the demand for organ donation is much higher than the available supply. Statistics show that Spain (Spanish Model) has the highest percentage of donors after death for every million globally at 2021, followed by USA (USA Model), and the European countries (European model), while Gulf Cooperation Council (GCC) countries showed a significant decrease in organ donation. Hence, implementation of this standard is important to shift the curve and save lives.

2. SCOPE

2.1. Human Organs & Tissues Donation Services within DHA licensed HF with ICU services.

3. PURPOSE

- 3.1. To standarize the HF compliance with the local and federal laws and regulations regarding DNC.
- 3.2. To ensure the diagnosis of DNC is carried out as per international best practices.
- 3.3. To ensure the improvement of the diagnosis and reporting of DNC; in order to support the organ donation and transplantation on the national level.

4. APPLICABILITY

4.1. DHA licensed HF with Intensive Care Units (ICU) under the jurisdiction of Dubai Health Authority (DHA).



5. STANDARD ONE: HEALTH FACILITY REQUIREMENTS

5.1. The HF should meet requirement as per the DHA Health Facility Guidelines (HFG) 2019,
 Part B – Health Facility Briefing & Design - Intensive Care Unit.

5.2. The HF providing ICU services should have internal policies and procedures in place, to

cover all relevant donation steps which should include but not limited to:

- 5.2.1. Donor identification and referral information (Appendix 4);
- 5.2.2. Donor evaluation;
- 5.2.3. Donor maintenance;
- 5.2.4. Death declaration;
- 5.2.5. Family approach;
- 5.2.6. Operating theatre procedures;
- 5.2.7. Communication between ICU professionals, organ donation unit, and the National Center for Donation and Transplant (NCDT); and
- 5.2.8. Organ packaging and transportation (if applicable).
- 5.3. The HF providing ICU services should have an Organ Donation Unit (ODU).
- 5.4. The HF should ensure it has in place an active morbidity and mortality committee supported by written terms of reference.
 - 5.4.1. The HF morbidity and mortality committee should maintain a register of the HCP names involved in DNC assessment and diagnosis.
 - 5.4.2. The HF morbidity and mortality committee should review the cases of DNC determined, and provide recommedations for assessment and management whenever required.



- 5.4.3. The HF should report the ICU mortality rate to DHA on regular basis, refer to Guidelines for Reporting Human Organ and Tissue Donation Services Registry And Key Performance Indicators.
- 5.4.4. The HF morbidity and mortality committee should review the death cases with primary diagnosis of acute cerebral lesion, and not DNC diagnosis, as per (**Appendix 7**), and to provide recommendations for DNC diagnosis optimization as per the approved standadrs.

6. **STANDARD TWO:** HEALTHCARE PROFESSIONALS REQUIRMENTS

- 6.1. All HCP involved in the process of organ donation program in Dubai should hold an active DHA license as per the Professionals Qualification Requirements (PQR) and work within their scope of practice.
- 6.2. A minimum of three DHA licensed HCP can perform the brain functions assessment to diagnose DNC.
- 6.3. HCP assessing and diagnosing DNC should be physicians from following specialities:
 - 6.3.1. Critical Care Specialist (Adult or Paediatric).
 - 6.3.2. Neurology Specialist (Adult or Paediatric).
 - 6.3.3. Neurosurgery Specialist.
 - 6.3.4. Internal Medicine Specialist.
 - 6.3.5. Anaesthesia Specialist (Adult or Paediatric).
 - 6.3.6. Paediatric Specialist.
 - 6.3.7. Other specialised physicians privileged to diagnose DNC can perform the assessment.





- 6.4. One of the three HCP must be a Neuroscience Physician (Neurology/Neurosurgery) to diagnose DNC.
- 6.5. It is strictly prohibited for transplant HCP or surgeons to take part in diagnosing DNC or obtaining the consent.
- 6.6. The Clinical Privileging Committee or Medical Director of the HF should privilege the HCP who perform brain functions assessment to diagnose DNC aligned with their education, training, experience and competencies (refer to Clinical Privileging Policy).
- 6.7. If the number of HCP permitted to perform brain functions assessment to determine the DNC are less than three, a grandfathering approach should be adopted.
 - 6.7.1. Grandfathering should only be undertaken once both hospitals have signed a memorandum of understanding.
 - a. Grandfathering also could be provided by the National Center for Donation and Transplantation from MOHAP.
 - 6.7.2. The nominated hospital performing grandfathering should have sufficient and competent privileged HCP who are licensed by DHA or other health regulator in the UAE.
 - 6.7.3. Grandfathering should be free from any conflict of interest that may affect the determination of DNC.
- 6.8. All HCP involved in the Organ Donation Unit (ODU) should be trained and aware about the UAE organ donation process management protocol; to standardize the critical care case notification and referral of possible deceased organ donor.





7. STANDARD THREE: ASSESSMENT OF DEATH BY NEUROLOGICAL CRITERIA (DNC)

- The clinical assessment should be carried out as per the Ministerial Decision No. (19) of
 2022 regarding Death Diagnosis Criteria.
- 7.2. The HCP should intensify the management of saving the organs viability during the critical period of diagnosing the DNC.
- 7.3. Consent of the next of kin is not a requirement to perform the DNC assessment.
- 7.4. Prerequisite for DNC Assessment (**Appendix 1**):
 - 7.4.1. Prior to requesting the assessment, the Most Responsible Physician (MRP), or deputy, should ensure that all of the pre-assessment conditions are met.
 - 7.4.2. The pre-assessment conditions are:
 - b. The patient is in a state of deep coma due to a known reason.
 - c. The patient is dependent on mechanical ventilation and cannot trigger spontaneous ventilation.
 - d. A duration of at least six hours have lapsed since the event leading to coma, and to state clearly the reason of DNC (head injury, cerebral bleeding, ...etc)
 - e. The patient is not in untreated cardiovascular shock.
 - f. Biochemical tests don't indicate significant metabolic or endocrine derangements.
 - g. The patient should not respond to any kind of stimuli.
 - h. Loss of brain stem reflexes with the possibility of having some minimal spinal cord reflexes.
- 7.5. Exceptions for DNC Assessment:



