



Wireless Broadband Breathes New Life into Rural Medicine

Wireless broadband technology is cost-effectively bringing big city capabilities to rural medical clinics around the globe – ensuring their very survival in the process. Like their urban counter parts, rural medical practices are increasingly leveraging advanced broadband solutions to improve communications, offer better patient care and monitor and streamline administrative processes. By improving connectivity, wireless broadband technology delivers the critical access to propel rural medicine forward, securing not only its long-term viability, but potential for growth.

The Stimulus Effect

The current American Recovery and Reinvestment Act (ARRA), also known as the U.S. stimulus package, earmarks billions of dollars for health information (HIT) technology. Such spending measures are expected to accelerate the standardization of HIT technology and the adoption of a variety of patient care technologies including interoperable electronic medical records (EMR) systems and e-prescriptions.

Capitalizing on Rural Initiatives

As more and more rural broadband initiatives roll out worldwide, healthcare practices of all sizes stand to reap meaningful rewards. One small town medical clinic in the Southwestern U.S., serving a community of 2,500 and a county of 10,000, capitalized on a community broadband access grant to build out the necessary network infrastructure to link wirelessly to four regional hospitals within a 30-mile radius of its facility. A self-described Island of healthcare, the clinic previously had limited and unreliable connectivity to these facilities, resulting in less efficient and more costly patient care and duplicative administrative processes. By deploying a wireless solution, the clinic realized thousands of dollars in monthly T1 lease costs.

To make its wireless strategy a reality, the clinic partnered with Motorola, Inc. and ERF Wireless, Inc., to implement a fixed wireless broadband solution. The original broadband system serving the community
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Forging the Rural Broadband Path: Key U.S. Legislation

- The Universal Service Program established by the 1996 Telecommunications Act funded broadband Internet access for medical facilities.
- To significantly increase access to acute, primary and preventive health care in rural America, the Federal Communications Commission dedicated over \$417 million in 2007 for the construction of 69 statewide or regional broadband telehealth networks in 42 states and three U.S. territories under the Rural Health Care Pilot Program (RHCPP).
- The Rural Health Care Program of the Universal Service Fund (USF), which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to provide reduced rates to rural health care providers (HCPs) for telecommunications services and Internet access charges related to the use of telemedicine & telehealth.

MOTOROLA WIRELESS BROADBAND

(continued from front)

came as a result of a state grant in 2004 and consists of Motorola Point-to-Multipoint (PMP) technology (5.8 GHz and 900 MHz). Upgraded through the years by ERF Wireless, the network has expanded to include Point-to-Point (PTP) links that provide backhaul connectivity to the fiber backbone and now encompasses 25 tower sites and delivers more than 60 Mbps of throughput.

Numerous quality-of-care and quality-of-life benefits will result from the widespread adoption of digital Health Information Technology (HIT) including uniform, interoperable technological standards that will network and digitize the healthcare system to connect fragmented systems via broadband.

Source: The Benton Foundation

Protecting Patient Information

To meet HIPAA guidelines, the clinic's solution provides a secure pipe for the transmission of electronic patient health records (EHR), real-time diagnostic imaging and access to core databases.

The Value of Broadband: Telemedicine

Rural residents often face challenges accessing a full range of healthcare services. Broadband technology is changing that. According to a report issued by the U.S. Department of Agriculture (USDA) Economic Research Service, "Rural Broadband at a Glance," the value of broadband has both medical and economic implications:

Medical benefits:

- Improving the perception of locally provided healthcare quality
- Offering a larger menu of locally provided medical services
- Treating emergencies more efficiently
- Telehome monitoring can help providers better manage elderly rural residents with chronic conditions, thereby reducing hospitalizations and avoiding early placement in nursing homes or assisted living care facilities

Economic benefits:

- Reducing time off of work due to decreased travel time to access specialist care
- Lowering the cost of travel to receive care
- Increasing revenue from pharmacy and lab work that can be conducted locally
- Reducing costs to health facilities by outsourcing specialized medical procedures



A Significant Lifeline

For the Southwestern medical clinic, wireless broadband technology not only delivered significant cost savings, but the critical access it needed to more effectively connect to the regional hospitals and health-care facilities more than 30 miles from its doorstep. The ability to remotely monitor patients, share patient diagnostic data with other medical professionals and access shared databases, has helped the clinic improve its patient care and attract new doctors. Making the broadband investment has meant the difference between merely surviving to thriving. High speed data connectivity is increasingly becoming the gold standard in the healthcare industry and is proving crucial for the continued survival of rural clinics around the globe.

About Motorola Wireless Broadband

Motorola's Wireless Broadband and our WLAN solutions provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, Wi-Fi and WiMAX networks that support data, voice and video communications, enabling fixed and mobile applications for public and private systems.

About ERF Wireless, Inc.

ERF Wireless, Inc. headquartered in League City, Texas, specializes in providing secure broadband wireless and other broadband products and secure service solutions on a national and international basis. Their clients include companies in healthcare, banking, the oil and gas industry and other commercial and residential customers. Its principals have been in the network integration, triple-play FTTH, IPTV content delivery, and Internet banking and encryption technology businesses for more than 20 years.



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