

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

In the Matter of)
Promoting Telehealth for Low-Income Consumers) WC Docket No. 18-213

NOTICE OF PROPOSED RULEMAKING

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I. INTRODUCTION

1. Telemedicine has assumed an increasingly critical role in health care delivery as technology and improved broadband connectivity have enabled patients to access health care services even when they cannot access a health care provider’s physical location. Advances in telemedicine are transforming health care from a service delivered solely through traditional brick and mortar health care facilities to connected care options delivered via a broadband Internet access connection directly to the patient’s home or mobile location.1 Despite the numerous benefits of connected care services to patients and health care providers alike, patients who cannot afford or who otherwise lack reliable, robust broadband Internet access connectivity are not enjoying the benefits of these innovative telehealth technologies. So today we propose a Pilot program within the Universal Service Fund (USF or Fund) to

1 Examples of connected care services delivered to patients at their residence or mobile location rather than a health care provider’s physical location include, but are not limited to, synchronous video consultations and visits, store and forward services (asynchronous transfer of patient images and data for interpretation by a physician), remote patient monitoring, and patient health education. See, e.g., Karen Schulder Rheuban & Elizabeth A. Krupinski, Understanding Telehealth 18 (1st ed. 2017) (describing the types of telehealth-related services).

support connected care for low-income Americans and veterans. This Pilot program would help the Commission better understand how the Fund can play a role in helping patients stay directly connected to health care providers through telehealth services and improve health outcomes among medically underserved populations that are missing out on these vital technologies.

2. Specifically, in this Notice of Proposed Rulemaking, we propose the creation of a Pilot program that would allow us to obtain valuable data concerning connected care services and also help us better understand the relationship of affordable patient broadband Internet access service to the availability of quality health care, the health care cost savings that result from connected care services, and the role of connected care on patient health outcomes. Our proposal seeks to bring these innovative telemedicine technologies to medically underserved populations, including low-income communities and veterans, by empowering health care providers to connect directly with their patients.

3. As discussed more fully below, we propose that the Connected Care Pilot program will operate as a new program within the USF, which would provide funding to eligible health care providers to defray the qualifying costs of providing connected care services to low-income Americans and veterans.

4. We expect this Pilot could benefit Americans that are responding to a wide breadth of health challenges, including diabetes management, opioid dependency, high-risk pregnancies, pediatric heart disease, mental health conditions, and cancer. Data gathered from the Pilot program will help us understand whether and how USF funds can be used to promote health care provider and consumer adoption and use of connected care services. The data and information collected through this Pilot program might also aid in the consideration of broader reforms—whether statutory changes or updates to rules administered by other agencies—that could support this trend towards connected care.

II. BACKGROUND

5. The Communications Act of 1934 (Act), as amended by the Telecommunications Act of 1996, directs the Commission to “establish competitively neutral rules to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for . . . health care providers[.]”² The Act also directs the Commission to base its universal service policies on the principles that “health care providers . . . should have access to advanced telecommunications services” and “[c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to advanced telecommunications and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.”³ Congress also directed the Commission to base policies for the preservation and advancement of universal service on the principles that “[q]uality services should be available at just, reasonable, and affordable rates” and “[a]ccess to advanced telecommunications and information services should be provided in all regions of the Nation.”⁴

6. Consistent with this directive, the Commission established two USF programs that help it play an important role in improving the quality of health care and enabling health care innovation through communications services (collectively, the RHC programs). The Healthcare Connect Fund provides a 65% discount on the cost of broadband connectivity to eligible health care providers to encourage the formation of state and regional telehealth networks. The Telecommunications Program provides discounts on telecommunications services to ensure that rural health care providers pay no more than their

² 47 U.S.C. § 254(h)(2)(A).

³ 47 U.S.C. §§ 254(b)(3), (6).

⁴ 47 U.S.C. §§ 254(b)(1)-(2).

urban counterparts. The Rural Health Care Pilot program (RHC Pilot program) also played a critical role in improving broadband Internet access connectivity for health care providers around the country.⁵

7. For years, the FCC, through these USF programs, has played a key role in supporting health care providers' access to communications technologies. Historically, we have focused primarily on supporting telecommunications services needed to connect health care providers to other providers, and later on providing broadband services to connect health care providers to the Internet. But there's a new trend in telehealth—a trend towards connected care. The delivery of high-tech, high-quality health care is no longer limited to the confines of connected, brick-and-mortar facilities. With remote patient monitoring and mobile health applications that can be accessed on a smartphone or tablet, we now have the technology to deliver quality health care directly to patients, regardless of where they are located.⁶ The Pilot program seeks to address this new trend.

8. In recent years, as connected care services have continued to expand and have proven to be an effective approach to treatment for numerous health conditions, stakeholders have advocated for the Commission to use the RHC programs to support the provision of these services by health care providers.⁷ For example, stakeholders raised this idea in response to the Commission's Connect2Health Task Force's April 2017 Public Notice seeking information on how it "can help enable the adoption and accessibility of broadband-enabled health care solutions, especially in rural America and in other underserved areas of the country."⁸ Several commenters advocated for this kind of support in response to the Commission's December 2017 Notice of Proposed Rulemaking for the Rural Health Care programs that sought comment on whether "under the statute, [the Commission could] support patient home monitoring services?"⁹

9. Subsequently, in August 2018 the Commission released a Notice of Inquiry seeking information on "how the Commission can help advance and support the movement towards connected care everywhere and improve access to the life-saving broadband-enabled telehealth services it makes

⁵ See *Wireline Competition Bureau Evaluation of Rural Health Care Pilot Program Staff Report*, WC Docket No. 02-60, Staff Report, 27 FCC Rcd 9387, 9389 (WCB 2012) (discussing the key benefits of the RHC Pilot Program); *Rural Health Care Support Mechanism*, Report and Order, 27 FCC Rcd 16678, 16686, para. 19 (2012) (*Healthcare Connect Fund Order*) (discussing the substantial impact of the RHC programs, including the RHC Pilot Program). Further, through the RHC programs, in particular the Healthcare Connect Fund, the Commission and USAC collect data regarding the use of funding to support telehealth and other remote applications, through FCC Forms 460, 461, and 463, as well as an annual report for consortia.

⁶ For example, some health care providers have addressed this need by providing certain patients with broadband Internet access service in their homes, such as through a broadband-enabled tablet. See, e.g., Virginia Telehealth Network Comments at 2 ("VTN members also provide broadband connectivity to enable the use of those remote monitoring tools where patients lack broadband services at home."); Eli Richman, Fierce Healthcare, *The VA Tried Out Loaning Thousands of iPads to Veterans for Telehealth. Now They Plan to Double the Program* (Sept. 19, 2018), <https://www.fiercehealthcare.com/tech/va-expects-to-double-tablet-leasing-program-for-at-need-veterans-potentially-distributing-12> (discussing VA's wireless-enabled tablet loan program); CHRISTUS Health Comments at 2 (describing its remote patient monitoring pilot program for chronic heart conditions and diabetes).

⁷ See, e.g., Letter from George S. Conklin Senior, Vice President and CIO of CHRISTUS Health, et al., to Marlene Dortch, Secretary, FCC, WC Docket No. 02-60, at 4 (Mar. 30, 2015) (CHRISTUS Health 2015 Letter) ("The Commission should consider subsidizing under the RHC program the wireless broadband contracts between the [health care provider] and wireless carriers [health care providers] use for remote monitoring.") (emphasis in original); Schools, Health & Libraries Broadband (SHLB) Coalition, Petition for Rulemaking, WC Docket No. 02-60, at 23 (rec. Dec. 7, 2015) (urging "the Commission to formally explore whether it will help rural HCPs if the broadband costs for remote patient monitoring were eligible, and what the likely demand for such funding will be."); NTCA—The Rural Broadband Association Comments, WC Docket No. 02-60, at 22 (rec. Jan. 14, 2016) ("NTCA urges the Commission to evaluate RHC Program support for the broadband component of the remote patient monitoring service—including both wireless and wireline services."); TracFone Comments, WC Docket No. 02-60, (continued....)

possible.”¹⁰ As explained in the *Notice of Inquiry*, connected care services have been used to treat a wide range of health conditions, including diabetes, heart disease, opioid dependency, stroke, mental health conditions, high-risk pregnancy, and cancer.¹¹ Connected care services have resulted in improved health outcomes for chronic conditions and significant cost savings for health care providers and patients.¹²

10. Examples of the impact connected care has on patients abound. The Veterans Health Administration (VHA) conducted a three-year remote patient monitoring program involving more than 43,000 veterans with conditions like hypertension, congestive heart failure, chronic obstructive pulmonary disease, depression, and PTSD. The program resulted in a 25% reduction in days of inpatient care and a 19% reduction in hospital admissions.¹³ Similarly, Louisiana-based Ochsner Health System launched a remote monitoring pilot program in 2015 that enabled patients to manage their hypertension via a smart watch. Program participants were more than twice as successful as non-participants in achieving their target blood pressure levels and showed improvement in patient engagement levels.¹⁴

11. The United States currently spends more than \$3 trillion on health care every year¹⁵—a greater percentage of gross domestic product than any other nation in the Organization for Economic Cooperation and Development.¹⁶ Telehealth technologies are expected to create significant cost savings for chronic disease management, which accounts for over 85% of direct health care spending in the country.¹⁷ Analysts further estimate that widespread use of remote patient technology and virtual doctor visits could save the American health care system \$305 billion annually.¹⁸

12. However, despite this growing and compelling evidence, many health care providers and patients have not yet adopted connected care services.¹⁹ Health care providers have cited reimbursement issues and health care professional licensing laws and regulations as some of the obstacles to broader adoption of connected care services.²⁰ In recent years, Congress, the U.S. Department of Veterans Affairs (VA), the Centers for Medicare and Medicaid Services (CMS), and other entities have made significant changes to address these obstacles. For example, in 2018 Congress passed legislation that permits

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at 9 (rec. Jan. 14, 2016) (recommending that “at a minimum the Commission make the wireless broadband costs associated with remote patient monitoring an eligible expense.”).

⁸ *FCC Seeks Comment and Data on Actions to Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies*, Public Notice, 32 FCC Rcd 3660, 3660 (2017) (*Broadband-Enabled Health Care Solutions and Advanced Technologies Public Notice*). See, e.g., American Hospital Association Comments at 17, GN Docket No. 16-46 (rec. May 23, 2017) (“The Commission should change the program rules to include costs for remote patient monitoring as an eligible expense.”); Geisinger Health System Reply Comments at 5, GN Docket No. 16-46 (rec. June 8, 2017) (“Geisinger also supports the request of the American Hospital Association to change the Rural Health Care Program rules to include the costs for remote patient monitoring as an eligible expense.”).

⁹ *Promoting Telehealth in Rural America*, Notice of Proposed Rulemaking and Order, 32 FCC Rcd 10631, 10656, para. 78 (2017) (*2017 Promoting Telehealth Notice and Order*). See, e.g., Alaska Communications Comments at 34-35, WC Docket No. 17-310 (rec. Feb. 2, 2018); Healthcare Information and Management Systems Society and Personal Connected Health Alliance Comments at 4- 5, WC Docket No. 17-310 (rec. Feb. 2, 2018); CHRISTUS Health Comments at 5, WC Docket No. 17-310 (rec. Feb. 2, 2018).

¹⁰ *Promoting Telehealth for Low-Income Consumers*, Notice of Inquiry, 33 FCC Rcd 7825, 7825-26, paras. 1, 5 & n.15 (2018) (*Connected Care Notice of Inquiry* or *Notice of Inquiry*).

¹¹ See *id.*, 33 FCC Rcd at 7825-26, para. 1.

¹² See *id.*, 33 FCC Rcd at 7827-29, paras. 5-8.

¹³ *Id.*, 33 FCC Rcd at 7827, para. 5.

¹⁴ *Id.*

¹⁵ Centers for Medicare and Medicaid Services, NHE Fact Sheet (Apr. 17, 2018), <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nhe-fact-sheet.html>.

covered VA health care professionals to provide telemedicine services across state lines to wherever a veteran is located, and the VA adopted rules implementing this change.²¹ And subsequent to the *Notice of Inquiry*, CMS issued new rules that expanded Medicare coverage for connected care services, including remote patient monitoring and virtual video check-ins.²²

13. Lack of residential broadband Internet access service for patients is also cited as a key obstacle for health care providers and patients in adopting connected care services.²³ In one survey, for example, 36% of respondents stated that lack of patient access to telehealth technology was a key barrier to the adoption of telehealth.²⁴ Patient broadband Internet access service is therefore an important factor that drives health care providers' decisions on whether to invest in connected care options for patients.²⁵ Other Americans may have a home broadband connection that is not sufficient for connected care services, or lack the routers and wireless capability needed for connected care services.²⁶ Finally, for many Americans, the cost of connected care services, including broadband connectivity costs, may serve as an obstacle to the adoption of connected care services.²⁷ Based on the record before us, aside from the VA's Home Telehealth Program (which provides a limited number of patient broadband connections targeted to veterans), no federal agency currently offers funding to health care providers for use for patient connectivity in connected care.²⁸

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¹⁶ Rick Schadelbauer, *Anticipating Economic Returns of Rural Telehealth*, NTCA—The Rural Broadband Association at 1 (Mar. 2017), https://www.ntca.org/sites/default/files/documents/2017-12/SRC_whitepaper_anticipatingeconomicreturns.pdf.

¹⁷ Karen Schulder Rheuban & Elizabeth A. Krupinski, *Understanding Telehealth*, at 134 (2018). These cost savings have been borne out on a project level. For example, net of costs, a remote patient monitoring pilot administered by the University of Mississippi Medical Center resulted in nearly \$700,000 in annual savings due to reductions in hospital readmissions alone. Assuming just 20% of Mississippi's diabetic population were to enroll in this type of remote patient monitoring program, Medicaid savings for the state would be approximately \$189 million per year. See *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7829, para. 8. The VHA remote patient monitoring program similarly produced substantial savings: the annual cost of the program was \$1,600 per patient compared to more than \$13,000 per patient for VHA's home-based primary services. *Id.*

¹⁸ See Goldman Sachs, *Internet of Things*, Vol. 5, *The Digital Revolution Comes to US Healthcare*, at 12-13 (2015), https://www.wur.nl/upload_mm/0/f/3/8fe8684c-2a84-4965-9dce-550584aae48c_Internet%20of%20Things%205%20-%20Digital%20Revolution%20Comes%20to%20US%20Healthcare.pdf.

