Standards for Human Organs & Tissues Donation Services (Deceased Donor) – Donation after Circulatory Death (DCD)

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Health Policies and Standards Department

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ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Standard in collaboration with the Donation and Transplantation Institute (DTI Foundation), The National Center for Organ Donation and Transplant (MOHAP) and Subject Matter Experts. We would like to acknowledge and thank these stakeholders for their dedication toward improving the quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

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INTRODUCTION

The Health Regulation Sector (HRS) plays a key role in regulating the health sector. HRS is mandated by the Dubai Health Authority (DHA) Law No. (6) of the year (2018) with its amendments pertaining to DHA, to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice;
- Managing patient complaints and assuring patient and physician rights are upheld;
- Governing the use of narcotics, controlled and semi-controlled medications;
- 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 (Deceased Donor) – Donation after Circulatory Death (DCD) aims to fulfill the following overarching Dubai Health Sector Strategy 2026:

- Make Dubai a lighthouse for healthcare governance, integration and regulation.
- Foster healthcare education, research and innovation.

EXECUTIVE SUMMARY

Human Organs & Tissues Donation Services are considered one of the major and vital implementations in the world of health. These standards support saving lives through organ donation by identifying patients that are declared as being dead by circulatory criteria and who might be potential donor candidates. They outline a clear process towards assessing patients with possible and potential irreversible circulatory death due to cessation of spontaneous heart beating and breathing. These standards are developed in line with applicable laws and legislations that are already in place, including:

- Federal Decree-Law No. (25) of 2023 regarding Donation and Transplantation of Human Organs and Tissues,
- Ministerial Decree No. (19) for the year 2022 related to Death Diagnosis Criteria,
- UAE Federal Decree Law No. (4) of 2016 on Medical Liability.

ABBREVIATIONS

CCSU : Critical Care Support Unit

CCSUC: Critical Care Support Unit Coordinator

CPR : Cardiopulmonary resuscitation

DCAS : Dubai Corporation for ambulance services

DCC : Death by Circulatory Criteria

DCD : Donation after Circulatory Death

uDCD : Uncontrolled Donation after Circulatory Death

cDCD : Controlled Donation after Circulatory Death

DHA : Dubai Health Authority.

ED : Emergency Department

ICU : Intensive Care Unit

MRP : Most Responsible Physician

NCDT : National Center for Organ and Tissue Donation and Transplantation

NRP : Normothermic Regional Perfusion

ORT : Organ Retrieval Team

PQR : Professionals Qualification Requirements

DEFINITIONS

Clinical Privileging: process of granting a DHA licensed healthcare professional 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 authorize or deny clinical privileges.

Consent for Organ and Tissue Donation: legally valid permission from the next of kin for the retrieval of donor organs and tissues for the purpose of transplantation using the unified consent form.

Critical Care Support Unit (CCSU): 24/7 operating unit within the health facility ICU responsible for all organ donation matters, run by the critical care support unit director and coordinator/s. Formerly known as the *Organ Donation Unit (ODU).*

Critical Care Support Unit Director: critical care physician that leads the CCSU including all standard operation procedures required for the unit, supervises the critical care support unit team and coordinators, and oversees implementation of all steps of organ donation process. This position was previously known as the *Organ Donation Unit Director.*

Critical Care Support Unit Coordinator (CCSUC): critical care nurse, critical physician 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 CCSU, DHA, and the National Center for Organ and Tissue Donation and Transplantation

(NCDT) are done on a timely manner to facilitate organ donation and transplant. This role was previously known as the *Organ Donation Unit Coordinator (ODUC).*

Death By Circulatory Criteria (DCC): defined by unresponsiveness, the absence of breathing (or only occasional gasps), and the absence of circulation in a permanent way.

Donor after Circulatory Death (DCD): a human being declared dead by DCC and from whom organs, tissues, or cells were retrieved for the purpose of transplantation after clinical evaluation and family consent.

Emergency Department (ED): is an acute care hospital unit that receives critically injured patients via ambulance for acute medical triage and stabilization.

Human Organs and Tissue Services: services responsible for the retrieval of organs or/and tissues from a donor for the purpose of transplantation into a recipient who is in end-stage organ or tissue failure.

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

Most Responsible Physician (MRP): refers to the qualified physician who has a primary responsibility for the care of patient in the health facility.

