



May 24, 2017

Ajit Pai, J.D.  
Commissioner  
Federal Communications Commission  
445 12th St. SW.  
Washington, DC 20554

Submitted electronically at: <http://apps.fcc.gov/ecfs/> (cc to: [connect2health@fcc.gov](mailto:connect2health@fcc.gov))

**Re: Request for Comment – Actions to Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies (GN Docket No. 16-46, FCC 17-46)**

Chairman Pai:

The American Medical Informatics Association (AMIA) is pleased to provide input meant to inform the Federal Communication Commission's (FCC) current approach to accelerating adoption and accessibility of broadband-enabled health care solutions and advanced technologies. We appreciate the FCC's commitment to these issues as well as the work conducted by its Connect2Health<sup>FCC</sup> Task Force to develop this request for comment (RFC).

AMIA is the professional home for more than 5,400 informatics professionals, representing front-line clinicians, researchers, educators and public health experts who bring meaning to data, manage information and generate new knowledge across the health and health care enterprise. As the voice of the nation's biomedical and health informatics professionals, AMIA plays a leading role in advancing health and wellness by moving basic research findings from bench to bedside, and evaluating interventions, innovations and public policy across settings and patient populations.

As a membership-driven organization dedicated to the science of data collection, analysis and application, AMIA strives to deliver evidence-based policy recommendations that focus on the opportunities and challenges of implementing health informatics tools, such as electronic health records, health information exchanges, clinical decision support and other kinds of analytics to support health and care. For your convenience, we have developed a sampling of relevant scholarship available in Appendix A.

AMIA strongly agrees with the FCC's assertion that "health care is being transformed by the availability and accessibility of broadband-enabled services and technologies and the development of

May 24, 2017

life-saving wireless medical devices.”<sup>1</sup> We also appreciate FCC’s deliberate focus on both “health and care to reflect and include the broad range of participants in the emerging broadband health ecosystem.”<sup>2</sup> Thus, AMIA believes that access to broadband is, or soon will become, a social determinant of health.<sup>3, 4, 5</sup> Social determinants of health are “the structural determinants and conditions in which people are born, grow, live, work and age.”<sup>6</sup> They include factors such as socioeconomic status, education, the physical environment, employment, and social support networks, as well as, access to health information and care via broadband-enabled technologies.<sup>7</sup> Given this fundamental assessment, we offer below a set of recommendations and observations for consideration by the FCC as it seeks to develop policies and programs that improve adoption and accessibility of broadband-enabled health care solutions for patient care, public health and personal well-being.

*Opportunities to address the digital divide’s impact on health*

Much like access to, and utilization of, high-quality health care and prevention strategies, mobile Health (mHealth) technologies that rely on broadband services have a wide adoption variance based on geography, population density, and socioeconomic status. Vulnerable groups face specific

---

<sup>1</sup> FCC Request for Comment and Data on Actions To Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies, 82 FR 21781 (May 10, 2017). Federal Register: The Daily Journal of the United States. <https://www.federalregister.gov/d/2017-09309>

<sup>2</sup> Ibid.

<sup>3</sup> Perzynski, et al. found that patient portals have shown potential for increasing health care quality and efficiency, and that lower rates of initiation of portal use was found for racial and ethnic minorities, persons of lower socioeconomic status, and those without neighborhood broadband internet access. They conclude that Internet access and other factors influencing patient portal use could worsen health disparities. (Perzynski A., Roach, M.J., Shick, S. et al; Patient portals and broadband internet inequality. J Am Med Inform Assoc 2017 ocx020. doi: 10.1093/jamia/ocx020)

<sup>4</sup> Graetz, et al. found similar results when conducting a cross-sectional survey of 1,041 patients with chronic conditions in a large integrated health care delivery system, indicating similar disadvantages for online access to health records and the ability to exchange secure messages among disadvantaged groups. (Graetz I, Gordon N, Fung V, et al. The Digital Divide and Patient Portals: Internet Access Explained Differences in Patient Portal Use for Secure Messaging by Age, Race, and Income. Med Care. 2016 Aug;54(8):772-9. doi: 10.1097/MLR.000000000000560.)