III. DISCUSSION

14. To the extent that lack of affordable and robust broadband Internet access service is an obstacle to the adoption of connected care services by health care providers and patients, we believe universal service support could help address that obstacle. Further, by encouraging more health care providers to make use of connected care technologies, we may help create a model for the nationwide adoption of such technologies, which could lead to improved health outcomes for patients and savings to the country's health care system overall.

15. Thus, today we propose a three-year Connected Care Pilot program (Pilot) with a \$100 million budget that would provide support for eligible health care providers to obtain universal service support to offer connected care technologies to low-income patients and veterans. Through this Pilot program, we seek to develop a record that will help us understand the benefits that subsidization of broadband service for connected care brings.

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¹⁹ See, e.g., AT&T Comments at 8 (explaining that while many large health care systems have adopted telehealth and remote patient monitoring other providers “may have been slower to adopt”); Eric Wicklund, mHealth Intelligence, *AMA Survey Finds Medical Practices are Slow to Embrace Telehealth* (Jan. 14, 2019), <https://mhealthintelligence.com/news/ama-survey-finds-medical-practices-are-slow-to-embrace-telehealth> (“Telemedicine and telehealth may be the norm rather than the exception in hospitals and health systems, but smaller medical practices still aren’t embracing connected care technology.”); Ken Abrams, MD, Steve Burrill & Natasha Elsner, Deloitte Insights, *What Can Health Systems Do to Encourage Physicians to Embrace Virtual Care?* (July 18, 2018), <https://www2.deloitte.com/insights/us/en/industry/health-care/virtual-health-care-health-consumer-and-physician-surveys.html?id=us:2el:3pr:4di4407:5awa:6di:MMDDYY:&pkid=1005419> (stating that Deloitte’s 2018 Survey of Physicians indicated that the surveyed physicians have a “low interest in virtual care technologies” despite recognizing the benefits of telehealth); News Release, George Washington University, *Despite Increase in Telehealth Participation, Underserved Populations Use Telehealth the Least*, (Dec. 3, 2018), https://www.eurekalert.org/pub_releases/2018-12/gwu-dii113018.php (““Only 38 percent of community health centers—major health service providers for underserved populations—offered telehealth,” Dr. Park said. ‘Policies that incentivize providers to adopt telehealth could be an important way to increase access for underserved populations.’”); Jessica Kim Cohen, Becker’s Hospital Review, *Underserved Populations Use Telehealth Least, Study Finds* (Dec. 4, 2018) <https://www.beckershospitalreview.com/telehealth/underserved-populations-use-telehealth-least-study-finds.html> (“But underserved populations—such as low-income, rural and Medicaid populations—did not use video-based telehealth as widely as other demographic groups. The researchers identified this trend across the U.S., even in states with less restrictive telehealth policies will need incentives to adopt the service that go beyond removing regulatory restrictions.”); JeongYoung Park, Clese Erickson, XinXin Han, and Preeti Iyer, *Are State Telehealth Policies Associated with the Use of Telehealth Services Among Underserved Populations*, 37 Health Affairs No. 12, 2067 (2018) (explaining that while telemedicine use increased between 2013-2016, “key underserved populations (including Medicaid, low-income, and rural populations) had significantly lower use of telehealth.”).

²⁰ See American Hospital Association, Fact Sheet: Telehealth, <https://www.aha.org/system/files/2019-02/fact-sheet-telehealth-2-4-19.pdf> (last visited July 9, 2019) (citing to Medicare reimbursement limitations and restrictions for telehealth, certain rural facilities’ limited access to adequate broadband services, cross-state licensure issues, credentialing and privileging, online prescribing, privacy and security, and fraud and abuse as barriers to telehealth adoption); Center for Connected Care Health Policy, Fact Sheet: Telehealth Policy Barriers (Feb. 2019), <https://www.cchpca.org/sites/default/files/2019-02/TELEHEALTH%20POLICY%20BARRIERS%202019%20FINAL.pdf> (last visited July 9, 2019) (citing to reimbursement limitations and restrictions under Medicare and Medicaid and state licensing requirements (which treat the patient location as the location of service), malpractice insurance, HIPAA, privacy and security concerns, and state laws requiring an in patient relationship before prescribing medication as some of the obstacles to the adoption of telehealth).

²¹ See VA MISSION ACT, 38 U.S.C. § 1730C (a) (2018); 38 CFR § 17.417 (VA rule permitting VA medical professionals to practice telehealth across state lines).

A. Proposing a Connected Care Pilot Program

16. We seek to design a cost-effective and efficient Pilot program that incentivizes participation from a wide range of eligible health care providers and broadband service providers, provides meaningful data about the use of connected care services provided over broadband for low-income Americans and veterans, and provides insight into how universal service funds could better promote the adoption of connected care services among low-income Americans and veterans and their health care providers.

17. We propose implementing a flexible Pilot program that will give health care providers some latitude to determine specific health conditions and geographic areas that will be the focus of the proposed projects. Under this proposal, the Pilot program would provide funding to selected Pilot project health care providers to defray the costs of purchasing broadband Internet access service necessary for providing connected care services directly to qualifying patients. We seek comment on this proposal. We believe our proposed approach will increase the variety of projects without discouraging or prejudging any applicants considering whether to participate. Nevertheless, we propose limiting the Pilot program to projects that primarily focus on health conditions that typically require at least several months or more to treat—such as behavioral health, opioid dependency, chronic health conditions (e.g., diabetes, kidney disease, heart disease, stroke recovery), mental health conditions, and high-risk pregnancies. We believe that collecting data across at least several months would provide more meaningful, statistically significant data to track health outcomes and cost savings—health conditions that do not require at least several months of treatment, therefore, may not provide the type of meaningful data we seek to collect through the Pilot program.

18. The *Notice of Inquiry* sought comment on whether the Pilot program should focus on certain health conditions or geographic regions.²⁹ Many commenters asserted that the Pilot program should not be limited to projects that treat specific health conditions.³⁰ In addition, the record identifies numerous health conditions that can benefit from connected care services.³¹ To ensure that Pilot program

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²² Eric Wicklund, mHealth Intelligence, *CMS to Reimburse Providers for Remote Patient Monitoring Services* (Nov. 2, 2018), <https://mhealthintelligence.com/news/cms-to-reimburse-providers-for-remote-patient-monitoring-services> (describing changes to Medicare reimbursement structure that separates remote patient monitoring from telehealth (for which reimbursement is more restricted)); Press Release, Remarks by Administrator Seema Varma at the Alliance for Connected Care Telehealth Policy Forum for Health Systems (Nov. 15, 2018), <https://www.cms.gov/newsroom/press-releases/remarks-administrator-seema-verma-alliance-connected-care-telehealth-policy-forum-health-systems> (describing significant changes to Medicare reimbursement for telemedicine services including “[f]or the very first time, starting in January, Medicare will pay for virtual check-ins,” “[f]or the very first time, we will also be paying for . . . evaluation of remote pre-recorded images and video,” “[a]lso new for 2019, under our final rules, Medicare patients receiving home dialysis will be able to receive their monthly clinical assessments via telehealth from their homes.”).

²³ See Microsoft, *A Rural Broadband Strategy* (July 10, 2017), <https://blogs.microsoft.com/uploads/2017/07/Rural-Broadband-Strategy-Microsoft-Whitepaper-FINAL-7-10-17.pdf> (stating that “[b]roadband access is also an important part of managing healthcare delivery and wellness programs. Indeed, the availability of ‘telemedicine’ has been an important development in rural areas which often have fewer doctors per capita than urban areas.”); Associated Press, *Companies to Extend Broadband Access in Rural Ohio* (Aug. 10, 2018), <https://apnews.com/e1905bc983f94a38b6b71c2a5819c7d6> (describing partnership between Microsoft and an Ohio-based telecommunications provider to bring broadband Internet access to unserved people in Ohio to “address a need for reliable broadband access in rural Ohio and provide access to digital advances in agriculture, telemedicine, and education.”).

²⁴ See Joyce Frieden, *Barriers to Telehealth Adoption Remain, Survey Finds* (Apr. 12, 2019), <https://www.medpagetoday.com/meetingcoverage/acp/79180> (stating that lack of patient access to health care technology is a leading barrier to telehealth adoption, and further stating that lack of patient access to broadband technology is a barrier to adoption that could increase disparities in care, as patients without broadband access would be excluded from the benefits of telehealth). See also *4 Non-technical Barriers to Telehealth – and How the* (continued....)

funding is used for legitimate medical conditions and to guard against potential waste, fraud, and abuse, should we adopt a specific definition of “health condition” for purposes of the Pilot program? If so, is there a generally accepted authority that provides a definition of “health condition” that would be appropriate to adopt for the Pilot program? We also seek information from commenters regarding the marketplace for connected care services, specifically whether health care providers typically purchase complete packages or suites of services that include patient broadband Internet access service and other functionality necessary to provide connected care services, or whether health care providers typically purchase broadband Internet access service connections for connected care as a stand-alone product.³² Additionally, we seek comment on the costs health care providers incur to purchase such services.

19. *Supported Services.* The *Notice of Inquiry* sought comment on providing funding for the costs of: (1) the broadband connectivity that eligible low-income patients of participating hospitals and clinics would use to receive connected care services; and (2) the broadband connectivity that a participating hospital or clinic would need to conduct its proposed connected care pilot project.³³ The record demonstrates that many patients lack home broadband service or lack sufficient broadband service to receive connected care services,³⁴ and evidences widespread support for funding broadband Internet access connections for connected care through the Pilot program.³⁵ Many commenters also expressed support for funding both fixed and mobile broadband for connected care.³⁶ The record indicates that the VA’s tablet program, which provides patient broadband connections for a small fraction of veterans who receive care through the VA, is the only federal agency program that currently funds patient broadband connections specifically for connected care.³⁷

20. The record indicates that health care providers typically purchase broadband Internet access service that enables connected care through a broadband carrier or a connected care company (for example, a remote patient monitoring company). The health care provider then provides a connected care service, including the broadband Internet access service underlying that connected care service, to the patient directly.³⁸ To what extent are health care providers already funding patient broadband connections

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Industry Can Overcome Them, HealthTech Magazine (Feb. 21, 2018),

<https://healthtechmagazine.net/article/2018/02/4-non-technical-barriers-telehealth-and-how-industry-can-overcome-them> (nearly 20% of respondents to a 2017 American Telemedicine Association survey reported connectivity issues as a barrier to increased telehealth adoption).

²⁵ InTouch Health, *How Faster Broadband Will Help Telemedicine Reach Its Full Potential*,

<https://intouchhealth.com/how-faster-broadband-will-help-telemedicine-reach-its-full-potential/> (last visited July 9, 2019) (“Adoption rates are largely determined by patient demand. If a healthcare provider’s patients can’t access telehealth services because they don’t have access to the internet, the provider won’t view telehealth as a priority.”)

²⁶ See Elizabeth O’Dowd, HT Infrastructure, *Rural Health Care Networks Require IT Infrastructure Support* (Aug. 15, 2018), <https://hitinfrastructure.com/news/rural-healthcare-network-connections-require-it-infrastructure-support> (“Many Americans have internet that is not fast enough to support a high-quality video chat. In rural communities, service providers often have customers pay for internet by the gigabyte, which can result in high charges for video conferencing.”); Elizabeth O’Dowd, HT Infrastructure, *Broadband Supports Healthcare IOT Remote Connectivity, Volume* (Sept. 15, 2017), <https://hitinfrastructure.com/news/broadband-supports-healthcare-iot-remote-connectivity-volume> (“Remote care and telehealth programs that depended on the patient’s home WiFi network were often unsuccessful, especially when clinicians were visiting patients in rural or underserved areas. Home WiFi connections were often unreliable and were not strong enough to transmit large files or stream video for conferencing.”); EMHS Comments at 2 (stating “many older adults who have broadband in their homes cannot afford and/or do not have routers and wireless capabilities, needed for home-based monitoring, diagnostics, and care delivery.”).

²⁷ See, e.g., Nicole Orysko, Federal News Network, *VA’s Telehealth Program is already the Largest in the Nation. It’s About to get Bigger* (Dec. 6, 2018), <https://federalnewsnetwork.com/veterans-affairs/2018/12/vas-telehealth-program-is-already-the-largest-in-the-nation-its-about-to-get-bigger/> (many rural Veterans “‘don’t have broadband access in their home yet,’ Scher said. ‘. . . either they can’t afford it or it’s not available where they live.’”);

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for connected care services and what are the costs associated with funding those connections? To what degree would providing universal service funding to offset these costs enable health care providers to extend service to additional patients or treat additional health conditions? Several health care providers asserted that the Pilot program should not fund Internet connections between health care providers.³⁹ We agree, as doing so would be duplicative with the existing RHC programs and propose to exclude such connections from the Pilot program.

21. We consider “telehealth” for the purposes of this proceeding to include a wide variety of remote health care services beyond the doctor–patient relationship; for example, involving services provided by nurses, pharmacists, or social workers.⁴⁰ We also define the term “telemedicine” as using broadband Internet access service-enabled technologies to support the delivery of medical, diagnostic, and treatment-related services, usually by doctors.⁴¹ We seek comment on these definitions and their applicability to the Connected Care Pilot program. In addition, we also propose to define the term “connected care” as a subset of telehealth that is focused on delivering remote medical, diagnostic, and treatment-related services directly to patients outside of traditional brick and mortar facilities. We seek comment on this proposed definition of connected care. Should we place any additional qualifiers on this definition to ensure that the Pilot program is focused on medical services delivered directly to patients outside of traditional medical facilities through broadband-enabled technologies?

