

<b>Starship Children's Hospital</b> Auckland District Health Board		Patient Label	
<b>DONATION AFTER CIRCULATORY DEATH (DCD)</b>			
DATE: ...../...../.....			
<p><b>Criteria for identification of potential DCD donor:</b></p> <ul style="list-style-type: none"> <li>• On ventilatory support in ICU irrespective of diagnosis</li> <li>• Consensus that intensive therapies will be withdrawn in the near future</li> </ul> <p><b>Advice is available by contacting the donor coordinator: 24 hour number 09 630 0935</b></p> <p>The following procedure for DCD is listed in approximate sequence</p>			
	<b>Procedure</b>	<b>Action by</b> √ when completed	<b>Explanatory Notes</b>
1	Agreement by the treating team that continuing intensive therapies is not in the patient's best interest.	Intensivist and PICU nurse	The decision to withdraw intensive therapies is 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	<p>These issues will be addressed</p> <ul style="list-style-type: none"> <li>• Likelihood of deterioration to brain death and possibility of DBD</li> <li>• Organs and tissues under consideration for DCD donation depending on age – lungs, liver, kidneys, heart valves, eyes and skin</li> <li>• 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.</li> <li>• Whether the interval between withdrawal of intensive therapies and death is likely to be within the timeframe for DCD</li> <li>• Whether or not referral to the coroner is required</li> <li>• Possible timing of withdrawal of intensive therapies</li> <li>• Whether the intensivist objects to giving heparin at the time of withdrawal of intensive therapies</li> <li>• The name of the intensivist who will be involved at the time of withdrawal of intensive therapies.</li> </ul>
4	Agreement to withdraw intensive therapies	Intensivist and PICU 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 before DCD can be considered.
5	Provide space and time for patient/whānau to attend to cultural/spiritual/emotional/social needs.	Intensivist and PICU nurse	Offer karakia and spiritual support to family/whānau during this time.

	Procedure	Action by √ when completed	Explanatory Notes
6	Discuss organ donation with both the patient (if he/she has decision-making capacity) and the family/whānau	Intensivist, PICU nurse	Discuss the possibility of organ donation and explain the DCD process including: <ul style="list-style-type: none"> <li>Continuation of care by the PICU team, including the use of opioid and/or sedation if required</li> <li>Whether therapy will be withdrawn in PICU or OT</li> <li>Family/whānau can only have a few minutes with their child following death</li> <li>The organs and tissues that are under consideration</li> <li>Use of heparin</li> <li>If death does not occur within the required timeframe that DCD will not proceed but tissue donation can be facilitated following death.</li> <li>Confirm the intent of the family/whānau (and of a patient with decision-making capacity) to proceed with DCD.</li> </ul>
7	Inform donor coordinator	Intensivist or PICU 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.
8	Donor Bloods	PICU 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 Declaration, are completed. Donor coordinator will arrange courier to collect Donor Pack from PICU and transport to NZBS for testing (as soon as possible to prevent undue delays for the donor family/whānau). <b>Testing of bloods commences only after family/whānau has indicated intent to proceed with DCD.</b>
9	Donor assessment	Donor coordinator	Obtain information for the Confidential Donor Referral.
10	Medical/Social Questionnaire and Physical Assessment	Donor coordinator	Complete Physical Assessment and meet with family/whānau to complete Medical/Social questionnaire. Email completed documentation to Donor Coordinator: <a href="mailto:contactus@donor.co.nz">contactus@donor.co.nz</a>
11	Inform theatre team	Donor coordinator	Contact OT coordinator with early notification of DCD to enable planning for donor surgery. OT coordinator contacts OT Link nurse. Donor coordinator contacts anaesthetist on call.
12	Agreement of the coroner	Intensivist	When referral to the coroner is required, agreement from the coroner for organ and tissue donation 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.
13	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 is in the ICU and before withdrawal of intensive therapies.
14	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 PICU staff of organs and tissues that can be donated.
15	Cessation of enteral feeding for lung donation	Intensivist and PICU nurse	If lung donation is planned, donor coordinator will ask the PICU staff to cease enteral feeding and to aspirate the NG tube.
16	Determine if family/whānau wish to be present at time of withdrawal of intensive therapies and death	Donor coordinator	<ul style="list-style-type: none"> <li>If family/whānau wish to be present, withdrawal will take place in PICU rooms 6 or 7 (or other appropriate room, if available).</li> <li>If no family/whānau wish to be present at the time of withdrawal of intensive therapies, withdrawal will take place in OT.</li> </ul>

