An Rx for rural health-care

Telepharmacy fills gaps caused by pharmacist shortage

Maybe you can be in three places at one time.

Ask Jody Doe, a 1992 graduate of NDSU’s College of Pharmacy. Every day, Doe checks prescriptions, answers questions and provides face-to-face consultations with customers in the North Dakota communities of Killdeer, New England and Beach.

He manages this even though Beach is 95 miles from his Killdeer pharmacy and New England is 60 miles away. Audio and video links allow him to communicate with his pharmacy technicians and customers as if they are standing next to him.

It’s all part of the state’s new telepharmacy system, which was conceived by lawmakers and pharmacy leaders to battle the rural health-care crisis. Recognizing that the nationwide pharmacy shortage would affect rural North Dakota profoundly, policy-makers have developed a revolutionary model that allows existing pharmacists to take on several satellite sites, staffed by pharmacy technicians. The pharmacists rely on tools like digital cameras, DSL connections and a live satellite feed to supervise the technicians closely — from the labels they type to the pills they dispense.

“It is working very well and in many regards is equal to if not better than the services provided by the traditional way of delivering pharmacy services,” says Dean Charles Peterson, who submitted the federal grant to fund a telepharmacy pilot project.

The telepharmacy system still has some roadblocks ahead: a shortage of pharmacist technicians, technology that can be unreliable or expensive and the possibility of overburdening the central pharmacist.

Overall, however, the pros seem to outweigh the cons. So much, in fact, that the Board of Pharmacy held a rule hearing July 29 to move the telepharmacy project from a pilot program to a regular system — even though the test phase is just 2 1/2 years along, says Howard Anderson, executive director of the North Dakota Board of Pharmacy.

“It has exceeded our expectations,” Anderson says. “It would be great if we had real pharmacists at all these places, but we don’t. Right now, it’s this or nothing.”

The pharmacist shortage is no secret. Those areas most affected have been the rural communities, as they can’t offer the metropolitan amenities and the $100,000 salaries of their urban counterparts.

According to the state board, 26 communities in the state have lost pharmacies and at least 12 more are at risk of losing theirs. “The situation has reached a crisis stage,” Peterson says. “In many cases, the pharmacist is the only health-care provider in the community. So, essentially, residents are losing access to health care, and that has a major impact on the health and wellness of a community.”

The pharmacist shortage is no secret. Those areas most affected have been the rural communities, as they can’t offer the metropolitan amenities and the $100,000 salaries of their urban counterparts.

According to the state board, 26 communities in the state have lost pharmacies and at least 12 more are at risk of losing theirs. “The situation has reached a crisis stage,” Peterson says. “In many cases, the pharmacist is the only health-care provider in the community. So, essentially, residents are losing access to health care, and that has a major impact on the health and wellness of a community.”

Telepharmacy seems to be the best solution. The experimental project was started through the support of the Board of Pharmacy and legislation passed by the 2001 session of the North Dakota Legislature. That law allows medications to be dispensed in certain remote locations without a pharmacist being physically present.

With legislation in place, NDSU applied for a five-year telepharmacy grant from the Department of Health and Human Services’ Office of Advancement for Telehealth. Last year, nearly $600,000 was approved. This year, a $577,000 grant was approved.

So far, remote telepharmacy sites without pharmacists have been established in Beach, New England and Rolette. Central sites, with pharmacists, are stationed in Killdeer and Maddock although — after Sept. 1 — Maddock, which was purchased by Thrifty White, also will become a remote site under Rugby.

Additional remote “spoke sites” are expected in New Town, Gwinner, Mohall, Oakes, Lisbon, Enderlin and Lidgerwood. LaMoure, Velva, Watford City and a second pharmacy in Lisbon are slated to be central “hub” pharmacies.

How it works

Last fall, Barb Buzalsky moved from Rapid City, S.D., back to her hometown of New England to become a pharmacy technician at a satellite site.

She did so because the pay was better than at her previous Medicap job, the cost of living was lower, she could be near family and she could work with Doe, a former schoolmate.

Buzalsky has no regrets. “It’s a win-win situation,” she says. “I enjoy it a lot more.”

New England residents are just as happy. When the town’s former pharmacist retired, there was no one to replace him. “What else would they do?” Buzalsky says. “There’s no other place they can go, other than driving to Dickinson. At least 50 to 75 percent of them are elderly. A lot of them don’t go anywhere, or they have to rely on family to take care of them.”

