

exist in Alberta, Saskatchewan and Quebec, and various other provinces are now developing programs. For physicians' offices, opportunities are more limited. Although the *Code of Marketing* from pharmaceutical companies states that "companies are responsible for making sure that all excess and/or expired clinical evaluation packages of their own manufacture are returned to the company's storehouse or head office,"<sup>5</sup> this does not consistently occur in practice. As our study showed, potentially 50 kg of medications would have been thrown in the garbage, landfill or toilet (or kept in the office) if we had not provided an outlet.

For physicians with cupboards full of expired medications without a proper outlet for disposal, we strongly urge you to i) accept medication samples only if your pharmaceutical representative will collect expired/unused samples, or ii) just say NO.

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## Arterial dissections after cervical manipulation

Chiropractors across Canada are claiming endorsement from the *CMAJ* that the risk of a stroke from neck manipulation is one in 5 850 000.<sup>1</sup> In the Dec. 2001 edition of the *Canadian Chiropractor*, Paul Carey claims, "the key difference is that it was published in a major peer-reviewed journal."<sup>2</sup>

For the denominator, the authors used all types of neck manipulations done by chiropractors. No distinction was made between those done at the atlas and the axis and those done lower in the neck. Nor was there any distinction made between the velocity, amplitude and degree of rotation of the manipulation. This is equivalent to trying to find out the side effects of thalidomide by counting all pills of any kind prescribed to all people.

For the chiropractors, the numerator was "did the patient sue?" Thus a patient lying in a hospital bed, with a proven prospective dissection on angiogram following a chiropractic neck manipulation, is excluded if they did not take legal action.

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#### [Two of the authors respond:]

We took great pains in our research letter not to claim that we were presenting an incidence study of arterial dissection, but rather we described the likelihood that a chiropractor would be made aware of such an occurrence. The statement that only cases that led to lawsuits were included is incorrect. Chiropractors are required to report all cases of neurological symptoms that may indicate a stroke following treatment. Of the 43 cases reviewed, only 22 actually filed a lawsuit.

We found that chiropractors were made aware of 23 cases of dissection following manipulation over a 10-year period in Canada, where approximately 30 million chiropractic visits occur each year. The case-control study by Rothwell and colleagues<sup>1</sup> noted 6 cases of vertebral artery occlusion that could be attributed to chiropractic manipulation over a 6-year study period in Ontario, where 10 million chiropractic visits occur each year. This suggests that the number of cases brought to the attention of chiropractors was similar to that anticipated from the only case-control study in Canada.

A recent review of the literature, and multiple cases of stroke associated with manipulation, has shown that dissection can occur following any method of manipulation or any type of trivial neck movement or trauma and is not limited to those movements that have only rotation and extension.<sup>2,3</sup> This observation led us to survey the total number of manipulations rather than specific types of manipulation.

Schievink and colleagues suggest up to 50% of strokes following manipulation occur in patients with neck pain caused by an unrecognized spontaneous dissection prior to chiropractic treatment.<sup>4</sup> This explains how dissection can occur with any movement of the neck in a predisposed patient. To reduce the frequency of dissections associated with manipulation, the ability to diagnose a dissection prior to manipulating the cervical spine may be a fruitful area for further research.

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## Breast cancer guidelines

As one of the authors of the Canadian Society of Surgical Oncology consensus statement on sentinel lymph node biopsy for breast cancer,<sup>1</sup> I agree with most of the recommendations put forth by Jacques Cantin and colleagues.<sup>2</sup> However, there are 2 philosophical questions I would like to ask the authors in particular and the readership of *CMAJ* in general.

Cantin and colleagues state that “a surgeon who performs breast cancer surgery infrequently should not perform [sentinel lymph node] biopsy.”

Should such surgeons be allowed to operate on breast cancers at all? If a surgeon cannot perform a sentinel lymph node biopsy reliably then why do we assume that he or she can safely perform a segmental mastectomy or axillary node dissection, procedures that, in my opinion, are even more complicated? We do not publicly identify such stringent criteria for performing other complex procedures (for which surgical volumes have clearly been shown to affect morbidity and mortality), such as the Whipple procedure for pancreatic cancer and the total mesorectal excision for rectal cancer.

The second question concerns the recommendation that patients “should be informed of ... the surgeon’s success rate with the procedure.” This is reminiscent of the publication of morbidity and mortality rates of US cardiac surgeons on the Internet. Should the recommendation of Cantin and colleagues be broadened to include a surgeon’s rate of positive margins with segmental

mastectomy and the average number of nodes he or she excises with axillary node dissection?

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## Psychological factors in clinical nutrition

I enjoyed reading the first article in *CMAJ*’s clinical nutrition series.<sup>1</sup> Perhaps this was judged irrelevant in a clin-

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