

dehydrogenase deficiency). Newborns and fetuses are apparently susceptible to this effect on glutathione reductase activity and hemolytic crises have been documented in these patients.<sup>5,6</sup> Other evidence links craniosynostosis to fetal exposure to nitrofurantoin and drugs with similar chemical structures.<sup>7,8</sup>

The US Food and Drug Administration continues to list nitrofurantoin as a Category B drug (probably safe). The *Canadian Compendium of Pharmaceuticals and Specialties* (2007) continues to state that nitrofurantoin use is contraindicated in pregnancy when patients are close to delivery;<sup>9</sup> until further data are available, it would be prudent to follow this guideline.

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#### REFERENCES

1. Mohamed A, Dresser GK, Mehta S. Acute respiratory failure during pregnancy: a case of nitrofurantoin-induced pneumonitis. *CMAJ* 2007;176(3):319-20.
2. Le J, Briggs GG, McKeown A, et al. Urinary tract infections during pregnancy. *Ann Pharmacother* 2004;38:1692-701.
3. Prytherch JP, Sutton ML, Denine EP. General reproduction, perinatal-postnatal, and teratology studies of nitrofurantoin macrocrystals in rats and rabbits. *J Toxicol Environ Health* 1984;13:811-23.
4. Ben David S, Einarson T, Ben David Y, et al. The safety of nitrofurantoin during the first trimester of pregnancy: meta-analysis. *Fundam Clin Pharmacol* 1995;9:503-7.
5. Gait JE. Hemolytic reactions to nitrofurantoin in patients with glucose-6-phosphate dehydrogenase deficiency: theory and practice. *DICP* 1990;24:1210-3.
6. Bruel H, Guillemant V, Saladin-Thiron C, et al. Anémie hémolytique chez un nouveau-né après prise maternelle de nitrofuratoïne en fin de grossesse. *Arch Pédiatr* 2000;7:745-7.
7. Kallen B, Robert-Gnansia E. Maternal drug use, fertility problems, and infant craniosynostosis. *Cleft Palate Craniofac J* 2005;42:589-93.
8. Gardner JS, Guyard-Boileau B, Alderman BW, et al. Maternal exposure to prescription and non-prescription pharmaceuticals or drugs of abuse and risk of craniosynostosis. *Int J Epidemiol* 1998;27:64-7.
9. Canadian Pharmacists Association. *Canadian compendium of pharmaceuticals and specialties. The Canadian drug reference for health professionals*. 42nd ed. Ottawa (ON): The Association; 2007.

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## Physicians' participation in research

I (the first author) am currently working with the Motherisk program at the Hospital for Sick Children, where I am helping with a research project that involves contacting family physicians' offices, describing a survey to the nurse or office manager and inquiring if the physician would be interested in completing a 5-minute questionnaire. I have been very surprised by the number of physicians who report that they do not participate in research. In Canadian medical schools, we are taught that physicians are expected to practise evidence-based medicine, which is based on research findings. Clinicians should play a pivotal role in research, because they require the results of these studies to optimally treat their patients.

The role of the physician is a demanding one, with many time constraints. It would be unreasonable to expect physicians to participate in every survey that crosses their desk, but we feel that they should at least consider the research proposals that are presented to them, rather than becoming irritated and immediately discarding them. Perhaps the exposure of medical students to role models and the way research is presented within the medical school curriculum should be evaluated to ensure that graduating physicians are open to participating in research.

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## Maintaining ethical standards in chart audits

My physician recently told me that he had audited the charts of his patients with diabetes. I casually asked who had

done the audit for him. He replied, "My daughter." My heart dropped; his daughter is a student nurse in the program in which I teach.

In a later conversation I asked if all identifying information had been removed before the audit took place. It soon became clear that the physician's daughter had had full access to my medical file.

I feel that during the conduct of this audit there was a failure to adhere to several ethical standards. First, patient privacy and confidentiality were violated. Second, informed consent was not obtained, as required by the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.<sup>1</sup> Third, the CMA Code of Ethics was breached, particularly some of the guidelines itemized in the sections entitled "Fundamental Responsibilities" and "Responsibilities to the Patient."<sup>2</sup> In addition, student nurses need to be aware that they must adhere to the Canadian Nurses Association's Code of Ethics<sup>3</sup> under all circumstances, regardless of whether or not a physician has asked them to do something.

I am writing this letter not to complain, but to ask physicians to stop and think about the methods they are using to evaluate their practices. I urge the colleges of physicians to review protocols for chart audits to ensure that patient confidentiality is safeguarded and to give serious consideration to insisting that written informed consent be obtained before any information collected during such audits is disclosed to third parties. I appreciate my own physician's professionalism in listening to my concerns.

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#### REFERENCES

1. Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada and Social Sciences and Humanities Research Council of Canada. *Tri-Council policy statement: ethical conduct for research involving humans. 1998 (with 2000, 2002 and 2005 amendments)*. Available: [pre.ethics.gc.ca/english/policystatement/policystatement.cfm](http://pre.ethics.gc.ca/english/policystatement/policystatement.cfm) (accessed 2007 May 11).
2. Canadian Medical Association. *Code of Ethics*. Ottawa: The Association; 2004. Available: [www.cma.ca/index.cfm/ci\\_id/2419/ta\\_id/1.htm](http://www.cma.ca/index.cfm/ci_id/2419/ta_id/1.htm) (accessed 2007 May 11).
3. Canadian Association of Nurses. *Code of ethics*