22. We seek comment on common existing uses of connected care technologies, such as remote patient monitoring devices. The record indicates that such devices are generally single-purpose, meaning that they cannot be used to access the public Internet or for uses outside of the health care context.⁴² Are there other circumstances where health care providers are providing patient connectivity

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Michigan Medicine Comments at 2 (stating that “one of the largest barriers to broadband access is cost If the resources provided by the Connected Care Pilot Program are used to serve these patients who cannot afford broadband, we anticipate that many patients may be better connected to their care.”); EMHS Comments at 2 (stating that in Maine “[e]ven if reliable broadband were available, access would be unaffordable for many.”); NTCA Comment at 21, WC Docket No. 02-60 (rec. Jan. 14, 2016) (“Technology is readily available, but NTCA members and their customers’ qualitatively report that the combined cost of the hardware, software, monitoring service, and the broadband connection is often too pricey for the patient.”); TracFone Wireless Comments at 9, WC Docket No. 02-60 (rec. Jan. 14, 2016) (“All too often the costs to consumers of obtaining the necessary equipment and mobile data present significant barriers to the adoption of broadband-dependent health solutions such as remote patient monitoring.”).

²⁸ See Virginia Telehealth Network Comments at 10. See also Eli Richman, Fierce Healthcare, *The VA Tried Out Loaning Thousands of iPads to Veterans for Telehealth. Now They Plan to Double the Program* (Sept. 19, 2018), <https://www.fiercehealthcare.com/tech/va-expects-to-double-tablet-leasing-program-for-at-need-veterans-potentially-distributing-12> (discussing VA’s challenge with funding patient wireless connections for its broadband-enabled tablet loan program which initially served 6,000 patients and is being expanded to serve double that number of patients). The recent *Veterans Broadband Access Report* states that the VA has provided more than 2.29 million telehealth interactions to more than 782,000 veterans enrolled in the VA health care system, an increase of 7.5% from Fiscal Year 2017 services. See *Report on Promoting Broadband Internet Access Service for Veterans, Pursuant to the Repack Airwaves Yielding Better Access for Users of Modern Services Act of 2018*, Report at 16-17 (WCB May 1, 2019), <https://docs.fcc.gov/public/attachments/DOC-357270A1.pdf> (*Veterans Broadband Access*

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that enables them to access the Internet for non-health care purposes? Are there any barriers to receiving connected care services for low-income patients and veterans, and, if so, what are those barriers? Would this Pilot enable additional connectivity not currently available to low-income patients and veterans?

23. We also seek comment on whether there are packages or suites of services that health care providers use to provide connected care services (such as a turnkey solution that includes software, remote patient monitoring and remote monitoring devices, and patient broadband Internet access) that are not currently funded under the existing RHC support programs that could be funded through the Pilot program as information services. What types of services would be considered information services, as well as any applicable precedents and should be funded through the Pilot program? How do service providers currently fund these types of services and what are the typical costs? Are specific types of health care providers or provider locations more likely to be unable to purchase these types of information services? Are there any federal or other grant programs or other funding sources that provide health care providers support for purchasing these types of services? Should we provide support for internal connections for eligible health care providers through the Pilot program? Is such support needed for connected care services?⁴³

24. *Network Equipment.* The *Notice of Inquiry* sought comment on whether the Pilot program should fund “network equipment necessary to make a broadband service functional” and for consortia applicants “equipment necessary to manage, control or maintain an eligible service or a dedicated health care broadband network” as is done in the Healthcare Connect Fund program.⁴⁴ At least one commenter supported funding this type of network equipment through the Pilot.⁴⁵ Because we currently fund the types of network equipment that are eligible for support through the Healthcare Connect Fund program, we believe we have the authority to provide funding for similar equipment here, to the degree it is necessary to enable connectivity for the purposes of connected care. However, we propose not to permit duplication of funding for this equipment and equipment funded through the Healthcare Connect Fund program.⁴⁶ We seek comment on this interpretation and approach. Would such

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Report); see also U.S. Department of Veterans Affairs, VA Telehealth Services, Fact Sheet (2019) (VA Telehealth Services).

²⁹ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7832, paras. 19-20.

³⁰ See, e.g., CoBank ACB Comments at 3; California Primary Care Association Reply Comments at 2; Community Healthcare Association of New York State Reply Comments at 3; Nevada Primary Care Association Reply Comments at 2; Oklahoma Primary Care Association Reply Comments at 2; CHRISTUS Health Comments at 2.

³¹ See, e.g., Selfhelp Community Services Reply Comments at 2-3; Ochsner Health System Comments at 2; Letter from Sarah B. Tyree, Vice President, Policy and Public Affairs, CoBank, to Marlene H. Dortch, Secretary, FCC, at 1 and Attachment at 6 (Apr. 17, 2019).

³² See, e.g., AT&T Comments at 10 (“AT&T (the connectivity provider) contracts with and is paid by the [remote patient monitoring] solution provider” and “the connectivity provider such as AT&T generally has no direct relationship with either the [health care provider] or the patient.”); CHRISTUS Health 2015 Letter (“The Commission should consider subsidizing under the RHC program the wireless broadband contracts between the HCP and wireless carriers HCPs use for remote patient monitoring.”).

³³ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7838, para. 42.

³⁴ See, e.g., Virginia Telehealth Network Comments at 5; Michigan Medicine Comments at 2; Hughes Network Systems Comments at 12; CHRISTUS Health Comments at 1-2.

³⁵ See, e.g., Virginia Telehealth Network Comments at 5; CHRISTUS Health Comments at 4; Gila River Telecommunications Inc. Comments at 14; Pennsylvania Association of Community Health Centers Reply Comments at 2; Geisinger Comments at 2; Oklahoma Primary Care Association Reply Comments at 2; California Primary Care Association Reply Comments at 2; University of Vermont Health Network Comments at 2; Survivor Healthcare Comments at 3; American Hospital Association Comments at 3.

network equipment be necessary to providing the broadband service underlying connected care, or part of a health care provider's purchase of a telehealth information service? Would health care providers still be interested in and be able to participate in the Pilot program if the Pilot program did not fund the types of health care provider network equipment that is eligible for support under the Healthcare Connect Fund program? If we were to fund this type of equipment, how could we ensure that the health care provider actually needs this equipment for the Pilot program and would not have needed or purchased this equipment but for participating in the Pilot program?

25. We also acknowledge that a few commenters stated that the Pilot program should support health care provider administrative and outreach costs associated with participating in the Pilot program (such as personnel costs, and program management costs).⁴⁷ Consistent with the existing RHC support programs and the RHC Pilot program, however, we do not propose funding these expenses as part of the Pilot.⁴⁸ As the Commission has previously explained, past experience in the RHC support programs and RHC Pilot program demonstrates that “[health care providers] will participate even without the program funding administrative expenses.”⁴⁹ We seek comment on this approach.

26. *End-User Devices, Medical Equipment, Mobile Applications, and Health Care Provider Administrative Expenses.* The *Notice of Inquiry* also sought comment on whether the Pilot program should fund end-user equipment, medical devices, or mobile applications for connected care.⁵⁰ Many commenters supported funding such items.⁵¹ That said, traditionally, the Commission has declined to fund these items through the Universal Service Fund because of section 254's focus on the availability of and access to services.⁵² As such, we propose to make end-user devices, medical devices, or mobile applications (excepting those applications that may be part of a service that could be considered an information service) ineligible for support in the Pilot program. Based on the record and other sources, some health care providers may be able to self-fund or obtain outside funding for end-user devices, medical devices, and connected care applications needed for their connected care pilot projects.⁵³ We

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³⁶ See, e.g., Gila River Telecommunications Inc. Comments at 13; OCHIN Comments at 5; College of Healthcare Information Management Executives Comments at 2; Cherokee County Health Services Council Comments at 5; National Association of Accountable Care Organizations Comments at 2.

³⁷ See Virginia Telehealth Network Comments at 10.

³⁸ See, e.g., AT&T Comments at 10-11; CHRISTUS Health 2015 Letter at 2.

³⁹ See, e.g., Virginia Telehealth Network Comments at 6 (“Healthcare providers generally have broadband connectivity to the Internet from their clinics or offices already.”); Pennsylvania Association of Community Health Centers Comments at 2 (“[Pilot] funds should be focused on providing broadband access to low-income patients and equipment to patients and providers—not on broadband access for healthcare providers.”); Virginia Healthcare Association Reply Comments at 2 (same); Community Health Care Association of New York State Reply Comments at 2 (same); California Primary Care Association Reply Comments at 2 (“Funds should not be prioritized for broadband access for health care providers.”).

⁴⁰ See *Broadband-Enabled Health Care Solutions and Advanced Technologies Public Notice*, 32 FCC Rcd at 3662 & n.9.

⁴¹ See *id.*

⁴² See CHRISTUS Health 2015 Letter at 3 (“the equipment supplied by the HCP is locked down and can only be used for healthcare related purposes”).

⁴³ For example, in the E-Rate program, internal connections are eligible for support. See 47 CFR § 54.502(a)(2). The E-Rate program rules define internal connections as a service “necessary to transport or distribute broadband within one or more instructional buildings of a single school campus or within one or more non-administrative buildings that compromise a single library branch.” 47 CFR § 54.500.

seek comment on the extent to which health care providers participating in the Pilot program may be able to obtain outside funding for end-user devices, medical devices, or mobile applications necessary to provide connected care services. Would health care providers still be interested in and be able to participate in the Pilot program if the Pilot program does not fund end-user devices, connected care medical devices, or connected care mobile applications?

27. *Other Program Structure Considerations.* We seek comment on whether there are any medical licensing laws or regulations, or medical reimbursement laws or regulations that would have a bearing on how we structure the Pilot program. If so, how would those specific laws or regulations impact the Pilot program, and how should the Commission design the structure of the Pilot program in light of those impacts? For example, commenters in the record identify reimbursement as a major barrier to telehealth adoption. They urge the Commission to coordinate with CMS—whether through a Memorandum of Understanding or other means—to implement reforms to reimbursement policies for telehealth.⁵⁴ How should we structure the Pilot to best ensure coordination between the Commission and other federal agencies, such as CMS? How can we most easily obtain data through the Pilot that would be informative on issues such as reimbursement and licensure? Additionally, we seek comment on whether the provision of USF support to health care providers to provide connected care to low-income patients (or any other Pilot program funded item used by individual patients as part of the Pilot program) raises any issues under the Medicare and Medicaid Anti-Kick Back Statute, the Civil Monetary Penalties Act, or any other federal statutes.⁵⁵

28. *Budget.* The *Notice of Inquiry* sought comment on a potential \$100 million budget for the Pilot program.⁵⁶ Based on the broad support in the record, we believe that targeting this amount of funding for the broadband underlying connected care technologies is substantial and sufficient to allow us to obtain meaningful data and ensure significant interest from a wide range of participants. We therefore propose to adopt that budget for the Pilot program.⁵⁷ As discussed below, we also propose a three-year

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⁴⁴ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7839, para. 46. See also 47 CFR §§ 54.635(a)-(b). The Commission previously determined that this type of network equipment fell within the scope of the Commission's directive under section 254(h)(2)(A) to "provide access to advanced telecommunications and information services" because it is "necessary to make a broadband service functional." *Healthcare Connect Fund Order*, 27 FCC Rcd at 16751, para. 157 & n.435.

⁴⁵ See, e.g., Geisinger Reply Comments at 2.

⁴⁶ See 47 CFR §§ 54.635(a) ("Both individual and consortium applicants may receive support for network equipment necessary to make functional an eligible service that is supported under the Healthcare Connect Fund."), (b) ("Consortium applicants may also receive support for network equipment necessary to manage, control, or maintain an eligible service or dedicated health care broadband network. Support for network equipment is not available for networks that are not dedicated to health care.").

⁴⁷ See, e.g., University of Arkansas for Medical Science Comments at 4; OCHIN Comments at 3; American Hospital Association Comments at 2.

⁴⁸ See *Rural Health Care Support Mechanism*, Order, 22 FCC Rcd 20360, 20398-99, para. 75 (2007) (*RHC Pilot Program Order*) (stating the ineligible expenses for the RHC Pilot program included "[p]ersonnel costs (including salaries and fringe benefits), except for those personnel directly engaged in designing, engineering, installing, constructing, and managing the dedicated broadband network. Ineligible costs of this category include, for example, personnel to perform program management and coordination, program administration, and marketing."; "Program administration or technical coordination that involves anything other than the design, engineering, operations, installation, or construction of the network."; "Administration and marketing costs (e.g., administrative costs; supplies and materials (except as part of network installation/construction); marketing studies, marketing activities, or outreach efforts; evaluation and feedback studies."); *Healthcare Connect Fund Order*, 27 FCC Rcd at 16758,

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funding period for the Pilot program, during which selected projects would receive funding. We seek comment on these proposals. How should the total Pilot program budget be distributed over the three-year funding period? Should each selected project's funding commitment be divided evenly across the Pilot program duration? For example, if a selected project requests and receives a \$9 million funding commitment and the funding period is three years, should the project receive \$3 million for each year?

29. Several commenters expressed concern that the budget for the Pilot program could be debited against the existing budgets for the Lifeline or Rural Health Care programs.⁵⁸ However, the proposed Pilot program would not divert resources from the existing universal service support programs. Instead, we propose requiring USAC to separately collect on a quarterly basis the funds needed for the duration of the Pilot program.⁵⁹ We expect that funding the Pilot program in this manner would not significantly increase the contributions burden on consumers.⁶⁰ This approach also would not impact the budgets or disbursements for the other universal service programs. We seek comment on this approach. Should the collection be based on the quarterly demand for the Pilot program? We also propose to have excess collected contributions for a particular quarter carried forward to the following quarter to reduce collections.⁶¹ Under this approach, we also propose to return to the Fund any funds that remain at the end of the Pilot program. Are there other approaches we should consider for funding the Pilot program?

30. *Number of Pilot Projects and Amount of Funding Per Project.* The *Notice of Inquiry* sought comment on funding up to 20 projects with awards of \$5 million each. First, we propose to provide a uniform percentage of eligible services or equipment to be funded, rather than fully funding any Pilot projects, consistent with the Healthcare Connect Fund program and the RHC Pilot program.⁶² Several commenters similarly suggest that the Pilot program should not fund 100% of the eligible costs for each project.⁶³ Based on the Commission's experience with the E-Rate and Rural Health Care programs, there are significant advantages to providing a set discount percentage that requires participants to contribute a portion of the costs, including being administratively simple, predictable, and equitable, and incentivizing participants to choose the most cost-effective services and equipment and refrain from purchasing a higher level of service or equipment than needed.⁶⁴ In addition, we believe that funding less

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para. 175 (declining to fund administrative expenses through the Healthcare Connect Fund program and stating “[n]either the Telecommunications nor Pilot Programs fund administrative expenses.”).