<sup>5</sup> Gibbons, et al. conducted a wide-ranging systematic evidence review of consumer health informatics, defined as any electronic tool, technology, or system that is (1) primarily designed to interact with health information users or consumers (anyone who seeks or uses healthcare information for nonprofessional work), (2) interacts directly with the consumer who provides personal health information to the CHI system and receives personalized health information from the tool application or system, and (3) is one in which the data, information, recommendations, or other benefits provided to the consumer, may be used in coordination with a healthcare professional but is not dependent on a healthcare professional. Gibbons, et al found that a system-level barrier related to Internet access at home or in the community was prevalent across all inclusive studies. (Gibbons, M.C., Wilson, R.F., Samal, L. et al. Consumer health informatics: results of a systematic evidence review and evidence based recommendations. Behav. Med. Pract. Policy Res. (2011) 1: 72. doi:10.1007/s13142-011-0016-4)

<sup>6</sup> Marmot M., et al., “Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health,” The Lancet 372, no. 9650 (Nov. 8, 2008):1661–1669.

<sup>7</sup> Office of Disease Prevention and Health Promotion, Department of Health & Human Services, “Social Determinants of Health” accessed May 16, 2017 <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

May 24, 2017

challenges related to inadequate access to affordable and consistent high-speed Internet. Race, ethnic, and age disparities in patient portal use and readiness and preferences for using digital communication for health-related purposes have shown to be significant,<sup>8</sup> and this, in turn, reduces their ability to participate in many new and exciting mHealth solutions. These groups would benefit from an environment that would foster a low-cost broadband option with access that would be open and as ubiquitous as possible.

AMIA supports many of the proposals described in the chairman's Digital Empowerment Agenda, meant to improve the digital divide's impact on health, including development of Gigabit Opportunity Zones and his Mobile Broadband for Rural American plan.<sup>9</sup> We note, however, that should private-sector actors fail to sufficiently address broadband access and digital opportunity for disadvantaged populations, FCC and other federal, state, and local partners must be willing to take a leadership role. This role may include direct funding or subsidies for access, and preemption of state and local laws pursuant to section 253 of the Communications Act.

Additional opportunities FCC may consider include policies that promote accessibility to specific health applications. For example, policies could allow general citizens, particularly disadvantaged populations, to access and use mobile health applications, personal health records (PHR) and other health apps and/or participate in population-based research without incurring network data charges. We note that certain carriers, such as Verizon and AT&T, already provide this kind of access for native applications on some smartphones on their network. These policies would significantly increase the use of such applications by those that are underserved, improve their access to health information and care, and ultimately, improve clinical outcomes.

A basic assumption, which may require FCC attention, is that access to such specialized health apps would not be subject to discriminatory policies. Example use cases that will benefit from such policies: (1) sending/receiving messages to/from their health care providers either using regular text messaging services/apps or via patient portals and (2) participating in research via mobile apps (includes providing e-consent, completing surveys etc.). Apps involved in these scenarios use an insignificant amount of network data when compared to services such as media streaming. We believe that the ability to freely use these apps (i.e., without data charges) will significantly enhance patient-provider engagement and promote citizen science. Again, with evidence suggesting that broadband access is a social determinant of health, government must be willing to provide protections for the public good.

*Focus areas for program development and inter-agency collaboration*

---

<sup>8</sup> Gordon N.P., Hornbrook M.C. Differences in Access to and Preferences for Using Patient Portals and Other eHealth Technologies Based on Race, Ethnicity, and Age: A Database and Survey Study of Seniors in a Large Health Plan. *J Med Internet Res*. 2016 Mar 4;18(3):e50. doi: 10.2196/jmir.5105.

<sup>9</sup> Remarks of (then) FCC Commissioner Ajit Pai, *A Digital Empowerment Agenda*, The Brandery, Cincinnati, Ohio (Sept. 13, 2016), available at <https://www.fcc.gov/document/commissioner-pais-digital-empowerment-agenda>

May 24, 2017

We note that fully developed, fully operational national broadband service is necessary to ensure that Americans benefit from the electronic health infrastructure that was initiated with the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act,<sup>10</sup> and supported by the 21<sup>st</sup> Century Cures Act. Hardware and software developments now permit implementation of such capabilities as electronic health records, technology-mediated public health monitoring and response, consumer-mediated health data exchange, and technology-enabled patient-reported outcomes measures. These and other technologies provide for improved outcomes at the individual and population levels and facilitate clinical efficiencies that offer the possibility of less costly and more cost-effective health care.

