

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

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**Competing interests:** None declared.

#### REFERENCES

1. Collier R. Canadian hospitals rise to the occasion during isotope shortage. *CMAJ* 2008;178:815.
2. Magnus B. Over budget, overdue and, perhaps, overdesigned. *CMAJ* 2008;178:813-4.
3. Cochran TB, McKinzie MG. Detecting nuclear smuggling. *Sci Am* 298:98-102. Available: [www.sciam.com/article.cfm?id=detecting-nuclear-smuggling](http://www.sciam.com/article.cfm?id=detecting-nuclear-smuggling) &SID (accessed 2008 May 27).
4. Williams B, Ruff T. Proliferation dangers associated with nuclear medicine: getting weapons-grade uranium out of radiopharmaceutical production. *Med Confl Surviv* 2007;23:267-81.
5. Kahn LH, von Hippel F. How the radiologic and medical communities can improve nuclear security. *J Am Coll Radiol* 2007;4:248-51.

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## Safe drinking water for rural Canadians

In a recent *CMAJ* editorial, Steve Hrudehy correctly stated that Canadian water quality is a rural versus urban issue.<sup>1</sup> 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.<sup>2</sup> 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 oxidation-resistant 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.

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#### REFERENCES

1. Hrudehy SE. Safe water? Depends on where you live! [editorial] *CMAJ* 2008;178:975.
2. Pedley S, Bartram J, Rees G, et al, editors. *Pathogenic mycobacteria in water: a guide to public health consequences, monitoring and management*. London (UK): IWA Publishing; 2004.

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## 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.<sup>1</sup> 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.

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**Competing interests:** None declared.

#### REFERENCE

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

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#### [The authors respond:]

We thank Emmanuel Maicas for his comment, but we believe his disagreement arises from a misreading of our editorial.<sup>1</sup> 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