

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Health Care Delivery Elements of National)	GN Docket Nos. 09-47, 09-51, 09-137
Broadband Plan)	WC Docket No. 02-60
Notice #17)	
)	

COMMENTS OF AT&T INC. – NBP PUBLIC NOTICE #17

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December 4, 2009

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AT&T Inc., on behalf of itself and its affiliates (“AT&T”), respectfully submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) National Broadband Plan (“NBP”) Public Notice #17,¹ which seeks comment on healthcare information technology (“healthcare IT”) applications relating to “electronic public health records (‘EHRs’), remote patient monitoring, and real-time video consultations,” and other services that “use broadband and other advanced communications to promote better health outcomes and more efficient delivery of care.”²

INTRODUCTION & SUMMARY

AT&T strongly supports the Commission’s examination of healthcare IT as it relates to the national broadband plan. New and developing healthcare IT offers enormous potential benefits for health-care providers, taxpayers, and, above all, patients. For instance, telemedicine – the provision of remote health services over telecommunications systems – enables specialists

¹ Public Notice, *Comment Sought on Health Care Delivery Elements of National Broadband Plan, NBP Public Notice #17*, GN Docket Nos. 09-47, 09-51, and 09-137, WC Docket No. 02-60, DA 09-2413 (rel. Nov. 12, 2009) (“*Public Notice*”).

² *Id.* at 1.

to offer a broader range of services in rural communities.³ For those suffering from chronic diseases, two-way video visits with physicians and remote health monitoring can minimize hospital trips. And electronic health records can give providers a comprehensive view of patients' medical histories and enable better coordination of care, electronic claims processing, and electronic physician order entries, among other things.⁴

At the same time, Healthcare IT promises significant cost savings. One study has shown that after a five-year investment, telemedicine applications could generate \$4.28 billion in savings nationwide.⁵ Others estimate that societal cost savings from healthcare IT use are as much as \$80 billion per year in the United States.⁶ In one specific case, Penn State University estimated that remote home health monitoring of diabetes patients reduced hospital-care expenses by more than 60 percent.⁷

AT&T and other private and state-owned network operators have already made and continue to make very significant investments in the development and deployment of innovative

³ See Public Notice, *Bringing Broadband to Rural America: Report on a Rural Broadband Strategy*, GN Docket No. 09-29, DA 09-2258, ¶ 20 (rel. Oct. 19, 2009) (“*Rural Broadband Report*”) (“With sufficiently robust broadband services, clinics in rural areas can have access to facilities and specialists in more-densely populated areas.”).

⁴ See, e.g., Robert D. Atkinson & Daniel D. Castro, *Digital Quality of Life: Understanding the Personal & Social Benefits of the Information Technology Revolution*, at 26 (Oct. 2008) (“*Digital Quality of Life Report*”) (telecommunications-dependent health technologies also increase access to health information and health care, and improve the quality of health care), available at <http://www.itif.org/files/DQOL.pdf>.

⁵ Center for Information Technology Leadership, *The Value of Provider-to-Provider Telehealth Technologies*, at 63 (2007), available at http://www.citl.org/_pdf/CITL_Telehealth_Report.pdf.

⁶ *Digital Quality of Life Report* at 26 (citing Federico Girosi et al., RAND Corp., *Extrapolating Evidence of Health Information Technology Savings and Costs* (2005), available at http://www.rand.org/pubs/monographs/2005/RAND_MG410.pdf, and Jan Walker et al., Health Affairs, *The Value of Health Care Information Exchange and Interoperability* (Jan. 19, 2005), available at <http://content.healthaffairs.org/cgi/content/full/hlthaff.w5.10/DC1>).

⁷ Jonathan Rintels, Benton Foundation, *An Action Plan for America Using Technology and Innovation to Address Our Nation's Critical Challenges: A Report for the Next Administration*, at 15 (2009), available at http://www.benton.org/initiatives/broadband_benefits/action_plan/health_care#telehealth (citing Kathryn H. Dansky, et al., *Cost Analysis of Telehomecare*, 7 *Telemedicine J. & e-Health* 225, 231 (2001)). One report estimates that broadband-based remote monitoring could reduce health-care costs by \$197 billion over the next 25 years. Robert E. Litan, Better Health Care Together, *Vital Signs Via Broadband: Remote Health Monitoring Transmits Savings, Enhances Lives*, at 2 (Oct. 24, 2008), available at <http://www.betterhealthcaretogether.org/study>.

