Dunedin Hospital

Southern DHB

DONATION AFTER CIRCULATORY DEATH (DCD)

DATE: ……/……/……..

Patient Label

DONATION AFTER CIRCULATORY DEATH

Criteria for identification of potential DCD donor:

- On ventilatory support in ICU irrespective of diagnosis
- Consensus that intensive therapies will be withdrawn in the near future
- No age barrier.

Advice is available by contacting the donor coordinator: 24 hour number 09 630 0935

The following procedure for DCD is listed in approximate sequence

	Procedure	Action by √ when completed	Explanatory Notes
1	Agreement by treating team that continuing intensive therapies is not in the patient's best interest.	Intensivist and ICU nurse	The decision to withdraw intensive therapies if made by the treating team in accord with good medical practice. This includes consideration of the patient's best interests, ethical standards and legal requirements.
2	Contact donor coordinator	Intensivist	Please discuss all patients who meet the above criteria for identification of the potential for donation with the donor coordinator on call. The donor coordinator will contact the ODNZ medical specialist on call, who in turn will phone the Intensivist.
3	Discuss the possibility of DCD	Intensivist and ODNZ medical specialist	These issues will be addressed • Likelihood of deterioration to brain death and possibility of DBD • Whether the interval between withdrawal of intensive therapies and death is likely to be within the timeframe for DCD • The doses of opioid and/or sedative the intensivist plans to use at the time of withdrawal of intensive therapies. The ODNZ medical specialist will not seek to modify this plan in any way. • Organs and tissues under consideration for DCD – lungs, liver, kidneys, heart valves and eyes • Whether or not referral to the coroner is required • Possible timings for withdrawal of intensive therapies • Whether the intensivist objects to giving heparin at the time of withdrawal of intensive therapies • The name of the intensivist who will be involved at the time of withdrawal of intensive therapies.
4	Donor bloods	ICU staff	The label on the pink blood tube in the Donor Pack must be handwritten. Patient labels can be used on the other tubes and the form. Ensure all sections of the blood request form, including the Specimen Request Declaration, are completed. Donor coordinator will arrange courier to collect Donor Pack from ICU and transport to NZBS for testing (as soon as possible to prevent undue delays for the donor family/whānau). **Testing of bloods commences only after family/whānau has indicated intent to proceed with DCD.**
5	Agreement to withdraw intensive therapies	Intensivist and ICU nurse	A patient with decision-making capacity and the patient's family/whānau and the treating team must agree to the withdrawal of intensive therapies.

	Procedure	Action by √ when completed	Explanatory Notes
6	Provide space and time for patient/whānau to attend to cultural/spiritual/ emotional/social needs	Intensivist and ICU nurse	Offer karakia and spiritual support to family/whānau during this time.
7	Notify the ICU Link nurse	ICU staff	ICU staff notify ICU Link nurse.
8	Discuss organ donation with both the patient (if he/she has decision-making capacity) and the family/whānau	Intensivist, ICU Link nurse and ICU nurse	Discuss the possibility of organ donation and explain the DCD process including: • Continuation of care by the ICU team, including the use of opioid and/or sedation if required • Whether intensive therapies will be withdrawn in ICU, OT Waiting Bay or OT • Family/whānau can only have a few minutes with their relative following death • The organs and tissues that are under consideration • Use of heparin • If death does not occur within the required timeframe that DCD will not proceed but tissue donation can be facilitated following death. • Confirm the intent of the family/whānau (and of a patient with decision-making capacity) to proceed with DCD.
9	Inform donor coordinator	Intensivist or ICU Link nurse	Inform donor coordinator of outcome of discussion. When family/whānau agreeable to donation, whether or not heparin will be given and whether referral to the coroner is required.
10	Donor Assessment	ICU Link nurse and donor coordinator	Donor coordinator will request the information outlined in the ODNZ Intensive Care Guidelines Section 8.4.
11	Medical/Social Questionnaire and Physical Assessment	ICU Link nurse	Complete Physical Assessment and meet with family/whānau to complete Medical/Social questionnaire. Email completed documents to donor coordinator: contactus@donor.co.nz
12	Notify theatre team	Donor coordinator	Contact theatre coordinator with early notification of DCD to enable planning for donor surgery. Donor coordinator will notify anaesthetist.
13	Agreement of the coroner	Intensivist	When referral to the coroner is required, agreement from the coroner for organ and tissue retrieval must be obtained before intensive therapies are withdrawn: 24 hr number 0800 266 800. The Chief Coroner agrees that in planning for DCD, it is appropriate for the coroner to agree before death has occurred. Document outcome of the discussion and the name of the coroner involved on the Authority for Organ and Tissue Removal Form.
14	Complete patient ID with police	Intensivist	When the coroner has accepted jurisdiction, request police to attend and complete patient ID while family/whānau is present, preferably while the patient in the ICU and before withdrawal of intensive therapies.
15	Confirm organs and tissues that can be donated	Donor coordinator	Contact transplant units with donor information and whether or not heparin will be given. Inform ICU staff of organs and tissues that can be donated.
16	Cessation of enteral feeding for lung donation	Intensivist and ICU nurse	If lung donation planned, donor coordinator will ask ICU staff to cease enteral feeding and aspirate the NG tube.
17	Determine if family/whānau wish to be present at time of withdrawal of intensive therapies and death	Intensivist and ICU Link nurse	• If family/whānau members wish to be present, withdrawal will take place in ICU or OT Waiting Bay after hours • If no family/whānau members wish to be present, withdrawal of intensive therapies will take place in OT 8 after hours or acute theatre during working hours.

