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*USDA Rural Development: Telecommunications Program;
Distance Learning and Telemedicine Program; Pennsylvania*

Wayne County Memorial Hospital

Need:

Located in an exceptionally rural area, residents of Wayne County, PA, Lackawanna County, PA, Pike County, PA, and Sullivan County, NY, were in desperate need of a new, more efficient way of receiving radiology services. Due to a dearth of medical providers, these residents often had to wait six to eight weeks to receive X-ray information. This problem was compounded by a lack of public transportation services, which made it particularly hard for the sick, elderly, and indigents to get the medical attention that they were in need of without traveling outside of their service areas. This community was in need of a teleradiology system that would allow consumers the opportunity to have their X-ray images read in real-time at a local hospital. In addition to X-ray services the network would support CT scans, MRI services, Ultrasound, and Digital Fluoro images.

How Rural Development Helped:

Rural Development awarded Wayne County Memorial Hospital a \$500,000 grant in 2002 for the development and installation of a teleradiology network. Another grant of \$155,213 was also awarded in 2006 for a computed radiography unit, a fetal monitoring system and home

health monitoring units. Recently they were awarded their third grant in 2010 for the amount of \$351,748. radiography unit, a fetal monitoring system and home health monitoring units. Recently they were awarded their third grant in 2010 for the amount of \$351,748.

Results:

According to Grants Manager Jack Dennis, "Wayne Memorial Hospital services a rural population of approximately 120,000 people, since 2006 the 3 DLT grants have provided improved medical care and services close to home for many of these residents."

With the new network, primary care doctors have instant access to patients' radiology results and are able to diagnose and treat illnesses more effectively.

Wayne County Memorial Hospital recently received another grant to install a new hub in another location in order to expand its coverage area. Apart from trying to serve as many people as possible, this grant works to target special groups. An assessment of women's programs is currently underway and will hopefully lead to the development of a women's access program. The results of this new grant will be evident in improved quality of life for thousands of residents that it continues to serve.

The project had 3 components, a RM/PAC system, home health monitoring equipment and a prenatal system, which has been installed.

The RM/PAC (Radiology Management and Picture Archiving and Communication) system allowed the hospital to contract with the University of Pittsburgh to perform X-ray readings. Since this is a remote area, hiring qualified technicians was a challenging prospect. The system was also installed at a remote site and allows central processing of X-ray films. Wayne County Memorial Hospital is still



using standard X-ray film and then scans it. They hope to start using digital technology in the future. They have recently purchased a new site in Wayne County and plan to install the PAC system here as well.

The Prenatal system allows their OBGyn's (online community of Obstetrics/Gynecology medical professional) to monitor their admitted patients from any location with an adequate internet connection. This



eliminates extra trips to the hospital for doctors to monitor their patients, increasing the quality of life for the doctors and helping with retention.

The home health monitoring system included the purchase of 40 units and is very popular with the nurses and patients who use the system. The hospital expects to increase the number of units in service.

Current Projects:

Wayne County Memorial Hospital plans on using the 2010 grant for replacing the current radiography unit with an advanced system that has the capability to generate digital mammography and X-ray images. This new system offers numerous advantages, for example the technology allows them to capture an x-ray image faster and the resolution/sharpness of the image is also much better.

The grant will also be used to enhance the maternal-neonatal fetal monitoring system. This system can be utilized anywhere in the hospital including the Emergency Department and operating room. Two other projects will also be financed by the 2010 grant, the first is the telecardiology which is a technology that instantaneously transmits echo-cardiograms to cardiologists at remote locations and the second project involves Telestroke. This system provides a real-time link between the Wayne Memorial and Geisinger Medical Center's accredited Primary Stroke Center.