Brain Death Worksheet

General: Brain death has occurred when cerebral and brain stem functions are irreversibly absent.

1. Irreversibility of brain injury demonstrated.
2. Exclusion of reversible conditions.
4. Documentation of apnea.
5. Absence of brainstem reflexes.
6. Persistence of these findings for a sufficient period of time.
7. Greater than 36 weeks post conception.

Physiologic parameters:
1. Temperature > 32 C.
2. Absence of depressant drugs.
3. Absence of untreated shock and profound electrolyte disturbances, i.e. Na < 125 or K < 2.
   a. Pupillary response. R - L.
   b. Corneal. R - L.
   c. Doll’s eyes. R - L.
   d. Cold caloric. R - L.
   e. Cough and gag.
   f. No response to noxious stimulus.
5. Observational period, minimum of 6 hours and repeat exam.
   a. In most cases, 6 hours is all that is required between exams.
   b. In the newborn, the diagnosis of brain death cannot be made until 7 days of life.
   c. In patients 7 days to two months, 48 hours is required.
   d. In patients 2 months to 12 months, 24 hours is required.
   e. If suspected intoxication or other depressant medication, the duration between exams may be as long as three days.
6. Apnea testing.
   a. FiO₂ 1.0.
   b. Baseline ABG needed, PCO₂ should be normal prior to testing, minimum 35 torr, preferably higher.
   c. T-piece or CPAP alone, no mechanical support.
   d. Monitor for 5 - 10 minutes or as long as tolerated, looking for any respiratory effort. PCO₂ rises 3 - 4 torr/min. Repeat ABG.
   e. PCO₂ > 60 torr confirms apnea, or a PCO₂ increase of 20 torr in the absence of any respiratory effort.
   f. Hypoxia and hypotension should be avoided and terminate the testing. (~50% of pediatric patients that are brain dead will become hypotensive.)

Ancillary consultations and testing.
1. Need determined by PICU attending.
2. Neurology and/or Neurosurgery consultations as appropriate.
3. Optional studies as indicated on case by case basis: EEG, Cerebral blood flow, Cerebral angiography, and/or Transcranial ultrasound/Doppler.