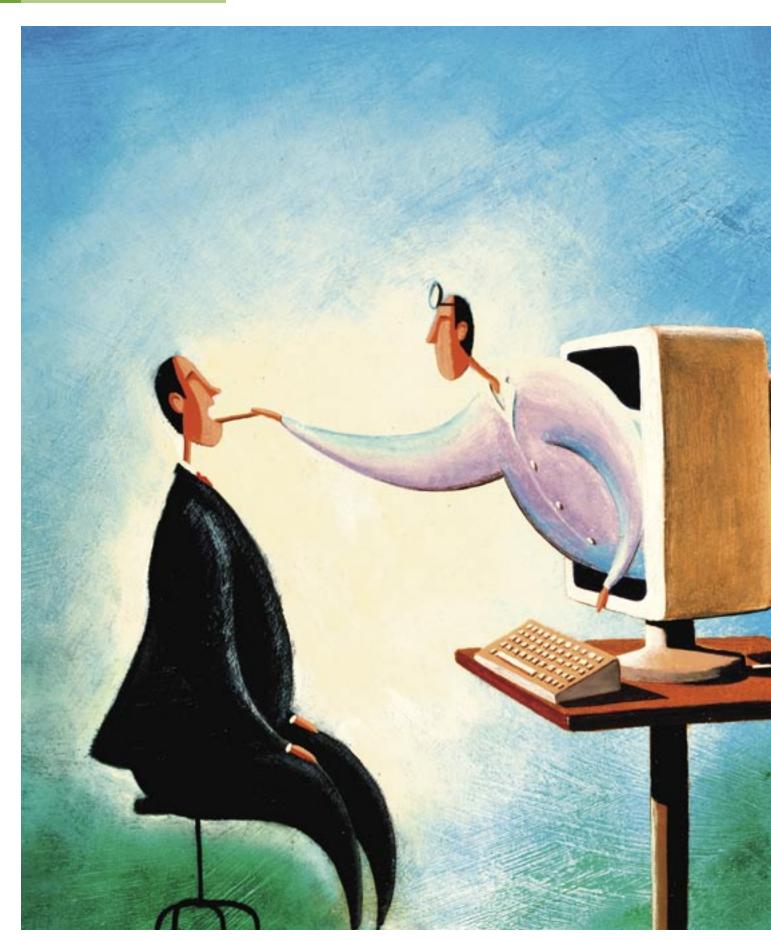
frontiers of medicine





Cine Across 116

Capital Health's Regional Telehealth program uses technology to bring health care closer to home

By Deepti Babu

ver the past 28 years, Sonja
Schmidt has been a foster mother
to lots of Northern Alberta children,
many of whom have special needs. A
resident of High Level, Schmidt currently cares
for four kids who are patients of Capital Health's
Home Nutrition Support, a program for tubefed children. It used to be that Schmidt and her
kids had to drive more than nine hours each way
for medical appointments in Edmonton, trips
that often required at least one night away from
home. Now they can easily make their way to
a telehealth appointment just two blocks from
her house.

"I was skeptical about how it was going to work at first," says Schmidt of the telehealth program. "But in the end, I was quite impressed. I don't have to leave town, and everybody on the team is ready and works well together. My kids get a charge out of it. To them, it's a fun outing."

Two years ago, the nutrition support team offered Schmidt the possibility of appointments in her community, as part of Capital Health's Regional Telehealth program. She was keen to try. Now Schmidt takes her kids to the local hospital to meet with the Edmonton team via videoconference. At any particular appointment, Schmidt might see pediatric nurses, dietitians, feeding therapists and physicians for a full assessment, including a close-up look with the video camera to check her kids' feeding tube sites.

Dietitian Carol Graham-Parker, who works with the Home Nutrition Support program, says feedback from people like Schmidt about telehealth has been very encouraging. "The ease for parents is astronomical," Graham-Parker says. "Without telehealth appointments we might not see some families at all because it's so difficult for them to come in."

Capital Health's telepediatrics service and

its numerous subspecialties – such as pediatric oncology, diabetes and cardiology – met with similar success. "Telehealth is the extension of health service delivery through technology," says Dan Huffman, Regional Director of Patient Transport, Telehealth and Simulation. The regional telehealth program began in 1997 now provides a bulk of the clinical telehealth care in the province. That's no small accomplishment, given that Capital Health supports a referral base of 1.6 million people. In all, the program works with 20 different health centres and connects to over 270 sites that reach across the province, country and world.

sound equipped with Doppler imaging adapted for use in telehealth, is critical for thorough evaluations.

