

'Ups' and 'downs' of diabetes care

November may be *Diabetes Awareness Month*, but for Red Lake RN Nancy Muller, the challenges of this disease need attention all year round. BY JILL-MARIE BURKE

It is estimated that 25 per cent of the aboriginal population living in remote, fly-in communities in northern Ontario has Type 2 diabetes, the third highest rate in the world. Given that blindness is one of the most feared complications for diabetics, how do you ensure this population has access to annual eye exams that may save their sight? For RN Nancy Muller, it means climbing into a nine-seat aircraft with 68 kilograms of high-tech photo imaging equipment and flying into the community herself.

Muller is the regional telemedicine coordinator for Keewaytinook Okimakanak (KO) Tribal Council, an organization of First Nations chiefs which oversees the provision of telemedicine services to the residents of 26 Ojibway-Cree (Oji-Cree) communities north of Sioux Lookout. Some of the Oji-Cree people have a genetic mutation which contributes to a high incidence of Type 2 diabetes. The telemedicine program brings Muller and nursing colleagues directly to the people, eliminating the cost and inconvenience of flying them to the city for appointments. With a busy schedule as coordinator, Muller may not make every flight, but when she does she spends her time training other nurses to conduct eye exams rather than doing them herself.

Before taking on her telemedicine role, Muller spent 14 years at Red Lake Margaret Cochenour Memorial Hospital. She loved the variety of cases that the 18-bed hospital offered and didn't think she'd ever be able to choose a specialty. When she began working with a dietician who was passionate about diabetes education, it ignited a spark in her as well. Muller always enjoyed teaching and when a job as a diabetes educator opened up in Red Lake, she took it. That experience ultimately led her to tele-ophthalmology.

When Muller and her colleagues arrive in a remote community, they go straight to work. They dilate patients' pupils and use a retinal camera to take digital photographs



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that show the blood vessels at the back of the eye. The photos are immediately transferred to a secure website where an ophthalmologist in another community views them and posts a report. It takes the ophthalmologist one minute to assess the photos of a healthy eye, five minutes if there are problems. In addition to taking the photos, the nurses conduct vision assessments, check eye pressure and provide education to patients to prevent diabetes-related health problems.

Since they don't speak the three aboriginal languages that are spoken in the communities, the nurses rely on full time, community telemedicine coordinators to act as translators. These individuals are also trained to operate video-conferencing equipment that allows patients to access the care they need for other health concerns. They can have clinical consults with cardiologists, oncologists, dermatologists and psychiatrists who are tapping into the technology from larger communities.

Telemedicine requires flexibility, Muller explains. Snow storms, for instance, can

blow in suddenly and lead to flight cancellations and re-scheduled appointments. And life itself is unpredictable. "When you get to a First Nations community, you are a guest," she explains. "You might get there and find out an elder has passed away. Then, it's not appropriate to (conduct) eye appointments so you might lend a hand with funeral preparations instead."

Muller doesn't mind the ups and downs of her work. In fact, she's passionate about ensuring these remote communities receive whatever care they need. Her holistic, evidence-based approach has led to her participation in a number of other projects, including a stint as a panellist for one of RNAO's diabetes best practice guidelines.

Muller embraces the role of innovator, best practice champion and advocate. Last year, she successfully lobbied to have ophthalmologists' services covered by OHIP. She also started a national best practice group for retinal screening thanks to a grant from the North West Local Health Integration Network (LHIN). So far, nurses and photo-imaging equipment operators from Alberta, Manitoba and Ontario have attended the meetings, and colleagues in B.C., Quebec and Saskatchewan have expressed interest in participating. In October, the Ministry of Health invited Muller to join an advisory committee responsible for drafting a provincial plan for tele-ophthalmology. Nurses can play a major role in changing policy, she says. With diabetes rates on the rise and a growing number of seniors dealing with macular degeneration and cataracts, "we've got to look at e-health and changing the way we do things to manage the work... We can't ask our health-care system to have an ophthalmologist see someone in their office every year for a healthy eye check. For remote communities and communities that don't have regular eye care, tele-ophthalmology is the answer." **RN**

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