

National Broadband Plan Staff
Federal Communications Commission
445 12th Street SW
Washington, DC 20554
December 2, 2009

The attached document is submitted for your consideration in accordance with:

COMMENT SOUGHT ON HEALTH CARE DELIVERY ELEMENTS OF NATIONAL
BROADBAND PLAN NBP Public Notice #17
PLEADING CYCLE ESTABLISHED
GN Docket Nos. 09-47, 09-51, 09-137; WC Docket No. 02-60

The comments are submitted by a group that formed as a result of the Rural Health Care Pilot Program (RHCPP) from the membership in Internet2 and interested groups and individuals wanting the program to succeed and improve health care delivery particularly to rural Americans. Because of the interest of the group and the focus on the Pilot Program, the responses are limited to question 6 with a particular focus on 6b. However, since it is not feasible to discuss the Pilot Program without considering the original Rural Health Program, responses are also provided to 6a. In addition, with the support of Office of Health Information Technology Florida Center for Health Information and Policy Analysis Agency for Health Care Administration we are providing a response to question number 1.

The recommendations are numerous but should not dilute the message that the goals of the Rural Health Care Pilot Program were very good and should be encouraged and strengthened. The Pilot program was created because of the limited success of the original program that often distributed ten to fifteen percent of funding cap. The administration of the RHCPP has led to near disastrous results with about two percent of the funding being disbursed after almost two and one half years of a three-year program.

The community remains committed to the success of the RHCPP and makes many recommendations that are aimed at strengthen and broaden it to replace the original Rural Health Program.

These comments are not new to this community. Rather, these have resulted from many conference calls, presentations and meetings, including one with then acting FCC Chairman Copps in February 2009. This group is focused on the success of the Pilot Program and on using Broadband networks to provide all Americans with improved health care.

We appreciate the opportunity to provide these comments and are willing to provide any other assistance to meet these goals.

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Introduction

The following responses are submitted to the Broadband planning staff by the ad hoc Health Network Group that has arisen as a result of a common interest in the success of the Rural Health Care Pilot Program (RHCPP). This group meets regularly via conference calls and semi annually in face-to-face settings. The members of the group include at least physicians, educators, technology experts and administrators in rural and urban settings who provide each other with advice, resources and processes aimed to ensure the success of their activities.

The group is particularly focused on questions in section 6b but since it is not feasible to consider the Pilot Program without reference to the original Rural Health Program responses are provided to questions from section 6a. In addition, with the support of Office of Health Information Technology Florida Center for Health Information and Policy Analysis Agency for Health Care Administration we are providing a response to question number 1.

The recommendations are numerous. The key messages are that the goals of the RHCPP are applauded and encouraged. Yet the program is close to being a disaster because of the administration of the program. The recommendations address these issues and the need to broaden the program's participants and support mechanisms.

This ad hoc group remains committed to the success of the RHCPP and these comments are submitted with the desire to achieve this end.

1. IT Infrastructure to Support Healthcare Delivery
 - a. Hospitals

The rollout of statewide exchange of medical records relies on three conditions: the adoption of electronic health record systems (EHRs) by health care providers; the implementation of a sustainable, statewide health information exchange (HIE); the creation of an affordable broadband infrastructure that can meet the increasing demand for medical data traffic. EHR adoption, HIE and broadband infrastructure are basic health care network building blocks that serve complementary purposes and all need to be developed along parallel strategies. A high-speed telecommunications network is fundamental to the success of statewide HIE.

Access to a broadband infrastructure is greatly restricted in the rural areas of a state. The following example of the need for broadband access comes from a broadband connectivity survey conducted in 2009 in 28 rural counties in Florida, the Rural Areas of Critical Economic Concern (RACECs). The survey data come from responses of 18 rural hospitals in Florida. The survey provides details on the health care environment in each

RACEC – Opportunity Florida in the Florida Panhandle, North Florida Economic Development Partnership in North Central Florida and Florida’s Heartland REDI in South Central Florida. The survey reports the number of health care facilities, the number of health care workers, the volume of patient admissions in hospitals and emergency departments, the bandwidth available to hospitals and the broadband demand from hospital CIOs.

There are 755 health care facilities in the RACECs, including hospitals, clinics, long-term care facilities, radiology, clinical laboratories, home health care and others. Of these health care facilities, 23 are hospitals. Each one requires a connection to broadband and to the statewide HIE. Hospitals and clinics should be connected at the highest bandwidth available (100 Mbps recommended). All others should be connected with at least 10 Mbps.