- 7.5.1. The patient's body temperature shouldn't be low and the internal body temperature should be equal or more than 36 degrees Celsius for diagnosing death resulting from complete and final cessation of all brain functions, and
 - a. If the body temperature was lower than 36 degrees, patient should be warmed to raise the temperature, to allow metabolism of pharmacological agents.
- 7.5.2. The patient should not be under the influence of any sedatives, anxiolytics, hypnotics, narcotics, antiepileptics, muscle relaxants, central nervous system depressants or anti-depressants.
 - a. If the history is positive for ingestion/administration of any of above agents, then the influence of such agents should be excluded either by a laboratory test, ancillary test or awaiting five half-lives (the longest half-life from those mentioned in **Appendix 5**) from the last time an agent was ingested/administered after discontinuing the use of the drug, in the absence of acute liver or renal failure, and hypothermia prior to conducting the assessment.
 - b. To explore revert the action of the agent (giving antidote).
- 7.5.3. A toxicity test should be done in cases of road traffic accident or medication toxicity or cases of unknown loss of consciousness.
- 7.5.4. To exempt patients with significant metabolic/endocrine abnormalities.
- 7.5.5. Unavailability of any evidence on the brain function with patients like decerebrate or decorticate posture.





- 7.5.6. For any case the HCP is not clear on the exception condition to communicate with the NCDT for expert opinion.
- 7.6. The assessment of DNC should be performed by filling and signing the brain functions assessment form (**Appendix 1**).
- 7.7. DNC has three essential findings coma, absence of brainstem reflexes, and apnea.
 - 7.7.1. Two clinical examinations, separated by age-defined intervals, should be carried out using the brain function assessment form of DNC (**Appendix 1**).
 - a. Minimum of three HCP should perform the clinical examination.
 - b. First clinical examination; physician (1) and physician (2)
 - c. Second clinical examination; physician (3) with one of the above physicians or physician (4).
 - 7.7.2. If the two clinical examinations are completed and all the tests have been completed without constraints, the apnea test should be performed, to verify the absence of brainstem reflexes, and confirm DNC (**Appendix 1**).
 - 7.7.3. Apnea test should be conducted once by two of the three HCP after the second assessment.
 - 7.7.4. The ancillary test is not mandatory, it is only performed if the clinical exam parts or apnea test cannot be done, as stated in the Ministerial Decree No.19 of 2022 to diagnose death by brain criteria (**Appendix 1**).
- 7.8. If there is no possiblility to complete the two clinical examinations or the apnea test cannot be performed for any reason, then;



- 7.8.1. It is required to perform one of the ancillary tests, as stated in the MinisterialDecree No.19 of 2022 to diagnose death by brain criteria (Appendix 1).
- 7.8.2. One of the ancillary tests can likewise be used in case of insurmountable constraints and of uncertainty as to the interpretation of the presence of spinal reflexes and/or myoclonus before apnea test is performed, as per the Ministerial Decision No. (19) of 2022 regarding Death Diagnosis Criteria.
- 7.9. In pediatric age groups, it is recommended that the minimum criteria for determination of DNC be the same as in adults, with:
 - 7.9.1. Assessment of prerequisites
 - 7.9.2. Elimination of confounders; and
 - 7.9.3. Performance of a clinical examination including apnea testing (age-appropriate hemodynamic targets should be applied) and ancillary tests.
- 7.10. All HF should facilitate the reassessment of the patient of DNC by the NCDT.

8. STANDARD FOUR: REPORTING POSSIBLE AND POTENTIAL DNC DONORS

- 8.1. All HF should report potential DNC donors.
- 8.2. Possible DNC donor is an individual of any age who meets the following criteria:
 - 8.2.1. Requires mechanical ventilation.
 - 8.2.2. Has experienced a cerebral lesion with severe neurological insult (Anoxic Encephalopathy, cerebral hemorrhage, stroke, traumatic brain injury, encephalitis and meningoencephalitis, central nervous system tumors); and
 - 8.2.3. Glasgow Coma Scale of < 8;





- 8.3. Possible donors should be notified within 24 hours via email using the referral form ofPossible DNC Donor (Appendix 4) the following:
 - 8.3.1. Organ Donation Unit at the Health facility, and
 - 8.3.2. DHA Organ Donation Coordinator (Ayaalfalahi@dha.gov.ae; +97145027639)
- 8.4. The individual of any age who meets the following criteria for being a Potential DNC donor:
 - 8.4.1. Requires mechanical ventilation;
 - 8.4.2. Has experienced a cerebral lesion with severe neurological insult (post resuscitation, cerebral anoxia, CVA, cerebral haemorrhage, encephalopathy, traumatic brain injury); and
 - 8.4.3. Glasgow Coma Scale of < 5 with no sedations;
- 8.5. Potential donors should be referred within 12 hours via phone call and e-mail, using the referral forms of Potential DNC Donor (**Appendix 2 and 4**) to:
 - 8.5.1. Organ Donation Unit at health facilities in Dubai
 - 8.5.2. DHA Organ Donation Coordinator (Ayaalfalahi@dha.gov.ae; +97145027639)
 - 8.5.3. NCDT team (TheOPO@mohap.gov.ae; +97142301111; +971569921199; Admin on-call +971566888616)
- 8.6. Referral of potential donors should include the below clinical evaluation:
 - 8.6.1. Progress Note/ History of presenting illness (Admission until referral)
 - a. Current Illness (Cause of coma, admission day, GCS, death diagnosis done, etc)
 - b. Previous disease
 - c. Previous surgeries





- d. Previous clinical treatments
- e. Current or previous cancer disease (Kind, time, treatment)
- f. Current or previous diagnosis of chronic diseases (Kind, time, treatment)
- g. Previous drug consumption (Alcohol, tobacco, etc)
- 8.6.2. Current Clinical Status
 - a. Vital signs
- 8.6.3. Imaging Exams: Brain CT Scan, T X-Ray, other
- 8.6.4. Lab results:
 - b. Complete Blood Count
 - c. Coagulation Profile (PT/PTT/INR)
 - d. Electrolyte & Renal Profile (Sodium/Potassium /Creatinine/Urea/eGFR)
 - e. Liver Profile (Total Protein/Albumin/Total Bilirubin/ALT/AST/ALP)
 - f. Pancreas Profile (Amylase/Glucose)
 - g. Blood Gases (100% FiO2)
 - h. ECG
- 8.6.5. Cultures (Blood/urine/sputum)
- 8.6.6. COVID-19 PCR
- 8.6.7. QuantiFERON-TB
- 8.6.8. Urine analysis
- 8.7. The head of ICU physician or the most responsible physician (MRP), has to inform the next of kin about the diagnosis of DNC.
- 8.8. The ODU should maintain a donor registry of all possible and potential DNC Donors.





