



Clinical Neuroethics Education and Outreach

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Introduction

Neuroethics lies at the juncture of neuroscience, clinical medicine, ethics, and human values. The number of neuroethics-related publications has increased over time as have the number of authors from different countries contributing to the field (Lomber and Illes, 2008a). Contextual factors including healthcare systems, funding structures, and institutional support all influence the diffusion of neuroethics, and while clinical practice has been a major focus of studies represented in the peer-reviewed literature, few, if any, clinical neuroethics programs have been formalized.

The goal of this project was to examine the views and interests of neuroscientists, clinicians, stakeholders, and community members in British Columbia, Canada, as a first scan of the landscape for Clinical Neuroethics education and outreach.

Background

Rapid advances in neuroscience have led to greater understandings of brain disorders such as stroke, vegetative states, depression, and dementia, and have raised many significant ethics challenges. These challenges have spawned the field of "neuroethics" that is concerned with ethical, legal, social and policy implications of neuroscience, and is rooted in age-old debates of mind, brain, and behavior.

The ethics challenges are particularly relevant to clinical neurology as neurological disease can significantly impact quality of life and raise larger philosophical issues including sense of self, autonomy, and decision-making capacity. The complexity of neurological illness coupled with implications for patient care, families, and society at large create the need for focused training in Clinical Neuroethics.

Methods

We conducted a series of interviews and focus groups (N=10) to understand perspectives and priorities for Clinical Neuroethics. We focused on two major cohorts in the metropolitan area of Vancouver, British Columbia, Canada:

1. Stakeholders and community members
2. Professionals in basic and clinical neuroscience (physicians and medical residents in neurology, radiology and neurosurgery; allied health professionals including clinical ethicists; and administrators of hospitals and medical school programs)

We used descriptive methods based on grounded theory to search for major emerging themes in the field notes taken during the discussions.



Image courtesy of the Canadian Association for Neuroscience (CAN)

Results

Professionals in basic and clinical neuroscience

Scientists and medical and allied health professionals identified the following priority areas for neuroethics:

- palliative care
- innovative therapies
- informed consent
- cultural issues

The need for dedicated ethics consultations and greater educational opportunities for difficult cases involving brain disorders were also major emerging themes.

Stakeholder and community groups

Stakeholder and community groups placed education and accurate dissemination about advances in neuroscience as the highest priority. Other major thematic areas of interest were:

- neurodeterminism, free will, autonomy and reductionism
- neuroscience and law in the context of predicting criminal behavior and recidivism
- translation of neuroscience from the bench to private industry and into society, including privatized imaging and personalized health care

Conclusions

These results provide preliminary data on the landscape for education and outreach in clinical neuroethics in one region of Canada.

"Tough Cases" Clinical Neuroethics Program

To respond to the priorities identified by medical professionals and trainees, we have created a "Tough Cases" thread for our Clinical Neuroethics Program. This program uses the journal club format to address unresolved cases in the clinical setting. A template for reporting cases is shown in Figure 1. This template is available both in hardcopy and accessible online. Submitters may self-identify or transmit cases anonymously. To preserve the nuances of a case, transmission in real-time is encouraged. Journal clubs are scheduled quarterly, or are held on an as needed basis as cases arise. Discussions are based on selected, relevant classic papers from the bioethics and neuroethics literature.



Figure 1

Outreach

To respond to the priorities identified by community members, we are developing outreach materials and programs to promote neuroscience literacy. Figure 2 shows one such product for neuroimaging as applied to minimally conscious states. Other products, including small group discussions with the public, position papers, broadcasted web events, Cafes Scientifiques, and podcasts are currently under development. Topics in law and neuroscience, and law and the media are the current focus. A web-based resource for neuroethics reading for the global clinical neuroscience community is also under development and will be available at www.hso.info (Lomber and Illes, 2008b).

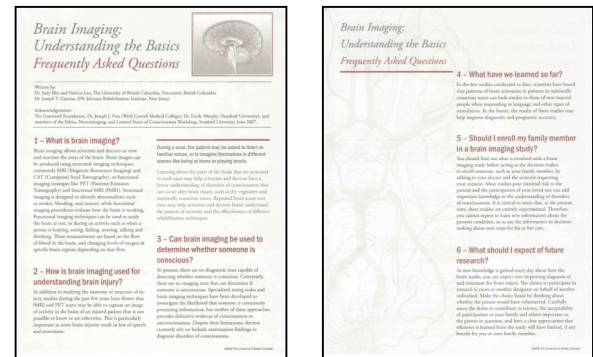


Figure 2

These programs are in early stages of development. While our analysis suggests need for enhancement of programs in clinical neuroethics, larger scale data gathering, especially for cultural differences, and testing and refinement are essential to meeting robust educational and outreach goals for Clinical Neuroethics.

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A freely accessible, growing library of these papers is available at: www.neuroethics.ubc.ca.