

New guideline helps determine brain death in adults

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A new national guideline, co-authored by a Henry Ford Hospital neurologist, has created an updated step-by-step process to help physicians better wade through the complex process of determining brain death in adult patients.

The guideline is set to appear in the June 8 issue of *Neurology*, the medical journal of the American Academy of Neurology (AAN).

The new AAN guideline is an improvement over the group's 1995 guideline, because it includes a check-list for physicians based on scientific research to help determine a diagnosis of brain death, says co-author Panayiotis N. Varelas, M.D., Ph.D., Director of the Neuro-Intensive Care Service, Henry Ford Department of Neurology & Neurosurgery.

"Many of the details of the clinical neurological examination to determine brain death cannot be established by evidence-based methods. Our goal was to develop a detailed brain death evaluation protocol that would be a useful tool for clinicians," he says.

Brain death occurs when the brain is no longer capable of sustaining the rest of the body's systems without advanced life support. It can result from a severe traumatic brain injury, stroke or prolonged CPR after cardiac arrest.

According to the new guideline, there are three signs that a person's

brain has permanently stopped functioning. First, the person is comatose, and the cause of the coma is known. Second, all brainstem reflexes have permanently stopped working. Third, breathing has permanently stopped. A ventilator, or breathing machine, must be used to keep the body functioning.

The guideline describes several complex steps doctors must follow to diagnose brain death. It carefully reviewed the best way to demonstrate absence of breathing. The guideline also concludes that laboratory tests such as EEG or cerebral blood flow studies are not always necessary to come to a diagnosis. The guideline also makes clear that this complex process must be completed by a doctor with considerable skill and experience in diagnosing [brain](#) death.

Provided by Henry Ford Health System

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