

Telepharmacy project offers a dose of technology

by Luann Dart

When Perry Glover, rural Maddock, gets his prescription filled, he is assured a face-to-face conversation with a pharmacist 40 miles away. Through the North Dakota Telepharmacy Project, Glover and other small-town and rural residents can get a prescription filled in their hometown, while conversing with a pharmacist miles away.

It's all possible through the miracle of modern technology.

Just over two years ago, the North Dakota State Board of Pharmacy, which establishes the rules and licensure of pharmacies and pharmacists in North Dakota, released a list of 26 rural communities that had recently lost pharmacy services and 10 to 12 more that were at risk of losing a pharmacy.

The state had a healthcare crisis on its hands.

"These pharmacies were being staffed by one pharmacist that had been serving the community for decades," says Charles Peterson, dean of the College of Pharmacy at North Dakota State University (NDSU) and director of the North Dakota Telepharmacy Project. And a national shortage of pharmacists is driving up salaries. NDSU's College of Pharmacy 2003 graduates are earning an average \$85,000.

"We're losing small-town, rural pharmacies due to an aging group of pharmacists that want to step

aside and allow someone to take over. The problem is there's no one to take over because they're not able to compete with the large salaries of corporate America. That is the current crisis that we're dealing with," Peterson says.

Until 2001, a pharmacy could not operate without a licensed pharmacist physically present. Pharmacy technicians had to be directly supervised.

In 2001, the board adopted rules to launch the North Dakota Telepharmacy Project, which allows a pharmacist in one town to supervise a technician in another community through a real-time, secure video and audio link over the Internet.

"It was designed to restore and retain pharmacy services in communities that don't have services or are about to lose their services," Peterson says.

North Dakota is the first state in the nation to allow a full-service pharmacy to operate without a licensed pharmacist being physically present.

The first telepharmacy was established in September 2002, with a pharmacist at the hub site in Killdeer, and the technician in Beach. In 2002, 10 communities participated in the program, with four hub sites and six remote sites.

By the end of 2003, 18 communities in 17 counties will be serving more than 20,000 people through the North Dakota Telepharmacy Project.

A community lifeline

When Maddock's pharmacist left in May, the community found a lifeline in the telepharmacy project. Today, pharmacy technician Thelma Olson fills 45 to 55 prescriptions a day.

"Healthcare in rural areas has been challenged by the fact that there's a shortage of health professionals," Peterson says. "Often, the pharmacist is one of the only healthcare professionals in a community." Besides keeping pharmacists in rural North Dakota, the telepharmacy project aids in economic development by adding businesses and jobs.

"In a small town of 500 to 1,000 people, we're adding a \$500,000-per-year business to the community," Peterson says.

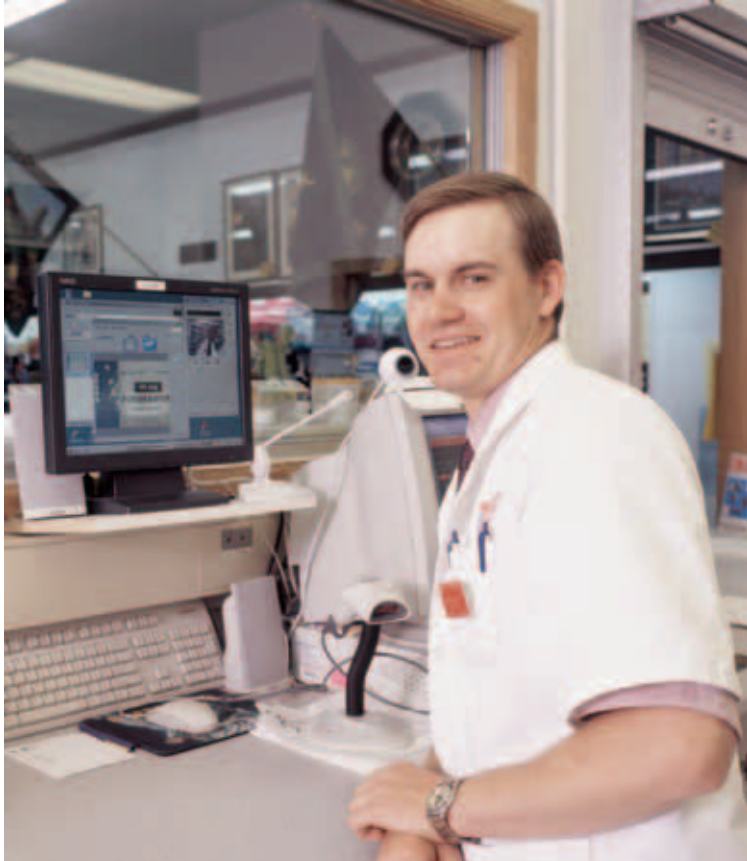
The North Dakota State Board of Pharmacy must first approve a telepharmacy site through an application from either a community or an individual pharmacist.