National Center for Organ and Tissue Donation and Transplantation (NCDT): is the federal center under the Ministry of Health and Prevention (MOHAP) responsible to regulate and coordinate organ and tissue donation and transplantation in the 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 fourth degree available in the country

or by telephone or computer visual and audio/sign language communication, based on the below order:

A. The father.

B. The mother.

C. The children.

D. The spouse.

E. The grandfather.

F. The siblings.

G. The paternal uncle and the full uncle are precedents to the half uncle.

Normothermic Regional Perfusion Service: specialized service in organ donation after circulatory death (DCD) that maintains organ viability through controlled warm blood perfusion. A trained team manages perfusion equipment and monitors parameters to preserve organs, using techniques that prevent cerebral perfusion, ensuring organs are suitable for transplant.

Potential Uncontrolled DCD Donor: person whose circulatory and respiratory functions have ceased and resuscitation measures, if carried out, have not been effective.

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, their medical records, and the fulfillment of the medical criteria dictated by the organ donation and transplantation authorities, as candidates for organ and tissue donation.

The criteria for the determination of death are based on a set of first-release consensus recommendations for the assessment and diagnosis of death, as per the international panel of worldwide experts. It is defined as complete and terminal cessation of heart, and breath functions or irreversible termination of all brain functions.

Currently, the demand for organs and tissues for transplantation is much higher than the available supply. In 2023, world statistics showed that Spain (Spanish Model) has the highest rate of donors after death for every million population (donor pmp/year), followed by the USA (USA Model) and European countries. Although organ donation activity in the UAE has increased significantly in the last 3 years, the implementation and consolidation of best practices in organ and tissue donation recommended by these standards will contribute to increasing the number of donors and saving more lives.

2. SCOPE

2.1. Human Organs & Tissues Donation Services (Deceased Donor) – Donation after Circulatory Death (DCD) in DHA licensed health facilities with ED and ICU services.

3. PURPOSE

3.1. To assure the provision of the highest levels of safety and quality of Human Organs & Tissues Donation Services (Deceased Donor) – DCD in Dubai Health Authority (DHA) licensed health facilities.

3.2. To ensure the diagnosis of DCC is consistently aligned with international best practices and UAE law.

3.3. To ensure diagnosis and notification of DCC in order to support the organ donation for transplantation on the national level.

4. APPLICABILITY

4.1. DHA licensed health facilities with Emergency Department (ED) and Intensive Care Units (ICU) under the jurisdiction of DHA.

5. **STANDARD ONE:** HEALTH FACILITY REQUIREMENTS FOR DCD RETRIEVAL CENTER

5.1. The health facility must be licensed and accredited according to DHA requirements.

5.2. The health facility must have a Normothermic Regional Perfusion Service with 24/7 coverage, well-trained staff, and recognized experience in Normothermic Regional Perfusion (NRP) for DCD donation.

5.3. The retrieval center must have dedicated donor management, surgical retrieval, and organ preservation areas.

5.4. The health facility shall have a Critical Care Support Unit (CCSU).

5.5. Equipment and supplies requirements:

5.5.1. The retrieval center must be equipped with state-of-the-art surgical equipment and preservation solutions for organ retrieval.

5.5.2. Ensure availability of sterile packaging materials for organ transport.

5.6. Infrastructure requirements:

5.6.1. The retrieval center must have dedicated operating rooms specifically for organ retrieval procedures.

5.6.2. Ensure the availability of a secure and sterile storage area for preservation fluids and surgical instruments.

5.7. Organizational structure requirements:

5.7.1. Organ Retrieval Team (ORT):

a. The ORT must include licensed and trained consultant surgeons, anesthesiologists, and cardiac perfusionists.

b. Each member of the ORT shall have specific roles and responsibilities clearly defined.

c. ORT must have proven expertise in organ retrieval techniques under both NRP and hypothermic in situ preservation scenarios (rapid-retrieval approach).

5.7.2. Critical Care Support Unit Coordinator (CCSUC):

a. Supervise the logistics of the retrieval process.

b. Ensure all legal and administrative documentation is completed.

c. Coordinate with the NCDT for organ allocation and transport.

5.8. Operational protocols:

5.8.1. Pre-retrieval procedures:

a. Verify all legal and administrative documentation, including donor consent and death declaration.

b. Schedule and prepare the operating room, ensuring all necessary equipment and supplies are ready.

c. Conduct a thorough pre-retrieval verification process to confirm donor identity and organ suitability.

5.8.2. Retrieval procedures:

a. Must follow standardized surgical protocols for organ retrieval, minimizing warm ischemia time.

b. Ensure proper handling and preservation of retrieved organs.

5.8.3. Post-retrieval procedures:

a. Properly package, label, and document all retrieved organs for transport.

b. Coordinate with NCDT and transplant centers to ensure timely delivery of organs.

c. Conduct a detailed review of the retrieval process and document any deviations or incidents.