Funding from the American Recovery and Reinvestment Act (ARRA) is available for EHRs in hospitals and other providers’ facilities that will require broadband access to become fully functional. Funding for the EHRs and EHR training is coming from Medicaid and Medicare incentive programs and from the Office of the National Coordinator for Health IT. In order for these programs to succeed, a broadband infrastructure must be in place that provides access to broadband to every health care provider.

The implementation of broadband access for health care facilities must take into account the information exchange needs of the health care workforce. The total health care workforce in Florida’s RACEC counties is 25,061, of which 663 are medical doctors. These numbers include positions that deliver care, such as doctors, dentists, nurses, optometrists, and other licensed health care practitioners listed in the Florida Department of Health licensing database. The numbers indicate the potential health care population that would want access to high speed broadband to do their job. A number of practitioners might work in one facility, but each one will need computer access to the health care network.

The number of patients seen in the emergency departments and admitted to hospitals in the RACECs indicates the potential volume of records that will need to be transferred in a health information exchange setting. In 2008 there were 51,711 admissions to hospitals in the RACECs. In the same year there were 288,744 visits to the emergency departments of the rural hospitals. If each one of these admissions initiated a query for an electronic patient record, then these represent a demand curve for medical data traffic from hospitals to the statewide HIE. The demand for high bandwidth availability will increase as x-rays and MRIs are exchanged.

The hospitals in the broadband survey were asked to indicate the speed of their telecommunication service. Only one hospital had a broadband connection of 100 Mbps and another of 45 Mbps. Both of these hospitals were part of a hospital system. Three of the hospitals had connections at 10 Mbps and two had connections at 2 Mbps. The rest of the hospitals, eight or 44% of them, had T1 connections of 1.5 Mbps. Given these figures one can extrapolate that the rest of the 732 health care facilities that are not hospitals have little access to high speed broadband.

The CIOs of the hospitals were asked a number of questions about their expected broadband demand. 61.1% of the rural hospitals had EHRs and 55.6% wanted to transfer large image files, such as x-rays and MRIs. Almost three quarters or 72.2% of hospitals wanted to increase their speed of connection, and 83.3% ranked the affordability of broadband as their greatest barrier.

The broadband connectivity survey demonstrates that with some exceptions, access to broadband is generally limited to T1 speeds of 1.5 Mbps. Some hospitals have electronic health record systems, but too few to handle the requirements of statewide health information exchange. This situation will most likely change with the ARRA health care funding in the next two years. Most hospitals want to send large files, such as x-rays and MRIs and most hospitals want faster telecommunications service, but need it to be affordable.

The case of Florida's rural hospitals is surely no different from rural areas in states across America. Access to high-speed broadband appears to be inadequate to meet the demands of health information exchange. This is a key issue for rural hospitals and other health care providers. If affordable, high-speed broadband access (100 Mb) were made available to rural hospitals, clinics and doctors' offices, then health care telecommunication services could become available for the delivery of health care. Affordable, high-speed broadband availability is essential to the development of sustainable health information exchange and telemedicine services.

6. Universal Service Rural Health Care Support Mechanism and Rural Health Care Pilot Program.

a. Questions Relating to the Rural Health Care Support Mechanism:

- i) Nationwide Connectivity. How does the existing rural health care support mechanism affect nationwide connectivity? Are there instances where the discount structure of the existing rural health care support mechanism provides incentives for rural health care providers to maintain slower, more expensive connections, rather than purchasing faster connections that may be less expensive? Provide specific examples of ways in which the mechanism may impact how health care providers choose broadband service offerings.***

Response

The statute 47 U.S.C. § 254(b)(6), (h)(1)(A), (h)(2) states:

A telecommunications carrier shall, upon receiving a bona fide request, provide telecommunications services which are necessary for the provision of health care services in a State, including instruction relating to such services, to any public or nonprofit health care provider that serves persons who reside in rural areas in that State at rates that are reasonably comparable to rates charged for similar services in urban areas in that State. A telecommunications carrier providing service under this paragraph shall be entitled to have an amount equal to the difference, if any, between the rates for services provided to health care providers for rural areas in a State and the rates for similar services provided to other customers in comparable rural areas in that State treated as a service obligation as a part of its obligation to participate in the mechanisms to preserve and advance universal service.