The key to the success of Regional Telehealth lies in the partnership between Capital Health and local health regions, such as the Northern Lights Health Region, in High Level, where Sonja Schmidt and her children live. Participation in Regional Telehealth has the effect of beefing up the capabilities of the local health regions. If medical recommendations are made during a telehealth appointment, resources may need to be available locally, so the impetus for improved delivery is there, too. It all adds up

hand-held imaging devices, the Internet and other emerging technologies to deliver health care. Some programs don't even use videoconferencing.

In teleophthalmology, a technician uses specialized equipment to take high-quality digital photographs of the back of a patient's eye, and then sends the pictures electronically to an Edmonton ophthalmologist, such as Dr. Chris Rudnisky, who reviews them. "Our system provides an exam of the same quality as would be received if the patient had come in person to our clinics," Rudinsky says. "In this way, we determine which patients need treatment, and refer

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The goal of telehealth is to enhance patient care, but there are other benefits. "The telehealth network also facilitates communication between health care providers from different centres," says Huffman. They can co-ordinate care of shared patients and also use the services for continuing education. For example, the Stollery Children's Hospital works with the Western Canadian Children's Heart Network to support a weekly case review of pediatric cardiology patients, hosted by Capital Health. Care providers from major health centres in Western Canada have comprehensive discussions about patients. Electronic imaging, including ultra-

to better services for local patients.

The Regional Telehealth program has received positive feedback from patients and care providers alike. Percentage-wise, "satisfaction rates are consistently in the mid-90s," reports Blayne Iskiw, Director of Regional Telehealth. Iskiw's telehealth colleagues are adding about five new programs each year to meet with increasing interest. "Patients particularly like the fact that they don't have to travel," he says. "And they often feel better educated about their health following telehealth appointments. People believe they are getting better access to better health care."

A concern in the early days of telehealth was that patients would feel awkward seeing their doctor through a television screen. Quite the opposite; "Evaluations show that patients feel they receive more attention during a telehealth appointment," says Iskiw. "In fact, many preferred this approach because they felt they were being given extra time from their physician than if they had been seen in person."

Other concerns centred around security and confidentiality of electronic information travelling on a network. Here, too, worries have proven to be a non-issue. "Because we use the highest encryption rates for the networks," says Huffman, "telehealth visits are more secure than speaking over the phone."

Though its mainstay has been live, two-way videoconferencing, Capital Health's telehealth program now uses other applications, such as

only those to Edmonton." Diabetic sub-specialists and others are using teleophthalmology to refer patients for assessment. Health providers across the country are taking notice and the teleophthalmology team is helping groups in other jurisdictions set up their own systems.

In partnership with the University of Alberta, the teleophthalmology group runs a program for patients from all 44 of Alberta's First Nations communities. This program sends technicians to the communities to take on-site digital ocular photographs to check for complications related to diabetes, which is more common in Aboriginal people. Not everyone with complications will need treatment, so telehealth services prevent needless trips to the city.

It took Mariam Buffalo some convincing to take part in teleophthalmology services. A member of the Saddle Lake Cree Nation and grandmother of 10, Buffalo now appreciates the new service in her community. Admittedly in denial about her diabetes for a number of years, she reluctantly attended a visit from the teleophthalmology team that visited the Saddle Lake Reserve, about three hours northeast of Edmonton. After photographs found problems in her eyes related to diabetes, she was quickly referred for ophthalmic surgery at the Royal Alexandra Hospital. "Ever since then, I have come to terms with the fact that I have diabetes," she says. "There are no two ways about it. Now I'm the first one in line to get my photos taken when they come to my area." YH

The Telestroke Program

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The A.H. Owen and Family Stroke Prevention Clinic at the University of Alberta Hospital offers telehealth appointments through Capital Health's regional telestroke service for adults at risk for stroke. Those who live outside the Capital Health region and are referred by their physicians can have evaluations by stroke neurologists in a videoconference appointment at their local hospital. If further evaluation is needed, the patient may need to travel to Edmonton but quite often, time is saved and travel is avoided with a telestroke appointment. For further information, you can contact the A.H. Owen and Family Stroke Prevention Clinic at (780) 407-7363 and speak with the regional telestroke coordinator.