	<b>Procedure</b>	<b>Action by</b> √ when completed	<b>Explanatory Notes</b>
17	Written consent for organ and tissue donation	Donor coordinator	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.
18	Organisation of donor surgery	Donor coordinator	Organise OT time in liaison with PICU, OT coordinator and the donor surgical team(s). Confirm OT time and location of withdrawal of intensive therapies with PICU, OT and anaesthetist.
19	Organisation of OT staff	OR coordinator	Organise OT staff (OT Link nurse, circulating nurses 1 or 2, anaesthetic technician if lung donation planned) who are to be involved.
20	Patient care in PICU	PICU staff	Continue patient care, including maintenance of adequate MAP and oxygenation.
21	Arrive at donor hospital	Donor surgical teams	Donor surgical team(s) and donor coordinator(s) arrive at donor hospital.
22	OR 5 set up for donor surgery	Donor surgical team(s) and OT staff	Set up OT 5 (if available or designated OT) for donor surgery. Trolleys remain uncovered in OT. Donor scrub nurse remains with sterile set-up. Donor coordinator informs PICU staff when OT set-up is complete.
23	Planning meeting	Donor coordinator	Facilitate a meeting in the PICU meeting room prior to commencement of DCD process for those who will be involved: intensivist, PICU nurse, OT Link nurse, OT nurse(s), anaesthetic technician (if lungs are being donated), donor surgical team(s), orderly and donor coordinator(s). Staff will not be allowed to be involved in the DCD process if they have not been present at the planning meeting. Documentation will be checked at this meeting. OT staff will provide yellow over-gowns and hats for PICU staff, if withdrawal of intensive therapies is going to be in OT. Masks and overshoes are not required.
24	Inform PICU staff	Donor coordinator	Inform PICU staff when OT staff are ready and donor surgical team(s) are gowned and gloved.
<b>For withdrawal of intensive therapies in OT 5 (if available) with no family/whānau present, go to No. 35</b>			
<b>For withdrawal of intensive therapies in PICU rooms 6 or 7 (or other appropriate room) with family/whānau present, continue from No. 25</b>			
25	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.
26	Preparation for lung donation	Intensivist and PICU 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.
27	Withdrawal of intensive therapies	Intensivist, and PICU nurse	Discontinue ECG monitoring and continue arterial pressure monitoring and pulse oximetry. Withdraw all intensive therapies (ventilation, ETT and inotropes) at the same time. An intensivist and PICU 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.

DONATION

AFTER

CIRCULATORY

DEATH

	<b>Procedure</b>	<b>Action by</b> √ when completed	<b>Explanatory Notes</b>
28	Determination of death	Intensivist	Determine death on the basis of: <ul style="list-style-type: none"> <li>• Immobility</li> <li>• Apnoea</li> <li>• Absence of pulsatility on the arterial line of at least <b>5 minutes</b> duration</li> </ul> Notify donor coordinator and document time of death on the Determination of Death Form <b>If death does not occur within the required timeframe, DCD will not proceed. Tissue donation can be facilitated following death.</b>
29	Inform donor surgical team(s) of death	Donor coordinator	Inform donor surgical team(s) and OT staff of death.
30	Transfer of patient to OT 5 (if available) or other designated OT	Intensivist, orderly, OR circulating nurse(s), donor coordinator(s)	Intensivist, donor coordinator and orderly transfer deceased patient immediately to OT department doors. OT staff, donor coordinator(s) and orderly transfer patient to OT. If lung donation is planned, the patient remains on the ICU bed. If abdominal organ donation only, the donor coordinator(s), OT Link nurse, circulating nurse(s) and orderly transfer patient to OT table. The PICU nurse provides care and support for the family/whānau.
31	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.
32	Re-intubate trachea for lung retrieval	Thoracic anaesthetist and anaesthetic technician	If lung donation planned, patient re-intubated immediately.
33	Transfer of patient to OT table	Anaesthetic staff, OT staff and donor coordinator	If lung donation planned, anaesthetic staff, circulating nurses and donor coordinator transfer patient to OT table.
34	Donor surgery	Donor surgical team(s)	Donor surgery commences immediately.
<b>For care of patient following donation, go to No. 47</b>			
<b>For withdrawal of intensive therapies in OT, continue from No. 35</b>			
35	Transfer of patient to OT 5 (if available)	Intensivist, PICU nurse, and donor coordinator	PICU staff who will be in OT will require yellow over-gowns and hats but not overshoes and masks. Transfer patient to OT 5 (if available or designated OT) using self-inflating bag and O <sub>2</sub> cylinder or transport ventilator, transport monitor with arterial pressure monitoring and inotrope infusion pump, if required. Continue pulse oximetry. Discontinue ECG monitoring. Medications are taken from PICU including morphine, diazepam and heparin. Intensivist and PICU nurse continue patient care in OT.
36	Sight patient ID	Thoracic anaesthetist or donor coordinator	If lung donation planned, thoracic anaesthetist completes patient ID with donor surgical teams and OT staff. If abdominal organs only, donor coordinator completes patient ID with donor surgical team and OT staff.
37	Preparation for lung donation	Intensivist and PICU nurse	If lung donation planned, place patient in anti-Trendelenburg with head elevated to 30 degrees on the operating table. Aspirate the nasogastric tube and avoid external pressure to the abdomen.