healthcare IT solutions to significantly improve patient care and safety. AT&T, for example, is working with manufacturers to develop devices that remotely monitor a patient's medical information and wirelessly transmit the information to doctors – *e.g.*, from ambulances on the way to an emergency room, or for elderly patients at home (which can both reduce doctor visits and also alert doctors to problems in real time).⁸ These “devices can measure, for example, temperature, weight, pulse rate, blood oxygen level, blood-pressure, and blood glucose,” and an even “wider variety of instruments are now approaching certification [by AT&T] for use.”⁹ AT&T also provides services that allow physicians to view medical records, prescribe medication, and conduct other health related tasks using wireless portable handheld devices. For example, AT&T is working with Texas Tech University to test whether wireless devices can help to prevent the elderly from suffering falls (a common cause of serious injury or death among the elderly) by informing medical professionals in real time of potential problems. The technology includes, for example, special sensors built into the insoles of shoes that measure the person's gait and transmit the information wirelessly to a gateway connected to a health care

⁸ Tim McKeough, *AT&T's Telehealth Wirelessly Monitors Patients' Health*, Fast Company (Jan. 15, 2009) (“AT&T is developing a software tool and networking platform that will use wireless devices to record a patient's health measurements at home and send the data to the doctor.”), *available at* <http://www.fastcompany.com/magazine/132/futurist-at-t-telehealth.html>; Alexander H. Vo, *The Telehealth Promise, Better Health Care and Cost Savings for the 21st Century*, AT&T Center for Telehealth Research and Policy Electronic Health Network University of Texas Medical Branch Galveston, Texas, at 1 (May 2008) (“With telemedicine, physicians at remote hospitals can link to distant specialists for real-time guidance in emergency situations to save lives without the delay of long ambulance rides while a patient deteriorates. Difficult transfers of patients to doctors' offices from nursing homes, between emergency rooms, or from institutions such as prisons to medical care providers can be substantially reduced by resorting to online communications. Expectant mothers living long distances from medical care providers can receive quality prenatal care through online consultations and remote monitoring. Individuals with chronic illnesses or those recently released from hospital care can take advantage of remote monitoring programs to go about their daily routine with confidence that potentially worrisome changes in vital signs will be instantly communicated to care givers.”), *available at* <http://attcenter.utmb.edu/presentations/The%20Telehealth%20Promise-Better%20Health%20Care%20and%20Cost%20Savings%20for%20the%2021st%20Century.pdf>.

⁹ Robert Miller, *The Role of Telehealth Remote Monitoring in Healthcare Reform*, AT&T Labs (Feb. 12, 2009), *available at* <http://www.research.att.com/viewTechView.cfm?id=1>.

network. “AT&T’s scientists are hoping that by catching changes in a patient’s walking pattern, the software can alert doctors to a problem before they take a tumble.”¹⁰

AT&T also operates one of the most robust healthcare IT services in the country – a service called Health Community Online (“HCO”)¹¹ – that connects hospitals, physician offices, vendors, pharmaceutical companies, state and federal agencies and other payers, long term care facilities, and urgent care centers, among others, and aggregates patient information from these entities to put it at the fingertips of treating physicians. User authentication protocols ensure security and privacy of data, while a user-friendly data-aggregation and view function ensures ease of use, putting critical patient information at the physician’s fingertips, including, for example, recent lab reports and other hospital information, allergies, medical history, and insurance information. Moreover, the HCO service allows doctors securely to provide remote diagnoses, share health records and images, and prescribe pharmaceuticals from anywhere with a broadband connection. Thus, for example, when an unconscious patient is admitted to the emergency room at a hospital that uses AT&T’s HCO service, the treating physician with access to AT&T’s HCO service would have immediate access to the patient’s medical history and other pertinent information, could transmit medical images to specialists, and could engage in real-time video or voice consultations with specialists.

AT&T’s HCO service is designed to be accessible by physicians, hospitals, and other healthcare providers of all sizes in both urban and rural areas. Larger institutions typically opt for high-speed dedicated private lines, such as T1.5 lines, to access the HCO service, while

¹⁰ See, e.g., Damian Joseph, *Could AT&T Prevent Falls Among the Elderly?*, Business Week (May 14, 2009), available at http://www.businessweek.com/innovate/next/archives/2009/05/how_att_could_p.html.

