care professionals have leverage and can put pressure on MDS Nordion to use low-enriched uranium.

#### Nancy Covington MD

President, Physicians for Global Survival, Halifax, NS

Competing interests: None declared.

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# Safe drinking water for rural Canadians

In a recent *CMAJ* editorial, Steve Hrudey correctly stated that Canadian water quality is a rural versus urban issue. Canadian cities have some of the best-quality sources of raw water in the world and the financial and technical resources to treat the water with processes that take hours and use sophisticated techniques. Most cities treat their water to standards even higher than those outlined in federal or provincial guidelines.

In contrast, raw water supplies in rural Canada are often small and of poor quality. The water drains mostly from farmland and may contain *Escherichia coli* and other bacteria, parasites, viruses and organic material that can be difficult even for city-based treatment plants to remove. Most rural communities treat their raw water supplies using only a few simple processes that take minutes.

This is the crux of the problem: rural water needs better treatment than urban water because it is of poor quality. Is it any wonder that most rural water treatment plants cannot meet current Canadian guidelines for drinking water quality? In many rural communities,

drinking water is assessed using only a small subset of the guidelines and the response to boil-water advisories is often just to add more chlorine.

There are 2 ways to solve the problem with rural water supplies. The first solution is to pipe in water from regional treatment plants. This approach may make financial sense but there may be microbial issues, such as the growth of nontuberculous mycobacteria.2 Unlike urban distribution systems, rural pipelines are typically very long and have a small diameter. The use of small-diameter pipelines results in long water residence times, higher surface area and loss of disinfection residuals. Attempts to increase the longevity of these residuals (e.g., by chloramination) are not effective when oxidationresistant bacteria such as nontuberculous mycobacteria are involved. Many organizations and agencies that promote a pipeline approach have in the past labeled pipeline water as nonpotable even when fully treated water was being distributed. This permitted local authorities to circumvent any requirement for water quality testing to comply with drinking water guidelines. Few consumers receiving this water would bother to retreat it as they believed it must be of high quality because it was provided by government agencies.

A simpler and universal solution exists. Better water treatment systems are needed for rural water users.

# Hans Peterson PhD Executive Director

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Competing interests: None declared.

#### **REFERENCES**

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DOI:10.1503/cmaj.1080061

# Faith and the end of life

The recent *CMAJ* editorial about the problems associated with ending life

support against the wishes of the patient's family was a pleasure to read. However, a few key issues were not addressed.

First, Samuel Golubchuk was an orthodox Jew; his faith underlies all of his family's demands. For an observant Jew, extraordinary treatment is not a choice but is an obligation. This obligation to maintain life was the basis for similar suits brought against the Jewish General Hospital in Montréal, Quebec, by the family of a man known as Otto G. and the family of Herman Krausz. It is not unique to Judaism; the family of Terri Schiavo in the United States found justification in their Christian faith to make similar demands. Second. the editorial did not mention that the Canadian Charter of Rights and Freedoms protects freedom of religion and did not discuss the implications of this protection in such cases.

Third, the fact that our single-provider health care system has limited resources is another key issue that was not discussed in the editorial. Indeed, in all the legal cases I have mentioned, the "unpluggers" evoked resource allocation more often than the best interests of the dying. The editorialists should have noted that in countries where private health care is legal, families have the option of paying for extra treatment.

## **Emmanuel Maicas PhD MD**

Department of Pathology, Dr. Georges-L. Dumont Regional Hospital, Moncton, NB

Competing interests: None declared.

#### REFERENCE

 Attaran A, Hébert PC, Stanbrook MB. Ending life with grace and agreement [editorial]. CMAJ 2008;178:1115-6.

DOI:10.1503/cmaj.1080064

# [The authors respond:]

We thank Emmanuel Maicas for his comment, but we believe his disagreement arises from a misreading of our editorial. He is not correct that our editorial "did not mention that the Canadian Charter of Rights and Freedoms protects freedom of religion and did not discuss the implications of this protection." On the contrary, our editorial expressly acknowledged

"the constitutional freedom to one's religion" but noted that as is the case for other human rights, society's affirmation of religious freedom is not absolute. Just as one cannot seize on freedom of speech to yell "Fire!" in a public place, one cannot muster freedom of religion to command "never withhold my medical care" in a public health care system.

In fact, the very first sentence of the Charter of Rights and Freedoms makes it abundantly clear that one's freedoms are not absolute: it reads that one's freedoms are "subject only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society."2 In many cases, including Samuel Golubchuk's, there are reasonable limits to medical treatment beyond which there lies only medical futility. Jewish or Christian, Muslim or Hindu, no matter what one's faith, it is the fallacy of freedom of religion as absolute and trumping secular medical judgment and ethics that our editorial rejects.

### **Amir Attaran LLB DPhil**

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**Competing interests:** See www.cmaj.ca/misc /edboard.shtml.

Deputy Editor, Scientific, CMAJ

#### REFERENCES

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# Prehospital and in-hospital advanced life-support

The recent article by Ian Stiell and colleagues on prehospital care was excellent. However, as we question the value of prehospital advanced life-support we also need to determine whether inhospital emergency advanced lifesupport makes a difference in patient outcomes. Those of us who have provided advanced cardiac life-support and listened to unsubstantiated claims about its benefits over the years must be aware that the use of bicarbonate, bretylium, calcium, vasopressin, amiodarone and many other drugs has probably done more harm than good.

It is important to practise evidencebased medicine and thus the use of prehospital advanced life-support should be validated, but we must also recognize that the role of emergency physicians in both advanced trauma lifesupport and advanced cardiac lifesupport has never been validated in an outcome study either.

## Ian M. Wishart MD

Emergency Physician, Calgary Health Region, Calgary, Alta.

Competing interests: None declared.

#### **REFERENCE**

 Stiell IG, Nesbitt LP, Pickett W, et al. The OPALS Major Trauma Study: impact of advanced life-support on survival and morbidity. CMAJ 2008;178:55 1141-52.

DOI:10.1503/cmaj.1080066

# **Corrections**

In the Practice article "Toward a more effective approach to stroke: Canadian Best Practice Recommendations for Stroke Care," the URL in the footnote

of Box 1 should have been included as www.canadianstrokestrategy.ca.

#### REFERENCE

 Lindsay P, Bayley M, McDonald A, et al. Toward a more effective approach to stroke: Canadian Best Practice Recommendations for Stroke Care. CMAJ 2008;178:1418-25.

DOI:10.1503/cmaj.080883

In the print version of a recent scientific article,<sup>1</sup> the sixth sentence in the research section of the abstract should read as follows: Patients were less likely to receive thromboprophylaxis after discharge if they had a longer hospital stay (15–30 days v. 1–7 days, OR 0.69, 95% CI 0.59–0.81). The online version is correct.

#### REFERENCE

 Rahme E, Dasgupta K, Burman M, et al. Postdischarge thromboprophylaxis and mortality risk after hip- or knee-replacement surgery. CMAJ 2008; 178:1545-54.

DOI:10.1503/cmaj.080884

The name of one of the artists mentioned in a Left Atrium article in the May 20, 2008 issue was misspelled.<sup>1</sup> The correct spelling is Kelly Haydon.

*CMAJ* apologizes for any inconvenience this error may have caused.

#### REFERENCE

 Fraser JL. The private and public nature of disease: Art as a transformative medium CMAJ 2008; 178:1467-9.

DOI:10.1503/cmaj.080885

# **Letters submission process**

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