Policy and Procedure Manual
PATIENT CARE RELATED

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Brain Death (Death by Neurologic Criteria)

I. PURPOSE / BACKGROUND

To outline: criteria for evaluation and diagnosis of brain death of a patient – defined as the irreversible cessation of all functions of the entire brain, including the brain stem - as determined by physicians on staff at Medical Center ("Hospital" or " MC"); the process by which the patient's Personal Representative is informed of potential brain death and, once confirmed, of the discontinuance of ventilatory support to the patient; how a declaration of death is made and documented in the medical record; and the process by which required notifications are made, e.g., to the organ and tissue procurement agency and to the County Coroner (as applicable).

II. POLICY

A. Criteria for Evaluation and Diagnosis of Brain Death

1. A diagnosis of brain death is made by clinical examination following the American Academy of Neurology Practice Parameter or other accepted medical standards.

2. Laboratory tests (usually brain scans) are used to determine the cause of the brain damage but are generally not included as diagnostic criteria of brain death except as confirmatory tests (usually electroencephalography) when an adequate clinical examination is not possible (e.g., prior eye surgery does not permit evaluation of pupillary light responses or hypotension or CO2 retention makes formal apnea testing risky).

3. A determination of brain death using neurologic criteria will determine:
   a. the presence of coma or unresponsiveness;
   b. the absence of brain stem reflexes; and
   c. the absence of ventilatory effort during formal apnea testing.

4. Any physician member of the Medical Staff may make an initial determination of brain death, subject to the following:
   a. An Independent Confirmation by a second licensed physician is required. One of the two physicians making the determination must be a neurologist, a neurosurgeon, or have been trained in critical care medicine.

b. When the patient is an infant or child, at least one of the examinations shall be performed by a specialist knowledgeable about the unique criteria appropriate for the determination of death by neurologic criteria in infants and children.

B. Communication with Family Members; Brief Period of Accommodation

1. Before completion of the brain death evaluation, the patient's Primary Physician will advise the patient's Personal Representative that, if the patient is on a ventilator, such ventilatory support will be discontinued if brain death is established. This notification should take place (or be repeated) after a neurological examination finds coma and the absence of brain stem reflexes, but before the formal apnea test.

2. A reasonable period of accommodation, resulting in a delay of the apnea test, can be made at the request of the patient's Personal Representative to permit notification to, and a visit from, family members; spiritual or religious counseling; and possibly further medical discussion with medical practitioner(s) of the family's choice.

3. If, in the opinion of the patient's Primary Physician, the period of accommodation is prolonged such that a further delay becomes unreasonable, a referral to the Patient Rights & Ethics Committee is appropriate.

4. Should the patient's Personal Representative remain resistant to completing the brain death evaluation by the apnea test (or allowing another confirmatory test), the patient's Primary Physician will consult with his/her Department Chair and the Hospital's Chief Medical Officer.

   a. In those exceptional instances where the patient's Personal Representative has religious or culturally-based beliefs in which brain death is not accepted, the Chief Medical Officer may allow transfer of the patient to another institution or may allow death to be determined by cardiopulmonary criteria. In either case, the patient's Personal Representative will be asked to consent to the assignment of a Do Not Resuscitate (DNR) code status for the patient and to agree that there will be no additional medical interventions other than those currently in place. The code status discussion and decision(s) made as a result will be documented in the patient's medical record.

   b. In instances where the request for further delay is not based on religious or culturally-based beliefs, the Chief Medical Officer will lend support to the medical practice of proceeding with brain death evaluation by the apnea test or confirmatory laboratory test and partner with the patient's Primary Physician to establish clear communication to the patient's Personal Representative that ventilatory support will be discontinued if brain death is diagnosed. The patient's Personal Representative must immediately request transfer of the patient to another facility that will accept the patient or promptly file for a court order to prevent the discontinuance of ventilatory support. If a challenge is filed with the court, the Hospital's Office of General Counsel will be notified and ventilatory support will be continued until the court has issued a ruling.

C. Determination of Brain Death By Two Qualified Physician Medical Staff Members

1. After a determination of death has been made using neurologic criteria, as supported by an Independent Confirmation by another qualified physician, then cardiopulmonary support may be continued temporarily pending notification of the appropriate organ procurement agency and final disposition decisions.

2. If the organ procurement agency has determined that the deceased is a potential donor of transplantable organs or tissue, cardiopulmonary support should be continued until a representative from the organ procurement agency has completed discussion with the patient's Personal Representative regarding retrieval of organs or tissue.

   a. Neither the physician making the determination of death nor the physician making the Independent Confirmation shall participate in procedures for removing or transplanting organs or tissues from the deceased.

   b. If the organ procurement agency has determined that the deceased is not a potential donor of organs or tissue, the patient's Primary Physician will inform the family of the agency's decision and will inform the patient's Personal Representative that cardiopulmonary support will now be discontinued. If the patient's Personal Representative objects, reasonable accommodations should be attempted.

D. Documentation of the Determination of Death

1. The physicians making the initial determination and Independent Confirmation of death shall document the basis for their determinations in the deceased's medical record.