¹¹ An industry brief explaining AT&T’s HCO service can be found at http://www.corp.att.com/healthcare/docs/Healthcare_Online.eHealth_Market_Brief3-30-09.pdf.

community health centers, smaller physician practices, physicians working from home, patients and others typically use AT&T's virtual private network ("VPN") capabilities to securely access HCO over the public Internet using DSL, cable modem or similar types of connections. When physicians are away from wireline facilities, they still may access the HCO service through secure connections using a variety of wireless devices, such as smart phones, and can, among many other things, examine updated patient data, engage in consults with other physicians, and prescribe medications. By providing physicians with the information they need when and where they need it, AT&T's HCO service can dramatically improve patient care and safety.

AT&T also works closely with states to help them develop and deploy robust healthcare IT networks and services. Most notably, in Tennessee "AT&T is actively engaged with the state and health care providers statewide in building the eHealth Exchange Zone."¹² The AT&T solution being used by Tennessee "features a secure online collaboration center – a Virtual Private Network (VPN)-based portal – designed to safely and securely enable such applications as: [p]rescribing pharmaceuticals online, [s]ecuring clinical messaging among the state's health care providers, [s]haring high-density images, including x-rays, MRIs and CT scans, [e]xchanging patient information via portable health records, [d]elivering telemedicine applications for remote diagnostic care, [a]ccessing Tennessee Department of Health applications, and [a]ccessing other health care applications and systems."¹³

As documented in this and other proceedings, other network operators are likewise making significant investments in networks and technology to develop and deploy healthcare IT

¹² See AT&T Press Release, AT&T to Deliver Country's First Statewide eHealth Exchange Zone (Feb. 25, 2009), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25204>.

¹³ *Id.* See also Tennessee Government, Office of e-Health Initiatives, available at <http://www.tennesseeanytime.org/ehealth>.

services throughout the country using both wireline and wireless broadband technologies. For example, Verizon has explained that the services it provides allow “health care providers to use a variety of innovative services, including electronic delivery of medical records, e-prescribing patient monitoring, home health care reporting, and other work flow solutions,”¹⁴ and Qwest was recently selected by the Colorado Hospital Association and the Colorado Behavioral Healthcare Council “to provide high-speed broadband services that will link nearly 400 of the state’s urban and rural health care and behavioral health providers, and facilitate telemedicine access.”¹⁵

As explained below, however, if these promising advances are to continue, the Commission’s policies in two specific areas are critical. First, to maintain an environment where network providers continue to have the incentive to make the substantial investments necessary to develop and deploy innovative healthcare IT services, the Commission should not impose new “net neutrality” mandates that would undercut the ability of network providers to meet the very high Quality of Service (“QoS”) standards – *e.g.*, strict security, speed and reliability standards – that are necessary for the effective provision of such services. In addition, the Commission should reform its universal service support programs for rural health-care providers by phasing out the legacy and largely ineffective Rural Health Care Program and by improving and expanding the Rural Health Care Pilot Program model (“Pilot Program”), which – with certain essential modifications – could provide meaningful support for deployment of innovative, broadband-based healthcare IT services.

¹⁴ Comments of Verizon Wireless, *Fostering Innovation and Investment in the Wireless Communications Market; A National Broadband Plan for Our Future*, GN Docket Nos. 09-157, at 81 (filed Sep. 30, 2009).

¹⁵ Qwest Press Release, *New High-Speed Internet Health Information Network to Connect Colorado’s Urban, Rural Health Care Providers* (Aug. 14, 2009), available at <http://news.qwest.com/ColoradoTelehealthNetwork>.

DISCUSSION

*Flexibility To Provide High QoS for Healthcare IT Services.*¹⁶ The information transmitted and stored using healthcare IT services is highly confidential. It includes personal healthcare information (much of which is protected under the HIPPA statute) and information about healthcare providers, payers, pharmaceutical companies, pharmacies, insurance companies, and much else. Moreover, healthcare IT communications are typically high priority transmissions, where fast and reliable transmission can literally be a matter of life or death. It is therefore imperative that the Commission's broadband policies maintain network providers' flexibility to protect information from unauthorized access and to employ robust network management tools to minimize the impact of network congestion and disruptions that would otherwise impair critical health-related communications.¹⁷

New "net neutrality" mandates would threaten network operators' ability to offer the security, reliability and the speeds necessary to effectively provide many healthcare IT services, and would significantly reduce network operators' incentives to continue making significant investments in such services. Even with exceptions to permit efforts to protect security, restrictive rules would inevitably discourage providers from aggressively combating security breaches due to ambiguities in the rules, such as uncertainty over the meaning of "reasonable network management." Indeed, any interpretation of "reasonable" in the network security context must not confine providers to a "narrowly tailored" or similarly limited countermeasures, which would only serve to aid those who seek unauthorized access. Instead, providers must in

¹⁶ This section contains information responsive to Questions No. 4 and 5 in the *Public Notice*.