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18	Written consent for organ and tissue donation	Intensivist and ICU Link nurse	Inform family/whānau of DCD process, the organs and tissues that are able to be donated and if heparin will be given before withdrawal of intensive therapies. Family/whānau representative signs Authority for Organ and Tissue Removal Form. If family/whānau is not present, verbal consent in accord with the Human Tissue Act 2008 is documented on Authority for Organ and Tissue Removal Form.
19	Inform donor coordinator	Intensivist or ICU Link nurse	Inform donor coordinator whether consent has been obtained, for which organs and tissues, whether the family/whānau wish to be present and where withdrawal of intensive therapies will occur.
20	Organisation of donor surgery	Donor coordinator	Arrange OT time in liaison with ICU, OT coordinator and the donor surgical team(s). Inform ICU and anaesthetist of OT time.
21	Organization of OT staff	OT coordinator	Organise OT staff (OT Link nurse, circulating nurse 1 or 2, anaesthetic technician if lung donation is planned) who are to be involved.
22	Patient care in ICU	ICU staff	Continue patient care, including maintenance of adequate MAP and oxygenation.
23	Travel to donor hospital	Donor surgical teams and donor coordinator(s)	Donor surgical team(s) and donor coordinator(s) travel to hospital.
24	OT 8 (after hours) or acute theatre (working hours) set up for donor surgery.	Donor surgical team(s) and OT staff	Set up OT for donor surgery. Trolleys are set up and remain uncovered in OT. Donor scrub nurse remains with sterile set-up. Donor coordinator informs ICU staff when OT set-up is complete.
25	Planning meeting	Donor coordinator	Facilitate a meeting in the Ritchie Room or other appropriate room prior to commencement of DCD process for those who will be involved: intensivist, ICU Link nurse, ICU nurse, OT Link nurse, OT nurses (1 or 2), anaesthetic technician (if lungs are being donated), OT HCA, donor surgical team(s) and donor coordinator(s). Staff will not be allowed to be involved in the DCD process if they have not been present at this planning meeting. Documentation will be checked at this meeting. OT staff will provide appropriate OT attire for ICU staff, if withdrawal of intensive therapies is going to be in OT.
26	Inform ICU staff	Donor coordinator	Inform ICU staff when OT staff are ready and donor surgical team(s) are gowned and gloved.
For withdrawal of intensive therapies in OT, go to No. 51			
For withdrawal of intensive therapies in OT Waiting Bay after hours) with family/whānau present, go to No. 37			
For withdrawal of intensive therapies in ICU with family/whānau members present, continue from No. 27			
27	Administration of heparin	Intensivist	Give heparin (300u/kg) prior to withdrawal of intensive therapies provided the intensivist does not think it will influence the process of dying.
28	Preparation for lung donation	Intensivist, and ICU nurse	If lung donation planned, place patient in a 30 degree head up position. Aspirate the nasogastric tube and avoid external pressure to the abdomen.