	<b>Procedure</b>	<b>Action by</b> √ when completed	<b>Explanatory Notes</b>
38	Patient prepared for donor surgery	Donor surgical team(s)	Patient prepared and draped for surgery. A donor surgical nurse remains in set-up room, all other OT staff and the donor surgical team(s) (gowned and gloved) leave OT and wait in the OT 6 or set-up room between OT 5 and 6.
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	Withdrawal of intensive therapies	Intensivist and PICU nurse	Withdraw all intensive therapies (ventilation, ETT and inotropes) at the same time. Continue arterial pressure monitoring and pulse oximetry (ECG monitoring will have been discontinued in PICU). An intensivist and PICU 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.
41	Determination of death	Intensivist	Determine death on the basis of: <ul style="list-style-type: none"> <li>• Immobility</li> <li>• Apnoea</li> <li>• Absence of pulsatility on the arterial line of at least <b>5 minutes</b> duration</li> </ul> Notify donor coordinator and document time of death on the Determination of Death Form. All equipment remains in OT until after the donor surgery. <b>If death does not occur within the required timeframe, DCD will not proceed and care will be continued in PICU. Tissue donation can be facilitated following death.</b>
42	PICU staff leave OT	PICU staff	All PICU staff leave the OT as soon as death has been determined and documented.
43	Inform donor surgical team(s) of death	Donor coordinator	Inform donor surgical team(s) and OT staff (waiting in OT 6 or set-up room) of death.
44	Sight time of death on Determination of Death Form	Donor surgical team(s), OT staff and donor coordinator(s)	Donor coordinator completes sighting of death on Determination of Death Form with donor surgical team(s) and OT staff.
45	Re-intubate trachea for lung retrieval	Thoracic anaesthetist and anaesthetic technician	If lung donation planned, patient re-intubated immediately (after PICU staff have left OT)
46	Donor surgery	Donor surgical team(s) and OT staff	Donor surgery commences immediately (after PICU staff have left OT)

**For care of deceased following donation, continue from No. 47**

**Care of deceased following donation**

47	Completion of routine death documentation	PICU staff	Routine death documentation is the responsibility of the Intensivist and PICU nurse. Refer to Death Information Resource Folder in PICU.
48	Care of deceased following donation	OT staff and donor coordinator(s)	Following donation, care of the patient is carried out by OT staff and donor coordinator(s). OT nurse contacts Duty Manager and Enquiries/Admitting to inform of death. If family/whānau wish to spend time with their child following donation following donation, transfer patient to Bereavement Room or back to the room the patient had been in before transfer to OT. Duty manager arranges transfer of deceased patient to the mortuary.

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	<b>Procedure</b>	<b>Action by</b> √ when completed	<b>Explanatory Notes</b>
49	For coronial cases	ICU medical staff	Donor coordinator informs PICU registrar that donor surgery has been completed. PICU registrar notifies police. Registrar completes identification and documentation with police. Family/whānau may be required to formally identify the patient (if not already completed). Police transfer deceased patient to mortuary.
50	Blessing for OT	OT staff	OT staff contact Duty Manager to arrange blessing of OT.

*Updated August 2023*