

low birthweights. As noted by Greeno (2002), giving up any of the conditions of the experimental design removes our ability to make causal inferences.

Conclusion

Although there are some who would like to use correlational studies to imply causation, we have seen here that these types of studies would not meet the criteria for causation. When we hear words like “linked to” or “associated with”, we know that the researchers were using correlational research in some form. We then know to expect that there may be many other unknown factors which could be alternate explanations for the association. An often-told legend in statistics is used to illustrate the error in this thinking. Years ago, researchers were investigating the factors associated with the development of malaria. They discovered there was a strong association between the amount of rainfall in tropical zones and the incidence of malaria. They believed that the malaria parasites were carried in the rainfall. This was reinforced when researchers noted that those who wore protective clothing against the rain had a decreased incidence of malaria. This type of thinking excluded other possibilities which may explain why these two factors were linked. It was not until much later that they realized it was the Anopheles mosquitos that actually carried the parasites and transmitted the disease with their bite. The mosquito population would, of course, increase in times of high rainfall, and those who wore protective raingear would also be less likely to be bitten by mosquitos. Let’s look beyond the rain in our interpretation of the research and try to find the mosquitos! 🦟

References

- Brink, P.J., & Wood, M.J. (1998). Introduction (Chapter 1). In P.J. Brink, & M.J. Wood (Eds.), **Advanced design in nursing research** (2nd ed., pp. 3-20). Thousand Oaks: Sage.
- Carter-Snell, C.J., & Sheehan, G. (1989). Comparison of two suction techniques for intubated ICU patients [Abstract]. **Proceedings of the Twenty-eighth Interscience Conference on Antimicrobial Agents and Chemotherapy** (p. 116).
- CBC Staff. (2004). US Study suggests antibiotic, breast cancer link. **CBC News**. Retrieved February 20, 2004 from http://www.cbc.ca/stories/2004/02/16/antibiotic_bcancer040216
- Cook, T.D., & Campbell, D.T. (1979). Causal inference and the language of experimentation. In T.D. Cook & D.T. Campbell (Eds.), **Quasi-experimentation: Design & analysis issues for field settings**. Boston: Houghton Mifflin Company.
- Greenhalgh, T. (1998). Statistics for the nonstatistician - II: “Significant” relations and their pitfalls. **Student BMJ**, **6**, 156-159.
- Greeno, C.G. (2002). Major alternatives to the classic experimental design. **Family Process**, **41**(4), 733-736.
- Grimes, D.A., & Schulz, K.F. (2002). Descriptive studies: What they can and cannot do. **Lancet**, **359**(9301), 145-149.
- Linton, M. (2004, January 9). Nurses’ health study a landmark. **C-Health, Toronto Sun**. Retrieved March 3, 2004 from http://www.canoe.ca/Health0109/04_linton-sun.html
- Loiselle, C.G., Profetto-McGrath, J., Polit, D.F., & Beck, C.T. (2004). Analyzing quantitative data. In C.G. Loiselle, J. Profetto-McGrath, D.F. Polit, & C.T. Beck (Eds.), **Canadian Essentials of Nursing Research** (pp. 329-380). Philadelphia: Lippincott.
- Reynolds, C. (1999). Inferring causality from relational data and designs: Historical and contemporary lessons for research and clinical practice. **The Clinical Neuropsychologist**, **13**(4), 385-395.

‘Brain death’ in Vancouver!

By Caroline McGarry-Ross, RN, ENC(C), Halifax, NS

From April 9-11, 2003 Vancouver hosted a Canadian forum with one main goal: to bring experts from many fields together in order to develop a new Canadian protocol for assessing and diagnosing the patient with brain (versus cardiac) death. The forum was officially called “Severe Brain Injury to Neurological Determination of Death”, and NENA was invited to send three emergency nurses from across Canada to participate. Provincial associations were contacted and requested to forward interested and appropriate names for selection. By some divine intervention, my name was selected, and so it was that I found myself attending this conference along with two other ER nurses: Clay Gillrie from British Columbia, and Francoise “Frankie” Verville from Saskatchewan.