5.9. The health facility shall have the following policies and procedures in place, to cover all relevant donation steps which include but not limited to:

5.9.1. Donor identification and referral information;

5.9.2. Donor evaluation;

5.9.3. Death Determination by Circulatory Criteria;

5.9.4. Family communication;

5.9.5. Communication between ED team, ICU professionals, CCSU, and NCDT;

5.9.6. NRP procedures;

5.9.7. Organ and tissue retrieval; and

5.9.8. Organ and tissue packaging and transportation.

5.10. All staff involved in the retrieval process must undergo training in organ donation protocols, ethical considerations, and communication skills.

5.11. Regular competency assessments and certification updates are required according to DHA regulations.

5.12. The health facility shall ensure an active morbidity and mortality committee is in place, supported by written terms of reference.

5.12.1. The health facility morbidity and mortality committee shall maintain a register of the healthcare professional names involved in DCC assessment and diagnosis.

5.12.2. The health facility, morbidity and mortality committee shall review the cases of DCC determined and provide recommendations for assessment and management whenever required.

6. **STANDARD TWO:** HEALTH FACILITY REQUIREMENTS FOR NORMOTHERMIC REGIONAL PERFUSION SERVICE

6.1. The health facility shall meet requirements as per the DHA Health Facility Guidelines (HFG) 2019, Part B – Health Facility Briefing & Design - Intensive Care Unit.

6.2. Equipment and supplies:

6.2.1. The health facility must have state-of-the-art NRP equipment, including perfusion devices, and monitoring systems

6.2.2. Ensure the continuous availability of sets, cannulas, and other disposable materials required for the procedure.

6.3. Organizational structure:

6.3.1. Normothermic Regional Perfusion Team:

a. The NRP team must consist of specialists trained in vessel canulation, perfusion techniques, and organ preservation.

b. Continuous education and certification in NRP protocols are mandatory.

6.3.2. The NRP coordinator is a designated team leader to oversee the NRP process and ensure adherence to protocols

6.4. Operational protocols:

6.4.1. Verify all legal and administrative documentation, donation consent, and death declaration.

6.4.2. Prepare the NRP equipment and ensure all necessary supplies are ready.

6.4.3. Conduct a thorough pre-perfusion verification process to confirm donor suitability.

6.4.4. Post-mortem measures, including anticoagulation and canulation, shall be done after death declaration by circulatory criteria (DCC).

6.4.5. Initiate NRP immediately after circulatory death declaration using perfusion devices to maintain organ viability.

6.4.6. Continuously monitoring the donor's physiological parameters during NRP to assess organ function.

6.4.7. Ensure perfusion is conducted according to standardized protocols to avoid cerebral perfusion. This could be achieved through placing a thoracic intra-aortic balloon or clamping the supra-aortic roots and cutting them distally.

6.4.8. Coordinate with transplant centers to ensure timely delivery of perfused organs.

6.4.9. Conduct a detailed review of the NRP process and document any deviations or incidents.

6.5. All NRP team members must receive ongoing training to stay updated on the latest advancements in perfusion techniques.

6.6. Regular competency assessments and certification updates are required by DHA requirements.

6.7. The NRP service shall develop the following policies and procedures in place, to cover all relevant donation steps which include but are not limited to:

6.7.1. NRP Procedures.

6.7.2. Organ and tissue retrieval procedures, including rapid retrieval technique.

7. **STANDARD THREE:** UNCONTROLLED DCD PRE-HOSPITAL REQUIREMENTS

7.1. Dubai Corporation for Ambulance Services (DCAS) shall implement a “scoop and run” approach for patients experiencing cardiac arrest who meet uDCD criteria.

7.2. The “scoop and run” policy must include continuous chest compressions during transport, with a preference for mechanical compressions over manual, to ensure consistent quality.

7.3. DCAS shall perform high-quality advanced CPR throughout patient transport, adhering to best practices for uDCD candidate management.

7.4. DCAS is required to contact the receiving hospital’s ED and CCSU while en route. The pre-notification shall include relevant patient details to prepare ED and CCSU teams for rapid intervention.

8. **STANDARD FOUR:** HEALTHCARE PROFESSIONALS REQUIREMENTS

8.1. All healthcare professionals involved in the process of organ and tissue donation program in Dubai shall hold an active DHA license as per the Professionals Qualification Requirements (PQR) and work within their scope of practice.

8.2. Healthcare professionals involved in the DCD process must include, but are not limited to, the following Roles and Responsibilities:

8.2.1. ED and ICU physicians: Oversee the medical care of the patient, determine the medical suitability for DCD, and assess and report potential DCD donors for CCSU and NCDT.

