

## A 'super boost' to Panhandle Health Information Exchange

By Dave Howe

Data line capacity and reliability are crucial if a system is to get the full benefits of an electronic health information exchange.

The Rural Nebraska Health-care Network (RNHN) recently scored a home run on both counts in the form of a \$19 million Federal Communications Commission (FCC) grant. It comes with a stipulation that it be combined with an additional 15 percent (about \$2.85 million) in local non-profit matching funds. That nearly \$22 million will cover the cost of burying 800 miles of fiber optic cable linking healthcare providers in Nebraska's Panhandle and in areas of other states adjacent to the Panhandle.

The network recently created the Western Nebraska Health Information Exchange, a limited liability corporation to oversee uses that the network has been pioneering in electronic health information technology for several years.

The network's accomplishments under planning and implementation grants it had earlier received from the Agency for Healthcare Research and Quality may have had a lot to do with its winning the \$19 million FCC grant, said Jim Parks, chief operating officer at Box Butte General Hospital in Alliance, one of several critical access hospitals in the network. (See accompanying list of exchange partners.)

The RNHN was "already down the road" in electronically linking Panhandle critical access hospitals with the hub Regional West Medical Center in Scottsbluff, physicians, clinics, behavioral health providers, and other healthcare entities in western Nebraska, said Parks, who is on the exchange's software selection committee.

The network was in the top five among 40 applicants to receive the \$19 million grant from the FCC and the only rural area to do so, according to Parks.

The regional body has been developing practices and protocols for a number of health information technology services, including these:

- Electronically sharing patient health records among providers.
- Transmitting prescriptions electronically to pharmacies.
- Conducting video conferences among healthcare providers at scattered locations to save time and expense of travel.
- Carrying out consults between local physicians and specialists at remote locations.
- Transmitting lab test results and radiological reports between local providers and remotely located healthcare providers to whom patients are referred.

The idea is not only to serve this area of the state but also to share with other interested communities what has been learned about electronic health-care information exchange.

What does the grant mean to providers in the WNHIE that was created by the network? They are currently linked by TI lines subsidized by the Universal Service Fund under the Nebraska Statewide Telehealth Network.

A TI line has a bandwidth or capacity of about 1 megabyte (MB) per second. In contrast, each of the 24 fibers in the fiber optic cable to be installed under the grant has a capacity of up to 1,000 MB per second - 1,000 times the capacity of a TI line, Parks said

As envisioned now, each partner provider in the exchange would have use of a dedicated fiber in that 24-fiber cable, he explained.

That means a hospital, clinic or other provider would have enough capacity to conduct several bandwidth-hungry functions simultaneously, Parks explained. One example is being able to transmit a radiological report and, at the same time, carry out a two-way video conference between a behavioral health patient at the hospital and a psychologist at a remote location.

Also, the exchange members will have the redundancy of the planned fiber optic cable and the T1 lines of the Nebraska Statewide Telehealth Network. Redundancy is important as a safeguard against interruption of network use during a critical moment, such as an interactive consult between a physician performing surgery at a local hospital and a specialist at a remote location. Such interruptions can occur when, for example, a farmer or construction crew accidentally severs a cable or line, Parks said.

Exchange partners may need to add some equipment to utilize the fiber optic cable, but the cost for that will be relatively low, Parks said.

The grant comes with several conditions. First, the network must raise an additional 15 percent of matching funds from local donors. In addition, the fiber optic cable must be operational in three years, Parks said.

The grant came about when Hemingford Cooperative Telephone Company employee Joanie Jesspersen was doing some sleuthing for sources of communications grant funds for the phone company. (The phone company provides telephone service to network partners.)

In the process, she discovered a \$460 million FCC fund set aside for "medical communications," Parks said. "It was a fund that nobody was using."

He said Jesspersen, who is a Box Butte General Hospital board member, said: "I found this. What can we do with it?"

Fiber optic cable was the answer.

Jesspersen and the phone company's general manager, Theron Jensen, worked with the non-profit network to apply for the grant, for which only nonprofit organizations are eligible.

While Parks credited the network's previous accomplishments in health information technology as a factor in landing the grant, he cited another major factor: strong teamwork among network participants, which he said included some 80 people working on the grant application. A lot of the work was done by the hospital CEOs in the network and by the Hemingford Cooperative Telephone Company, Parks said.