The result of the statute has been the creation of independent special purpose networks that usually are not expected to interoperate. The statute is often interpreted that the

telecommunications carrier rather than the health care provider determines the nature of the network and its necessity for the provision of health care services. These networks are often developed using the minimum bandwidth capabilities to meet the identified application. Health care services are often very narrowly defined and often fail to include important factors such as continuing medical education; does not encourage the aggregation of services; and does not consider the community needs such as economic development.

In telemedicine situations in at least Alaska, Oregon and Hawaii aging network infrastructure is not capable of supporting modern video equipment and similarly the video equipment purchased to work with the networks supported by the original Rural Health program cannot take advantage of upgraded network offerings. This double constraint must be overcome to allow all of the health networks to interoperate and reach the individuals in need of the health services.

The FCC Commissioners recognized the need for change when they implemented the Rural Health Care Pilot Program. Specifically they stated the following as the Program's purpose:

“By connecting to this dedicated national backbone, health care providers at the state and local levels will have the opportunity to benefit from advanced applications in continuing education and research. In addition, a ubiquitous nationwide broadband network dedicated to health care will enhance the health care community's ability to provide a rapid and coordinated response in the event of a national crisis.”

- Federal Communications Commission, FCC 06-144, September 26, 2006

ii) Impediments. The Commission has modified various aspects of the rural health care support mechanism over the years, but demand for funding remains below the authorized funding cap of \$400 million per funding year. For funding year 2008, disbursements under the rural health care support mechanism were approximately \$60 million, or 15 percent of the total \$400 million authorized annually for the program.8 Are there specific aspects of the current support mechanism design that suppress demand for funding?

Response

The FCC's Rural Health Program is considered to be overly bureaucratic, paperwork laden, and risky to participate in because of the threat of the need to repay the funding because of an unintended mistake in following the complex rules. The result is that the program is often considered not worth the effort.

When the Rural Health Care Pilot Program was created one of its purposes was to explore ways to improve the standard program's outreach to improve rural healthcare. However the original program's administrative processes have been imposed onto the pilot project. These processes are, at a minimum, cumbersome and impede the rapid implementation of this short-term pilot. See Attachment A.

These recommendations are important to the success of the Pilot Program that was in turn intended to provide input into the Rural Health Program. The Rural Health Program is a tremendous resource that has the potential to change health care delivery in its targeted settings. A characteristic of both health care and its supporting technologies in today's environments are that they are dynamic and perhaps even volatile. The Broadband plan must adapt to that environment and allow for agility and adaptability. This is seldom accomplished with special purpose or single use resources.

One of the problems with the extreme regulatory nature of the E-rate and the Rural Health Care Program is the fact that 'stovepipes' of connectivity are created in a community creating disparity between small community populations. Community residents working in healthcare or education often have unlimited access to the Internet while other rural residents are left with no access. If the intent is to provide broadband access to all rural residents, then a better approach would be to combine the two programs into one broadband plan and require the telecomm carriers to offer reasonable rate internet to the community residents if they are receiving USAC funds for rural communities.

iii) Telehealth and Telemedicine Leveraging. Are there specific ways the Commission could better leverage the benefits of the rural health care support mechanism through coordination with other federal, state, local, tribal, or nonprofit programs that seek to advance broadband deployment or the efficient use of telehealth and telemedicine?

Response

The FCC is only one of many Federal organizations involved in the support and promotion of rural and telehealth. The lack of coordination between these organizations has created independent developments that are sometime confusing and counterproductive. For example, when the FCC Rural Health Pilot Program proposals were submitted but not yet evaluated an official from another agency called a member of our community to complain that Rural Health was their responsibility and this person was not consulted and this program should be stopped.

A lack of coordination leads to differing definitions of eligible entities, mistrust between programs, differing methods and measures for evaluation and significant paperwork and reporting requirements on those receiving support.

One intention of the Rural Health Care Pilot Program is to build a ubiquitous telehealth network. Their activities are focused on the physical telecommunications infrastructure. The Office of the National Coordinator for Health Information Technology is working toward a Nationwide Health Information Network to allow the exchange of information that can take advantage of the physical infrastructure. There is some coordination but common planning and sharing of common goals that are well understood by the community could only be beneficial to the community.