⁴⁹ *Healthcare Connect Fund Order*, 27 FCC Rcd at 16758, para. 175.

⁵⁰ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7839, paras. 47-48.

⁵¹ See, e.g., American Hospital Association Comments at 10; Pennsylvania Association of Community Health Centers Comments at 2; Dr. Amy Sheon Comments at 2; University of Vermont Comments at 2; Virginia Telehealth Network Comments at 6; CHRISTUS Health Comments at 4; Gila River Telecommunications Inc. Comments at 4.

⁵² See *Lifeline and Link Up Reform and Modernization et al.*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd 6656, 6805, para. 349 (2012) (*2012 Lifeline Order*) (“However, in keeping with the Commission’s historic approach to using the Fund, we will not subsidize equipment purchases as part of the pilot program.”); *Lifeline and Link Up Reform and Modernization et al.*, Third Report and Order, Further Report and Order, and Order on Reconsideration, 31 FCC Rcd 3962, 4005-4006, para. 125 (2016) (*2016 Lifeline Order*) (“Past Commission precedent makes it clear that Lifeline, with the exception of a brief period after Hurricane Katrina, has been used to fund services, and not equipment. At this time we see no reason to deviate from that approach.”); *Healthcare Connect Fund Order*, 27 FCC Rcd at 16754, para. 167 & n.455 (“The Universal Fund historically has not supported end user devices.”); *id.* at 16754, para. 157 & n.435 (“The Commission previously has concluded that it lacked statutory authority to support telemedicine equipment.”); 47 CFR § 54.639(a) (note to paragraph a) (listing end user devices, telemedicine equipment, applications and software as examples of ineligible expenses); *Modernizing the E-rate Program for Schools and Libraries*, Order, 33 FCC Rcd 11219, 11231, Appendix B, Eligible Service List for Funding Year (WCB 2018) (“Examples of items that are ineligible components of Internet access services include applications . . . and end-user devices and equipment such as computers, laptops, and tablets.”). The RHC Pilot program also did not fund end-user devices, medical equipment or telemedicine applications. See *RHC Pilot Program Order*, 22 FCC Rcd at 20398, para. 75.

than 100% of the costs minimizes the risk of non-usage of the supported services. We seek comment on this approach.

31. For services supported under this structure, we propose a discount level of 85%—the discount amount participants received in the Rural Health Care Pilot Program⁶⁵—and seek comment on whether this amount would strike the right balance between requiring a health care provider contribution for such services and encouraging a wide range of eligible health care providers to participate in the Pilot program. Are there other grant or support programs or data that we could look to in order to determine an appropriate discount level for these types of services that could be funded under this structure? For example, in the E-Rate program, the lowest discount level is 20% and ranges up to 90%.⁶⁶ In contrast, the discount level for the Healthcare Connect Fund is 65%.⁶⁷ To further ensure the cost-effective use of Pilot funds, in addition to adopting a flat, uniform discount percentage, should we cap the monthly amount of support that can be paid for broadband Internet access service to a health care provider for each participating patient? If so, what would be an appropriate cap, and what data and specific information would support this cap amount?

32. For the Healthcare Connect Fund program, the health care provider is required to pay the non-discounted share of the eligible costs from eligible sources (e.g., the applicant, eligible health care provider, or state, federal, or Tribal funding or grants), and is prohibited from paying the non-discounted share of eligible costs from ineligible sources (e.g., direct payments from vendors or service providers).⁶⁸ We seek comment on whether we should apply this same limitation to health care providers participating in the Pilot program. If so, should participating patients also be considered an eligible source of the non-discounted share for services funded under the Pilot? Should we limit the portion of the non-discounted costs that health care providers can require participating patients to pay for the supported broadband Internet access service? If so, what would be an appropriate limit on the patient share of the costs? For purposes of the Pilot program, should we place any limitation at all on the source of funding for the non-

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⁵³ See, e.g., Healthcare Communications, LLC Comments at 1 (stating that the Connected Care Pilot program funding could be leveraged with “[m]atching funds from private, non-profit sources already supporting the state of the state of Texas healthcare community.”); Survivor Healthcare Comments at 3 (“There are other federal telemedicine programs that fund equipment”); Nicole Ogyrkso, Federal News Network, *The VA Tried Out Loaning Thousands of iPads to Veterans for Telehealth. Now They Plan to Double the Program* (Sept. 19, 2018), <https://www.fiercehealthcare.com/tech/va-expects-to-double-tablet-leasing-program-for-at-need-veterans-potentially-distributing-12> (discussing VA’s tablet loan program for Veterans in need of telehealth who lack computers); Eric Wicklund, Telehealth News, *UVA Launching 6 New Telehealth MHealth Programs for Chronic Care* (Feb. 26, 2019), <https://mhealthintelligence.com/news/uva-launching-6-new-telehealth-mhealth-programs-for-chronic-care> (discussing new launches and expansion of virtual care at University of Virginia, including “A new program [that] will equip patients who have experienced heart failure with telehealth tablets” This and other new programs are “supported by more than \$750,000 in grant money from the Centers for Disease Control and Prevention (CDC) and the Virginia Department of Health.”).

⁵⁴ See, e.g., App Association Comments at 7; ACOG Comments at 4; OCHIN Comments at 6.

⁵⁵ See 42 U.S.C. § 1320(a)-7(a); 42 CFR § 1001.952.

⁵⁶ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7835, para. 29.

⁵⁷ See, e.g., American Hospital Association Comments at 9; US Telecom Comments at 5; Hughes Network Systems, LLC Comments at 13; Center for the Advancement of mHealth Comments at 4, 6. This proposed budget would be the total maximum authorized disbursement amount and would not include USAC’s administrative costs. We would expect the Universal Service Administrative Company (USAC) to administer the Pilot in an efficient, cost-effective manner.

⁵⁸ See, e.g., California Primary Care Association Reply Comments at 1 (expressing concern that the Pilot program “may be funded through reductions in the Lifeline program?”); Community Health Care Association of New York State Reply Comments at 2 (same); American Hospital Association Comments at 9-10 (supporting the proposed \$100 million budget “provided that such funding is separate and apart from RHC program funding.”).

discounted share of the costs? Are there any other approaches the Commission should consider for limiting the source of funding that are not tied to the Healthcare Connect Fund program rules?

33. Next, we address the number of projects and the per-project budget cap. Some commenters agreed that we should fund up to 20 projects with awards of \$5 million per project.⁶⁹ Other commenters argued for the selection of fewer projects with larger funding amounts,⁷⁰ or for the selection of a larger number of projects with varied or smaller funding amounts.⁷¹ On further consideration of the record, we propose not to expressly limit the number of funded Pilot projects, and to permit flexible and varied funding for each selected Pilot project. We believe setting a fixed number of funded projects would not serve the goals of the Pilot program because it would artificially limit the number of funded projects before any proposals are even submitted. In addition, not setting a fixed number of projects to be funded will allow us to better focus on selecting quality projects that can provide meaningful data rather than selecting a pre-determined number of projects. We seek comment on this view. The record likewise indicates that a uniform \$5 million funding amount per project could artificially limit the scope of potential pilot projects and the data collected.⁷² While we propose allowing varied funding amounts for selected projects, we do not anticipate spending all of the Pilot program funds on one or two large projects. Should we establish a ceiling on the amount of the total budget that can be allocated to a single project and, if so, what would be an appropriate maximum funding amount for a single project?

34. *Cost Allocation.* We also seek comment on whether cost allocation should be required for services or other items supported through the Pilot program that are used for non-health care purposes or include ineligible components. For example, if a Pilot project permits patients to use the supported broadband service for non-health care purposes, should we require cost allocation of the non-health care usage? If so, how should the cost allocation work? For supported patient broadband Internet access

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⁵⁹ Pursuant to section 54.709(a)(3) of the Commission's rules, as part of the process by which the Commission establishes the quarterly contribution factor, the Administrator (Universal Service Administrative Company or USAC) must provide the Commission each quarter with its projection of total demand and administrative expenses for the universal service support mechanism. See 47 CFR § 54.709(a)(3).

⁶⁰ For example, if the Pilot program funds were evenly distributed over the proposed three-year funding period (e.g., \$33 million per year), using the 2nd Quarter 2019 projected collected revenues of \$12.27 billion, we estimate that the proposed Pilot budget would result in an approximately 0.1% increase in the contribution factor. See Proposed Second Quarter 2019 Universal Service Contribution Factor, Public Notice, CC Docket No. 96-45 (OMD Mar. 13, 2019), <https://www.fcc.gov/document/second-quarter-usf-contribution-factor-188-percent>.

⁶¹ 47 CFR § 54.709(b) (describing the default practice of carrying forward excess contributions to the following quarter to decrease contributions).

⁶² *RHC Pilot Program Order*, 22 FCC Rcd at 20399, para. 77 (discussing the eligible sources of participating health care providers' 15% share of the costs); *Healthcare Connect Fund Order*, 27 FCC Rcd at 16717, 16719, paras. 84, 91 (stating "a uniform participant contribution will facilitate consortium applications and reduce administrative expenses, both for participating [health care providers] and for the Fund Administrator" and requiring participating health care providers to contribute 35% of the costs).

⁶³ Vantage Health Comments at 2 ("All participants can be eligible for an 80/20 reimbursement model, whereby USAC will reimburse 80% of the costs quarterly . . ."); Geisinger Comments at 2 ("encourag[ing] the Commission to consider a requirement for matching funds committed to the applicant's proposal."); Sage Telecom Comments at 4 ("The Commission should also consider requiring corporate participants to contribute perhaps 30 percent of the gross cost of their approved project to be matched with pilot program funds . . .").

⁶⁴ See, e.g., *Healthcare Connect Fund Order*, 27 FCC Rcd at 16716, para. 82 ("A flat, uniform contribution is administratively simple, predictable, and equitable and has broad support in the record. Requiring a significant contribution will provide incentives for HCPs to choose the most cost-effective form of connectivity, design their networks efficiently, and refrain from purchasing unneeded capacity. Vendors will also have incentive to offer services at competitive prices, knowing that HCPs will be unwilling to increase unnecessarily their out-of-pocket expenses).

service, should the cost allocations be based solely on the percentage of the service that is used for health care purposes? Should the cost allocations instead take into account the health care providers' savings associated with the use of the supported patient broadband Internet access for health care purposes? If a health care provider contracts with a remote patient monitoring solution provider for a package that includes end-user devices and other items that are not broadband Internet access service, how should cost allocation work for those devices or items? Should cost allocations for all Pilot-supported costs follow the cost allocation rules and processes for the Healthcare Connect Fund?⁷³ Which entity or entities (e.g., the health care provider or service provider) should be responsible for providing the cost allocation and supporting documentation? What type of documentation should we require to support the cost allocation?⁷⁴

35. *Duration.* The *Notice of Inquiry* sought comment on whether the Pilot program should have a two- or three-year funding duration and six-month ramp-up and wind-down periods.⁷⁵ Many commenters asserted that a three-year duration is appropriate and would allow us to obtain sufficient, meaningful data from the selected projects.⁷⁶ A few commenters argued that more than three years would be necessary if broadband deployment was a Pilot program goal,⁷⁷ or that the Pilot program duration should be as long as four or five years.⁷⁸ USTelecom cautioned that a duration longer than three years (plus a ramp-up and wind-down and evaluation period) “risks having the findings become obsolete by the time they could be effectuated”⁷⁹ Other commenters separately assert that a six-month ramp-up and six-month wind-down period should be part of the funding period.⁸⁰

36. Based on the record and the proposed Pilot program goals (which do not include broadband deployment), we propose a three-year funding period and separate ramp-up and wind-down periods of up to six months in order to give projects time to complete set up and other administrative matters related to the Pilot program.⁸¹ We seek comment on these proposals. When should the ramp-up

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⁶⁵ See Federal Communications Commission, Rural Health Care Pilot Program, Frequently Asked Questions, <https://www.fcc.gov/general/rural-health-care-pilot-program#faq1> (last visited July 9, 2019).

⁶⁶ See USAC, Schools and Libraries, Discount Matrix, *available at* <https://www.usac.org/res/documents/sl/pdf/samples/Discount-Matrix.pdf>.

⁶⁷ Federal Communications Commission, Healthcare Connect Fund, Frequently Asked Questions, <https://www.fcc.gov/general/healthcare-connect-fund-frequently-asked-questions#Q1> (last visited July 9, 2019).

⁶⁸ See 47 CFR § 54.633(b)(1) (“Eligible sources include the applicant or eligible health care provider participants; state grants, funding or appropriations; federal funding, grants, loans or appropriations except for other federal universal service funding; Tribal government funding; and other grant funding, including private grants.”); 47 CFR § 54.633(b)(2) (“Ineligible sources include (but are not limited to) in-kind or implied contributions from health care providers; direct payments from vendors or other service providers, including contractors and consultants to such entities; and for-profit entities.”).

⁶⁹ See, e.g., US Telecom Comments at 5; University of Vermont Health Networks Comments at 2; Hughes Network System Comments at 13; NTCA Comments at 11; Centerstone Comments at 7.

⁷⁰ See, e.g., Virginia Telehealth Network Comments at 5; Cherokee County Health Services Council Comments at 4.

⁷¹ See OCHIN Comments at 5; CoBank Comments at 2; WTA-Advocates for Rural Broadband Reply Comments at 8.