¹⁷ AT&T described in detail the measures it takes to protect its network from cybersecurity attacks in its response to NBP Public Notice #8. See Comments of AT&T Inc. – NBP Public Notice #8, *Public Safety, Homeland Security, and Cybersecurity Elements of National Broadband Plan*, GN Docket Nos. 09-47, 09-51, 09-137, at 38-41 (Nov. 12, 2009).

all cases be afforded wide latitude to use their best judgment in protecting their networks and customers from potential security breaches. This is especially true where dealing with extremely sensitive healthcare information.

On issues of speed and reliability, the Commission should not adopt “net neutrality” principles that would diminish network operators’ flexibility to implement robust network management tools need to account for unpredictable shifts in network usage that could undermine the reliability and speed necessary to provide effective healthcare IT services. For example, many of the healthcare IT communications involve the transmission of very large files (*e.g.*, x-rays, MRIs, CAT-scans, and so on) for the purpose of obtaining a rapid consultation with a specialist, where it is imperative that sufficient bandwidth be allocated to the transmission to facilitate a timely consultation. Similarly, real-time video consultations can be highly sensitive to latency, jitter, and other issues that arise as a result of network congestion and other factors. Moreover, in the future healthcare IT will likely be constantly transmitting critical patient data – such as EKGs – that will be monitored and interpreted in real time by facilities embedded in the network to provide automatic alerts to doctors and patients when needed, and such services clearly will require extraordinary levels of bandwidth and reliability. By effectively managing congestion, operators can minimize disruptions that would otherwise impair critical health-related communications. To do so, providers must have the flexibility to invest in and utilize “smarter” networks that can differentiate between various types of traffic to ensure that the most vital communications get through. Indeed, few would dispute that an emergency healthcare video consult should take priority over a movie download when network congestion arises.

*The Commission Should Revise The Rural Health Care Support Mechanisms.*¹⁸ In addition to adopting broadband policies that provide network providers with the flexibility to implement the QoS standards necessary to effectively provide health IT services, the Commission should revisit its universal service support programs for rural health-care providers, and examine ways to better advance the goals of the American Recovery and Reinvestment Act of 2009 (“Recovery Act”).¹⁹ The Commission’s efforts should focus on determining whether a mechanism similar to the Pilot Program could provide meaningful support for deployment of innovative, broadband-based health IT services.²⁰ However, such a determination should only be made after notice and comment. Though well intentioned, the current Pilot Program has not proven to be the success the Commission and parties had hoped.²¹ Thus, rather than simply extending and expanding the Pilot Program, AT&T recommends that the Commission issue a notice of proposed rulemaking that seeks comment on the Pilot Program, its status, and recommended changes to the Pilot Program—issues the Commission has committed to address in a report upon completion of the Pilot Program.²²

¹⁸ This section contains information responsive to Question No. 6 in the *Public Notice*.

¹⁹ Pub. L. No. 111-5, §6001(b) (2009).

²⁰ *Id.* ¶ 129 (noting that, in contrast to the legacy program, “[t]he goal of the Pilot Program is to stimulate the deployment of the broadband infrastructure necessary to support innovative telemedicine services to rural America.”).

²¹ See *Rural Broadband Report* ¶ 128 (“Despite modifications the Commission has made to the Rural Health Care Program, the program continues to be greatly underutilized and is not fully realizing the benefits intended by the Telecommunications Act of 1996 and the Commission’s rules.”); News Release, FCC Update on Rural Healthcare Pilot Program Initiative (April 16, 2009) (noting that, a year and a half after selecting 67 Pilot Program participants, the Commission had approved funding for only six projects), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-290141A1.pdf.

²² See Order, *Rural Health Care Support Mechanism*, WC Docket No. 02-60, FCC 07-198, ¶ 126 (2007) (“*Pilot Program Order*”) (stating that the Commission intends to issue a report “detailing the results of the program, its status, and recommended changes”). Thus, AT&T does not believe that the Commission should seek additional applications after expiration of the current Pilot Program until after completion of a rulemaking, a necessary administrative process to which this Pilot Program was never subject.

