Broadband USA Applications Database

Applicant Name: CENTRAL IOWA HOSPITAL CORPORATION

Project Title: Rural Iowa Telehealth Initiative

Project Type: Sustainable Broadband Adoption

_______________________ Executive Summary ______________________

Recent data from Iowa State University show while few Iowa communities have escaped job-losses and layoffs in the past year, the current recession has hit jobs harder in rural towns than in metro areas. Residents in rural Iowa often have lower incomes and higher poverty rates. Further, a recent study by The Iowa Policy Project estimates that 1.2 million rural residents in Iowa 'need increased access to affordable, quality health insurance', usually due to a job loss or lack of employer-sponsored health insurance. According to the USDA Economic Research Service, rural per-capita income lagged at $32,225 compared to urban per-capita income. Estimates from 2008 indicate a poverty rate of 11.6% exists in rural Iowa. Data from 2000 reports 15.7% of the rural population has not completed high school, while only 12.3% of the urban population lacks a high school diploma. The unemployment rate in rural Iowa is at 4.5% (USDA-ERS, 2008). The leading cause of death in Iowans under the age of 40 is trauma, and there is a strong correlation between traumatic injuries and the use of heavy farm machinery and equipment. In 2008 alone, there were over 2,000 farm related injuries and 287 people died in farm-related accidents. And, despite the large number of trauma cases, only 12.5% of Iowa hospitals have certified trauma centers. The health provider workforce in rural communities reflects difficulties in recruitment and retention. Rural physicians are physically and often professionally isolated. This isolation results in inadequate access to information and services more readily available in secondary and tertiary level institutions. Such conditions create a barrier to optimal patient care and to the professional satisfaction that could potentially keep physicians and other health care providers such as nurses and ancillary providers from practicing in the rural primary care setting. The Rural Iowa Telehealth Initiative seeks to create jobs, deliver workforce development opportunities and provide access to quality affordable healthcare in the most rural and medically underserved communities through implementation of a telehealth program. The Central Iowa Hospital Corporation will lead this project with four rural hospitals and 81 community anchor institutions representing the rural communities and whole-heartedly supporting this initiative. The challenges to rural residents in Iowa make the development of the Rural Iowa Telehealth Initiative a promising focus for utilization in the state of Iowa. Health care reform measures currently under discussion, such as managed competition, will put additional responsibility on the rural health care provider to become the requisite gate-keeper for such systems. This has the potential to create ripple effects in economic regeneration in rural communities with the demand for a qualified and skilled workforce, needs for quality education and training, and the requirements for outreach programs for the residents in the communities. The availability of telecommunications technologies and the statewide fiber-optic infrastructure have the potential to play an important role in optimizing delivery of services to rural residents and to preserve
and strengthen the rural communities through a sustainable broadband adoption initiative such as the Rural Iowa Telehealth Initiative. The total federal funding requested for this initiative is $8,321,815 with a combined cash and in-kind match of $5,445,104 which equates to 40% of the federal funding requested. This project will impact approximately 871,000 out of the 1.2M rural residents of Iowa. The cost effectiveness of this project is evident from the $10 in Federal funding requested per rural resident. The project will connect our partnering sites, providing telemedicine consultations, clinical mentoring and collaboration, and patient education and training over high-speed secure IP-network in Iowa. The network is a seamless innovative integration of three core layers, each of which is critical for successful adoption and utilization of the network by the end-user sites. The three-layer architecture comprises of the following layers: 1. Layer 1 consists of the secure Internet Protocol (IP)-based broadband network. 2. Layer 2 consists of the hardware conferencing and server core that is technological hub of the Network. 3. Layer 3 consists of the telemedicine systems at the distributed end-points where the telemedicine and distance learning applications are routinely used. The partners of this Initiative have found multiple innovative ways to reach the most rural and under-served counties by understanding the healthcare and educational needs of residents, and by reducing the geographic, cultural and language barriers they currently face. Adopting health information technology (HIT) is the next step toward creating a virtual medical home for a population that lacks stability and continuity in the care they can access. Through this Initiative, we plan to: ' Increase local access to health care for uninsured residents by developing outreach models for facilitated enrollments at the telehealth points of presence. ' Create new opportunities for education and development of health care professionals locally that would otherwise have to leave the rural setting for like opportunities. ' Connect community colleges and other universities to rural communities to deliver distance learning options for rural citizens to train and become part of the local infrastructure of health care professionals. ' Connect a critical access hospital to area high schools to teach nurse aide and medical terminology courses, in order to grow nurse aides for positions at the hospital, while preparing them to seamlessly move into nursing and other healthcare professional roles. ' Develop a model of education for health-related issues via teleconferencing in schools and other community locations to provide consistent communication and information in times of need, like pandemic influenza outbreak, as well as community education on topics such as healthy living and chronic disease support. ' Provide tools through telemedicine applications that are indispensable for home health care, remote patient monitoring, and disease management, to improve access to healthcare services. ' Link the correctional facilities to hospitals to provide local access to services when warranted without an escape risk of the inmate. ' Provide community emergency department physicians immediate access to specialty physician consultations to assist with patient examination and initiation of treatment allowing patients in rural communities' access to the same standards of care delivered in urban emergency department. ' Offer telepharmacy services to the rural hospitals through access to 24/7 pharmacist order entry from staff located at tertiary care facilities. ' Enable hospitals to partner with area community colleges to offer certified nursing assistant classes and college-level curriculum for healthcare career students in an effort to "grow their own workforce". ' Connect rural anchor institutions in a virtual unified command center with the state departments of health and homeland security for response to, mitigation, and recovery from disasters. The ultimate objective of the Rural Iowa Telehealth Initiative is to bring economic regeneration in our rural communities that have been battered in the recent downturn in economy. We plan to do this by
leveraging technology and broadband adoption that will provide the workforce with training and educational opportunities that will prepare them for high-tech jobs, expose the school-going and community college students to high demand careers and related skills, equip the rural residents with healthcare and ancillary services that improve their overall quality of life, provide public safety workers with the best of training and tools to keep their communities safe, all of which will develop a thriving and sustainable model of economic development in rural Iowa.