Now one would think that five days in downtown Vancouver at the posh Fairmont Hotel Vancouver (all expenses paid by the conference) would be a treat. And, in many ways, it was. The catch was that I had to actually *participate* in this conference (versus attend and just look interested, which is something I can do well...) and it was on a subject that I had managed to avoid for years: how best to identify and diagnose the patient with brain death. You see, a couple of negative experiences in emergency and ICU had left me with a rather uncomfortable feeling about the whole process and that, coupled with a nagging spiritual concern for patients who became donors, simply meant avoiding such situations as much as possible. That is where the divine intervention comes in; clearly the good Lord decided it was high time I learned much more about this. And so, with some hesitation about it all, as well as Air Canada’s ability to get me there, off to Vancouver I went.

On day one of the conference, we did the obligatory introductions and I found myself surrounded by quite an esteemed (and very cerebral) group from all over Canada. Indeed, there were neurosurgeons, neurologists,

emergency physicians, intensivists, pediatricians, a neonatologist, a statistician, donor coordinators, a representative from the Department of Health and a select number of ICU and emergency nurses (just to add some common sense and balance to the group, I'm sure). They had assembled quite a remarkable group of professionals, and the best part was we were divided into small working groups. (Oh yeah, I felt like contributing my squeaky little opinion amongst that crew!) Needless to say, I did end up contributing my thoughts, just as we all did, because we had a superb facilitator who was very clear about one thing: we had just two-and-a-half days to achieve our goals and *everyone* was expected to contribute.

Throughout those two-and-a-half days the conference organizers and facilitator succeeded in bringing this varied and opinionated group of experts to a consensus on a number of key things. Namely:

- Appropriately identifying the criteria for determining brain death,
- Identifying criteria of patients who should be assessed for brain death,
- Identifying which practitioners are best capable of diagnosing brain death; and
- Identifying a guideline for the optimal care of the patient with brain death.

It was a very dynamic and interesting process and there were times when clinical expertise combined with the emotional aspect of this discussion (and the *occasional* inflated ego) led to some very heated debates! To their credit, the organizers encouraged these debates and were very sincere that all aspects be discussed and considered. A presentation by the statistician pointed out to everyone, especially the organ coordinators, that our way of comparing potential organ donors to actual donors was deeply flawed and inaccurate. Thus, comparisons of provinces against each other, or of Canada versus the USA or European countries, are, to date, invalid.

Dr. Wijdicks, Professor of Neurology at the Mayo Clinic, presented on the evolution of the (relatively outdated) Harvard definition of brain death, developed in 1968. He was clearly impressed and excited at this Canadian initiative and stated we are "setting the new standard for Harvard and the world". It is expected that it will take approximately one year for the approval process for these proposals to be completed.

It was a real eye-opener to be a part of this whole process. I felt very fortunate to be invited to participate in these discussions and very impressed with the degree of passion shown by the physicians there. As if to allay my fears (and others'), the organizers were adamant that the conference focus solely on defining brain death and the optimal care of the patient with it. Deciding who then qualifies as a donor and the whole process of retrieval and donation were not to be discussed.

At the close of the conference, as debates were finished, notes taken, and thank you's made, Dr. Philip Belitsky, Coordinator Transplant Services QEII Halifax, stood up to speak. In his soft voice and unassuming manner, he thanked everyone profusely for attending and contributing to this conference. He stated he was the only person there who could be seen as being in a potential 'conflict of interest' position. After all, his world deals with retrieving organs and transplanting them, should he really be at a conference that looks to define a condition that will, in some cases, allow the patient to become an organ donor? He concluded his thoughts beautifully by stating there is no conflict of interest when we all share the same goals: to provide optimum care to *all* patients, regardless of where they may be in that continuum of life and death.

And so it was, on the long flight home, that I found myself realizing that I no longer felt uncomfortable about organ donation. A key piece of the puzzle had been solved, knowing that any patient diagnosed with brain death would have had it done using a non-biased, current, and nationally-accepted standard, with the only focus being optimal care of that patient and not their potential to be a donor. Divine intervention had worked; I finally felt I could speak to a family about either issue and not feel a conflict of interest.

Now... if I could only find a conference in Hawaii... 

NENA revised position statements

Revised position statements, standards and new core competencies are available for purchase by non-NENA members for \$20.00 per document. For orders of 20 copies or more, 15% will be reduced from the total cost. Just make sure that you note this when you place your order. Send orders to Jerry Bell, 10 Laval Drive, Regina, SK S4V 0H1. 