University of Michigan Neurocritical Care
Adult Brain Death Exam Checklist
(for educational use only)

☐ Peer Teaching ☐ Supervised Clinical Experience Date: _____

For the full checklist, see the UMH Brain Death policy (03-01-020), Table 4: Checklist for Brain Death. This educational tool accompanies the formal checklist and may be used to provide feedback for specific points to the learner.

Prerequisites	**Feedback**
☐ Recognize that there are institutional and state policies for brain death and that these may differ from national guidelines	
☐ Identify the prerequisites (e.g. identification of catastrophic, irreversible etiology of brain injury, with the etiology known to lead to brain death; exclusion of reversible contributors such as hypothermia, hypotension, intoxication, metabolic or endocrinologic derangements)	
Neurologic Exam	**Feedback**
☐ Mental status ☐ Response to voice (loud) ☐ Response to noxious stimuli (mandatory central stimulation with supraorbital pressure, TMJ pressure; optional peripheral stimulation with trapezius pinch, sternal rub) ☐ Spontaneous eye movements ☐ Response to visual stimuli (e.g. blink to threat)	
☐ Motor and sensory function ☐ Response to voice (reflexive movements with mandatory central and/or peripheral stimulation?) ☐ Response to noxious stimuli (reflexive movements with mandatory central and/or peripheral stimulation?)	
☐ Brainstem function ☐ Pupillary light reflex with quantitative pupillometry ☐ Corneal reflex ☐ Oculocephalic reflex ☐ Vestibuloocular reflex (with ice water) ☐ Cough and gag reflex	

Apnea Test	Feedback
☐ Identify conditions that may preclude safe apnea testing (e.g. severe COPD with chronic hypercapnia, cardiogenic shock with inability to tolerate lower pH)	
☐ Identify prerequisites for apnea testing (e.g. absence of hypoxemia, hypotension, hypovolemia; PaO2 > 200mmHg; pH 7.35-7.45)	
☐ Collaborate with RT to identify the method for apnea testing (switching the ventilator to the apnea test settings [reference 3] is preferred; otherwise, nasal cannula or T-piece setup may be used)	
☐ Recommend apnea test setup optimizations to streamline testing (e.g. arterial line in place, runner available to send POC ABGs live and return with the result, pre-oxygenate with FiO2 100% for at least 10 minutes before starting)	
☐ Monitor the patient and have someone else monitor the ventilator for spontaneous respirations (n.b. there may be ventilator waveform artifacts that don't actually indicate spontaneous respiration)	
☐ Identify when apnea testing must be aborted (e.g. hemodynamic instability, progressive desaturation below 85%, hypotension below goal MAP despite medical management)	
☐ Identify when the criteria have been met that confirm a diagnosis of brain death (i.e. apneic throughout the testing period, PaCO2 ≥ 60mmHg, ΔPaCO2 ≥ 20mmHg, pH < 7.3å)	

References

1. Greer DM, Kirschen MP, Lewis A, et al. Pediatric and Adult Brain Death/Death by Neurologic Criteria Consensus Guideline. Neurology. 2023;101(24):1112-1132. doi:10.1212/wnl.0000000000207740
2. University of Michigan Health Brain Death Policy, 03-01-020, revised 10/2021.
3. Merchant RA, Ahmad SN, Haddix B, et al. Apnea Testing on Conventional Mechanical Ventilation During Brain Death Evaluation. *Neurocritical Care*. 2024;doi:10.1007/s12028-024-01990-8