While it may be outside of the broadband planning we would recommend that the regulations limiting telemedicine services to rural patients only be rescinded and allow

services to be provided and paid for patients in urban areas as well. Urban patients, especially elderly and other frail populations would benefit from telemedicine services. These services should no longer be based on locality but on services need and health care benefit. Also, having telemedicine services available in schools where the schools can then be connected to a primary care provider will go a long way in assisting to manage pandemic flu and assist in biosurveillance efforts. Health centers have established medical services in schools across the country and telemedicine services are required.

One outcome of the RHCPP has been the development and augmentation of regional and state-level organizations that can act as intermediaries between the federal RHCPP program and health care providers. These organizations often applied for and are carrying out the RHCPP implementation. The broadband policy should continue to make use of the ability of these organizations to be accountable to the FCC for program development and operation and to be effective in developing and operating broadband service for public and non-profit healthcare providers.

The health system in the United States is undergoing significant change and quickly moving toward an electronic and highly networked enterprise. Unfortunately, the government's broadband financial support structure is based on urban / rural differences that need to re-evaluated and perhaps modified.

- a. Access for certain patient populations/facilities (e.g. the homeless) within urban areas can be as challenging and cost-prohibitive as for rural residents,
- b. The definition of telemedicine-originating sites must be consistent across federal programs. For example, CMS now includes skilled nursing facilities, behavioral health centers, and dialysis centers that are not eligible entities in FCC programs,
- c. Health specialists tend to be located in urban areas and therefore fiscal support for the urban facilities/portions of the telehealth networks needs to be provided on an ongoing basis, and
- d. Rural health care providers are increasingly for-profit yet need to be permitted and encouraged to participate in any support programs to provide incentives to get needed services to rural residents. These health care providers are now required to cover 100% of their costs of participating in network build outs; however that creates a disincentive and can price some rural residents out of access to needed health care services.
- e. The role of data and network operations centers as essential components of the health ecosystem need to be acknowledged.

iv) Role of Universal Service Support. What role should federal universal service support have in the funding of broadband health

care networks? For example, the rural health care support mechanism currently provides, to public and nonprofit health care providers in rural areas, discounts on the installation and monthly charges for telecommunications and Internet access service used for the provision of health care. What would be the impact on the delivery of health care if the rural health care mechanism supported network backbone only (i.e., infrastructure), or supported the use of telehealth applications?

Response

The benefits of ubiquitous nationwide broadband for health are significant because a national high-speed broadband network can enable better quality care and improve access to that care for patients. A nationwide health network will dramatically increase the efficiency of health care by improving the ability to allocate and share both expertise and resources. The current healthcare environment creates disparities in care between those who have access to world-class expertise and resources in some urban locations and those who live hundreds of miles from such resources. An advanced network reaching into the underserved rural communities of this nation removes one barrier to access by non-urban caregivers to the health clinical, educational and research capabilities at Academic Medical Centers and large urban health settings through telemedicine and telehealth facilities.

Much work has been done, and many benefits will emerge, from electronic medical records. But those records must include images, x-rays, scans, diagnostic videos and other large data files. Transmission of such records will require more than today's commercial last-mile Internet connections permit. Moreover, a nationwide medical record exchange should be integrated with the advanced broadband networks needed to conduct telehealth activities – distance diagnosis, remote ICU monitoring, second opinions, distance medical education, and the like. An integrated, high-speed national health network is needed to enable all of these activities.

It is critical that the connectivity be pushed to the last mile to encompass at least anchor institutions including schools and libraries as well as health institutions.

v) Urban Areas. Some commenters suggest that the Commission should replace the current discounts available to rural health care providers with an across-the-board discount on connectivity for all health care providers, regardless of whether they are rural or urban. How would such a change impact demand for funding? How would rural areas be impacted by such a change?

Response

The difficulty is not so much rural versus urban but rather whether the institution is able to support the requisite infrastructure. However, if an anchor institution such as a hospital has a need for connectivity, such as saving lives, then that funding should be available.

There should be a priority for those institutions that exist in rural and underserved areas.

Current regulations are very restrictive and forcing some organizations such as those in Alaska to run separate networks for rural and urban users.