2. One of the physicians shall complete a death certificate unless the case is subject to Coroner's inquiry, in which case the death certificate shall be completed by the Coroner. (See, Patient Care-related Policy, "Postmortem Care")

   a. For legal and certification purposes, the time of death to be recorded is the time of the Independent Confirmation (second physician member's examination).

E. Procedure Following Determination of Death

1. Following determination of death by neurologic criteria, a formal pronouncement of death shall be made.

2. The deceased's Personal Representative shall be notified that death has occurred by the Primary Physician or physician-designee.

3. Once death has been declared, if the deceased is an organ donor, further testing and management become the responsibility of the organ procurement agency or transplant team. (See, Patient Care-related policy, "Organ and/or Tissue Donations")

   a. The Primary Physician or physician-designee will inform the deceased's family of the necessity of continuing ventilatory and circulatory support to preserve vital organs.

   b. If the deceased is not an organ donor, all lines, tubes, machines and monitors shall be

removed unless an autopsy will be performed by the County Coroner. In Coroner's cases, lines and tubes will be left in place.

4. Family members will be given an opportunity to remain in private with the body of the deceased for a reasonable period of time.

5. Family will be offered available resources for continuing support by Hospital staff.

III. PROCEDURE

RESPONSIBLE PERSON(S)/DEPT(S)	PROCEDURE
	A. Prior to Completion of Brain Death Evaluation
Primary Physician	1. Advise patient's representative that ventilatory support will be discontinued if brain death is established
1st Licensed Physician: usually Neurologist/Neurosurgeon	B. Make the initial evaluation of brain death using neurological criteria.
	1. Document the basis for the determination in the patient's medical record.
2nd Licensed Physician: usually Pulmonologist/Critical Care Specialist	C. Serve as Independent Confirmation if the 1st Licensed Physician makes the diagnosis of brain death.
	1. Document the basis for the determination in the deceased medical record.
	2. Conduct formal apnea test.
Primary Physician or designee	D. Pronounce patient and notify family/patient representative of patient's death.
	1. Determine if the death is reportable to the Coroner's office.
	2. Complete all necessary paperwork as it pertains to patient's expiration.
	3. Notify family/patient's representative.
	4. Disconnect patient from ventilator at agreed upon time.
Nursing Staff	E. Notify Organ/Tissue Donation Agency within one hour of expiration.
	F. Provide support to patient's family members during and after the diagnostic period.
	G. Provide for the patient's physical needs/provide comfort care.

References:
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California Health & Safety Code Sec. 7180
Medical Staff Rules & Regulations, Section 14.0, Patient Code Status
Eelco F.M. Wijdicks, Panayiotis N. Varelas, Gary S. Gronseth and David M. Greer (2010).
Quality standards subcommittee of the American Academy of Neurology evidence-based guideline update: determining brain death in adults. *Neurology*; 74, 1911-1918.

Related Policies:

- Advance Directive
- Care of the Dying Patient
- Do Not Resuscitate (DNR)/Withholding/Withdrawal of Life Support Orders
- Ethics Committee Consultation
- Life Sustaining Treatment for Minor Patients, Guidelines for Forgoing
- Orders for Patient Care
- Organ and Tissue Donation
- Postmortem Care

Related Forms: (See HIMS website to access unless otherwise noted)

Appendix One: Terms, Acronyms and Definitions Applicable to this Policy
Appendix Two: California Hospital Association (CHA) ***Consent Requirements for Medical Treatment of Adults***
Appendix Three: California Hospital Association (CHA): ***Consent Requirements for Medical Treatment of Minors***

Author(s): Medical Director, Critical Care (ICU); Clinical Nurse Director, Critical Care (ICU)
Sponsor(s): Chief Medical Officer; Chief Nursing and Patient Services Officer

Appendix One

Terms, Acronyms and Definitions Applicable to this Policy

Primary Physician – The physician member of the Medical Staff responsible for coordination of the patient's care across visits and specialties.

Death – An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions; or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with acceptable medical standards. (California Health and Safety Code Section 7180)

Independent Confirmation (of brain death) – When an individual is pronounced dead by determining that the individual has sustained an irreversible cessation of all functions of the entire brain, including the brain stem, there shall be independent confirmation by another physician-member of the Medical Staff. (California Health and Safety Code Section 7181)

Personal Representative (of the patient) - An individual who is acknowledged by the Hospital to be the patient's decision-maker for health care. The Personal Representative may have been designated by the patient to act as his/her agent for health care decisions by advance directive (written or verbal); or have been appointed as the patient's Conservator or Guardian for health care decisions by a court of law; or, in the absence of a designation by the patient or a formal appointment, is recognized as the patient's surrogate decision-maker by virtue of his/her relationship to the patient (spouse or other family member, registered domestic partner or close friend).

Priority of Decision-Making – Identification of Patient's Personal Representative: For helpful guidance as to the priority of surrogate decision-makers, when there is no designated agent or court-appointed conservator of the person, please refer to the following documents published by the California Hospital Association (CHA): *Consent Requirements for Medical Treatment of Adults* and *Consent Requirements for Medical Treatment of Minors*, attached as Appendix Two and Appendix Three to this Policy.