FCC has a critical role in ensuring that this infrastructure is both fully operational and fully implemented in every area of the country, but it should seek to do so alongside federal, state and local partners. Below, we offer suggestions on ways FCC can collaborate with other federal partners, and we identify select, potential focus areas for program development supporting broadband-enabled health care delivery. Specifically, AMIA recommends FCC:

- Partner with federal and state/local agencies to leverage broadband-enabled health solutions and technologies against the opioid epidemic;
- Align programs that can bolster efforts to better target those with chronic conditions, and ensure that these populations have access to affordable broadband and broadband-enabled health technologies;
- Examine other agency sources of administrative data, such as CMS, ONC and CDC, among others, to assess broadband-enabled health solutions capacity and needs; and
- Leverage the work done by the National Institutes of Standards & Technology's National Strategy for Trusted Identities in Cyberspace, also known as NSTIC, to ameliorate privacy and security concerns in accessing health care-related information via public broadband.

**Substance use disorder and the opioid epidemic** – Rehabilitation of substance abuse is a complex and long process, including the need for medical, behavioral, social, physical, and other interventions over a period of time. Broadband-enabled health care delivery can play a critical role in multiple stages of an individual's rehabilitation and better engage such individuals who live in rural areas. A mixed-methods pilot study with new methadone maintenance treatment clients indicated that the mobile intervention approach was feasible, and that participants found the intervention highly acceptable and useful.<sup>11</sup> Additionally, pilot participants showed evidence of increased treatment retention and abstinence from illicit opioids (in terms of effect size) over a 3-month period relative to those in standard treatment, suggesting the application's potential to enhance treatment outcomes. While this study is encouraging, we believe there is a lack of sufficient exploration in the utilization of broadband-enabled rehabilitation for substance use disorders. **We**

---

<sup>10</sup> Public Law 111-5

<sup>11</sup> Guarino, H., Acosta, M., Marsch, L. A., et al. A mixed-methods evaluation of the feasibility, acceptability, and preliminary efficacy of a mobile intervention for methadone maintenance clients. *Psychology of Addictive Behaviors*, Vol 30(1), Feb 2016, 1-11. <http://dx.doi.org/10.1037/adb0000128>

May 24, 2017

**recommend the FCC work with partner federal and state/county agencies, and focus activities meant to leverage broadband-enabled health solutions and technologies against the opioid epidemic.**

**Chronic care in the 21<sup>st</sup> century** – The Centers for Disease Control & Prevention (CDC) has characterized chronic diseases and conditions—such as heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis—as the leading cause of death and disability in the United States. As of 2012, about half of all adults, or 117 million people, had one or more chronic health conditions, and one of four adults had two or more chronic health conditions.<sup>12</sup> Further, nearly Eighty-six percent of all health care spending in the US in 2010 was for people with one or more chronic medical conditions.<sup>13</sup> Progress in combating chronic disease since this time has for the most part languished, yet the opportunities for broadband-enabled technology has never been as great. Since 2010, broadband adoption – either through fixed home or mobile – has steadily increased. **FCC should look to align programs that can bolster efforts to better target those with chronic conditions, and ensure that these populations have access to affordable broadband and broadband-enabled health technologies.** Recent actions in the 115<sup>th</sup> Congress should be monitored, particularly the status of The Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2017 (S.870), which may present FCC with opportunities to impact this space.

**Mapping broadband availability** - Question #8 under objective 1 calls for potential enhancements to the *Mapping the broadband health in America*, which analyzes connectivity versus health across various states. This tool could be developed further to use data collected by the Centers for Medicare & Medicaid Services (CMS), the Office of the National Coordinator for Health IT (ONC), and other agencies. For example, by combining CMS data with broadband availability data, officials could identify overlaps of referral patterns – based on CMS claims data – to identify obvious gaps among health information exchange partners and their patients. Additionally, CMS data on accountable care organizations, and other pilots conducted by the CMS Innovation Center, might elucidate informative trends and information. Further, ONC collects a range of data on certified EHRs, which include capability meant to allow patients to access their information and communicate with their providers, that may be useful to monitor. **FCC should examine these and other agency sources of administrative data to assess broadband-enabled health solutions capacity and needs.**