- 8.8.1. The ODU should maintain a proper communication between DHA and NCDT.
- 8.8.2. The ODU should report the related KPIs regularly to DHA, refer to the Guidelines for Reporting Human Organ & Tissue Donation KPIs.
- 8.8.3. The ODU should ensure that the assessment form and the DNC declaration are completed and signed regardless the outcome of the assessment, and should ensure uploading those forms into the patient health record.

9. STANDARD FIVE: DNC DECLARATION AND ISSUANCE OF DEATH CERTIFICATE

- 9.1. If the Potential DNC Donor meets the criteria for organ donation, then the NCDT should be informed within 12 hours for the necessary action (**Appendix 2**).
 - 9.1.1. The ODU should facilitate the availability of medical reports and tests of the Potential DNC Donor and to be shared with the NCDT.
 - 9.1.2. If the patient was not a registered organ donor, a grace period up to 48 hours should be given to the family to respond about decision on organ donation.
 - a. This period can be prolonged to 4 days if the donor's family are traveling-in to Dubai.
 - 9.1.3. The unified consent form for organ donation is obtained by the NCDT from the next of kin in the presence of the most responsible physician (MRP), or deputy to proceed with the donation (**Appendix 6**).
 - 9.1.4. The ODU should facilitate the referral and transfer of the DNC Donor to the organ transplant facility for organ retrieval and transplantation.
- 9.2. If the Potential DNC Donor doesn't meet the criteria for organ donation or if the next of kin doesn't approve the organ donation, then life sustaining equipment is withdrawn,





in compliance with Article No. (10) point 2 of the UAE Federal Decree Law No. (4) of

2016 on Medical Liability.

- 9.2.1. Assessment and the denial of the next kin should be clearly documented in the patient medical record and maintained.
- 9.2.2. HF should train the ICU physicians on effective communication skills in this regard with the family and next of kin.
- 9.2.3. ICU physicians' should ensure compliace to the directions set out in this standards and relevant legislations to avoid violations and legal implications.
- 9.3. Issuance of death certificate:
 - 9.3.1. The death certificate should be issued after the DNC declaration is duly signed and as per the following:
 - b. If the consent for organ donation is obtained after the consultation with NCDT,
 it is issued within 6 hours before proceeding to the operating room for organ
 retrieval.
 - c. If the organ donation is rejected it is issued after the withdrawing of life sustaining therapy.

10. STANDARD SIX: REPORTING SERVICE REGISTRY AND KEY PERFORMANCE INDICATORS

10.1 HRS will publish Guidelines for Reporting Human Organ and Tissue Donation Services

Registry And Key Performance Indicators.

10.2 HFs should capture the KPIs and report them on monthly basis.





10.3 HFs should establish and maintain an organ donation registry as per the template set out, and share it on monthly basis with HRS.

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 2016 concerning regulating the transfusion and transplantation of human organs and tissues.
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APPENDICES

APPENDIX 1 – BRAIN FUNCTIONS ASSESSMENTS FORM OF DEATH BY NEUROLOGICAL

CRITERIA

Please write patient details below in addition to ID sticker

Name:				Medical Record number:			
Age:	Sex:	☐ Male ☐ Female	Nationality:	Blood group:	Weight: Kg	Height: cm	
Hospital Name:	ospital Name:			Date of admission (DD/MM/YYYY):			

First Exam	First pl	nysician	Second physician		
I. PRECONDITIONS:					
1. Clinical or neuroimaging evidence of acute Central Nervous System (CNS)	□ Yes		□ Yes		
catastrophe that is compatible with irreversible loss of brain function.					
≥ 6 hours have passed since the initial insult.*	Yes	□ No	Yes	🗌 No	
3. Coma with no spontaneous respiration.	Yes	□ No	🛛 Yes	🗌 No	
II. EXCLUSIONS:					
 Hypothermia (core temperature ≤ 36°C). 	Absent	Present	Absent	Present	
 Sedation or muscle relaxants (blood test or hospital record should indicate absence of significant levels of sedative drugs, muscle relaxants or intoxication). 	Absent	Present	Absent	Present	
 Systolic blood pressure <100 mmHg (despite vasopressors). 	□ Absent	Present	Absent	Present	
 Significant metabolic or endocrine causes of coma. (suggested sodium ≤ 155 mmol/L or mEq/L). 	□ Absent	Present	Absent	Present	
III. CLINICAL ASSESSMENT:					
 Absence of any cerebrally-mediated response to auditory and tactile noxious stimulation, peripherally and in the cranium. (does not include spinal reflexes) 	Absent	Present	Absent	Present	
2. Absence of brain stem reflexes:					
a. Pupils response to bright light	Absent Untestable	Present	□ Absent □ Untestable	Present	
b. Corneal	Absent Untestable	Present	Absent Untestable	Present	
c. Oculocephalic (contraindicated when C-spine unstable)	AbsentUntestable	Present	Absent	Present	
 d. Oculovestibular (tympanic membranes must be intact) (50 ml adults 20 ml in children ice-cold water 0°C) 	AbsentUntestable	Present	Absent	Present	
e. Gag	AbsentUntestable	Present	Absent	Present	
f. Cough	AbsentUntestable	Present	Absent	Present	

UAE Federal Law No.5/2016 article 15.2: death is determined by a committee of 3 physicians including 1 specialized in neurological disease.