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	Procedure	Action by √ when completed	Explanatory Notes
29	Withdrawal of intensive therapies	Intensivist, ICU Link nurse and ICU nurse	Discontinue ECG monitoring and continue arterial pressure and pulse oximetry monitoring. Withdraw all intensive therapies (ventilation, ETT and inotropes) at the same time. An intensivist and ICU nurse remain with the patient until death has occurred. Any appearance of distress is treated with opioid and/or sedation in the same manner as would be done if intensive therapies were being withdrawn and DCD was not a possibility.
30	Determination of death	Intensivist	Determine death on the basis of: • Immobility • Apnoea • Absence of pulsatility on the arterial line of at least **5 minutes** duration Notify donor coordinator and document time of death on the Determination of Death Form **If death does not occur within the required timeframe, DCD will not proceed. Tissue donation can be facilitated following death.**
31	Inform donor surgical team(s) of death	Donor coordinator	Inform donor surgical team(s) and OT staff of death.
32	Transfer of patient to OT	Intensivist, ICU Link nurse donor coordinator, OT HCA	Intensivist, ICU Link nurse, donor coordinator and OT HCA transfer deceased patient immediately to OT department doors. Circulating nurses, OT HCA and donor coordinator transfer patient into OT. If lung donation is planned, the patient remains on the ICU bed. If abdominal organ donation only, the donor coordinator(s) and OT staff transfer patient to OT table. The ICU nurse provides care and support for the family/whānau.
33	Check patient ID and Determination of Death Form	Donor surgical team(s), OT staff and donor coordinator	Donor coordinator completes patient ID and sights time of death documented on Determination of Death Form with donor surgical team(s) and OT staff.
34	Re-intubation for lung donation	Thoracic anaesthetist and anaesthetic technician	If lung donation planned, patient re-intubated immediately.
35	Transfer of patient to OT table	Anaesthetic staff, OT staff and donor coordinator(s)	Anaesthetic staff (if lung donation planned), OT staff, OT HCA and donor coordinator(s) transfer patient to OT table.
36	Donor surgery	Donor surgical team(s)	Donor surgery commences immediately.
For withdrawal of intensive therapies in OT with no family/whānau present, go to No. 49			
For care of patient following donation, go to No. 62			
For withdrawal of intensive therapies in OT Waiting Bay after hours with family/whānau present, continue from No. 37			
37	Transfer of patient to OT Waiting Bay	Intensivist, ICU Link nurse, ICU nurse and donor coordinator	ICU staff who will be in OT require appropriate OT attire. Continue arterial pressure monitoring and inotropic support, if required. Discontinue ECG monitoring. Continue with pulse oximetry monitoring. Take all medications that might be required, including heparin, opioids and sedation. Intensivist and ICU nurse continue patient care. Another ICU nurse remains with the family/whānau in ICU.
38	Family/whānau taken to OT Waiting Bay	ICU nurse or donor coordinator	An ICU nurse or donor coordinator takes the family/whānau to the OT Waiting Bay. The family/whānau do not require OR attire.

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	Procedure	Action by √ when completed	Explanatory Notes
39	Administration of heparin	Intensivist	Give heparin (300u/kg) prior to withdrawal of intensive therapies provided the intensivist does not think it will influence the process of dying.
40	Preparation for lung donation	Intensivist and ICU nurse	If lung donation is planned, place patient in a 30 degree head up position. Aspirate the nasogastric tube and avoid external pressure to the abdomen.
41	Withdrawal of intensive therapies	Intensivist, ICU Link nurse and ICU nurse	Withdraw all intensive therapies (ventilation, ETT and inotropes) at the same time. Continue arterial pressure and pulse oximetry monitoring (ECG monitoring will have been discontinued in ICU). An intensivist and ICU nurse remain with the patient until death has occurred. Any appearance of distress is treated with opioid and/or sedation in the same manner as would be done if intensive therapies were being withdrawn and DCD was not a possibility.
42	Determination of death	Intensivist	Determine death on the basis of: • Immobility • Apnoea • Absence of pulsatility on the arterial line of at least **5 minutes** duration Notify donor coordinator and document time of death on the Determination of Death Form. **If death does not occur within the required timeframe, DCD will not proceed and care will be continued in ICU. Tissue donation can be facilitated following death.**
43	Inform donor surgical team(s) of death	Donor coordinator	Inform donor surgical team(s) and OT staff of death.
44	Transfer patient to OT	Intensivist, ICU Link nurse, donor coordinator and ICU nurse	Intensivist, ICU Link nurse and donor coordinator transfer deceased patient immediately to OT door. Circulating nurses, OT HCA and donor coordinator(s) transfer patient into OT. If lung donation is planned, the patient remains on the ICU bed. If abdominal organ donation only, OT staff and donor coordinator(s) transfer patient to OT table. ICU nurse remains with the family/whānau.
45	Sight time of death on Determination of Death Form	Donor surgical team(s), OT staff and donor coordinator	Donor coordinator completes patient ID and sights of time of death on Determination of Death Form with donor surgical team(s) and OT staff.
46	Re-intubate trachea for lung retrieval	Thoracic anaesthetist and anaesthetic technician	If lung donation planned, patient re-intubated immediately.
47	Transfer of patient to OT table	Anaesthetic and OT staff and donor coordinator	If lung donation planned, anaesthetic and OT staff and donor coordinator(s) transfer patient to OT table.
48	Donor surgery	Donor surgical team(s) and OT staff	Donor surgery commences immediately.

