Lecture Week 8: Defining death, and Physician Assisted Suicide

The readings listed for this week focus primarily on the issue of physician-assisted suicide, a practice which has become legal in Oregon and most recently in Washington state. I will talk about those readings Thursday. Today I would like to look at three readings which were not listed on the syllabus, but which will be useful background for our discussion in Week 9 of organ transplantation.

These articles, on pp. 339-360 of our text, discuss the transition in the course of the last century from the traditional determination of death by the cessation of respiration and heart beat to a more technologically determined standard: the death of the whole brain, as determined by neurological tests. There are reading notes to those articles on the website.

This transition to a technological determination has been made because of technological advances: because ventilators can substitute for the organism in keeping the blood circulating, the stopping of the heart is not the first or even necessarily the best way of knowing whether the person is still alive or not. But the brain is indispensable in keeping the organism integrated and in keeping all the organic functions going. So if it can be determined whether the brain is still working or not, it can be determined whether the person is dead, or merely unconscious.

The brain-dead individual has no electrical activity in the brain (as measured by electroencephalogram); no response to pain; no pupillary reflex (=if you shine a light into the eye, the pupil does not narrow), and no spontaneous respiration. Official determination of death by neurological criteria typically requires examinations and declarations by two physicians, and flat EEGs (electroencephalograms) 24 hours apart. (The Bernat article on p. 353 talks about some of the tests for brain death.)

There are states of unconsciousness (pvs, minimally conscious state) where the individual has no conscious activity, but the brain stem still survives to provide some of the functions of the autonomic nervous system. That person is not dead. That person may be in PVS or in a minimally conscious state; and can remain in such a state for up to 35 years, if life supporting treatments (ventilator, ANH) are continued.

The typical scenario involves a severe injury (trauma or deprivation of oxygen for a period of time). The individual is raced to an ER and then to an ICU and put on all available means of life-support to see if the heart will start beating again, or if the person will begin to breath spontaneously. The three most common causes of brain injury are trauma, bleeding into the brain, and anoxia—deprivation of the brain of oxygen, from cessation of breathing or low blood pressure. Neurologists check to see the pupillary reflex and other reflexes; there are several well-established tests for brain stem injury. If it looks bad, the patient is declared dead and removed from life support.

There is some controversy about brain death on both ends. (1) Some people do not accept any criterion for death other than the cessation of heart and breath. Those people are allowed by law in two states (and by convention and sympathy almost everywhere else) to refuse to accept the declaration of death by neurological criteria. The formulation of the 1982 Uniform Determination of Death Act explicitly includes this as one of two definitions. (Removing all life support quickly provides evidence of death by those more traditional criteria as well.) (2) Other people, including some in our readings

for this week, wish to move to what is called the "higher-brain" standard: A person is dead when cerebral activity ceases—when they are no longer conscious, interactive, responsive—no longer able to remember their past, anticipate their future, or perceive their present. This 'higher-brain' standard is compatible with some (but not much) brain stem activity; and with the survival of isolated cells in the brain which may generate electrical impulses visible on EEG. This controversy dovetails into our discussion last week of personal identity. We are not just animals, mere animals; we are persons, as well, and the sustaining (or failure to sustain) of our animalian selves is a reproach or injustice to our human selves.

The UDDA and the President's Commission: The "Harvard criteria" for brain death were codified in a model statute in 1980 which has been adopted in some version by 50 states and (according to Bernat) about 80 foreign countries.

There's an interesting category of federal activity: model statutes, which the federal government recommends that states adopt. We have seen one in action: the Patient Self-Determination Act, by virtue of which health care providers are legally supported in NOT treating patients, despite the socially-designated function of health care providers and institutions, if the patients refuse treatment. We see another in the Uniiform Determination of Death Act, by which the traditional definition of death is supplemented by a definition of brain death.

Just as there are people who believe that all life is sacred and there are no good reasons for ever removing life support from anyone, there are people who believe as firmly that the life of a person in PVS, sustained in a twilight by machines that breathe for you, regulate your blood chemistry, nourish you with chemicals, inert in a bed, --that such a life is worse than death, that death would come as a blessing and relief, that sustaining such a life at such a cost is cruel and unusual punishment, torture and humiliation. It is because there is such disagreement among equally well-intended and committed individuals that the advance directive has become so important in contemporary medicine: if you are on one side or the other of this controversy, you are wise to make your wishes known.

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I found an article from 1989 that tried to figure out what the degree of knowledge about brain death was in people who worked in hospitals. The authors made up a questionnaire which they gave to decision makers and support people in hospitals. One question involved two cases.

> **Patient A** sustained irreversible loss of all brain function, including the brain stem and higher structure such as the cortex. Other physiological functions—beating heart and breathing—are being supported by intensive medical care.
>
> **Patient B** has sustained irreversible loss of all cortical brain function. He is unconscious and unresponsive. Breathing is spontaneous and internal regulation of blood pressure and temperature is intact.

The authors asked: Which patient is dead? The bad news; many of the people responding got it wrong; the good news, the doctors, who are responsible for declaring one way or another, mostly got it right.