It is also important to understand that rural health care providers are increasingly for-profit yet need to be permitted / encouraged to participate in any support programs to provide incentives to get needed services to rural residents. These health care providers are now required to cover 100% of their costs of participating in network build outs, however that creates a disincentive and can price some rural residents out of access to needed health care services.

vi) Tribal Areas. To what extent do the universal service rural health care support mechanism as well as the rural health care pilot program currently support tribal telehealth networks or Indian Health Service telehealth networks? Are there modifications to the existing rural health care support mechanism as well as to the existing Indian Health Service or other health care systems serving tribal lands that would increase broadband deployment to or adoption by health care providers in tribal lands? Please provide specific data or other information relating to the potential impact of such changes and estimates of how much additional universal service support would be disbursed if the proposed tribal area modifications were implemented.

Response

Within the Alaska tribal health system, Universal Service funds play an enormous role in the connectivity of rural health clinics - 95% of tribal health care facilities (over 200 locations) receive USF support. Since most of these clinics are not on the road system, there is no access to microwave or land lines, so they are totally dependent on satellite telecommunications. Monthly costs for a T-1 can range from \$8K to \$10K. Without this subsidy most small clinics would be reliant on a single phone line or a VHF radio. These technologies do not support most telemedicine and health information exchange applications.

There are a number of tribal clinics that fall within 50 miles of defined urban areas. These clinics are still without any broadband services due to cost. Alaska tribal members would like to see urban clinics included in the FCC Rural Health Care funds. We would like to see all non-profit (including tribal and FQHC) clinics included.

And yet, it is reported that there is no known support for the tribal telehealth networks in Texas.

vii) Specific Changes to the Program. Are there other modifications to the existing rural health care support mechanism that would

increase broadband deployment to or adoption by health care providers? Please provide specific data or other information relating to the potential impact of such changes and estimates of how much additional universal service support would be disbursed if the modifications were implemented.

Response

The members of the RHCPP community encourage an extension and broadening of the original rural health care program by:

- Accepting the program values of better use of health care expertise and resources irrespective of their location from the Pilot Program.
- Incorporating the goals of the FCC's Rural Healthcare Pilot Program into all of the FCC's Rural Health programs.
- Build on the investments being made by the FCC Rural Health Program and the pilot program to integrate with other federal agency health information technology investments outside of the FCC.
- Keeping a pilot program but refocusing the administration of the program from an emphasis on sustainability to an emphasis on experimentation and discovery, i.e., learning from the pilot program
- Encouraging partnerships with related federal programs such as the Nationwide Health Information Network proposed by the Office of the National Coordinator of Health Information Technology, the biosurveillance program in the Center for Disease Control, and other programs from Health Resources and Services Administration, Agency for Health Research and Quality, the Indian Health Service, the Department of Veteran's Affairs and the Department of Defense.
- Facilitating the integration of Rural Health Program infrastructure with other similarly focused programs, such as the FCC's own eRate program for schools
- Support the use of regional and state-level organizations as intermediaries who can interact efficiently with both the FCC/USAC and with health care providers.

We strongly recommend that we build upon the intention of the original FCC Order establishing the Rural Health Care Pilot Program. This is consistent with then President-elect Obama's goals:

"In addition to connecting our libraries and schools to the Internet, we must also ensure that our hospitals are connected to each other through the Internet. That is why the economic recovery plan I'm proposing will help modernize our health care system – and that won't just save jobs, it will save lives. We will make sure that every doctor's office and hospital in this country is using cutting edge technology and electronic medical records so that we can cut red tape, prevent medical mistakes, and help save billions of dollars each year." President-elect Obama's Saturday radio address December 6, 2008

The Administration has the ability to use existing funding available through the Universal Service Fund as well as dedicated funding at agencies such as the Food and Drug Administration, Health and Human Services, etc. to provide a coordinated strategy to improve health care in the United States. We can think of very few national goals of greater importance than expanding networked broadband services for the improved delivery of telemedicine and health care services to all Americans.

b. Questions Relating to the Pilot Program:

- i) Nationwide Connectivity. How does the Pilot Program affect nationwide connectivity? Provide specific examples of ways in which the program may impact how health care providers choose broadband service offerings.**

Response

According to the statement then Chairman Martin the Pilot Program was to be an “important step towards the creation of a ubiquitous, nationwide, broadband network dedicated to health care”. The program was to complement the efforts of the Office of the National Coordinator For Health Information Technology and the Centers For Disease Control. The progress toward accomplishing this intent is negligible. Dale Alverson, MD (Professor of Pediatrics and Regents' Professor Medical Director, Center for Telehealth and Cybermedicine Research, University of New Mexico, Health Sciences Center) testified before the FCC National Broadband Plan Staff Health Care Workshop on September 15, 2009, and noted that as of August 12, 2009:

- It is the final year of 3 year program with 10½ months left at that point
- There have been mergers and currently 62 (of the original 69) projects going forward.
- 47 Requests For Proposals for 33 projects (53% of the projects)
- 26 Funding Commitment Letters for \$20 million (4.8% of the \$417 million funds allotted)
- \$6 million has been disbursed (1.4% of funds allotted)
(We are told that of Sept. 15th this is now \$8.7 million or 2%)

Even in comparison to the traditional FCC Rural Health program that annually disburses about 10% of its authorized funds, the Rural Health Care Pilot Program has been remarkably ineffective. Thus, the impact of the Pilot Program on nationwide connectivity is virtually impossible to measure.

The RHCPP has been pursued without any significant requirement that the various networks be interconnected in any way. If a nationwide network is desired, there should be program requirements and resources provided towards this end.

Anecdotally, it is considered by some (perhaps many) to be a critical aspect of the program. Todd Rowland, MD responded to a question that the FCC should also make the connection to Internet2 mandatory for Pilot Program to ensure the nationwide connectivity reliability and benefits. This question was raised after a demonstration of the Federal Health Architecture (FHA) used to bring together information from multiple independent health institutions including the Department of Veteran’s Affairs and 2 Pilot Program participants. Using the FHA’s Connect Gateway, a video drawn from the individual’s medical record and a real time video consultation between care providers one of which was in a rural hospital. <http://www.internet2.edu/health/>

ii) Impediments. Are there specific programmatic requirements in the Pilot Program that make it difficult for entities to realize the full potential of the program?

Response

1. Despite the complexity of many of the projects, no money was to be allocated for project management. While the funds needed for program management are a fraction of the funds to be expended in discounts in the RHCPP, the lack of these funds is the largest single factor in delaying implementation.
2. Additionally, after the program started, the FCC announced that it would require an "acceptable" sustainability plan before any funds would be allocated or a funding commitment letter (FCL) would be issued. No guideline was provided to as to what was an acceptable sustainability plan.
3. Some approved projects self-provisioned and budgeted for their network design studies. However FCC/USAC is requiring that they obtain a SPIN and competitively bid for the work they had planned, outlined and budgeted to do in their proposal. This requirement posed burden for projects that included this in the already approved proposals.
4. Detailed Quarterly Progress Reports have been required of all selected participants starting Q4 2007 even when they have received no funding to start their project. This cost is considered project administration, which is not an allowable expense, adding to the burden and project management costs. Accountability in the project should be supported with adequate reporting, but the program should resource this task.

Recommended Changes to Streamline the Program and Facilitate Results:

1. The funds that have been authorized for each project should be released directly to each to manage. (It is explicitly understood that all project transactions must meet all auditing requirements.) This would simplify and greatly expedite project implementation.
2. The historical goal of this pilot project is to explore ways to improve the standard program's outreach to improve rural healthcare. Therefore:
 - a. A streamlined and abbreviated administrative process needs to be implemented to support the timely implementation and success of the approved RHCPP projects and therefore the requirements for detailed upfront information on Forms 465, 466, etc. need to be waived or modified.
 - b. Pilot projects that are part of an organization that is already permitted to purchase off of a pre-approved vendor listing created via a competitive bidding process (for example the federal GSA Cooperative Purchasing Program, a universal service provider listing, or a similar statewide price agreement) should be permitted to use the existing purchasing vehicle/instrument as appropriate rather than repeat competitive bidding using the USAC process.
 - c. Some projects have self provisioned for the network design studies for their approved projects and as such should be allowed to request funding directly for that component of their project without requiring competitive bidding.