For care of patient following donation, continue from No. 62

For withdrawal of intensive therapies in OT with no family/whānau present, continue from No. 49

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	Procedure	Action by √ when completed	Explanatory Notes
49	Transfer of patient to OT 8 after hours or acute theatre during working hours	Intensivist, ICU nurse, ICU Link nurse and donor coordinator	ICU staff who are going to be with the patient in OT require appropriate OT attire. Continue ventilation, arterial pressure monitoring and inotropic support, if required. Discontinue ECG monitoring. Continue pulse oximetry monitoring. Take all medications that might be required, including heparin, opioids and sedation. Intensivist and ICU nurse continue patient care in OT. ICU nurse remains with family/whānau in ICU if present.
50	Transfer patient to OT table	Anaesthetist, OT Link nurse, OT nurses, donor coordinators(s)	If lung donation planned, anaesthetist, OT Link nurse, circulating nurses, donor coordinator(s) and OT HCA transfer patient to OT table. For abdominal-only donation, circulating nurses, donor coordinators and OT HCA transfer patient to OT
51	Preparation for lung donation	Intensivist and ICU nurse	If lung donation planned, place patient in anti-Trendelenburgh with head end of the operating table elevated to 30 degrees. Aspirate the nasogastric tube and avoid external pressure to the abdomen.
52	Sight patient ID	Donor coordinator and donor surgical team(s)	If lung donation planned, thoracic anaesthetist completes patient ID with donor surgical team(s) and OT staff. If abdominal organs only, donor coordinator completes patient ID with donor surgical team(s) and OT staff.
53	Patient prepared for donor surgery	Donor surgical team(s)	Patient prepared and draped for surgery. Trolleys remain uncovered in OT. A donor surgical nurse remains in the scrub bay but all other OT staff and donor surgical team(s) (gowned and gloved) leave OT and wait in the utility room.
54	Administration of heparin	Intensivist	Give heparin (300u/kg) prior to withdrawal of intensive therapies provided the intensivist does not think it will influence the process of dying.
55	Withdrawal of intensive therapies	Intensivist, ICU Link nurse and ICU nurse	Withdraw all intensive therapies (ventilation, ETT and inotropes) at the same time. Continue arterial pressure and pulse oximetry monitoring (ECG monitoring will have been discontinued in ICU). An intensivist and ICU nurse remain with the patient until death has occurred. Any appearance of distress is treated with opioid and/or sedation in the same manner as would be done if intensive therapies were being withdrawn and DCD was not a possibility.
56	Determination of death	Intensivist	Determine death on the basis of: • Immobility • Apnoea • Absence of pulsatility on the arterial line of at least **5 minutes** duration Notify donor coordinator and document time of death on the Determination of Death Form. All equipment remains in OT until after the donor surgery. **If death does not occur within the required timeframe, DCD will not proceed and the patient will return to ICU for continuing care. Tissue donation can be facilitated following death.**
57	ICU staff leave OT	Donor coordinator	All ICU staff leave the OT as soon as death has been determined and documented.
58	Inform donor surgical team(s) of death	Donor coordinator	Inform donor surgical team(s) and OT staff (waiting in utility room and scrub bay) of death.
59	Sight time of death on Determination of Death Form	Donor surgical team(s), OT staff and donor coordinator(s)	Donor coordinator sights time of death on Determination of Death Form with donor surgical team(s) and OT staff.
60	Re-intubate trachea for lung retrieval	Thoracic anaesthetist and anaesthetic technician	If lung donation planned, patient re-intubated immediately.

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	Procedure	Action by √ when completed	Explanatory Notes
61	Donor surgery	Donor surgical team(s)	Donor surgery commences immediately.
For care of patient following donation, continue from No. 62			
62	Completion of routine death documentation	ICU staff	ICU staff follow normal protocol following death.
63	Care of patient following donation	OT Link nurse, OT staff, donor coordinator(s) and ICU staff	Following donation, care of the patient can be carried out by the OT staff and the donor coordinator(s). The ICU staff will inform OT staff if the family/whānau wish the patient to return to the ICU following donation otherwise the patient will be transferred directly to the mortuary.
64	For coronial cases	ICU medical staff	Notification of Police by ICU medical staff. Patient ID (if not already completed) and Life Extinct Form completed. Police and nursing staff or orderly transfer deceased to the mortuary.