- *Note: Recommended time interval between first and second examinations in various age groups
 - ** Infants (above 60 days 1 year) 24 hours • Adults: minimum of 30 minutes
 - Children (above one year) 12 hours
- ** neonate (7 days 60 days) 48 hours

First exam	Date	Time	Name	Signature	License number
First physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	HH:MM AM/PM			
Second physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	HH:MM AM/PM			





Age: Ses: Make Nationality: Blood group: Weight: Kg Height: no Torpital Name: Second Exam Third physican First or Second physican First or Second physican 1. PRECONFINE: Image: No Yes No Yes No	Name:		Medio	ical Record number:					
Second Exam Third physician First or Second physician 1. PRECONDITIONS:	Age:	Sex:	Nationality:	Blood	group:	Weight:	Kg I	Height: cm	
Second Exam Third pHysician physician I. PRECONDITIONS:	Hospital Name	:		Date	of admission (DD/	MM/YYYY):			
1. Clinical or neuroimaging evidence of acute Central Nervous System (CNS) Yes No Yes No 2. 26 hours have passed since the initial insult.* Yes No Yes No 3. Corna with no spontaneous respiration. Yes No Yes No 1. Hypothermia (core temperature \$ 36°C). Absent Present Absent Present 2. Solution or muscle relaxants Oldot pressure <100 mmHg Absent Present Absent Present 3. Systolic blood pressure <100 mmHg Absent Present Absent Present Absent Present 4. Significant metabolic or endocrine causes of coma. (suggested sodium \$155 mmO/L or mEq/L). Absent Present Absent Present Absent Present 1. Absence of ary cerebrally-mediated response to auditory and tactile noxious stimulation, peripherally and in the cranium. (does not include spinal reflexes) Absent Present Absent Present Present a. Pupils response to bright light Interstable Present Absent Present Absent Present b. Corneal Oculoexphalic (contraindicated when C-spine unstable) Absent Present Absent Present		Secon	d Exam		Third ph	ysician			
catastrophe that is compatible with irreversible loss of brain function.If YesIf NoIf YesIf NoIf YesIf No2. ≥ 6 hours have passed since the initial insult.*If YesNoYesNoNo3. Coma with no spontaneous respiration.If YesNoYesNoNoI. EXCLUSIONS:If AbsentIf PresentAbsentIf PresentAbsentIf Present1. Hypothermia (core temperature ≤ 36°C).If AbsentIf PresentAbsentIf PresentAbsentIf Present2. Sedation or muscle relaxantsIf Absent or intolication).If AbsentIf PresentAbsentIf Present3. Systolic blood pressure <100 mmHg					-				
3. Coma with no spontaneous respiration. IVes No 1. EXCLUSIONS: 1. Hypothermia (core temperature ≤ 36°C). Indexterment and the spontaneous respiration. IVes IVes 2. Sedation or muckle relaxants Indexterment and the spontaneous respiration. IVes IVes IVes 2. Sedation or muckle relaxants or intoxication). IVes				(CNS)				_	
II. EXCLUSIONS: 1. Hypothermia (core temperature ≤ 36°C). □ Absent □ Present □ Absent □ Present 2. Sedation or muscle relaxants (blood test or hospital record should indicate absence of significant levels of sedative drugs, muscle relaxants or intoxication). □ Absent □ Present □ Absent □ Present 2. Sedation or muscle relaxants or intoxication). □ Absent □ Present □ Absent □ Present 3. Systolic blood pressure <100 mmHg (despite vasopressors). □ Absent □ Present □ Absent □ Present 4. Significant metabolic or endocrine causes of coma. (suggested sodium ≤ 155 mmol/L or mEq/L). □ Absent □ Present □ Absent □ Present 1. Absence of any cerebrally-mediated response to auditory and tactile noxious stimulation, peripherally and in the cranium. (does not include spinal reflexes) □ Absent □ Present □ Absent □ Present 2. Absence of brain stem reflexes: □ Absent □ Present □ Absent □ Present □ Absent □ Present a. Pupils response to bright light □ Absent □ Present □ Absent □ Present □ Absent □ Present b. Corneal □ Coulovestibular (contraindicated when C-spine unstable) □ Absent □ Present □ Absent	2. \geq 6 hours have	ve passed since the initial	insult.*		☐ Yes	🗆 No	☐ Yes	🗆 No	
1. Hypothermia (core temperature ≤ 36°C). □ Absent □ Present □ Absent □ Present 2. Sedation or muscle relaxants (blood test or hospital record should indicate absence of significant levels of sedative drugs, muscle relaxants or intoxication). □ Absent □ Present □ Absent □ Present 3. Systolic blood pressure <100 mmHg (despite vasopressors). □ Absent □ Present □ Absent □ Present 4. Significant metabolic or endocrine causes of coma. (suggested sodium < 155 mmol/L or mEq/L).	3. Coma with n	o spontaneous respiration	1.		🗌 Yes	🗆 No	🗆 Yes	🗆 No	
2. Sedation or muscle relaxants (blood test or hospital record should indicate absence of significant levels of sedative drugs, muscle relaxants or intoxication). Absent Present Absent Present 3. Systolic blood pressure <100 mmHg (despite vasopressors). Absent Present Absent Present Present 4. Significant metabolic or endocrine causes of coma. (suggested sodium <155 mmO/L or mEq/L).	II. EXCLUSIO	DNS:					T		