⁷² See, e.g., Medical University of South Carolina Comments at 4-5; Center for the Advancement of mHealth Comments at 4; WTA Advocates for Rural Broadband Reply Comments at 8; EMHS Comments at 3.

period begin? Should the clock for the ramp-up period start after the selected project has been notified of its selection, or is there another event that should trigger the start of the ramp-up period? Should there be a uniform start date for funding under the Pilot program, and if so, how should we determine that start date? Should the proposed three-year funding period for the Pilot program use a funding-year approach, with a fixed start date and end date for each Pilot program funding year, as is done in the E-Rate and Rural Health Care programs?⁸² If so, how would the ramp-up and wind-down periods work with a funding-year approach (e.g., would the ramp-up period precede the start of the funding year)? Should funding disbursements begin during the ramp-up period, and if so how should funding be split between the ramp-up period and the Pilot project term? We propose setting a fixed end date for the Pilot program, with the possibility of extensions where circumstances warrant. We seek comment on this proposal.

37. *Eligible health care providers.* We propose to limit health care provider participation in the Pilot program to non-profit or public health care providers within section 254(h)(7)(B): (i) post-secondary educational institutions offering health care instruction, teaching hospitals, and medical schools; (ii) community health centers or health centers providing health care to migrants; (iii) local health departments or agencies; (iv) community mental health centers; (v) not-for-profit hospitals; (vi) rural health clinics; (vii) skilled nursing facilities; (viii) and consortia of health care providers consisting of one or more entities described in clauses (i) through (vii).⁸³

38. We seek comment on whether section 254 requires us to limit health care provider participation to these categories of providers. And if not, we believe that applying this limitation to the Pilot program would provide significant benefits: Leveraging the statutory definition of health care provider used for the Rural Health Care program would focus Pilot program funding on health care providers most in need of additional funding to reach eligible patients through connected care services, and would also realize administrative efficiencies by using existing definitions and application processes that parties are already familiar with through the Rural Health Care program.⁸⁴ In addition, having a

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⁷³ See 47 CFR § 54.639(d).

⁷⁴ See 47 CFR § 54.639(d)(4) (requiring health care providers participating in the Healthcare Connect Fund program to provide “a written description of their cost allocation method(s) to the Administrator with their funding requests.”).

⁷⁵ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7840, para. 51.

⁷⁶ See, e.g., University of Arkansas for Medical Science and Arkansas e-Link Comments at 4; Survivor Healthcare Comments at 4; US Telecom Comments at 5; AT&T Comments at 11; University of Vermont Health Network Comments at 2; Medical University of South Carolina Comments at 8; Hughes Network Systems, LLC Comments at 15; Centerstone Comments at 7.

⁷⁷ See Sage Telecom Inc. Comments at 3; Cherokee County Health Services Council Comments at 4.

⁷⁸ See Center for Health Care Research and Policy Comments at 2 (“The term of projects should be long enough to accommodate the complexities needed for a scientifically rigorous, multi-site project that is able to demonstrate an effect of the project on outcomes (24 to 48 months).”); Confederated Tribes of the Coleville Reservation Comments at 6 (arguing for a duration of three to five years); Colorado Health Foundation Comments at 2 (same); CHRISTUS Health Comments at 4 (recommending that the minimum length of funding should be three years, but also urging the Commission to consider adopting a longer duration).

⁷⁹ See US Telecom Comments at 5.

⁸⁰ See, e.g., Medical Home Network Comments at 7; Centerstone Comments at 7.

⁸¹ Some commenters indicated that six months each would be an appropriate ramp-up and wind-down period. See, e.g., Medical University of South Carolina Comments at 8; Centerstone Comments at 7.

single uniform definition of “health care provider” would provide clarity for potential participants and facilitate the administration of the Pilot program.

39. While the statutory definition of “health care provider” may exclude certain health care providers, we believe that it would still allow for a wide range of health care providers to participate in the Pilot program.⁸⁵ For example, the Healthcare Connect Fund program is subject to this definition and over 8,600 distinct health care providers received funding commitments in the Healthcare Connect Fund program for funding year 2018.⁸⁶ Additionally, the statutory definition encompasses many facilities serving medically underserved communities, including VA health administration facilities and facilities run by the Indian Health Service.⁸⁷ We seek comment on this interpretation. Is there an interpretation of section 254(h)(7)(B) that would allow us to provide funding to Emergency Medical Technicians,⁸⁸ health kiosks,⁸⁹ and school clinics⁹⁰ through the Pilot program, as commenters request? Would the definition of “health care provider” under section 254(h)(7)(B) preclude sites like the VA’s Virtual Living Room sites, community center or similar sites that provide dedicated rooms in convenient locations with broadband connections for patients to engage with technology and connect with the professionals providing them with medical care?⁹¹ We seek comment on whether limitations on eligible entities could limit the effectiveness of our Pilot program and the ability to obtain meaningful data on connected care services. Finally, are the proposed eligible health care providers sufficiently well versed in medical research methods to be able to properly evaluate the health outcomes linked to the provision of connected care?

40. In the event that we limit Pilot program participants to the statutory definition of “health care provider” under section 254, we propose requiring interested health care providers to indicate their respective category(ies) for eligibility by submitting FCC Form 460, which USAC uses to determine the eligibility of health care providers in the Healthcare Connect Fund Program.⁹² We propose requiring eligible health care providers to have prior experience with telehealth and long-term patient care.⁹³

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⁸² See 47 CFR §§ 54.507(b) (“A funding year for the purposes of the schools and libraries cap shall be the period July 1 through June 30.”); 54.675(b) (“A funding year for purposes of the health care providers cap shall be the period July 1 through June 30.”).

⁸³ 47 U.S.C. § 254(h)(7)(B). See OCHIN comments at 4 (asserting that eligibility requirements should be consistent with the rural health care program but should be applied more broadly). *But see* Survivor Health Comments at 3 (encouraging the Commission to consider a broad range of health care providers, and that eligibility should include health care providers that fall under section 254(h)(5)(B) [*sic*] or are associated through a range of contractual arrangements with those providers); Kansas State Representative Tom Sloan states that the FCC should instead solicit grant proposals from federal and state agencies providing, or planning to provide telehealth services directly through contract health care providers, such as providing grants to the VA or states. See Tom Sloan Comments at 1.

⁸⁴ See Virginia Telehealth Network Comments at 9 (“VTN cautions the Commission against providing any funding to corporate health care providers that provide exclusively connected care services. These providers will typically charge a patient for a videoconference appointment if the patient is requesting medication to treat a specific illness, but these providers do not typically manage patients’ care over the long term.”).

⁸⁵ See *RHC Pilot Program Order*, WC Docket No. 02-60, Order, 22 FCC Rcd 20360, 20364-65, para. 9 (2007) (detailing the Commission’s history of evaluating eligible health care providers within the confines of the statute).

⁸⁶ This data was provided by USAC and is based on funding commitments issued for funding year 2018 as of June 9, 2019.

⁸⁷ See United States Department of Veterans Affairs, *Veterans Health Administration*, <https://www.va.gov/directory/guide/division.asp?dnum=1> (last visited July 9, 2019); U.S. Department of Health and Human Services, Indian Health Service, Find Health Care, <https://www.ihs.gov/findhealthcare/> (last visited July 9, 2019).

⁸⁸ See Telemedicine Centers USA Comments at 4, 6 (asserting that the Connected Care initiative could usher in new fields of Community Health workers, . . . [including] EMTs . . . that have never been able to break through low-income community barriers to provide affordable health care delivery).

41. We also propose to borrow additional administrative procedures from the RHC programs in implementing the Pilot program. For example, we propose to have consortia applicants file FCC Form 460 identifying all sites that would participate in the Pilot program, including off-site data centers and administrative offices, and propose permitting consortia applicants to file FCC Form 460 on behalf of any site in the consortium that would participate in the Pilot program to determine that site's eligibility.⁹⁴ Consistent with the Healthcare Connect Fund program, we propose requiring consortia applicants to have in place a Letter of Agency, which provides a consortium leader with authority to act on behalf of the participating health care providers.⁹⁵ Additionally, we propose permitting third parties to "submit forms and other documentation on behalf of the applicant" if USAC receives written authorization from an "officer, director, or other authorized employee stating that the [health care provider] or Consortium Leader accepts all potential liability from any errors, omissions, or misrepresentations on the forms and/or documents being submitted by the third party."⁹⁶ We propose that consortium applicants must update their FCC Form 460s if any information on their FCC Form 460 changes. Similarly, we propose that an eligible health care provider participating in the Pilot program, including those participating in consortia, submit an updated FCC Form 460 within 30 days of a material change.⁹⁷ We seek comment on these proposals.

42. We also propose that the Pilot program be open to both urban and rural eligible health care providers.⁹⁸ Several commenters assert that the Pilot should not be limited to projects serving only rural areas.⁹⁹ To the extent that section 254(h)(2)(A) applies to the Pilot program, it does not limit universal service support to rural health care providers, and we believe the Pilot program should not be limited to rural health care providers.¹⁰⁰ The Fifth Circuit has found "the language in section 254(h)(2)(A) demonstrates Congress's intent to authorize expanding support of 'advanced services,' when possible, for non-rural health [care] providers."¹⁰¹ Likewise, section 254(h)(2)(A) authorizes the

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⁸⁹ See Michigan Medicine Comments at 2 (encouraging the Commission to include transitional telehealth kiosks in libraries or shopping centers as part of the program to extend the impact of funding).

⁹⁰ See, e.g., Nemours/Children's Health System/The Children's Partnership Comments at 1 (stating that schools should be eligible recipients for both broadband and telehealth equipment); SHLB Comments at 7 (asserting that school-based clinics should be able to apply for funding from the Pilot program).

⁹¹ See NTCA Comments at 7 (discussing VA Virtual Living Room initiative). The VA works with both private and service organizations to offer broadband access to veterans through programs like Anywhere to Anywhere Telehealth Program and Advancing Telehealth Through Local Access Stations (ATLAS). These programs aim to set up access points in veteran communities, provide telehealth services to veterans in comfortable and private locations, and improve digital literacy. See *Veterans Broadband Access Report* at 16.

⁹² See 47 U.S.C. §§ 254(h)(1)(A), (h)(7)(B).

⁹³ See Comments of Virginia Telehealth Network at 9 ("VTN cautions the Commission against providing any funding to corporate health care providers that provide exclusively connected care services. These providers will typically charge a patient for a videoconference appointment if the patient is requesting medication to treat a specific illness, but these providers do not typically manage patients' care over the long term.").

⁹⁴ *Id.*

⁹⁵ See *Healthcare Connect Fund Order*, 27 FCC Rcd at 16770-73, paras. 208-12. The letter of agency requirements for consortia participating in the Healthcare Connect Fund are located in 47 CFR § 54.632. USAC's processes for the E-Rate program also require consortia to submit a letter of agency before requesting services. See USAC, Schools and Libraries Program, Step 1 Competitive Bidding, <https://www.usac.org/sl/applicants/step01/letter-of-agency.aspx> (last visited July 9, 2019).

Commission “to enhance public and non-profit health care providers’ access” to broadband services.¹⁰² We seek comment on this proposal.

43. To promote geographic diversity, we seek comment on limiting participation in the Pilot program to health care providers that are located in or serve an area that has received the Health Resources and Services Administration’s Health Professional Shortage Areas designation¹⁰³ or Medically Underserved Areas designation,¹⁰⁴ which correlate with professional shortages and lower-income areas, respectively, within a defined geographic area.¹⁰⁵ What are the benefits and drawbacks of limiting participation by using these designations? Should we also, or alternatively, consider limiting participation in the Pilot program only to eligible health care providers that currently provide care to at least a certain percentage of uninsured and underinsured patients, or to a certain percentage of Medicaid patients?¹⁰⁶ We seek comment on these ideas. Would these types of limitations impact the interest and participation of health care providers in the Pilot program?

44. As connected care services continue to grow, health care providers that only offer connected care have entered the marketplace.¹⁰⁷ These new market entrants may bring innovative new services and inject competition that benefits patients, but it is not clear whether they would qualify as eligible health care providers under section 254(h)(7)(b). We seek comment on this question. Additionally, the record indicates that these types of providers may not be involved in long-term patient treatment.¹⁰⁸ What steps should we take to ensure that participating health care providers have significant experience with providing long-term patient care, in order to guard against waste, fraud, and abuse in the Pilot program?¹⁰⁹ We also seek comment on determining criteria that would demonstrate health care providers’ experience with long-term care for patients. Are there types of connected care only companies that could demonstrate the level of experience with long-term patient care needed for the Pilot?

45. To ensure projects meet the goals of the Pilot program, should we require participating health care providers to have experience integrating remote monitoring and telehealth services?

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⁹⁶ *Healthcare Connect Fund Order*, 27 FCC Rcd at 16812, para. 332.

⁹⁷ A material change consists of a change in the providers name, site location, contact information or eligible entity type, or for non-rural hospitals, an increase in the number of licensed patient beds. *See Healthcare Connect Fund Order*, 27 FCC Rcd at 16773, para. 214.

⁹⁸ Many comments agree that the Pilot program should be open to both urban and rural health care providers. *See American Association of Nurse Practitioners Comments at 1; University of Arkansas Medical Center Comments at 3; Hughes Comments at 19-20; OCHIN Comments at 4; Geisinger Comments at 1; Zipnosis Comments at 1; Cherokee County Comments at 4; Legacy Comments at 2; EMHS (Northern Light Health) Comments at 4; University of Vermont Health Network Comments at 2.*

⁹⁹ *See, e.g., Geisinger Reply Comments at 2* (“While Geisinger believes the Pilot should be focused on majority rural areas, we feel it is important to also include urban sites where access to broadband is also a concern in some of the lowest-income communities.”); *Michigan Medicine Reply Comments at 2* (“Rural patients are not the only patients with access challenges who would benefit from this pilot.”); *American Association of Nurse Practitioner Comments at 1* (“Many Health Professional Shortage Areas (HPSAs) are located near metropolitan areas. They are also in great need of telehealth services, and may not receive the necessary funding to treat their larger patient populations if prioritization is based solely on rurality or remoteness.”); *University of Vermont Health Network Comments at 2* (“... we do not believe that the pilot program should be restricted to clinics and hospitals in rural areas.”); *Zipnosis Comments at 1* (discussing urban health care deserts and stating “[t]he Connected Care Pilot Program has the opportunity to address this issue in addition to the issue of rural healthcare shortage.”); *Hughes Network Systems LLC Comments at 19* (advocating for the Pilot program to include mix of urban and rural projects, with a primary focus on rural); *Legacy Community Health Comments at 2* (“We encourage the FCC not to adopt a ‘rural’ vs. ‘urban’ approach to program eligibility.”).