8.2.2. The CCSUC shall facilitate the DCD process, acting as the liaison between the donor hospital, retrieval teams, and transplant centers:

a. Coordinate logistics of the donation process;

b. Facilitate the communication between the family, ED team, ICU team, and NCDT;

c. Organize and attend planning meetings with ICU and surgical teams;

8.2.3. Ensure all documentation is completed accurately.

8.2.4. NCDT team: conduct the family interview for organ and tissue donation.

8.2.5. ED and ICU Nurses shall provide bedside care to the potential donor.

8.2.6. Operating room staff shall prepare and maintain the operating room for the retrieval process:

a. Ensure all necessary equipment and supplies are available.

b. Assist the surgical team during the retrieval process.

c. Maintain sterile conditions and adherence to surgical protocols.

8.2.7. Surgical team shall perform the organ and tissue retrieval:

a. Conduct the organ retrieval following established surgical techniques and preservation protocols.

b. Ensure the integrity and viability of the organs for transplantation.

c. Communicate with the CCSUC regarding any findings or complications.

8.2.8. Social workers and psychologists shall provide emotional and psychological support to the donor's family.

8.3. Training and qualifications:

8.3.1. General requirements: All healthcare professionals involved in the DCD process must have appropriate qualifications and training relevant to their roles. Regular participation in continuing education and training programs on DCD practices, ethical considerations, and communication skills is mandatory.

8.3.2. Specific training programs:

a. ED and ICU physicians and nurses: must undergo training in ethical considerations in DCD, and advanced communication skills for discussing breaking bad news.

b. CCSUC: must receive training on the logistical aspects of DCD, legal and ethical considerations, and effective coordination of multi-disciplinary teams.

c. Operating room staff and surgical teams: must be trained in organ retrieval techniques, organ preservation methods, and maintenance of sterile conditions.

8.4. Ethical considerations and conflict of interest:

8.4.1. Separation of roles:

a. There must be a clear separation between the medical team responsible for attending to the patient and pronouncing the death and the team involved in organ donation and transplantation process, including organ retrieval to avoid any conflict of interest.

b. The decision to stop advanced life support and determine death shall be made before and independently of any consideration of organ donation.

c. It is strictly prohibited for the CCSUC to take part in determination of death.

d. It is strictly prohibited for transplant healthcare professionals or consultant surgeons to take part in diagnosing DCC or obtaining donation consent.

8.4.2. Family communication and support:

a. Healthcare professionals must ensure that discussions with the family regarding breaking bad news and organ donation are conducted with sensitivity, transparency, and respect for the donor's and family's wishes.

b. Continuous support shall be provided to the family throughout the process, including information regarding the determination of death, donation process, post-mortem measures (methodology and justification),

1.1.1. Documentation and compliance: all stages of the DCD process must be thoroughly documented, including donor evaluation, consent, and organ retrieval.

9. **STANDARD FIVE:** DECLARATION OF DEATH BY CIRCULATORY CRITERIA (DCC)

9.1. The diagnosis of DCC shall be made following- **Appendix 1.**

9.2. Consent from the Next of Kin is not required to perform the DCC assessment.

9.3. In the context of organ donation, the determination of death by circulatory criteria shall be made by two (2) fully licensed physicians, one of whom must be a cardiologist.

10. **STANDARD SIX:** INCLUSION CRITERIA FOR DCD DONORS

10.1. General eligibility criteria for DCD Donors:

10.1.1. Age: potential donors shall ideally be between 14-60 years old.

10.1.2. Neurological and physical condition:

a. The potential uDCD donor must have experienced a witnessed, irreversible circulatory arrest.

b. Circulatory arrest must be followed by the initiation of advanced life support (ALS) within less than 15 minutes.

c. Asystole must be maintained for more than 20 minutes despite ALS efforts and in the absence of any reversible cause.

d. The potential donor must have a thoracic perimeter compatible with mechanical chest compressions (BMI < 35).

e. Out-of-hospital ALS duration should be less than 100 minutes.

f. The total warm ischemic time (from circulatory arrest to NRP initiation in the cadaver) must be less than 150 minutes.

g. Any initial cardiac rhythm is acceptable, including asystole, Ventricular Fibrillation (VF), or Pulseless Electrical Activity (PEA).

10.1.3. The potential uDCD donor must not have severe comorbidities, a DNR directive, exsanguinating chest or abdominal injuries, and must be free from absolute contraindications such as HIV, active sepsis, or cancer.