Concurrently with those efforts, the Commission should begin to phase out the legacy Rural Health Care Program. Constrained by the language of the 1996 Act, funding under the existing program is available only to offset high distance-sensitive telecommunications charges that health-care providers located in rural areas would otherwise incur.²³ Lack of participation in the program suggests it meets only a limited need.²⁴ The Commission could transition all beneficiaries of the legacy Rural Health Care program to a program similar to the Pilot Program (though it could grandfather those participants for whom the legacy mechanism provides meaningful support), which would more effectively support the construction of health-care-provider broadband facilities and monthly broadband service charges,²⁵ and thus directly advance the Recovery Act's goals.²⁶

Whether the Commission retains some portion of the legacy Rural Health Care program, improves and makes permanent the Pilot Program or adopts another model after notice and comment, it should also take a fresh look at the program rules. As an initial matter, funding should be provided directly to the plan beneficiaries, not to broadband service provider intermediaries. As AT&T has previously explained, this would avoid the potential for administrative waste and distorted incentives that typically occur when funds are funneled

²³ *Id.* ¶ 8.

²⁴ *Public Notice* at 6 (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 per funding year."); *Pilot Program Order* ¶ 14 ("[A]lthough \$400 million dollars per year has been authorized for funding this program, since the program's inception in 1998, the program generally has disbursed less than 10 percent of the authorized funds each year."); *Rural Broadband Report* ¶ 128 (same).

²⁵ As the *Rural Broadband Report* explains, the Pilot Program provides "funding for the construction of state or regional broadband networks and for the advanced telecommunications and information services provided over those networks for health care providers." *Rural Broadband Report* ¶ 129.

²⁶ Recovery Act, § 6001(b)(1)-(3) (directing that support be provided to "medical and healthcare providers" and "unserved" and "underserved" areas); *id.* § 6001(k)(2)(D) (instructing that the National Broadband Plan include "a plan for use of broadband infrastructure and services in advancing . . . health care delivery").

through middle men.²⁷ The Commission also should consider bifurcating the program into two sections to fund one-time design and deployment charges separately from recurring service charges.²⁸ In addition, the program rules must be modified to allow participants to use backbones other than Internet2 and National LambdaRail.²⁹ There is no justification for continuance of this discriminatory decision³⁰ and giving rural health-care providers more flexible options will enhance innovation and broadband investment.³¹

The Commission also should ensure that its Rural Health Care support mechanism is tightly aligned with the programs and agendas of other government agencies that are responsible for advancing rural health-care initiatives. For example, in awarding funding, the Commission and the Universal Service Administrative Company (“USAC”) should coordinate directly with the Department of Health and Human Services (“HHS”), which is more likely to know the needs of communities and individual hospitals and clinics. The existing Pilot Program already takes a number of steps in this direction,³² but the Commission should go even further. For example, the

²⁷ See Comments of AT&T, *A National Broadband Plan for Our Future*, GN Docket No. 09-51, at 92-94 (filed June 8, 2009).

²⁸ *Id.*

²⁹ *Id.*

³⁰ While the Commission appears to have backtracked from this position in statements made in its *Pilot Program Order*, Pilot Program participants clearly understood that they could only select Internet2 or National LambdaRail as their backbone provider if they wanted the Pilot Program to cover 85 percent of their backbone connection costs.

³¹ See *Pilot Program Order* ¶ 16.

³² Indeed, the *Rural Broadband Report* recognizes that a strength of the Pilot Program is its coordination with HHS to “support the advancement of HHS’s health information technology (health IT) initiatives for electronic health records and [to] create vital broadband links for disaster preparedness and emergency response to any large-scale emergency or public health crisis.” *Rural Broadband Report* ¶ 129. See also *Pilot Program Order* ¶ 7 (“[S]elected participants shall coordinate the use of their health care networks with the Department of Health and Human Services (HHS) and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies Similarly, selected participants shall use Pilot Program funding in ways that are consistent with HHS’ health information technology (IT) initiatives. . . .”).

Commission could partner with the HHS's Office of Rural Health Policy on that agency's initiatives.³³

CONCLUSION

For the foregoing reasons, the Commission should maintain broadband policies that provide network operators with maximum flexibility to manage their networks and modify the existing healthcare support mechanisms as set forth herein.

Respectfully submitted,

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³³ See U.S. Department of Health and Human Services, Health Resources and Services Administration, *Rural Health Policy*, <http://ruralhealth.hrsa.gov/> (discussing HHS rural health programs).