¹⁰⁰ 47 U.S.C. § 254(h)(2)(A). The Healthcare Connect Fund Program provides a flat 65% discount, on eligible telecommunications or information services and network equipment necessary to make an eligible Healthcare Connect Fund program supported service functional, to both individual rural health care providers and consortia

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Specifically, should we limit eligibility in the Pilot program to health care providers that are federally designated as Telehealth Resource Centers or as Telehealth Centers of Excellence, or to otherwise demonstrate their experience providing telehealth services?¹¹⁰ Should we exclude health care providers that have no prior connected care experience?¹¹¹ Should participating health care providers have experience, or be required to partner with research bodies or firms with experience, conducting clinical trials in order to ensure statistically sound evaluation of patient outcomes?

46. *Eligible Service Providers.* In the RHC Program, the statute permits non-eligible telecommunications carriers (ETCs) to receive support; section 254(c)(3) makes clear that, in addition to the supported services included in the definition of universal service in section 254(c), “the Commission may designate additional services for such support mechanisms for . . . health care providers for the purposes of subsection (h).”¹¹² Further, section 254(h)(2)(A) directs the Commission “to enhance to the extent technically feasible and economically reasonable, access to advanced telecommunications services and information services” for health care providers and, thus, allows support for non-ETCs.¹¹³ The Commission has previously explained that the ETC limitation in section 254(e) applies to the section 254(c) supported services, but not to additional supported services under section 254(h)(2)(A).¹¹⁴

47. The *Notice of Inquiry* sought comment on whether the Pilot should be limited to ETCs, including facilities-based ETCs.¹¹⁵ Numerous parties opposed limiting the Pilot program to ETCs or facilities-based ETCs¹¹⁶ and explained that such a limitation would artificially limit participation in the Pilot program and could also limit the effectiveness of the Pilot program.¹¹⁷ We propose not to limit Pilot

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(which can include non-rural health care providers if the consortium has a majority of rural sites). See *Healthcare Connect Fund Order*, 27 FCC Rcd at 16705, para. 59.

¹⁰¹ *Texas Office of Public Utility Counsel v. FCC*, 183 F.3d 393, 446 (5th Cir.1999). The only statutory limitation is that health care providers must be public or non-profit entities and must be within one of the eligible statutory health care providers categories. See 47 U.S.C. §§ 254(h)(2)(A), 254(h)(7)(B) (listing categories of eligible health care providers).

¹⁰² See *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111, 11111, para. 1 (2006) (*2006 Pilot Program Order*).

¹⁰³ Health Resources and Services Administration, *Health Professional Shortage Areas*, <https://bhwh.hrsa.gov/shortage-designation/hpsas> (last visited July 9, 2019); see NPFW Comments at 2 (encouraging the Commission to use the Health Resources and Services Administration definitions of Medically Underserved Areas and Health Provider Shortage Areas).

¹⁰⁴ Health Resources and Services Administration, *Medically Underserved Areas and Populations*, <https://bhwh.hrsa.gov/shortage-designation/muap> (last visited July 9, 2019); see also SHLB Comments at 2 (citing to a recent Health Resources and Services Administration report concerning medically underserved areas, “Hospitals located in rural areas have been closing their doors more frequently and at higher rates than urban facilities in recent years — and a pattern of increasing financial distress suggests that more are likely to falter” Health Resources (continued....))

program funding to only ETCs. We anticipate that we would provide funding to eligible health care providers to purchase broadband Internet access service that would be provided to the patient through a connected care offering, or that the health care provider would use USF funding to purchase telehealth services that qualify as information services. As such, we do not believe that health care providers should be restricted to purchasing broadband Internet access service from only ETCs.

48. It is our hope that this will help incent participation in the program by a diverse range of both health care providers and service providers. We seek comment on this approach. What impact would this approach have on service provider and health care provider interest in participating in the Pilot program? If, instead, we were to conclude that only ETCs would be able to receive support for providing broadband Internet access service to patients participating in the Pilot, what impact would this approach have on service provider and health care provider participation in the Pilot program? As a practical matter, how could the Commission ensure that the Pilot program still leverages and supports the expertise of the health care provider as the main driver of each Pilot project, even if the monetary support must be paid to an ETC?

B. Application Process, Proposal Evaluation, and Selection of Projects

49. *Application Process.* The *Notice of Inquiry* requested comment on the application process for the Pilot program and proposed several categories of information that should be contained in the application.¹¹⁸ We propose that interested health care providers first submit an application describing the proposed pilot project and providing information that will facilitate the selection of high-quality projects that will best further the goals of the Pilot program. At the time of the application, should we require participating health care providers to have already identified specific broadband providers from which the health care provider will receive service? If we require broadband providers to be ETCs, should we require all designations to be obtained prior to the application process? Or should we require that if the project is selected, the service provider would obtain the necessary ETC designations before the project commences?¹¹⁹

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and Services Administration, *Hospital Closings Likely to Increase*, <https://www.hrsa.gov/news/past-issues/2017/october-19/hospitals-closing-increase.html> (last visited July 9, 2019)).

¹⁰⁵ The American College of Obstetricians and Gynecologists encourages the Commission to collaborate with agencies, “[i]ncluding [the] [Health Resources and Services Administration], to improve data collection for health-related databases and their analyses to ensure improved understanding of rural-urban health disparities among women.” See American College of Obstetricians and Gynecologists Comments at 3. Likewise, The American College of Obstetricians and Gynecologists is also urging the Commission to work with “[H]RSA to identify maternity care shortage areas based on provider types, geographic regions, and population characteristics. *Id.*

¹⁰⁶ See CHRISTUS Health Comments at 4 (recommending eligible health care providers to be limited to those with facilities providing at least 15% of their care to the uninsured and underinsured); see also Tennessee Primary Care Association Comments at 2 (stating that the percentage of a provider's Medicaid patients is not an appropriate proxy for percentage of their patients who are low-income, and that providers with a majority of patients who are 200% below the federal poverty line); VTN Comments at 7, 9 (stating that eligible health care providers that service high numbers of Medicaid beneficiaries should be the primary beneficiaries).

¹⁰⁷ For example, telemedicine provider Plush Care “do[es] not have any physical walk-in clinics, however, our physicians are still able to diagnose, treat, and prescribe medications via the phone or video consultation.” See Plush Care website, <https://support.plushcare.com/en/article/can-i-book-a-walk-in-appointment-with-plushcare> (last visited Apr. 5, 2019). Pix Health similarly only offers medical care via telephone or video. See Pix Health, *Using Modern Technology We Connect You When You Need it the Most*, <https://www.mypixhealth.com/how-it-works> (last visited July 9, 2019) (“Get an accurate diagnosis, a personalized treatment plan and get better without ever going to a doctor’s office.” and “Pix Health allows you to access to medical providers anytime, or any place over the phone or smart device.”).

¹⁰⁸ See Virginia Telehealth Network Comments at 9 (“VTN cautions the Commission against providing any funding to corporate health care providers that provide exclusively connected care services. These providers will typically

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50. Based on our review of the record and prior experience with Pilot programs, we propose that applications contain, at a minimum, the following information:¹²⁰

- Names and addresses of all health care providers that would participate in the proposed project and the lead health care provider for proposals involving multiple health care providers.
- Contact information for the individual(s) that would run the proposed pilot project (telephone and email).
- Health care provider number(s) and type(s) (e.g., non-profit hospital, community mental health center, community health center, rural health clinic, community mental health center), for each health care provider included in proposal.¹²¹

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charge a patient for a videoconference appointment if the patient is requesting medication to treat a specific illness, but these providers do not typically manage patients' care over the long term.”)

¹⁰⁹ For example, Medical University of South Carolina states that “preference should be given to systems with at least five years of telehealth experience in at least two chronic disease telehealth management programs and at least one primary prevention care program . . . [and] preference should be given to systems participating in alternative payment models (APMs) such as patient-centered medical homes and accountable care organizations.” Medical University of South Carolina Comments at 6.

¹¹⁰ See Health Resources and Services Administration, Telehealth Programs, <https://www.hrsa.gov/rural-health/telehealth/index.html> (last visited July 9, 2019); National Consortium of Telehealth Resource Centers

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- Description of each participating health care provider's experience with providing connected care services and conducting clinical trials or the experience of a partnering health care provider.
- Description of the connected care services the proposed project will provide, the conditions to be treated, the health care provider's experience with treating those conditions, the goals and objectives of the proposed project (including the health care provider's anticipated goals with

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website, <https://www.telehealthresourcecenter.org/about-us/> (last visited July 9, 2019) (indicated that there are 2 national telehealth resource centers and 12 regional telehealth resource centers); *see also* VTN Ex Parte at 9.

¹¹¹ *See* Centerstone Comments at 5 (stating that the Commission should limit participation to health care providers that have established telehealth programs); The Academy Comments at 2.

¹¹² 47 U.S.C. § 254(c)(3).

¹¹³ 47 U.S.C. § 254(h)(2)(A). *See also, e.g., Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Rcd 8776, 9085-86, paras. 591, 592 (1997) (*1997 Universal Service Order*) (“Section 254(h)(2), in conjunction with Section 4(i), authorizes the Commission to establish discounts and funding mechanisms for advanced services provided by non-telecommunications carriers, in addition to the funding mechanisms for telecommunications carriers created pursuant to section 254(c)(3) and 254(h)(1)(B) . . . section 254(h)(2)(A) does not limit support to telecommunications carriers.”); *RHC Pilot Program Order*, 22 FCC Rcd at 20420, para. 119 (“First, funding under the Pilot Program is not limited to telecommunications carriers. As discussed above, the Commission established the Pilot Program under the authority of section 254(h)(2)(A) of the 1996 Act, which does not limit support to only eligible telecommunications carriers.”).

¹¹⁴ *1997 Universal Service Order*, 12 FCC Rcd at 9086, para. 593.

¹¹⁵ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7837, para. 37.

¹¹⁶ *See, e.g.,* SHLB Comments at 7; AT&T Comments at 11; National Grange Comments at 1; Sage Telecom Inc. Comments at 4; OCHIN Comments at 5; Telemedicine Centers USA Reply Comments at 1.

¹¹⁷ *See, e.g.,* Virginia Telehealth Network Comments at 10; American Cable Association Comments at 3-4; Hughes Network Systems, LLC Comments at 18-19; NCTA Comments at 3-4; TracFone Reply Comments at 1, 3-4; CTIA Comments at 12.

¹¹⁸ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7835, para. 31.

¹¹⁹ For the Rural Broadband Experiments the Commission did not require an ETC designation until after the service provider was announced as the winning bidder. *See Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 29 FCC Rcd 8769, 8878, para. 22 (2014). For the Connect America Fund Phase II Auction, the Commission similarly allowed entities to bid in the auction before obtaining an ETC designation and required winning bidders to obtain an ETC designation within 180 days after the public notice announcing winning bidders. *See* 47 CFR §§ 54.310(e)(1), 54.315(b)(5). For the Lifeline Broadband Pilot program, the Commission required that carriers be designated as ETCs at the time of their application in the areas they proposed to service through that pilot program but allowed Tribally-owned or controlled providers to submit proposals as long as they had an application for ETC designation pending at the time the proposal was submitted. *See 2012 Lifeline Order*, 27 FCC Rcd at 6800, paras. 334-35.

¹²⁰ The proposed application information reflects the types of information required in the applications for the RHC Pilot program and also takes into consideration suggestions from the comments. *See Rural Health Care Support Mechanism*, Order, 21 FCC Rcd 11111, 11116-17, para. 17 (2006) (outlining the information required in the RHC Pilot program application); American Hospital Association Comments at 9; Center for the Advancement of mHealth Comments at 4; Med Pod Comments at 6; NTCA Comments at 9.

¹²¹ Health care providers would be able to obtain an eligibility determination from USAC in advance of submitting a project proposal. *See* USAC Website, Step 2 Determine Eligibility, <https://www.usac.org/rhc/healthcare-connect/individual/step02/default.aspx> (describing the process for submitting an FCC Form 460 (Eligibility and Registration Form) to receive an eligibility determination). USAC assigns a health care provider number for health care providers deemed to eligible.

respect to reaching new or additional patients, improved patient health outcomes, or cost savings), and how the project will achieve the goals of the Pilot program.

- Description of the clinical trial design intended to measure the effect of the connected care pilot on health outcomes.
- Description of the estimated number of eligible low-income patients to be served.
- Description of the plan for implementing and operating the project, including how the project intends to recruit eligible patients, plans to obtain the end-user and medical devices for the connected care services that the project would provide, and transition plans for participating patients after Pilot program funding ends.
- List of all Department of Health and Human Services, Health Resources & Services Administration (HRSA) designated Health Care Professional Shortage Areas (for primary care or mental health care only) or HRSA designated Medically Underserved Areas that will be served by the proposed project.
- Description of whether the health care provider will primarily serve veterans or patients located in a rural area, or the provider is located in a rural area, on Tribal lands, or is associated with a Tribe, or part of the Indian Health Service.
- Description of the anticipated level of broadband service required for the proposed project, including the necessary speeds/technologies and relevant service characteristics (e.g., 10/1 Mbps, or 4G).
- Detailed estimated break-down of the total estimated costs for the broadband Internet access services and any other eligible costs.
- Estimated total ineligible costs and description of the anticipated sources of financial support for the project's ineligible costs.
- Description of how the participating health care provider will ensure compliance with the Health Insurance Portability and Accountability Act (HIPAA) and other applicable privacy and reimbursement laws and regulations, and applicable medical licensing laws and regulations, and how it will safeguard the collected patient information against data security breaches.
- Description of the health outcome metrics that the proposed project will measure and report on, and how those metrics will demonstrate whether the supported connected care services have improved health outcomes.
- Description of how the health care provider intends to collect and track the required Pilot program data.