10.2. Specific organ viability criteria:

10.2.1. Lung: donors shall not have severe Chronic Obstructive Pulmonary Disease (COPD) or significant lung disease such as pulmonary fibrosis. Age ≤ 50 years for uDCD.

10.2.2. Kidney: donors shall not have severe acute renal failure or chronic kidney disease.

10.2.3. Liver: donors shall not have significant liver disease such as cirrhosis or fulminant hepatic failure.

11. **STANDARD SEVEN:** REFERRAL OF POTENTIAL DCD DONORS

11.1. Identification of a potential DCD Donor: ICU or ED staff identifies a patient after failed resuscitation efforts (uDCD).

11.2. Initial medical assessment:

11.2.1. Conduct a comprehensive medical evaluation to confirm the non-recoverable condition.

11.2.2. Ensure the patient meets the criteria for DCD.

11.3. Potential DCD donors shall be notified immediately via phone call and e-mail or IT solution to:

11.3.1. Critical Care Support Unit at the Health Facility, and

11.3.2. NCDT team (For support: +971 4 230 1111; +971 54 233 1046; For Back up: +971 54 2331043)

11.4. Family communication:

11.4.1. There must be a clear separation between the medical team responsible for cardiopulmonary resuscitation and death determination to the team involved in organ donation to avoid any conflict of interest.

11.4.2. After referral, the NCDT team must evaluate the eligibility of the patient as DCD potential donor and talk to the ICU physicians about this possibility, before talking to the family.

11.4.3. The NCDT team provides clear information about the DCD process and answers any questions the family may have.

11.4.4. The family interview for organ and tissue donation shall be conducted by the designated NCDT team.

11.4.5. The unified consent form for organ donation is obtained by the NCDT from the Next of Kin to proceed with the donation- **Appendix 2**.

11.4.6. The guardian of the person who fully or partially lacks legal capacity may reverse the donation without any restriction before removing the organ, part thereof, or human tissue, by Federal Decree by Law No. (25) of 2023, concerning Donation and Transplantation of Human Organs and Tissues.

11.4.7. It is not permissible to request the return of what was removed or extracted after donating it in accordance with the provisions of this law by decree.

12. **STANDARD EIGHT:** FAMILY COMMUNICATION FOR BREAKING BAD NEWS

12.1. Health facility shall have a breaking bad news protocol implemented in all critical care units (ICU, PICU, stroke unit, emergency department, etc.).

12.2. The health facility shall train the critical care physicians and nurses on effective communication skills regarding the family and next of kin.

12.3. The health facility must have a private separate room, preferably in the ED, ICU, or near, where would be done the family communications.

12.4. The discussions with the family regarding resuscitation process and death determination must be performed by the MRP, or deputy, or the attending ED or ICU physician, considering the family's needs and respecting culture, religion, and any other specificities. The conversation should be properly documented in the patient's clinical records.

12.5. An effective and empathic family communication for delivering the bad news must have the following elements:

12.5.1. Adapt the message to the family's level of understanding;

12.5.2. Show respect to beliefs of any kind;

12.5.3. Involve the family in the process;

12.5.4. Be concise;

12.5.5. Use open questions;

12.5.6. Review the family's understanding,

12.5.7. Summarize the key points and establish a plan of action.

12.6. If relatives have migration backgrounds:

12.6.1. Overcome language barriers through an official translator;

12.6.2. Choose a family contact person;

12.6.3. Clarify cultural and religious needs, as needed.

12.7. Communication workflow for controlled DCD:

12.7.1. Initial family meeting:

a. Hold a family meeting to establish mutual trust and respect. This meeting shall involve the most responsible physician, the attending physician, the critical care nurse, and possibly a social worker.

12.7.2. Family support and communication:

a. Maintain open and honest communication with the family throughout the process. Address any questions or concerns they may have promptly and compassionately.

b. Provide emotional support to the family during and after the viewing, and offer follow-up support services as needed.

13. **STANDARD NINE:** FAMILY COMMUNICATION FOR ORGAN AND TISSUE DONATION

13.1. Health Facility shall have a family communication protocol implemented in all critical care units (ICU, PICU, stroke unit, emergency department, etc.).

13.2. The health facility must have a private separate room, preferably in the ED, ICU or nearby, where it would be done the family communications.

13.3. The CCSU shall facilitate communication between the family, ED team, ICU team, and NCDT.

13.4. If there aren't family members available in UAE, contact the coordinators of NCDT for support in finding an authorized family member outside of UAE (For support: +971 4 230 1111; +971 54 233 1046; For Back up: +971 54 2331043).