(blood test or hospital record should indicate absence of significant levels of sedative drugs, muscle relaxants or intoxication).AbsentPresentAbsentPresentP			C).		□ Absent	Present	□ Absent	Present	
(despite vasopressors). Absent Present Absent Present Absent Present 4. Significant metabolic or endocrine causes of coma. (suggested sodium < 155 mmol/L or mEq/L).	(blood test or sedative drugs,	hospital record should i muscle relaxants or intoxi	0	vels of	☐ Absent	Present	Absent	Present	
(suggested sodium ≤ 155 mmol/L or mEq/L). □ Absent □ Present □ Absent □ Present □ Present III. CLINICAL ASSESSMENT: □ Absent □ Present □ Absent □ Present □ Absent □ Present 1. Absence of any cerebrally-mediated response to auditory and tactile noxious stimulation, peripherally and in the cranium. (does not include spinal reflexes) □ Absent □ Present □ Absent □ Present □ Present 2. Absence of brain stem reflexes: □ Absent □ Present □ Absent □ Present □ Present □ Present 2. Absence of brain stem reflexes: □ Absent □ Present □ Absent □ Present □ Present □ Present 3. Pupils response to bright light □ Absent □ Present □ Absent □ Present □ Present □ Present b. Corneal □ Octolecephalic (contraindicated when C-spine unstable) □ Absent □ Present □ Absent □ Present c. Oculocephalic (contraindicated when C-spine unstable) □ Absent □ Present □ Absent □ Present d. Oculovestibular (tympanic membranes must be intact) (S0 ml adults 20 ml in children ice-cold water 0°C) □ Absent □ Present □ Absent □ Present					Absent	Present	□ Absent	Present	
1. Absence of any cerebrally-mediated response to auditory and tactile noxious stimulation, peripherally and in the cranium. (does not include spinal reflexes)	0				Absent	Present	Absent	Present	
stimulation, peripherally and in the cranium. (does not include spinal reflexes) Absent Present Absent Present 2. Absence of brain stem reflexes:	III. CLINICAL	ASSESSMENT:							
a. Pupils response to bright light Absent Present Untestable Absent Present Untestable Untestable Present Untestable Untestable Untestable Untestable Untestable Present Untestable Untestable Untestable Untestable Present Untestable Untestable Untestable Untestable d. Oculovestibular Untestable Untestable Untestable Untestable e. Gag Absent Present Untestable Untestable Untestable f. Cough Absent Present Untestable					Absent	Present	Absent	Present	
a. Pupils response to bright light Untestable Untestable Untestable b. Corneal Absent Present Absent Present c. Oculocephalic (contraindicated when C-spine unstable) Absent Present Absent Present d. Oculovestibular (tympanic membranes must be intact) (50 ml adults 20 ml in children ice-cold water 0°C) Absent Present Absent Present e. Gag Absent Present Absent Present Dutestable f. Cough Absent Present Absent Present g. Absent Present Dutestable Present g. Untestable Untestable Dutestable Present g. Untestable Untestable Dutestable Present	2. Absence of b	orain stem reflexes:					-	-	
b. Corneal Untestable Untestable Untestable c. Oculocephalic (contraindicated when C-spine unstable) Absent Present Absent Present d. Oculovestibular (tympanic membranes must be intact) (50 ml adults 20 ml in children ice-cold water 0°C) Absent Present Absent Present e. Gag Gag Absent Present Absent Present f. Cough Absent Present Absent Present f. Cough Absent Present Present g. Absent Present Present Present g. Untestable Untestable Present Present g. Masent Present Present Present g. Untestable Untestable Present Present g. Untestable Untestable Untestable Present g. Untestable Untestable	a. Pupils re	sponse to bright light				Present			
Image: Constraint of the second se	h Comool				Absent	Present	Absent	Present	
c. Ocucephanc Image: Constraint of the second of the	D. Comean				Untestable			2	
d. Oculovestibular Absent Present Untestable Absent Untestable Untestable e. Gag Absent Present Untestable Untestable Untestable f. Cough Absent Present Untestable Present Untestable Untestable f. Cough Absent Present Untestable Untestable Untestable Untestable 	c. Oculoce	phalic			Absent	Present	Absent	Present	
(tympanic membranes must be intact) Image: Absent in the present	(contrain	ndicated when C-spine un		Untestable		Untestable	2		
(50 ml adults 20 ml in children ice-cold water 0°C) Untestable Untestable Untestable e. Gag Absent Present Absent Present Untestable Untestable Untestable Present Present f. Cough Absent Present Absent Present				Absent	Present	Absent	Present		
e. Gag Untestable Untestable Untestable		,	Untestable		Untestable	5			
f. Cough Image: Cough matrix of the sector	e Gao		Absent	Present	Absent	Present			
f. Cough	e. Gag				Untestable			2	
Untestable Untestable	f Court				□ Absent	Present	Absent	Present	
	_								