51. Is there any additional information that we should require health care providers to submit in the application? What types of information or documentation should we require health care providers to include in their applications to demonstrate that the supported services would enhance the health care provider's access to advanced telecommunications and information services? Is there a minimum number of patients that a project must serve to provide statistically significant data? Is the proposed application information sufficient to determine whether projects have processes in place to ensure compliance with the applicable medical licensing laws and regulations, HIPAA and any other applicable privacy laws, and guard against data security breaches? Is there anything in HIPAA or privacy laws and regulations that would limit our ability to structure the Pilot program or collected data needed to evaluate the Pilot's success?

52. Should we require health care providers to submit a self-certification regarding their patient care and telehealth qualifications with their applications? Moreover, should we require applicants

to certify that they are financially qualified?¹²² If so, what information should we rely on to make that determination? Is there any supporting documentation we should require to demonstrate that applicants are financially qualified? Likewise, should we require health care providers to submit a self-certification that specifies that they will be able to meet patients' long-term care needs as well as provide the appropriate technology to help meet those needs? Should we require applicants to certify that they have the capacity to conduct a valid clinical trial? If so, are there specific criteria we should rely on to make such a showing? Should we require applicants to certify that all information in their application is true and accurate?

53. We intend to establish a deadline for submitting applications for the Pilot program. If we ultimately issue an order establishing the proposed Pilot program, would requiring that applications be submitted within 120 days from the release of such an order give health care providers sufficient time to develop and submit a meaningful application for the Pilot program?

54. We propose to direct the Wireline Competition Bureau (Bureau) to review applications in coordination with the FCC's Office of Economics and Analytics, Office of Managing Director, Office of General Counsel, and the Connect2Health Task Force. We propose that the Commission will then make any final selection decisions. To facilitate our review and selection of proposals, should we also seek advice from other expert health care entities with telehealth expertise? For example, should we consult with the federally designated Telehealth Resource Centers or Telehealth Centers of Excellence?¹²³ Are there other organizations with whom we should consult during the application and selection process?

55. *Evaluation of Proposals and Selection of Projects.* We seek comment on the factors to evaluate the applications and select Pilot program projects. At a minimum, we propose considering whether each project would serve the Pilot program goals and whether the applicant is able to successfully implement, operate, and evaluate the outcomes of the project. We also propose considering the cost of the proposed project compared to the total Pilot program budget. What other objective factors should be used to evaluate the proposals and what should be the relative importance of each objective evaluation factor? For example, should a project's ability to further the goals of the Pilot program be more important than the estimated cost of the project compared to the total Pilot program budget? Should we decline to consider proposals that do not have a plan for how participating patients will obtain the necessary connected care medical devices, end user devices (e.g., smartphones or tablets), or connected care applications? Should we decline to consider projects that cannot provide statistically sound evaluations of their proposed interventions?

56. To promote the selection of a diverse range of projects, we propose awarding additional points to proposed projects that would serve geographic areas or populations where there are well-documented health care disparities (Tribal lands, rural areas, or veteran populations) or that treat certain health crises or chronic conditions that significantly impact many Americans and are documented to benefit from connected care, such as opioid dependency, diabetes, heart disease, mental health conditions, and high-risk pregnancy.¹²⁴ For all of the additional point factors we propose below, we seek comment

¹²² See Sage Telecom Inc. Comments at 5.

¹²³ See National Consortium of Telehealth Resource Centers, <https://www.telehealthresourcecenter.org/about-us/> (last visited July 9, 2019); Health Resources and Services Administration, Telehealth Programs, <https://www.hrsa.gov/rural-health/telehealth/index.html> (last visited July 9, 2019).

¹²⁴ Many commenters discussed the tremendous health care shortages in rural and Tribal areas and advocated for the Commission to focus the Pilot program on or prioritize projects located in rural or Tribal areas. See, e.g., TruConnect Comments at 6; Gila River Telecommunications Inc. Comments at 12; Hughes Network Systems Inc. Comments at 2-4; Confederated Tribes of the Colville Reservation Comments at 1; American Hospital Association Comments at 8; NTCA Comments at 1, 11-12; American Physical Therapy Association Comments at 2. Some commenters also indicated that heart disease, diabetes, substance abuse disorders or high-risk pregnancy would be an appropriate priority or focus for the Pilot program or that projects treating these conditions should be included in the Pilot program. See Virginia Telehealth Network Comments at 5 ("To the extent possible, the Commission

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on the relative importance of these factors compared to each other and compared to the other standard objective evaluation factors. Are there any other factors for which additional points should be awarded to a particular project?

57. It is well documented that there are significant health care shortages in rural areas and Tribal lands.¹²⁵ In addition, the Department of Health and Human Services' Health Resources & Services Administration (HRSA) designates areas that are Healthcare Provider Shortage Areas (HPSA) or are Medically Underserved Areas (MUA)—these areas can be urban or rural.¹²⁶ Given the significant health care disparities in these areas and potential benefits of increasing the adoption of connected care in these areas, we propose awarding extra points during the evaluation process to proposals that satisfy the following factors: (a) the health care provider is located in a rural area; (b) the project would primarily serve patients who reside in rural areas; (c) the project would serve patients located in five or more Health Professional Shortage areas (for primary care or mental health care only) or Medically Underserved Areas as designated by HRSA by geography; (d) the health care provider is located on Tribal lands, is affiliated with a Tribe, or is part of the Indian Health Service; or (e) the health care provider would primarily serve patients who are veterans.¹²⁷ How should the relative importance of these additional factors be compared to each other and to the other proposed standard objective factors for evaluating proposals? Should projects receive additional points for each factor that they satisfy? What criteria should determine whether a health care provider is located in a rural area for purposes of these additional points? Would the definition of “rural area” in section 54.600 of the Rural Health Care program rules¹²⁸ or the definition of “urban area” in section 54.505(b)(3)(i) of the E-Rate rules be appropriate for determining whether a

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should prioritize the funding of connected care projects serving high cost patients, such as those with diabetes, heart failure, hypertension, high-risk pregnant women, or patients with substance abuse disorders); American Physical Therapy Association Comments at 2 (“APTA recommends FCC work to expand access to telehealth for those individuals who suffer from chronic and/or complex conditions. Chronic conditions, such as diabetes mellitus or congestive heart failure, are well suited to telehealth.”); NTCA Comments at 11 (“NTCA suggests that the universe of health care pilots include, at least the following five health care concerns (1) diabetes; (2) substance abuse, including the opioid epidemic; (3) mental health; (4) aging, including the impacts of isolation, depression and physical decline; and (5) cardiovascular disease and COPD.”).

¹²⁵ See National Indian Health Board, *Indian Healthcare 101* at 2 (July 2014), <https://www.nihb.org/docs/01132015/Indian%20Health%20Care%20101.pdf> (“Many American Indians and Alaska Natives rely solely upon IHS [Indian Health Service]-funded health care, especially those individuals living in remote rural areas. For many Indians, reasonable access to alternative providers does not exist.”); Klemens Scott Kruse, et al., *Journal of Medical Systems* (Apr. 27, 2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4848328/> (“Native American communities face serious health disparities and, living in rural areas, often lack regular access to healthcare services as compared to other Americans.”); Rural Health Information Hub website, *Rural Tribal Health*, <https://www.ruralhealthinfo.org/topics/rural-tribal-health> (last visited July 9, 2019) (“In fact, health workforce shortages are persistent enough that the Health Resources and Services Administration automatically designates groups of federally recognized Native American tribes as Health Professional Shortage Area population groups.”); Brock Slaback, *Becker's Hospital Review*, *Fixing the Medical Staff Shortage Problems in Rural Areas* (June 20, 2018), <https://www.beckershospitalreview.com/population-health/fixing-the-medical-staff-shortage-problem-in->

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project qualifies for additional points based on rurality?¹²⁹ Is there another definition of “rural area” that we should consider and, if so, what geographic level (e.g., Census block, Census tract, Census block group) should we use to determine eligibility for extra points based on rurality? How should this proposal apply to consortia?

58. We also seek comment on the criteria that should be used to determine whether a project would primarily serve patients who reside in rural areas. We believe that relying on individual patient addresses for this purpose would be too complex to administer because of the potential volume of individual patient addresses. Are there other, non-patient address measures that could be used instead? For example, should we use a metric that estimates average patient travel distance to the health care provider’s facility?

59. We propose relying on the health care provider’s certification that it is located on Tribal lands, affiliated with a Tribe or is part of the Indian Health Service. We seek comment on this proposal. For purposes of the additional points, should we apply the definition of Tribal lands in section 54.400(e) of the Lifeline rules?¹³⁰ Is there another definition that we should consider? To receive the extra Tribal points, should we require that the health care provider be located in a rural area as defined for the Pilot program? If so, how should rurality be defined? Should the Commission use the same definition for “rural” areas as that found in section 54.505(b)(3)(i) of the Commission’s rules, or instead use a population density measure for a given geographic unit?

60. Similarly, we seek comment on the criteria that should be used to determine whether a project would primarily serve veterans. What threshold would be appropriate? For example, we seek comment on whether a project “primarily serves” veterans if more than 50% of its patient base are veterans. What documentation, if any, is appropriate to define a veteran population? Many veterans receive disability compensation from the VA, for instance, or cost-free health care based on certain factors.¹³¹ Would receipt of these benefits be sufficient to identify veteran status for purposes of the

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[rural-areas.html](#) (“Physicians are disappearing from the map of rural America . . . 60 million people are dealing with the impact of this shortage.”); Bureau of Health Workforce Health Resources and Services Administration (HRSA) U.S. Department of Health & Human Services, Designated Health Professional Shortage Areas Statistics Table 2 (as of Dec. 30, 2018), https://ersrs.hrsa.gov/ReportServer?HGDW_Reports/BCD_HPSA/BCD_HPSA_SCR50_Qtr_Smry_HTML&rc:ToOlbar=false (indicating that 59% of designated health care professional shortage areas lacking adequate primary care are in rural regions); American Heart Association Comments at 2-3 (“While approximately 15% of the U.S. population lives in rural areas, only 10% of the nation’s physicians practice in rural areas. There are an estimated 40 specialists for every 10,000 Americans living in rural areas, as compared to 134 per every 10,000 urban residents.”); Testimony of Dr. Karen Rheuban Before the Senate Committee on Commerce, Science and Transportation’s Subcommittee on Communications, Technology, Innovation and the Internet (June 20, 2017), https://www.commerce.senate.gov/public/_cache/files/6057a97a-dda2-4f6d-9d93-93f60d8c232f/5A5E13FD93156485723F5B2A48F1863E.rheuban-testimony.pdf (““Core health care services’ such as primary care, emergency medical services, long term care, mental health and substance abuse services, oral health and other services are considerably less accessible in rural communities. Lack of access to specialty care services is an even greater challenge.”).

¹²⁶ See HRSA website, HPSA Find tool, <https://data.hrsa.gov/tools/shortage-area/hpsa-find> (last visited July 9, 2019); HRSA website, MUA Find tool, <https://data.hrsa.gov/tools/shortage-area/mua-find> (last visited July 9, 2019). Several commenters recommended focusing on, prioritizing, or providing a preference for projects that service HRSA designated Medically Underserved Areas or Health Professional Shortage Areas. See, e.g., Medical University of South Carolina Comments at 6; National Partnership for Women and Families Comments at 2; American Hospital Association Comments at 12.

¹²⁷ Giving additional points to proposals serving Tribal lands is consistent with the Commission’s prior decision for the Rural Broadband Experiments to give a 25% “bidding credit” for projects serving only Tribal Census blocks.

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application?

61. We seek comment on awarding additional points for projects that are primarily focused on treating certain chronic health conditions or conditions that are considered health crises, such as opioid dependency, high-risk pregnancies, heart disease, diabetes, or mental health conditions. Opioid dependency is a well-documented epidemic in America¹³² and has had a particularly devastating impact in rural America where there are fewer opioid treatment centers.¹³³ The *Notice of Inquiry* explains that connected care services have been frequently used to treat opioid dependency; thus, we believe that it would be appropriate to award extra points for proposals that seek to use connected care to treat opioid dependency.¹³⁴ Maternal mortality is also a crisis in America—the maternal mortality rate in the U.S. is higher than most other high-income countries and has increased over the last few decades.¹³⁵ This crisis impacts both rural and urban areas and is particularly acute in rural areas where there is a significant shortage of hospitals and health care providers offering obstetric care, and also disproportionately impacts low-income, African-American women.¹³⁶ In December 2018, Congress took action to address the maternal mortality crises by passing the Preventing Maternal Deaths Act to create a federal infrastructure and resources for collecting and analyzing data on every maternal death in the United States.¹³⁷ Accordingly, we believe that it would be appropriate to award additional points for projects focused on treating high-risk pregnancy. Connected care has been used to treat heart disease and diabetes—two of the leading causes of death in America that are also associated with very high costs for patients and the health care system.¹³⁸ Therefore, we believe that it would also be appropriate to award additional points to proposals that seek to treat these conditions. Some organizations also have indicated that there is a mental health crisis in America—many Americans need mental health care but lack access or the ability to find it, particularly Americans who are low-income or reside in rural areas.¹³⁹ Therefore, we also

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See *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 29 FCC Rcd 8769, 8784, paras. 43-44 (2014).

¹²⁸ See 47 CFR §§ 54.600(b) (“A ‘rural area’ is an area that is entirely outside of a Core Based Statistical Area; is within a Core Based Statistical Area that does not have any Urban Area with a population of 25,000 or greater; or is in a Core Based Statistical Area that contains an Urban Area with a population of 25,000 or greater, but is within a specific census tract that itself does not contain any part of Place or Urban Area with a population of greater than 25,000.”), 54.600(b)(2) (“Notwithstanding the definition of ‘rural area,’ any health care provider that is located in a ‘rural area’ under the definition used by the Commission prior to July 1, 2005, and received a funding commitment from the rural health care program prior to July 1, 2005, is eligible for support under this subpart.”).

¹²⁹ See 47 CFR § 54.505(b)(3)(i) (defining urban as “located in an urbanized cluster area with a population equal to or greater than 25,000, as determined by the most recent rural-urban classification by the Bureau of the Census” with all other locations designated as rural).