13.5. The family interview for organ and tissue donation will only be conducted by the designated team by NCDT.

13.6. Family interview for organ donation must be performed only after family acknowledgment of understanding that resuscitation procedures failed and death determination.

13.7. The ED team, ICU team, multidisciplinary team (social worker, psychologist), and CCSU shall provide maximum and continuous family support.

13.8. If relatives have migration backgrounds:

13.8.1. Overcome language barriers through an official translator;

13.8.2. Choose a family contact person;

13.8.3. Clarify cultural and religious needs, as needed.

13.9. Family interview for organ and tissue donation:

13.9.1. Once the death determination has been made, discuss the option of organ and tissue donation in a subsequent conversation by the designated team by NCDT.

13.9.2. Ensure that the family understands the implications of DCD, including the potential for a limited time with the patient after death and the need for prompt organ retrieval.

13.10. Family support and communication:

13.10.1. Maintain open and honest communication with the family throughout the process. Address any questions or concerns they may have promptly and compassionately.

13.10.2. Provide emotional support to the family during and after the viewing, and offer follow-up support services as needed.

14. **STANDARD TEN:** DCD ORGAN AND TISSUE RETRIEVAL

14.1. DCD organ and tissue retrieval must be done exclusively in a health facility licensed by DHA as DCD retrieval center.

14.2. The health facility shall train all healthcare professionals involved in the organ and tissue retrieval process in the organ and tissue retrieval, packaging, and transportation protocol.

14.3. Involved agents and responsibilities:

14.3.1. Organ Retrieval Team (ORT): Responsible for performing the surgical procedure and other related activities. The ORT may be affiliated with the transplant center in UAE and is composed of specialists from the organ transplant team. DCD Organ allocation will be carried out following the pre-established rules.

a. The ORT shall be licensed by DHA to perform organ retrieval;

b. The ORT shall conclude organ retrieval with the careful reconstruction of the body according to best practices and ethical principles.

14.3.2. Operating room nursing team: a team that participates in various activities during the retrieval process, such as preparing the donor for retrieval, supporting the RT, providing necessary instrumentation, and ensuring proper handling of retrieved organs.

14.3.3. Critical Care Support Unit Coordinator: Collaborate with NCDT coordinators teams to oversee the entire process, from preparing logistics before the retrieval begins, transferring the potential donor, receiving the equipment in the operating room, packaging, collecting necessary samples, and ensuring all documentation and labelling are complete.

14.3.4. Critical care nursing team: Participates in preparing the potential donor for transfer to the operating room.

14.3.5. Other healthcare professionals: Support transferring the potential donor and preparing the retrieval environment. Involve necessary departments like Pathology, Immunology, and Radiology as required.

14.4. General procedures:

14.4.1. Administration of heparin: heparin shall be administered intravenously just after death determination, together with the reactivation of thoracic

compressions and ventilation of the cadaver to prevent clotting and improve the organ viability.

14.5. Post-Retrieval Procedures:

14.5.1. Transplant center teams are responsible for packaging and transport: properly package, label, and document all retrieved organs for transport.

14.5.2. CCSU and NCDT team shall maintain open and honest communication with the family throughout the process. Address any questions or concerns they may have promptly and compassionately. Consultant surgeons and nurses from ORT and coordination of the recovery center shall make sure that all necessary documentation for organ retrieval is completed after the procedure:

a. Death certificate;

b. Consent to Donate a Deceased Person Organs and Tissues;

c. Consent form for post-mortem cannulation and anticoagulation;

d. Donor information dossier for each team, as per legal requirements;

e. Medical report of organ and tissue retrieval specifying organs and tissues were retrieved and procedure's summary;

15. STANDARD ELEVEN: ORGAN AND TISSUE DONATION REGISTRY AND KEY PERFORMANCE INDICATORS - DONATION AFTER CIRCULATORY DEATH

15.1. Percentage of Trained ED and ICU Staff on the DHA Standards for Donation after Circulatory Death and relevant policies and procedures

Percentage of Trained ED and ICU Staff on the DHA Standards for Donation after Circulatory Death and relevant policies and procedures	
Main Domain:	Structure
Subdomain:	Effectiveness
Indicator Definition:	The percentage of ICU staff trained on DHA Standards for Donation after Circulatory Death (DCD), including all relevant DCD steps, but not limited to: 1. Donor identification and referral; 2. Donor evaluation; 3. Breaking bad news; 4. Family approach regarding donation after circulatory death; 5. Post-mortem measures; 6. Death declaration; 7. Normothermic regional perfusion (basic principles); 8. Operating theatre organization; 9. Communication between ED team, ICU professionals, CCSU and EOTC; 10. Organ packaging and transportation (if applicable).
Calculation:	Numerator: number of ED and ICU staff trained on DHA Standards for Donation after Circulatory Death. Denominator: total number of ED and ICU professionals.
Target:	70%
Methodology:	Numerator/ denominator x100