Initial technology was slow — they started out using e-mail and digital still cameras — which prolonged the verification process. But now that they’ve converted to live satellite feeds, the filling process rivals that of a regular pharmacy. “Now that he’s live, I just call him whenever I have a question,” Buzalsky says. “I still check with Jody on over-the-counters and everything. I don’t recommend a whole lot without him.”

That might reassure some pharmacists, who fear the telepharmacy system gives the pharmacy technician too much responsibility. When clinical associate professor Tom Christensen, co-principal investigator on the telepharmacy project, conducted surveys to gauge people’s reactions to telepharmacies, the response was overwhelmingly positive.

While the majority of pharmacists favored the concept, they also voiced the most reservations. “Some had concerns if it could be monitored enough. A big concern is: Will technicians, over time, lull themselves into a sense of more authority, of being able to handle more than they can?” Christensen says. “And we need to be sensitive to those concerns.”

To witness the system firsthand, however, helps to assuage those worries, Christensen says. Both the pharmacist and the technician have access to the patient medication profile, disease-state information...
and drug interaction warnings. A digital camera over the technician's workstation allows the pharmacist to monitor every stage of the filling process. The pharmacist sees the labels and the drug product, and is able to check the medication against the container it was taken from. When the prescription is filled, the pharmacist counsels the customer via a Polycom video-conferencing system.

In fact, no telepharmacy customer can leave the store without being counseled. It's one way in which telepharmacy actually surpasses the conventional approach, Peterson says. "In the traditional way, a pharmacist must only offer the patient consultation services and the patient can decline — which, unfortunately, many do."

Economic development is another unique aspect of the system. Because the telepharmacy technician pay is better than that of a traditional technician — an hourly wage of $15 vs. $8 to $12 — it attracts experienced technicians like Buzalsky.

It also retains, or even creates, businesses on North Dakota's main streets. Residents no longer need to drive to another community to buy prescriptions, and pick up groceries and other necessities elsewhere in the process.

In addition, satellite sites boost profits for the supervising pharmacist, who fills more prescriptions.

"It is economic development for communities who wouldn't have that business otherwise," Anderson says. "All (telepharmacy sites) are full-service, with health and beauty aids. That's what these communities want."

Growing pains
Still, as with all new developments, the system has experienced growing pains. One issue is a shortage of pharmacy technicians — especially those with the amount of training required. State law requires all techs to have graduated from a certified training program and have at least one year of work experience.

While this requirement provides better-prepared technicians, it also makes them harder to come by. To help remedy the problem, the college is collaborating with North Dakota State College of Science in Wahpeton, which runs the pharmacy technician training program. NDSU and NDSCS have written a grant to identify individuals who already live in targeted telepharmacy communities and recruit them to become future technicians at satellite sites.

Another potential issue for the telepharmacy pharmacist is overwork. Since Doe took on the Beach and New England sites, his prescription volume has jumped from 70 a day to up to 140 a day. In addition, he's consulting with each customer at those three sites.

"Personally, my workload has increased tremendously," Doe says. "It's almost to the point where it's too much. It would be nice if you could hire another pharmacist, but I don't know if we could afford it."

One solution could be a model tested by Thrifty White, in which a pharmacist works out of an office, devoting all his or her time to satellite pharmacies, Anderson says. Yet another challenge is the technology, which doesn't always work. One afternoon, when the satellite went down, Buzalsky had no choice; She closed the store.

The system also requires high-speed Internet connections such as T1 or DSL lines. And, while T1 lines are more reliable than DSL, they can be cost-prohibitive. "What we need to do is convince the companies who control those prices to make them more affordable, so we can start recovering some of those costs," Anderson says.

Christensen believes technology will become less of an issue with time. "The natural tendency is it will only get better and less expensive," he says.

Future plans
Even if the project hits a few bumps along the way, North Dakota is easily at the forefront of the telepharmacy movement. The Office of Advancement for Telehealth has asked the state to write a primer for other states on how to set up telepharmacy services in rural communities. North Dakota's program also has received requests from other states in setting up similar programs.

The goal is to create at least 50 independent, viable telepharmacy sites in five years. "The money isn't received with the idea that these projects will be continually supported with federal funds," Christensen says. "They have to establish themselves. It is a kind of seed money."

The project not only will re-establish a health-care provider in rural areas, it also will provide a training ground for tomorrow's pharmacists. The college plans to install telecommunications equipment in its new Concept Pharmacy instructional lab, which will network with telepharmacy sites.

"Students will provide drug information services to the pharmacists at the central hub sites and assist in counseling patients at the remote spoke sites," Peterson says. "They also will learn about the latest advances in pharmacy technology and how to deliver pharmacy services to rural communities in a unique and innovative way."