- d. Quarterly Progress Reports should not be required of selected participants until funding (at least program management funding) is actually dispensed and the project has started.
 - e. While there does need to be serious business planning, the current requirement for an approved sustainability plan needs to be reconsidered.
3. The use of federal dollars to support project administration and project management costs needs to be allowed. Allowable expenditures need to include salaries, travel to program facilities/sites, and other expenses of a recurring nature.
4. Data centers need to be approved as eligible to receive funding
- The purpose of RHCPP is to promote sharing of electronic health information (i.e. EHR, PACS, Telemedicine, Collaboration, etc.) between health care sites. That information primarily resides on computer servers that reside in data centers. Large health care systems frequently centralize their data centers in off-site locations. Yet data centers are being declared ineligible to receive support to connect them to their health users. The RHCPP is to build a network that will transmit electronic health information (i.e. Electronic Health Records, digital imaging, telemedicine, etc) from data centers to sites on the network. Therefore, a network cannot function without sites having electronic access to data centers on the network.
5. Administration sites need to be approved as eligible to receive funding
- Administrative sites that support functions for eligible hospitals should also be eligible when these functions improve patient care.

iii) Telehealth and Telemedicine Leveraging. Are there specific ways the Commission could better leverage the benefits of the Pilot Program through coordination with other federal, state, local, tribal, or non-profit programs that seek to advance deployment or the efficient use of telehealth and telemedicine?

Response

The broadband plan offers an opportunity for a paradigm change in the health care system. Information technology vendors, network engineers, health care providers and patients are working in partnership to improve the health of every American. Health services including telehealth and health information exchange delivered over a broadband infrastructure imply using information communication technologies to provide everyone with improved access to the best health care available, unconstrained by geographic and jurisdictional barriers.

Health information exchange often focuses on the providers, but the focus should be broader. An advanced broadband infrastructure opens an opportunity to deliver services that improve access to health care services and improves the health and wellness of both rural and urban communities. The impact of increased access to

broadband telecommunications on improved health outcomes should be evaluated rigorously to provide action steps based on the facts.

To improve the health of the nation the broadband infrastructure must be built to integrate providers, other health care professionals, home health care givers, patients and their families. When patients and home caregivers including lay caregivers are added to the customers serviced by the broadband infrastructure, then the business model changes and innovation will occur. Health services and health information exchange must be integrated into a network infrastructure that is reliable and secure.

According to BROADBAND & TELEMEDICINE: STATS, DATA & OBSERVATIONS AUGUST 2009 from the Advanced Communications Law and Policy Institute of the New York Law School:

The future of healthcare will depend on the effective incorporation of digital technologies to streamline the practice of medicine and to decrease costs. A key component of President Obama's healthcare plans is the digitization of U.S. health records within the next five years.

A core element of this strategy is broadband-enabled telemedicine, which encompasses:

- Real-time remote patient consultations;
- Remote monitoring of patients' vital signs and conditions;
- The storing and forwarding of critical health information for analysis and diagnosis (e.g. MRI results and electronic health records [EHRs]);
- The provision of specialized services over long distances (e.g. teledentistry, telepharmacy, and telepsychiatry); and
- The wide availability of health information to patients and caregivers.

They conclude that:

- Broadband enables telemedicine and the delivery of critical healthcare services to remote and homebound patients, facilitates enormous cost savings, and empowers individuals by providing them with access to critical medical information.
- Broadband is facilitating the development of a new generation of telemedicine tools, services, and devices, which have bolstered healthcare in this country and resulted in measurable and significant cost savings to providers and patients.
- Broadband-enabled telemedicine is shifting the healthcare paradigm towards more individualized and convenient care by, among other things, allowing for more robust in-home health monitoring and treatment.

In addition there are technical issues that must be addressed. For example, The commercial Internet does not expect to reliably achieve the kind of end-to-end performance needed by medical providers. For example, TCP is limited by a combination of packet loss and distance. Transferring a 100 MB file over a gigabit network takes a few seconds. However, if the network exhibited a packet loss rate of just one percent and the distance of the transfer was coast to coast, it would take at least 10 minutes to transfer the video. A 500 MB MRI study under similar conditions would take an hour or more.

iv) Program Evaluation. What metrics should the Commission use in evaluating the Pilot Program?

Response

For starters look at dollars expended. It is very small for the first three years.

One research study at Michigan State University is already underway to evaluate the effectiveness of this program. Also, the Federal Government has several institutions with significant evaluation expertise including HRSA, AHRQ, NIH /NLM. Etc. Consistent with our recommendation that coordination across agencies is requisite for the success of our nationwide health interests, so to it is recommended that cross agency coordination is requisite for the successful evaluation of programs.

v) Extension of the Pilot Program. The current Pilot Program is scheduled to end after funding year 2009, on June 30, 2010, and existing Pilot Program participants must file all of their funding commitment requests by that date. Should the Commission seek additional applications after the current Pilot Program ends? If so, what selection criteria should the Commission use in selecting new applications? For example, should support be limited to broadband healthcare networks in rural, insular, tribal, and/or underserved areas? Should the Commission change any of the requirements for participation in the Pilot Program?