*Note: Recommended time interval between first and second examinations in various age groups

Adults: minimum of 30 minutes ** Infants (above 60 days – 1 year) 24 hours ٠

• Children (above one year) 12 hours

** neonate (7 days – 60 days) 48 hours

Second exam	Date	Time	Name	Signature	License number
Third physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	HH:MM AM/PM			
First or Second physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	HH:MM AM/PM			

Note: First or Second physician could be replaced by fourth doctor if applicable.





Name:						Med	lical Record number:			
Age:	Sex:	🗌 Male 🗌 Femal	e	Nationality:			d group:	_	nt: Kg	Height: cm
Hospital Name: Date of admission (DD/MM/YYYY):										
b. If inconc	 a. Must be performed in the presence of two physicians and done once only. b. If inconclusive and patient remains hemodynamically stable, may continue for longer period (5 -10 minutes). c. If not doable due to hemodynamic instability or aborted, the reported ancillary test will be sufficient. 									
1. Core te	emperat	ure≥36	°C						🗌 Yes	5 🗌 No
 Core temperature ≥ 36°C Systolic BP > 100 mmHg (with or without vasopressor agents) 									🗌 Yes	5 🗌 No
3. Arteria	al pCO2 4	10 +/- 5 r	nm Hք	g (5.3 +/- 0.7	/ kPa) (In patient wi	ith no	rmal baseline PCO2))	🗌 Yes	5 🗌 No
4. Arteria	al pO2 gr	eaterth	an 90	mm Hg (12	<pa)< td=""><td></td><td></td><td></td><td>🗌 Yes</td><td>5 🗌 No</td></pa)<>				🗌 Yes	5 🗌 No
5. Expose	e chest a	nd abdo	men						🗌 Yes	5 🗌 No
B. Apnea tes	sting ch	ecklist								
					tes. Increase the ins 02 >200 mm Hg (26.		l fraction of oxygen ()	(FIO2)	🗌 Yes	5 🗌 No
the leve *Abort the ap	elofthe	carina.	(6 L/m	in adults, 1	.5-2 L/min children))	trachea via a canni erial blood gas samı		🗌 Yes	5 🗌 No
			-		ular collapse despite	e vasc	opressors		Apnea test aborted:	
c. Sigi	nificant	cardiac a	mhyt	6% for >30 se nmia ire observed					🗌 Yes	5 🗌 No
		-			es and every 5 minut	tes th	ereafter if necessary	y.		
				n either: a) adults or	≥50 mmHg (7.6 kPa	a) chil	dren		🗌 Yes	5 🗌 No
-	CO2 is ≥2 seline P		g (2.7	<pa) above="" t<="" td=""><td>the patient's knowr</td><td>n base</td><td>line (in patient with</td><td>high</td><td>🗌 Yes</td><td>5 🗌 No</td></pa)>	the patient's knowr	n base	line (in patient with	high	🗌 Yes	5 🗌 No
1. ABG at baseline: DD/MI DD/MM/YYYHH:MM AM/PM PH PH PaCO2 mmHg PaO2 PaO2				2. ABG at 10 minutes or shorter if aborted ¹ : <u>MM/YYYY HH:MM AM/PM</u> 02 mmHg ase specify: minutes			3. ABG at 5 minutes (optional) ² : <u>DD/MM/YYYY HH:MM AM/PM</u> pH PaCO ₂ mmHg PaO ₂ mmHg ² Refer to point b at the top of this page			
C. Apnea co	nfirmed	: absen	tresp	iratory mo	vements over≥10 i	minu	tes of observation.		🗆 Ye	s 🗆 No
APNEA TEST completed Date			ate	Time		Name		Signature	License numbe	
First physician			DD/MI	<u> </u>	HH:MM AM/PM	1				
Second physicia	n		DD/MI	M/YYYY	HH:MM AM/PM	1				

** UAE Federal Law No.5/2016 article 15.2: death is determined by a committee of 3 physicians including 1 specialized in neuro logical disease.

***One of the four clinical exams separated by mandatory waiting time for age (see footnote) to be completed by a specialist in neurological disease.

****The final declaration needs to be signed by all three physicians who performed clinical examinations and apnea test.

*****First or Second physician could be replaced by fourth doctor if applicable.

*Note: Recommended time interval between first and second examinations in various age groups

- Adults: minimum of 30 minutes ** Infants (above 60 days – 1 year) 24 hours • Children (above one year) 12 hours
 - ** neonate (7 days 60 days) 48 hours





Name:				Medical Record number:				
Age:	Sex:	☐ Male ☐ Female	Nationality:	Blood group:	Weight: Kg	Height: cm		
Hospital Name:			Date of admission (DD/MM/YYYY):					

ANCILLARY TEST(S): IF REQUIERED, minimum one of the following tests should be done.									
1. EEG (full brain death protocol, see last page)	No reactivity (>2 uV) to intense somatosensory or audiovisual stimuli.	<u>DD/MM/YYYY</u>	□ Yes	🗆 No					
2. Absence of brain circulation by any of:									
2.1 🗌 Cerebral angiogram	□ No flow	DD/MM/YYYY	🗌 Yes	🗌 No					
2.2 Duclear medicine cerebral blood flow study (technetium 99M SPECT)	□ No flow	DD/MM/YYYY	🗆 Yes	🗆 No					
2.3 🗌 Transcranial Doppler	□ No flow	DD/MM/YYYY	🗌 Yes	🗌 No					
2.4 🔲 CT cerebral angiogram (see appendix)	□ No flow	DD/MM/YYYY	🗆 Yes	🗆 No					

Final Declaration	Date	Time	Name	Signature	License number
First physician ☐ An intensivist ☐ Neurologist ☐ Neurosurgeon ☐ Others specify:	<u>DD/MM/YYYY</u>	<u>HH:MM</u> AM/PM			
Second physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	<u>HH:MM</u> AM/PM			
Third physician An intensivist Neurologist Neurosurgeon Others specify:	<u>DD/MM/YYYY</u>	<u>HH:MM</u> AM/PM			
Fourth physician (if applicable)	<u>DD/MM/YYYY</u>	<u>HH:MM</u> <u>AM/PM</u>			

*Note: Recommended time interval between first and second examinations in various age groups

Adults: minimum of 30 minutes
 ** Infants (above 60 days – 1 year) 24 hours

Children (above one year) 12 hours

•

** neonate (7 days – 60 days) 48 hours





Types and Techniques of CTA

Electroencephalography

- A minimum of 8 scalp electrodes should be used.
- Interelectrode impedance should be between 100 and 10,000 Ω .
- The integrity of the entire recording system should be tested.
- The distance between electrodes should be at least 10 cm.
- The sensitivity should be increased to at least 2 μ V for 30 minutes with inclusion of appropriate calibrations.
- The high-frequency filter setting should not be set below 30 Hz, and the low-frequency setting should not be above 1 Hz.
- Electroencephalography should demonstrate a lack of reactivity to intense somatosensory or audiovisual stimuli.

Neurology 2010;74:1911-1918.

A standard CTA acquisition uses a multislice CT scanner to acquire a helical scan (120 kV, 200 mA) from cervical vertebra C2 to vertex timed to chase the bolus of contrast as it passes through the intracranial vessels. Intravenous contrast medium (40-120 mL) is administered in an antecubital vein or a central venous catheter with a power injector, followed by 30 mL of an isotonic saline (rate: 3-5 mL/s). CT acquisition is timed to start 5 seconds after opacification of the common carotid artery of more than 150 Hounsfield units. Axial images reconstructed with a maximum of 2.0-mm increments. Thinner slices and multiplanar reformats may also be reconstructed. For delayed phase CTA [5,6], a repeat acquisition started 55-60 seconds after starting the first scan, using the same parameters as in first scan. The delayed phase acquisition is used to confirm persistence of lack of intracranial contrast over a longer duration. The standard 1- or 2-phase CTA is limited as it provides a static volume of brain vessels images performed during 1 or 2 specified time points (snapshot views). The predetermined time point used is often unreliable in these patients due to the abnormal or delayed flow.