But when the project was first launched, pharmacists didn't feel they could afford the \$200,000 cost of launching a telepharmacy site.

That's when NDSU stepped forward.



Pharmacy technician **Thelma Olson** greets customers at the Maddock pharmacy, but is supervised by pharmacist Kyle DeMontigny in Rugby. The connection also allows patients in Maddock to visit with DeMontigny through a video and audio connection between the two pharmacies.



PHOTOS BY LAVIN MUDDER

Pharmacist **Kyle DeMontigny**, who works in Rugby, supervises technicians in Maddock and Rolette through a video and audio connection with both remote sites.

“What a great opportunity for the university to get involved in helping the profession discover new and better ways of serving the public’s healthcare needs. It was a perfect way for us to get engaged with the professional community to help solve a real problem,” Peterson says.

With the help of Sen. Byron Dorgan, NDSU accessed a grant to fund approximately 50 percent of the startup costs of a telepharmacy.

Pharmacy technicians must have completed an accredited one- or two-year training program, which is available through the North Dakota State College of Science in Wahpeton. To work in a telepharmacy, an additional standard was added, which requires the technician to have at least a year of practical experience filling prescriptions.

The technology link

When Glover enters the Maddock pharmacy, technician Thelma Olson greets him with a smile. Behind the counter, she places his prescription under a miniature camera, then transmits the photo to pharmacist Kyle DeMontigny in Rugby. DeMontigny will receive three images from Olson for each customer: the doctor’s prescription, the original manufacturer’s drug container with tablets beside it to verify the technician is filling the prescription with the correct medication, and the patient’s medication bottle with the label containing proper instructions for use.

DeMontigny and Olson have a continuous video and audio connection. To speak to each other, they activate a small microphone and they can constantly see each other through a computer monitor, possible through small cameras mounted in each pharmacy that transmit the images.

Once the prescription is validated by the pharmacist over the Internet link, the patient enters a private consulting room in the Maddock pharmacy. There, he sits in front of a small

black camera mounted on top of a computer monitor. In Rugby, DeMontigny sits in his consulting room in front of a similar monitor. The patient and pharmacist can then visit with each other to discuss the proper use of the medication.

The telepharmacy project requires patient consultation, a feature not necessarily found in a typical pharmacy.

“Think how much extra value there would be if 100 percent of patients received education counseling by the pharmacist so that patients fully understand the directions, fully understand how to use them, fully understand how to keep themselves healthy and free of side effects. Wouldn’t that be great,” Peterson says.

“The majority of people are becoming more comfortable with it,” says Olson, a licensed practical nurse who was drawn to pharmacy work mainly because of the telepharmacy project. She now commutes from Devils Lake to serve the Maddock pharmacy.

“(Senior citizens) are a little bit reluctant at first of this high-tech approach, but once you walk them through the system, they actually have fun with it,” Peterson says.

“It’s kind of weird, but I’m comfortable with it,” Glover says. “It’s still better than driving ... Everybody who fills here saves 80 miles of driving.”

“It’s going way better than I thought it would,” DeMontigny says. “I was skeptical at first ... It’s a good way to expand and get more volume and at the same time offer a service to the community.” The Rugby pharmacy, with two onsite technicians, added another full-time pharmacist to help supervise its remote sites in Maddock and Rolette.

In the national spotlight

North Dakota is sharing its telepharmacy success story with other states through a primer written at the request of the federal government.

“We’re sharing this with other states because we feel a responsibility and obligation to help others because in the future it’s going to have a huge impact on restoring healthcare and providing economic development for rural communities all across the country. It’s nice to see North Dakota taking a national leadership role ... The rest of the country is watching us,” Peterson says.

NDSU is also pursuing a grant to establish distance education classes to train technicians in their hometowns without having to drive to a college campus. The university has also established a lab on campus to train pharmacy students in using telepharmacy technology, “so they can learn how to deliver healthcare in a unique and innovative way to a rural community,” Peterson says. ■

Luann Dart is a free-lance writer and editor who works from her home in rural Elgin. A native North Dakotan, she revels in small-town life and writing about the people and places of her home state.

Telepharmacy sites:
Pharmacists are located at four telepharmacy hub sites in the state, which serve six remote sites, including:

- Killdeer, serving Beach and New England
- Rugby, serving Maddock and Rolette
- Forman, serving Gwinner
- Watford City, serving New Town