Response

YES, the deadline for the Pilot Program should be extended. Also, any new pilot projects should be funded under a revised set of rules so the extension would only apply to the original pilot projects.

As indicated earlier, the Pilot Program has used approximate 2% of its funding to date. In spite of the VERY significant efforts on the parts of most of the RHCPP participants, they have been unable to secure funding commitments. With a looming deadline of July 2010 several of the program participants have requested extensions. It is recommended that the timeline of the program be extended and that the inherent inefficiencies that have prevented the participant's success be removed.

While the original goals of the RHCPP remain worthy ones for the nation, so little has been accomplished and so few funds have been released that it would be unwise and unwarranted to expand the Pilot Program at this juncture. Until and unless the FCC formulates a totally new process for determining site/HCP eligibility, releasing funds, reviewing expenditures, and assessing program results, the current Pilot Program will neither enhance rural health care delivery in the 69 areas, nor provide any useful lessons to guide future investments in rural health care infrastructure.

There is a great need to get many more underserved and rural health institutions connected via broadband. However, the commission must also focus on getting the initial program working use the lessons learned.

If the Commission still agrees with the original intent of the Pilot Program, and we strongly recommend that they should, then it is recommended that the Pilot Program replace the original Rural Health Program. Once again we stress that this recommendation is made only if the administrative processes, procedures and rules are modified as recommended in this document to ensure the program's success.

We are also reminded that Metcalfe's law states that the value of a telecommunication network is proportional to the square of the number of connected users of the system (n^2). This suggests that bringing as many end points together as possible will maximize the value of the FCC's investment. Fortunately, many of the desired resources are available on an existing high quality network. Focusing on the rural and underserved communities and ensuring that they are interconnected to a national network is recommended.

vi) To the extent commenters suggest modifications to the Pilot Program, please provide specific data or other information relating to the potential impact of such changes, and estimates of how many additional projects would participate and how much additional universal service support would be disbursed if the modifications were implemented.

Response

The numerous recommendations in this document would facilitate the successful implementation of programs such as the FCC's Rural Health Care Pilot Program. They would also provide a valuable resource of the lessons learned; create evidence-based models for sustainable networks; and encourage the development of a nationwide network of networks that can reliably, securely, most affordably support standard and emergency health transactions, health information exchange, and telehealth. Modifying the Pilot Program could allow other regions of the country and their affiliated healthcare provider organizations participate, closing the network gaps, through improved support and ease of implementation of other pilot projects. Since only a fraction of the traditional Rural Health program funds are currently utilized (< 10%), more flexibility such as that envisioned in the Pilot Program would allow more programs to participate. A greater portion of those Rural Health universal services funds, at least 50% of the annual \$400 million allocated, should be applied to an extension of this pilot program so that a true affordable and sustainable broadband infrastructure to support healthcare could be implemented nationwide.

Attachment A
Recommendations to Chairman Copps regarding the Pilot Program

In a February 26, 2009 meeting with then Acting Chairman Copps, the following recommendations were made:

- a. A streamlined and abbreviated administrative process needs to be implemented to support the timely implementation and success of the approved RHCPP projects. The requirements for detailed upfront information on Forms 465, 466, etc. need to be waived or modified given the 'pilot' nature of the RHCPP and desire to appropriately expedite the process.
- b. If the approved pilot project is being managed/coordinated by an organization that is already permitted to purchase off of a pre-approved vendor listing created via a competitive bidding process (for example the federal GSA Cooperative Purchasing Program, a universal service provider listing, or a similar statewide price agreement), that pilot project should be permitted to use the existing purchasing vehicle/instrument as appropriate rather than repeat competitive bidding using the USAC process.
- c. Some projects have self provisioned for the network design studies for their approved projects and as such should be allowed to request funding directly for that component of their project without requiring competitive bidding.
- d. Quarterly Progress Reports should not be required of selected participants until funding is actually dispensed and the project has started.
- e. If it is assumed that substantive lessons will be learned from the experiences of these 69 pilot projects, the precondition for an approved sustainability plan prior to the release of funds to begin a pilot project is illogical. While there does need to be serious business planning, the current requirement for an approved sustainability plan needs to be reconsidered.