Can Assoc Radiol J. 2017 May;68(2):224-228.

4-point CTA score

Vessel	Lack of Opacification
Right cortical segment of middle cerebral artery	🗌 Yes 🗌 No
Left cortical segment of middle cerebral artery	🗌 Yes 🗌 No
Right internal cerebral vein	🗌 Yes 🗌 No
Left internal cerebral vein	🗌 Yes 🗌 No
AJNR Am J Neuroradiol 2009:30:1566e70. Ca	an Assoc Radiol J. 2017 May:68(2):224-228.

7-point CTA score

Vessel	Lack of Opacification
Right pericallosal segment of middle cerebral artery	🗌 Yes 🗌 No
Left pericallosal segment of middle cerebral artery	🗌 Yes 🗌 No
Right cortical segments of the middle cerebral artery	🗌 Yes 🗌 No
Left cortical segments of the middle cerebral artery	🗌 Yes 🗌 No
Right internal cerebral vein	🗌 Yes 🗌 No
Left internal cerebral vein	🗌 Yes 🗌 No
vein of Galen	🗌 Yes 🗌 No
Am J Neuroradiol 1998;19:641e7. Can Assoc Radiol J. 2	2017 May;68(2):224-228.

*Note: Recommended time interval between first and second examinations in various age groups

- Adults: minimum of 30 minutes
- ** Infants (above 60 days 1 year) 24 hours
- Children (above one year) 12 hours
- ** neonate (7 days 60 days) 48 hours

 Standards for Human Organs & Tissues Donation Services (Deceased Donor)

 Code: DHA/HRS/HPSD/ST- 31 Issue Nu: 1.1 Issue Date: 08/05/2023 Effective Date: 08/07/2023 Revision Date: 08/05/2028 Page 28 of 34





APPENDIX 2- UAE ORGAN DONATION PROCESS MANAGEMENT PROTOCOL:

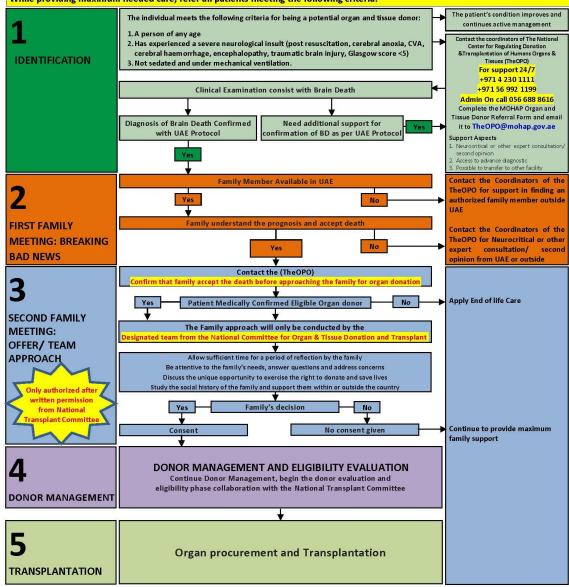
STANDARDIZED CRITICAL CARE CASE NOTIFICATION AND REFERRAL OF POSSIBLE

DECEASED ORGAN DONOR



UAE Organ and Tissue Donation Process Management Protocol Standardized Procedures for Reporting Critical Cases and Referring Potential Donors

While providing maximum needed care, refer all patients meeting the following criteria:



ص.ب P.O.BOX 1853 • الإمارات العربية المتحدة دبي DUBAI, UNITED ARAB EMIRATES. • هاتف 1000 • FAX +971 4 عناما 1853 www.moh.gov.ae





APPENDIX 3 - WITHDRAWING OF LIFE SUSTAINING EQUIPMENT FORM

Patient Name:	Hospital:
Date of Birth:	Gender:
Nationality:	Health Record No.:
Diagnosis:	

This document is to confirm that the above named patient is declared dead. Hence, the life sustaining equipment

will be withdrawn, and medical therapies are no longer indicated and will be terminated since death has occurred.

Treating / Most Responsible Physician
Name:
Signature and stamp:
Date and time:
Medical Director
Name:
Signature and stamp:
Date and Time:





APPENDIX 4- Potential Deceased Brain Death (DBD) Donors Referral Form

Potential Deceased Brain Death (DBD) Donors Referral Form					
The individual meets the following	ng criteria for be	eingapo	otential	organ donor:	
1. A person of any age					
2. Has experienced a severe neur	rological insult (post re	suscitat	ion, cerebral anoxia, CVA	, cerebral haemorrhage,
encephalopathy, traumatic brain	injury, Glasgow	score <	:5), not	sedated and under mech	nanical ventilation
Referral Date				Referral Time	
Referring Hospital				Location / Unit	
Patient Name				MRN	
Nationality				Gender	□ Male
					□Female
Date for Birth		Age		ICU Admission Date	
Police Case	Yes	No)	Blood Group	
Cause of Brain Injury					
Other, please specify					
Next of Kin Available	in UAE	ΠY	es D] No	Outside 🛛 Yes 🗆 No
Next of Kin Name					
Next of Kin Relationship					
Next of Kin Contact Number					
MRP Name					
MRP Contact Number					
ODU Coordinator Name					
ODU Coordinator Contact Number					