Measuring Unit:	Percentage of trained ICU staff
Reporting Frequency:	Monthly
Desired Direction:	Higher is better
Rationale:	Training ED and ICU staff on DHA Standards for DCD is crucial for maintaining high-quality care and ensuring that all steps in the donation process are correctly followed, leading to better outcomes in organ donation.
KPI Source:	DHA Standards for Human Organs & Tissues Donation Services (Deceased Donor) – Donation after Circulatory Death (DCD)

15.2. Uncontrolled in-hospital DCD donor identification

Uncontrolled in-hospital DCD donor identification	
Main Domain:	Structure
Subdomain:	Effectiveness
Indicator Definition:	The percentage of potential uDCD donors correctly identified and referred. It reflects the effectiveness of identifying potential DCD donors promptly to facilitate organ preservation and transplantation.
Calculation:	Numerator: number of potential uDCD donors correctly identified and referred Denominator: total number of potential uDCD donors
Target:	100%
Methodology:	Numerator/ denominator x100
Measuring Unit:	Percentage of correctly identified and referred DCD donors
Reporting Frequency:	Monthly
Desired Direction:	-
Rationale:	Identifying and referring all potential uDCD donors is critical for maximizing the number of organs available for transplantation. This KPI ensures that potential donors are not overlooked, thereby improving the overall efficiency and effectiveness of the organ donation process.
KPI Source:	DHA Standards for Human Organs & Tissues Donation Services (Deceased Donor) – Donation after Circulatory Death (DCD)

15.3. Conversion rate in uncontrolled DCD donors

Conversion rate in uncontrolled DCD donors	
Main Domain:	Outcome
Subdomain:	Effectiveness
Indicator Definition:	The conversion rate of potential uDCD donors into actual donors. The indicator assesses the efficiency of the donation process in uncontrolled donation after death by circulatory criteria.
Calculation:	Numerator: number of actual uDCD donors Denominator: Total number of potential uDCD.
Target:	20%
Methodology:	Numerator/ denominator x100
Measuring Unit:	Percentage of converted uDCD donors
Reporting Frequency:	Monthly
Desired Direction:	Higher is better
Rationale:	Critical measure of the effectiveness and efficiency of the donation process
KPI Source:	DHA Standards for Human Organs & Tissues Donation Services (Deceased Donor) – Donation after Circulatory Death (DCD)

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APPENDIX 1: DEATH DETERMINATION BY CIRCULATORY CRITERIA (DCC) IN ORGAN DONATION FORM

DEATH DETERMINATION BY CIRCULATORY CRITERIA (DCC) FORM					
Name:			**ID number:**		
Age:	**Sex:** ☐ **Male** ☐ **Female**	**Nationality:**	**Medical Record number:**	**Weight:** _____Kg	**Height:**_cm
Hospital Name:			**Date of admission (DD/MM/YYYY):**		

	First physician		**Second physician**	
I. PREREQUISITES:				
1. Cardiopulmonary resuscitation (CPR) is unsuccessful or not attempted (due to a do-not-resuscitate order or adequation life-sustaining therapy order).	☐ Yes	☐ No	☐ Yes	☐ No
2. The physician who took part in the determination of the death doesn't participate in any way in the organ transplant procedures.	☐ Yes	☐ No	☐ Yes	☐ No
II. CLINICAL ASSESSMENT: **For all patients, the absence of circulation shall be confirmed by a clinical diagnosis that includes.**				
1. Absence of a central pulse on palpation.	☐ Absent	☐ Present	☐ Absent	☐ Present
2. Absence of heart sound on auscultation.	☐ Absent	☐ Present	☐ Absent	☐ Present
3. Absence of breathing.	☐ Absent	☐ Present	☐ Absent	☐ Present

Death Declaration	**Name**	**Specialization area**	**Signature**	**License number**	**Date**	**Time**
First physician					DD/MM/YYYY	HH:MMAM/PM
Second physician						

