chance to see a female physician let alone any family doctor. Engineers and local health care workers presented a range of programs for aboriginal people, including housing initiatives where local plumbers and carpenters were identifying homes without the basics of hygiene, such as functioning faucets, and starting to improve the health of their communities.

Or how about promoting health through local football clubs? Rural doctors were buzzing around the various booths quizzing the purveyors of Palm Pilots, electronic medical records, distance education, and telemedicine. The poster presentations ranged from initiatives to promote point-of-care testing in isolated hospitals to clubs for medical students interested in rural practice. (Someone else must have noticed this booth, too, for there are few medical schools in Canada without one of these student groups today.)

It was hard to ignore the enthusiasm of the Canadian crew from Alberta with their white cowboy hats as they danced with the nursing sisters from South Africa to the latest Australian country music band. It was in this spirit of understanding and camaraderie that many serious issues were raised, such as the poaching of doctors from countries where physicians are underpaid but not necessarily undervalued by more wealthy countries such as ours. It was also enlightening to realize the power of the health care industry when someone tells you that they were parachuted in and out of Miami, Fla, to visit some US hospitals to see how they would benefit from having their hospital services contracted out to a North American firm.

In contrast, would physicians in developing countries be discouraged and mired in pessimism working with such limited resources? As my new friend explained it, imagine the outcry when a large amount of money was spent in sending the first South African into space. Sometimes there has to be a sacrifice so some truly great things can happen to provide hope and empower the rest of us. Having the chance to see the world through different eyes gave me some new ideas to bring back to my small community and a new perspective on Canadian medicine. I hope this letter inspires others to submit local initiatives to the WONCA conference and to attend the meeting in Florida this year or one of the many other meetings that happen yearly around the globe.

—Michelle Lawler, MD, CCFP
Carp, Ont
by e-mail

Focusing on glucosamine sulfate

I read with considerable interest the article[1] on the analgesic effects of glucosamine sulfate. Attention is now more focused on this most interesting nutraceutical, which has a range of actions including analgesic, antiarthritic, healing, and antiulcerogenic, and as a potential adjunct to other analgesics.

It is sad that glucosamine sulfate is chosen in preference to the hydrochloride form in most studies. The hydrochloride form contains 83.1% glucosamine whereas the sulfate form contains only 62.5%. The sulfate form is also unstable and needs 20% sodium or potassium chloride to maintain stability. In using the sulfate, one is not only giving 20% less glucosamine but also unwanted sodium or potassium chloride. The main reason for this is that the hydrochloride form discovered more than 100 years ago was not patentable, while the process of conversion to sulfate was, and, therefore, studies were supported by the manufacturer.

The original work on glucosamine and chondroitin synthesis was carried out by Roden[2] using the hydrochloride form. Because in the stomach, all forms of glucosamine disassociate, there are many advantages to giving the hydrochloride form, such as its higher concentration of glucosamine and no added salt. The greatest disadvantage of glucosamine hydrochloride is its lack of any substantial sponsorship. It is gratifying to note that the largest glucosamine study in the world, at present under way at the National Institutes of Health in the United States, is using the hydrochloride form in its glucosamine arm.

Never before has a nutraceutical been demonstrated to have such interesting actions and suffered from its lack of patentability.

—Alan L. Russell, MD
Brampton, Ont
by fax

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Response

We were discouraged from choosing glucosamine hydrochloride for our study because it had just been used for the first time in a randomized, double-blind, placebo-controlled trial,[1] and there was no significant difference between groups (although there was a trend in favour of glucosamine). In retrospect, this was likely due to the short 8-week period and the lack of power to detect a difference in Western Ontario and McMaster Universities (WOMAC) osteoarthritis scores given their degree of variability. It is also possible that we have more to learn about the pharmacokinetics of the various forms of glucosamine, and the two forms might differ in their efficacy.

Aside from these concerns, we simply followed convention by using the sulfate form of glucosamine. We hope "convention" will not hamper the acceptance of a nutraceutical that has a growing body of high-quality evidence supporting its safety, efficacy to treat pain, and ability to halt joint space narrowing.[2,3]

—Claire Nowlan, MD, CCFP
—Stephen Wetmore, MD, CCFP, FCFP

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Correction

In the April issue of *Canadian Family Physician*, an error was introduced in Vital Signs [*Can Fam Physician* 2004;50:672, 671 (Eng), 670-1 (Fr)]. The sentence in the middle of the second paragraph on page 672 should have read "It reminds us of family doctors' commitment to carry out and coordinate comprehensive continuing compassionate care for Canadians in communities from Glace Bay, NS, to Vancouver, BC."

Canadian Family Physician apologizes for this error and for any embarrassment it might have caused.