**Privacy and security** - Finally, we note that in many underserved populations, especially in urban settings, broadband use is more likely to be done using public or shared devices, exacerbating privacy concerns. **FCC should leverage the work done by the National Institutes of Standards**

---

<sup>12</sup> Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. *Prev Chronic Dis*. 2014;11:130389. DOI: <http://dx.doi.org/10.5888/pcd11.130389>

<sup>13</sup> Gerteis J, Izrael D, Deitz D, LeRoy L, Ricciardi R, Miller T, Basu J. Multiple Chronic Conditions Chartbook. AHRQ Publications No, Q14-0038. Rockville, MD: Agency for Healthcare Research and Quality; 2014. Accessed November 18, 2014.

May 24, 2017

**& Technology's National Strategy for Trusted Identities in Cyberspace, also known as NSTIC, to ameliorate these and similar concerns in health care.<sup>14</sup>**

\*\*\*\*\*

We appreciate FCC's work in this important area, and we are excited about the possibilities this new paradigm will have for bringing new and innovative therapies to American consumers. We look forward to working closely with the FCC, bringing the expertise of health informatics professionals to our national broadband health imperative.

Thank you for considering our comments. Should you have questions about these comments or require additional information, please contact Jeffery Smith, Vice President of Public Policy at [jsmith@amia.org](mailto:jsmith@amia.org) or (301) 657-1291. We look forward to continued partnership and dialogue.

Sincerely,



Douglas B. Fridsma, MD, PhD, FACP, FACMI  
President and CEO  
AMIA

---

<sup>14</sup> <https://www.nist.gov/itl/tig>

May 24, 2017

## Appendix A

Select Scholarship from the *Journal of the American Medical Informatics Association* regarding the broadband health imperative

- **Patient portals and broadband internet inequality:**  
<https://academic.oup.com/jamia/article/3079333/Patient-portals-and-broadband-internet-inequality?searchresult=1>
  - “The majority of adults with outpatient visits to a large urban health care system did not use the patient portal, and initiation of use was lower for racial and ethnic minorities, persons of lower socioeconomic status, and those without neighborhood broadband internet access. These results suggest the emergence of a digital divide in patient portal use.”
  
- **Patient and provider perspectives on the potential value and use of a bilingual online patient portal in a Spanish-speaking safety-net population:**  
<https://academic.oup.com/jamia/article/3778214/Patient-and-provider-perspectives-on-the-potential?searchresult=1>
  - “Patients from a safety-net health system, most of whom were Spanish-speaking, reported a high level of interest in the patient portal. Providers at the same health system expressed reluctance about the portal due to concerns related to time and reimbursement.”
  
- **Beyond access: barriers to internet health information seeking among the urban poor:** <https://academic.oup.com/jamia/article/23/6/1053/2399232/Beyond-access-barriers-to-internet-health?searchresult=1>
  - “Despite IT support, [study] participants still experienced internet connectivity issues that negatively impacted their health information seeking.”
  
- **Patient portals and personal health information online: perception, access, and use by US adults:** <https://academic.oup.com/jamia/article/24/e1/e173/2631484/Patient-portals-and-personal-health-information?searchresult=1>
  - “Most [survey] respondents (92%) considered online PHI access important, yet only 34% were offered access to online PHI by a health care provider, and just 28% accessed online PHI in the past year.”
  
- **Mobile health devices: will patients actually use them?:**  
<https://academic.oup.com/jamia/article/23/3/462/2909012/Mobile-health-devices-will-patients-actually-use?searchresult=1>
  - “Use of mobile technologies may have the potential to transform care delivery across

May 24, 2017

populations and within individuals over time. However, devices may need to be tailored to meet the specific patient needs.”

- **Seeking health information online: does limited healthcare access matter?:**  
<https://academic.oup.com/jamia/article/21/6/1113/788182/Seeking-health-information-online-does-limited?searchresult=1>
  - “Individuals with financial barriers to healthcare access, difficulty getting timely appointments with doctors, and conflicts in scheduling during clinic hours are more likely to search for general health information online than those without these access barriers.”