

Ethical Considerations In Functional Mri On Acutely Comatose Patients In The Intensive Care Unit

Charles Weijer

Professor of Philosophy and Medicine,
Canada Research Chair in Bioethics, Western University

**Wednesday, October 1 2014 at 12:00 noon
Centre for Brain Health (Room 3402B+C)**

Acquired brain injury is a leading cause of death and disability. After a severe brain injury, patients are treated in an intensive care unit and may be comatose for days or weeks. Prognosis is assessed using clinical examination, structural neuroimaging, biomarkers and electrophysiological testing. Although these tests are useful, prognostication is imprecise in the acutely comatose state. As the majority of deaths following severe brain injury are the result of withdrawal of life support, accurate information is essential for families and healthcare providers. Recent research has used functional MRI to assess intact neural networks in comatose patients. Future fMRI studies may provide evidence of intact neural networks and cognitive function which may, in turn, predict reversible impairments in consciousness. In this paper, we provide the first analysis of ethical issues in fMRI research in acutely comatose patients in the intensive care unit. We argue that six ethical issues ought to be addressed in any prospective fMRI study in this setting: (1) Is fMRI a therapeutic or nontherapeutic procedure in the study context? (2) Have the risks of research participation, including the risks of intrahospital transport, been minimized consistent with sound scientific design? (3) Are the risks of nontherapeutic procedures no more than a minor increase above minimal risk? (4) Have study participants been selected equitably? (5) Will valid surrogate consent for study participation be obtained? (6) Are adequate plans in place to share individual research results with the responsible physician or the family?

Charles Weijer is a philosopher and physician. His academic interests center on the ethics of medical research. Charles has written about using placebos in clinical trials, weighing the benefits and harms of medical research, and protecting communities in research. One recent project talks about a special kind of clinical trial in which groups of people— rather than individual patients—are randomized to one treatment or another. He is also currently collaborating with Adrian Owen on the ethics of functional neuroimaging after serious brain injury. Charles is one of the co-founders of the Rotman Institute and he has worked with a number of organizations around the world, including the World Health Organization, the United Nations, and the U.S. National Academies Institute of Medicine. He is motivated by the belief that medical research raises profound philosophical questions about the nature of our obligations to one another, particularly in relationships of inequality, such as that between researcher and research subject.

Talk co-sponsored by: the Maurice W. Young Centre for Applied Ethics and the National Core for Neuroethics, University of British Columbia