APPENDIX 5- LIST OF COMMONLY USED DRUGS AND A FIVEFOLD HALF-LIFE THAT CAN

BE CONSIDERED WHEN MAKING A DECISION ABOUT DEATH BY NEUROLOGICAL

CRITERIA

	Drug	Half life	
Opioids	Fentanyl	3.3-4.1 hours	↑CPBS, Aged, Prem; ⇔Child
	Oxycodone	2.1-3.1 hours	
Sedatives	Dexmedetomidine	2 hours	
	Diazepam	30-56 hours	↑Aged, LDL; ⇔HTh
	Lorazepam	9=19 hours	↑LD, Neo, RD; ⇔Aged, CPBS, AVH; $↓$ Burn
	Midazolam	1.3-2.5 hours	↑Aged, Obese, LD; ⇔Smoking
	Pentobarbital	15-50 hours	
	Phenobarbital	81-117 hours	↑LD, Aged; $↓$ Child; $⇔$ Epilepsy, Neo
	Thiopental	8-10 hours	
	Propofol	2.3-4.7 hours	A much longer terminal t1/2 was reported following prolonged IV infusion.
	Zolpidem	1.7-2.1 hours	↑Aged, LD; \Leftrightarrow RD; \checkmark Child
Other	Baclofen	2.8-4.7 hours	
	Bupropion	10-11 hours (7.9-18.4)	↑Aged, LD; ⇔ Alcohol





APPENDIX 6- UNIFIED CONSENT FORM









Consent to Donate a Deceased Person Organs and Tissues

رقم الملف بالمركز .EOTC File No	رقم الملف الطبي . Medical Record No	الوقت Time	التاريخ Date
F			

المعلومات الخاصة بالمتوفى Deceased person Information

الاسم Name	اسم المنشأة الصحية التي حدثت فيها الوفاة
رقم الهوية / جواز السفر ID/ Passport No.	The Name of the Health Facility Where the Death Occur
تاريخ الميلاد D.O.B	
الجنسية Nationality	

معلومات الشخص الذى أبدى الموافقة على التيرع بأعضاء وأنسجة المتوفى المذكور أعلاه

The Person Authorized to Consent for Organs & Tissues Donation of the deceased mentioned above

Name:	الاسم:	صبلة القرابة Relationship	
D.O.B:	تاريخ الميلاد:	Father 🤯	
ID/ Passport No:	رقم الهوية/ الجواز:	Eder Son has ships at	
Valid to:	صالحة لغاية:	الإين الوحرد في الدولة Conly son resident in the State	
Issuing Place:	مصيدرها:	Grandfather Aph	
E-mail:	البريد الالكتروني:	أكور الأخرة الأشقاء ثو أكورهم لأب إن ثم يوجد المقليق Elder sibling, then elder half-brother, if there is	
Telephone No. :	رقم التلفون:	الآغ الوحيد داخل الدولة Conly brother in the State	
Address:	العتوان:	العمر المميية ويقدم العم الشقيق على العم ألَّب	
Nationality:	الجنسية:	الزوم أو الزوجة إذا لم يعرف المترق عصبة حسب الأرتيب السابق Spouse, if the deceased's agnates by the above-mentioned order are not known	

وفقًا لقانون دولة الإمارات المربية المتحدة (مرسوم يقانون اتحادي 5 لسنة 2016)، أعلن أنا المذكور أعلاه وأنا بكامل قواي المعقلية وبدون أي إكراء مادي او معنوي بأنتى موافق على التبرع بأعضاء وأتسجة في هذا المجال.

According to UAE (Federal Law No. (5) of 2016), I declare the aforementioned, with full mental strength, granting consent to donate organs and tissues of my deceased relative mentioned above, in order to transplant them to any suitable patient as deemed by the competent authorities in this field.

□ I authorize the burial of my deceased relativ □ I wish to repatriate the body of my decease	 أصبح بنفن قرين المتوق المذكور أعلاه ناخل الدولة أرغب في إعادة جثمان قرين المتوق إلى الوطن الأم 	
Remarks:		ملاحظات:
Signature:		التوقيع:

للفيود The Witness

الإسم Name	صلة القرابة Relationship	رقم الهوية Identification No.	التوقيع Signature
The Coordinator who obtains app	roval to Name:	موافقة بالتبرع الاسم:	المنســـق الذي حصــل على ال

donate organs and tissues: بالأعضاء والأنسجة: التوقيع: (Assigned by the National dropse Tonequiner doramittee to opproach deceased family for organ donation) Signature: مصد من قبل الجنة الوطنية لزراعة الأه باء لطابلة سلل عاقة المترق، لحميرا، على الموافقة-بالجرح بالأعماء والأسجة إ Please attach copy of the authorized relative ID/ Passport who signed this Consent form الرجاء ارفاق نسخة من هوية/ جولا سفر الشخص الموقع بالموافقة على هذا الإقرار

ص.ب P.O.BOX 1853 + 4 230 1000 + وفي المتحدة الدربية الإمارات DUBAI, UNITED ARAB EMIRATES + مانف FAX +971 4 2301929 - فانف www.moh.gov.ae





APPENDIX 7- DEATHS WITH ACUTE CEREBRAL LESION ICD- 10 CODES

Trauma	S02	Fracture Of Skull And Facial Bones
	S061	Traumatic Cerebral Oedema
	S062	Diffuse Brain Injury
	S063	Focal Brain Injury
	S064	Extradural Haemorrhage
	S067	Intracranial Haemorrhage With Prolonged Coma
	S068	Other Intracranial Injuries
Cerebrovascular	S069	Intracranial Injuries Unspecified
	160	Subarachnoid Haemorrhage
	161	Intracranial Haemorrhage
	162	Other Non-Traumatic Intracranial Haemorrhage
Accidents	163	Cerebral Infarction
	164	Stroke Not Specific As Stroke Or Infraction
	165	Occlusion And Stenosis Of Precerebral Arteries
	166	Occlusion And Stenosis Of Cerebral Arteries
Cerebral Damage	G931	Anoxic Brain Damage
	G935	Compression Of Brain
	G936	Cerebral Oedema
Cerebral	C71	Malignant Neoplasm Of The Brain
Neoplasm	D33	Benign Neoplasm of the Brain
Infections	G00-G0	Meningitis

 Standards for Human Organs & Tissues Donation Services (Deceased Donor)

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