APPENDIX 2: UNIFIED CONSENT FORM

إقرار الموافقة على التبرع بأعضاء وأنسجة شخص متوفى

Consent to Donate a Deceased Person Organs and Tissues

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

Deceased person Information المعلومات الخاصة بالمتوفى

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

معلومات الشخص الذي أبدى الموافقة على التبرع بأعضاء وأنسجة المتوفى المذكور أعلاه

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

Name:	:ا	صلة القرابة Kinship	
D.O.B:	الميلاد:	Father - الأب	☐
ID/ Passport No:	هوية/الجواز:	The Mother - الأم	☐
Valid to:	ة لغاية:	Children الأولاد	☐
Issuing Place:	رها:	Spouse - الزوج أو الزوجة	☐
E-mail:	الالكتروني:	Grandfather - الجد	☐
Telephone No. :	تلفون:	Siblings الأخوة و الأخوات	☐
Address:	ن:	العم العصبة. ويقدم العم الشقيق على العم لأب The Uncle by Consanguinity. Priority shall be given to the full brother uncle than the uncle of paternal.	☐
Nationality:	سية:	في حال الاختلاف بين الأقارب في ذات درجة الترتيب يعتد برأي الأكبر سنا ويتساوى الذكر والأنثى Whenever disagreement in the decision amongst the relatives of the same degree of kinship occurs, the decision of the eldest is considered, and both male and female are equal.	

☐ وفقًا لقانون دولة الإمارات العربية المتحدة (مرسوم بقانون اتحادي 25 لسنة 2023 في شأن التبرع وزراعة الاعضاء البشرية والانسجة)، أعلن أنا المذكور أعلاه وأنا بكامل قواي العقلية وبدون أي إكراه مادي او معنوي بأنني موافق على التبرع بأعضاء وأنسجة قريبي المتوفى المذكور أعلاه، وذلك لزراعتها لأي مريض مناسب حسب ما تراه الجهات المختصة في هذا المجال.

☐ **According to UAE (Federal Law No. (25) of 2023 concerning the Human Organ & Tissue Donation & Transplantation) , I aforementioned signed , with fully aware of and of my own free will (without any physical or moral coercion) granting consent to donate organs and tissues of my deceased relative mentioned above, in order to transplant them to any suitable patient (s) as deemed by the competent authorities in this field.**

☐ I authorize the burial of my deceased relative in UAE ☐ أصرح بدفن قريبي المتوفى المذكور أعلاه داخل الدولة

☐ I wish to repatriate the body of my deceased relative to Home Country ☐ أرغب في إعادة جثمان قريبي المتوفى إلى الوطن الأم

Remarks:	ملاحظات:

Authorized Person Signature:		توقيع الشخص المخول بالموافقة :

The Witnesses-الشهود

Name الإسم	Relationship صلة القرابة	Identification No. رقم الهوية	Signature التوقيع

The authorized coordinator for the consent of donating organs and tissues: (Assigned by the National Organ Transplant Committee to approach deceased family for organ donation)	**Name:**		الاسم:	المنسق الذي حصل على الموافقة بالتبرع بالأعضاء والأنسجة: (المعتمد من قبل اللجنة الوطنية لزراعة الأعضـــاء لمقابلة ممثلي عائلة المتوفي، للحصول على الموافقة بالتبرع بالأعضاء والأنسجة)
	Signature:		التوقيع:	

*** Please attach copy of the authorized relative ID/ Passport who signed this Consent form** *الرجاء ارفاق نسخة من هوية/ جواز سفر الشخص الموقع بالموافقة على هذا الإقرار

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APPENDIX 3: CONSENT FORM FOR POST-MORTEM MEASURES

Patient Information:

Patient name:	**Hospital:**
Date of birth:	**Gender:**
Nationality:	**Health record no.:**
Diagnosis:	

Family Information:

- Next of Kin Name: _____
- Relationship to patient: _____
- Contact Information: _____

We, the undersigned, understand and agree to the following:

1. Medical condition:

The patient has been determined dead, and organ donation is being considered.

2. Explanation of procedure:

The healthcare team has explained the process of post-mortem cannulation and anticoagulation, including the potential benefits, risks, and the purpose of these procedures in the context of organ donation.

3. Post-mortem cannulation:

We consent to the insertion of cannulas into the patient's blood vessels to facilitate the preservation of organs for transplantation.

4. Administration of anticoagulants:

We consent to the administration of anticoagulant medications, such as heparin, to the patient after death determination to prevent blood clotting and enhance organ viability for transplantation.

5. Timing of procedures:

We understand and agree to the planned timing of the post-mortem cannulation and administration of anticoagulants.

6. Legal and ethical compliance:

We understand that this process will comply with all legal and ethical standards set by the Dubai Health Authority and other relevant authorities.

Next of Kin:

- Name: _____
- Signature: _____
- Date: _____

Witness:

- Name: _____
- Signature: _____
- Date: _____

The coordinator who obtains approval to donate organs and tissues:

- Name: _____
- Signature: _____
- Date: _____