Broadband USA Applications Database

Applicant Name:  RESEARCH FOUNDATION FOR MENTAL HYGIENE INC

Project Title:  Broadband Telemedicine and Telepsychiatry - Health Information and Services to Citizens' Homes

Project Type:  Sustainable Broadband Adoption

_________________ Executive Summary __________________

The Strategy: Broadband can enhance services for healthcare delivery by:

- Making meaningful healthcare information readily accessible and available in citizens' homes
- Making critical health information available at the point of care for patients in a secure fashion
- Making healthcare providers accessible to broader populations, especially to the unserved and underserved vulnerable populations in rural areas
- Making meaningful healthcare information and services available via the Internet to citizens' homes and doctors' offices will promote broadband demand and spur the widespread use of broadband services.

Broadband enabled telemedicine/telepsychiatry is a unique awareness campaign for broadband services. It provides a market force to sustain the broadband adoption.

Problem Statement: Evidence-based research and practice revealed that population health depends on citizens' lifestyles and their access to healthcare information. Affluent citizens in urban areas today do have some limited access over the Internet to healthcare information. Some of them can communicate with their doctors via broadband services. However, such limited access is not afforded to rural areas and vulnerable populations. Citizens and doctors in rural areas are not aware of how broadband services can improve people's healthcare, neither are they offered opportunity to learn new technology. For vulnerable population groups such as children, low income families, and ethnic minorities, the barrier to obtain broadband services for healthcare purposes is steep. It is widely recognized that insufficient capacity for clinical care exists at a national level for a large number of patients requiring specialty medical care. Throughout the United States, there is a shortage of child and adolescent psychiatrists needed to treat children with behavioral health needs. This shortage disproportionately affects rural and underserved communities that often lack access to evidenced-based treatments. For example, according to the Surgeon General, about 20% of children are estimated to have a mental disorder, with 5-9% of children having severe functional impairment or serious emotional disturbances. Of the total number of children and adolescents suffering at least mild functional impairment, less than 1 in 5 receive treatment. While it is estimated that approximately 33,000 child and adolescent psychiatrists are needed to adequately treat children in the U.S., there are only 7,000 child and adolescent psychiatrists in the U.S. today. This problem is particularly serious in rural New York, which has too few healthcare facilities and practitioners. In New York State, the medically unserved and underserved population overlaps with broadband unserved and underserved areas. Rural healthcare services are provided by small-scale facilities and governmental agencies, which lack the financial and technical resources to take advantage of the new broadband capability to improve healthcare through telemedicine and dissemination of healthcare information.

The Solution: Expanding several existing personalized...
healthcare and telemedicine initiatives in New York State, we will make integrated healthcare information accessible to about 2 millions of New York's most vulnerable populations in their homes and in their doctors' offices through a personal health record (PHR) portal. We will expand our rich healthcare content of widespread interests. We will integrate video teleconferencing (VTC) capability in the PHR portal to enable just-in-time telepsychiatry consultation over the broadband network. The project will provide training and education for both citizens and doctors to use broadband services. For the 34 rural counties, it will provide broadband access, support, and inexpensive end-user access equipment to stimulate the broadband adoption. Following any existing and new last mile infrastructure to citizens' home, agnostic to broadband carriers, the PHR portal will serve the entire New York State. From the mid-mile anchor institution perspective, the proposed telepsychiatry network would serve 34 New York counties, with a combined population of 2.66 million, 36% of whom are under 18 or over 65. The community anchor institutions covered in this project include approximately 300 healthcare organizations. These 300 organizations form the targeted mid-mile anchor institutions in the rural New York State. We will install new or upgrade the broadband services to these community anchor institutions. The proposed telemedicine/telepsychiatry network would include 20 backbone Tier 1 broadband nodes linking each other via 100 mbps broadband connections or faster and 300 Tier 2 broadband connections from the Tier 1 nodes. Tier 2 community anchor nodes aggregate the broadband demand induced by the telepsychiatry. The design of the broadband services maximizes the use of existing state-wide infrastructure. To carry out this project is a well prepared and most competent private-public partnership in New York State. The project is a result of the long lasting public-private partnership. The project team includes experts from Research Foundation for Mental Hygiene (RFMH), New York State Office of Mental Health (OMH), New York State Psychiatric Institute (NYSPI), Columbia University, Visiting Nurse Service of New York (VNSNY), IPLogic, and Tandberg. As a state agency, OMH operates the state-wide public mental health system, one of the largest in the country, with vast outreach to and strong partnership with local communities in all counties. OMH also regulates the private industry for mental healthcare. Department of Psychiatry at Columbia University, a higher education and research institution, excels in telepsychiatry and personalized medicine. IPLogic is one of the most competitive broadband service private for-profit companies covering the entire New York State. The project represents an innovative program that will promote the demand for broadband service. By promoting telepsychiatry and extensive use of personal health records on line, it significantly increases the awareness of broadband based healthcare services and spurs the widespread adoption of such services. It induces a fundamental change of healthcare delivery and promoting population health thus provides long lasting market force to sustain the state-wide usage of broadband services. The project targets over 2 million citizens in vulnerable populations. We expect more than 100,000, or 5%, new subscribers to broadband services who are otherwise not attainable in the market. These 100,000 new prescribers are achieved via the cost-effective fashion of about $200 per new subscriber. Such subscribership will be highly verifiable as the project provides the broadband connections and end-user equipment. The project contains a research component to measure, monitor, and continuously verify the adoptions of broadband healthcare services then guide the innovation of the content, services, and public policies that retain subscribership and recruit new users. The project also contains an outreach, training, and education component to help users to make best use of the broadband services. Project Costs The total project budget is approximately $19 million, of which we are requesting $14.8 million
federal grant funds. The private-public partnership will provide matching funds in the amount of $4.45 million equating 30% of the eligible costs of the project, out of which $1.48 million, or 10%, is cash match, which will used to buy broadband VTC units for 20,000 vulnerable households. The project will be substantially completed within 2 years of the start. Grant funds will be used to: 'deliver healthcare information and content via a personal health records (PHR) portal over Internet to citizens' homes and doctors' offices; ' develop and deliver training, education, and research programs for citizens and doctors to use broadband enabled PHR portal and telepsychiatry services; ' make available broadband services and VTC units in 2,000 psychiatrists' offices serving vulnerable populations such as children in need of mental healthcare; ' install broadband connections for three years in 300 community anchor institutions and lower the entry barriers for broadband demand aggregation. Estimated Job Creation Implementation of this network will stimulate the economy and create jobs. Most of the federal funding will go to private for-profit partner organizations, citizens' homes, and doctors' offices. This spending will directly or indirectly sustain or create about 40 jobs. By breaking down the geographic barrier, it can spur high quality jobs in telepsychiatry that would not have been possible in traditional settings where psychiatrists are unwilling to move to rural areas even though the demand for their services is high there.