¹³⁰ See 47 CFR § 54.400(e) (defining “Tribal lands” as “any federally recognized Indian tribe’s reservation, pueblo, or colony, including the former reservations in Oklahoma; Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688); Indian allotments; Hawaiian Homelands—areas held in trust for Native Hawaiians by the state of Hawaii, pursuant to the Hawaiian Homes Commission Act, 1920 July 9, 1921, 42 Stat. 108, *et. seq.*, as amended; and any land designated as such by the Commission for purposes of this subpart pursuant to the designation process in § 54.412.”). See also USAC website, Eligible Tribal Lands, <https://www.usac.org/li/program-requirements/enhanced-support-tribal.aspx> (last visited July 9, 2019).

believe that it would be appropriate to award additional points to proposals that seek to treat mental health conditions. We seek comment on these proposals. Are there any other health conditions that would warrant awarding additional points to specific project proposals during the selection process? Should we expressly limit eligible health conditions in advance of receiving applications for Pilot projects?

62. Are there any other criteria we should consider in our evaluation and selection of pilot projects? For example, we seek comment on whether we should permit a project to serve a patient population that is primarily, but not entirely low-income? If so, should we require health care providers to conduct a project where more than 50% of the patients are low-income? Or 75%? Similarly, how would we evaluate whether a project includes low-income individuals? Should we, for example, rely on the health care provider to identify patients for their project who are enrolled in Medicaid, receive cost-free health care from the VA, or who are uninsured or underinsured?

C. Program Administration and Requirements

63. Consistent with the Commission's other universal service support programs, it is critical

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¹³¹ See U.S. Department of Veterans Affairs, Compensation, <https://www.benefits.va.gov/compensation/> (last visited July 9, 2019); U.S. Department of Veterans Affairs, Health Benefits, Determine Cost of Care, <https://www.va.gov/healthbenefits/cost/> (last visited July 9, 2019).

¹³² See also, e.g., U.S. Department of Agriculture, Opioid Misuse in Rural America, <https://www.usda.gov/topics/opioids> (last visited July 9, 2019) (“In 2017, more than 72,000 Americans died from a drug overdose An overwhelming majority of these overdose deaths involved an opioid.”); Khary K. Rigg, Shannon M. Monmat, Melody N. Chavez, *International Journal of Drug Policy*, *Opioid-related Mortality in Rural America: Geographic Heterogeneity and Intervention Struggles*, Vol. 57 119, 119 (2018), https://www.hub.ki/collections/post/959/download/Opioid-related_mortality_in_rural_America.International_J_Drug_Policy_2018.pdf (“Over the last two decades, opioid-related mortality rates have increased dramatically to become a major public health crises in the United States. In 2016 alone, opioids were involved in 45,838 deaths, an increase over 400% since 1999. Additionally, since 2005, the national rate of opioid-related inpatient hospital stays has increased by 64%, and the rate of opioid-related emergency department (ED) visits has increased by 99%.”) (internal citations omitted); National Institutes of Health, National Institute on Drug Abuse website, Opioid Overdose Crisis, <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis> (last visited July 9, 2019) (“The Centers for Disease Control and Prevention estimates that the total ‘economic burden’ of prescription opioid misuse alone in the United States is \$78.5 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement.”); Department of Health and Human Services, The Opioid Epidemic by the Numbers, https://www.hhs.gov/opioids/sites/default/files/2019-01/opioids-infographic_1.pdf (last visited July 9, 2019) (stating an estimated more than 130 people die each day from opioid-related drug overdoses and 2.1 million people had an opioid misuse disorder).

¹³³ American Academy of Family Physicians, *More Opioids Being Prescribed in Rural America* (Jan. 28, 2019), <https://www.aafp.org/news/health-of-the-public/20190128ruralopioids.html> (discussing Centers for Disease Control Report study finding that the opioid prescription rate is higher in rural America than in urban America and stating “[t]his finding could correlate with the fact that higher rates of opioid-related deaths have been recorded in rural areas than in urban areas. In 2017, 14 rural counties were among the 15 counties with the highest opioid prescribing rates.”); William F. Benson and Nancy Aldrich, *Aging Today*, *Rural Older Adults Hit Hard by Opioid Epidemic*, (Sept./Oct. 2017), <https://www.asaging.org/blog/rural-older-adults-hit-hard-opioid-epidemic> (“Rural older adults are dying from the opioid epidemic at a higher rate than older adults in the nation as a whole, yet fewer than one in 10 opioid treatment centers are located in rural America”); Pew Trusts, Fact Sheet, *Opioid Use Disorder: Challenges and Opportunities in Rural Communities* (Feb. 7, 2019), <https://www.pewtrusts.org/research-and-analysis/fact-sheets/2019/02/opioid-use-disorder-challenges-and-opportunities-in-rural-communities> (“Additionally, nonfatal prescription opioid overdoses are concentrated in states with large rural populations.”).

¹³⁴ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7825, para. 1.

¹³⁵ See, e.g., March of Dimes, *Nowhere to Go Maternity Care Deserts Across the U.S.*, at 1 (2018), https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf (stating that the U.S. maternal mortality rate is (continued....))

that we ensure that the Pilot program funds are spent wisely and appropriately and that we guard the Pilot program from waste, fraud, and abuse. At the same time, we seek to minimize the administrative burdens on service providers and health care providers participating in the Pilot program. In this section, we propose and seek comment on potential requirements for Pilot program participants, including requirements for the vendor selection for Pilot-eligible costs, requesting funding, and requesting disbursements. For the Healthcare Connect Fund program, the Commission has developed robust rules and processes that are designed to minimize waste, fraud, and abuse. To promote the efficient and cost-effective use of Pilot program funds and guard against waste, fraud, and abuse, we propose extending many of these rules and processes to the proposed Pilot program.

64. *Selecting Service Providers.* We propose that participating health care providers, and not the participating patients, procure the services and equipment that could be funded through the Pilot program. We believe that having participating health care providers select the service provider would be a better approach because health care providers are in the best position to know the specific service and performance requirements necessary to provide the specific connected care services supported by their particular Pilot project. In addition, aggregating eligible subscribers and streamlining benefit payments may lead to cost efficiencies and/or better service arrangements. We seek comment on this approach.

65. Consistent with the Commission’s other universal service support programs, it is important that we ensure the cost-effective, efficient use of Pilot program funds. To appropriately tailor the vendor selection requirements to the marketplace, we request additional information on how health care providers typically purchase broadband Internet access service connections for connected care efforts. Do health care providers typically select and contract directly with a broadband service provider for patient broadband Internet access service, or is the broadband service provider typically determined by a connected care service vendor, such as a remote patient monitoring service provider?¹⁴⁰ Is the

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higher than most other high-income countries and has increased in recent years); Rachel Jones, National Geographic, *American Women are Still Dying From Alarming Rates While Giving Birth* (Dec. 13, 2018), <https://www.nationalgeographic.com/culture/2018/12/maternal-mortality-usa-health-motherhood/> (providing chart comparing U.S. mortality rate to other countries and stating “[m]ore than 700 women die each year in the U.S. from causes related to pregnancy or childbirth At least 60 percent of maternal deaths are preventable.”); Centers for Disease Control, *Pregnancy-Related Deaths*, Centers for Disease Control, *Pregnancy Mortality Surveillance System*, <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm> (last visited July 9, 2019) (providing graph of increases in maternal mortality rate in the U.S. and stating “[m]any studies show that an increasing number of pregnant women in the United States have chronic health conditions such as hypertension, diabetes, and chronic heart disease. These conditions may put a pregnant woman at higher risk of pregnancy complications.”).

¹³⁶ See, e.g., March of Dimes, *Nowhere to Go Maternity Care Deserts Across the U.S.*, at 1, 3 (2018), https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf (describing issues with accessing obstetric care in rural and urban communities, and stating “[m]ore than 5 million women live in maternity care deserts (1,085 counties) that have no hospital offering obstetric care and no OB providers.”; “[a]n additional 10 million women live in counties with limited access to maternity care.”; “1.1 million women live in a maternity care desert located in a large metropolitan area or urban setting”); Sharon T. Phelan, MD and Linda Marie Wetzel, *Maternal Death in Rural America* at 1, <https://www.contemporaryobgyn.net/obstetrics-gynecology-womens-health/maternal-death-rural-america> (Aug. 17, 2018) (“Fewer than half of rural women live within a 30-minute drive to a hospital with perinatal services, and over 10% have a drive of 100 miles or more.”); Dina Fine Maron, *Scientific American*, *Maternal Health Care is Disappearing in Rural America* (Feb. 15, 2017), <https://www.scientificamerican.com/article/maternal-health-care-is-disappearing-in-rural-america/> (stating only 6% of the nation’s OBGYN’s work in rural areas which are home to 15% of the U.S. population and “[m]aternal

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broadband Internet access service for connected care, whether purchased as a stand-alone product or as part of a package, a commercially available product that is purchased at publicly-available rates? Are these rates typically negotiable? What is the typical contract term (e.g., month-to-month, annual contract or multi-year contract) for these services? Are the health care provider costs for connectivity services for connected care determined on a per patient basis? Where health care providers purchase services for connected care as part of a complete package or suite of services, can the costs for the individual components be broken out separately? For example, for such a package or suite of services, is it possible to isolate the costs for the included software, or the broadband Internet access service?

66. For all of the costs that could potentially be supported through the Pilot program, we propose requiring the participating health care providers to conduct a competitive bidding process, and select the most cost-effective service, as is required by the Healthcare Connect Fund program.¹⁴¹ For the E-Rate and Rural Health Care support programs, the Commission has traditionally required schools and libraries and health care providers to competitively bid for the supported services and equipment, with limited exemptions.¹⁴² These competitive bidding requirements are designed to ensure that applicants select the most cost-effective method of providing the requested service, ensure that service providers have sufficient information to submit a responsive proposal, seek the most cost-effective pricing for eligible services, and guard against waste, fraud, and abuse.¹⁴³

67. If we require health care providers to competitively bid any services and equipment that could be funded through the Pilot program, should we use the existing Request for Services Form (Form 461) for the Healthcare Connect Fund program and, if so, what modifications would we need to make to that form for purposes of the Pilot program? We also propose requiring the lead health care provider for projects involving multiple health care providers to secure a Letter of Agency from all participating providers before submitting a request for services.¹⁴⁴ We seek comment on these proposals. Should we

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mortality is also significantly higher in rural areas.”); Adriana Gallardo and Nina Martin, ProPublica, *Another Thing Disappearing from Rural America: Maternal Care* (Sept. 5, 2017), <https://www.propublica.org/article/another-thing-disappearing-from-rural-america-maternal-care> (“Rural areas have higher rates of chronic conditions that make pregnancy more challenging, higher rates of childbirth-related hemorrhages — and higher rates of maternal and infant deaths.”); Centers for Disease Control website, Pregnancy Mortality Surveillance System, <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm> (last visited July 9, 2019) (reporting 13 deaths per 100,000 live births for white women, 42.8 deaths per 100,000 live births for black women, 32.5 deaths per 100,000 live births for American Indian/Native Alaskan women, 14.2 deaths per 100,000 live births for Asian/Pacific Islander women, and 11.4 deaths per 100,000 live births for Hispanic women).

¹³⁷ See Preventing Maternal Deaths Act of 2018, 42 U.S.C. § 247b-12; Judith M. Orvos, ELS and Ben Schwartz, Contemporary OBGYN, *Major Maternal Health Legislation Signed Into Law* (Jan. 8, 2019), <https://www.contemporaryobgyn.net/legislation/major-maternal-health-legislation-signed-law> (“The new law will establish and support Maternal Mortality Review Committees at the state level and provides \$12 million a year in new funds for 5 years for states. The committees will be required to review every pregnancy-related death as well as develop recommendations to prevent future deaths.”).

¹³⁸ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7825, 7827-28 paras. 1, 5 & n.15; Centers for Disease Control, National Center for Health Statistics, *Mortality in the United States 2017* (Nov. 2018), <https://www.cdc.gov/nchs/products/databriefs/db328.htm> (last visited July 9, 2019) (listing heart disease and diabetes respectively as the number 1 and 7 causes of death in America); Centers for Disease Control, Division for Heart Disease and Stroke Prevention, *Heart Disease Fact Sheet*, https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_heart_disease.htm (last visited July 9, 2019) (“Heart disease costs the United States about \$200 billion each year. This total includes the cost of health care services, medications, and lost productivity.”); American Diabetes Association, *The Cost of Diabetes*, <http://www.diabetes.org/advocacy/news-events/cost-of-diabetes.html> (last visited July 9, 2019) (stating 30 million Americans have diabetes, and “[t]he American Diabetes Association (Association) released new research on March 22, 2018 estimating the total costs of diagnosed diabetes have risen to \$327 billion in 2017 . . .”).

allow exemptions from competitive bidding rules, as we do in other USF programs? For example, should we allow an exemption in the Pilot program if the health care provider is requesting commercially available services purchased at publicly-available rates and/or the total cost of the eligible services or equipment is below a specific monetary threshold (e.g., total annual cost under \$10,000 or monthly per-patient cost of \$50 or below)?¹⁴⁵ We seek comment on whether the other exemptions to the competitive bidding requirements for the Healthcare Connect Fund program should also be extended to the Pilot program.¹⁴⁶ Are there any other competitive bidding exemptions or alternatives to competitive bidding that we should consider applying to the Pilot program?

68. Where an exemption to competitive bidding applies, are there public resources or entities that could help health care providers identify potential vendors or service providers? Should we require ETCs to indicate their interest in participating in the Pilot program and their service areas, and make this information publicly available before the application deadline for the Pilot program? How can we share similar interests to participate in the Pilot program from telecommunications providers that are not ETCs?

69. We also propose prohibiting gifts from participating service providers to participating health care providers.¹⁴⁷ Are there any aspects of the competitive bidding requirements for the Healthcare Connect Fund program that would not work for the Pilot program and, if so, why not? If we require competitive bidding for the Pilot program, we propose requiring participating health care providers to submit the same competitive bidding information, make the same certifications, and use the same processes that are required for the Healthcare Connect Fund program, including any changes that may be made as a result of the *2017 Promoting Telehealth Order and Notice*.¹⁴⁸

70. *Requesting Funding.* We next seek comment on the most efficient methods for Pilot program participants to request funding. Should we require selected Pilot projects to request funding under the Pilot program using the same forms and processes and making the same certifications that are required for the Healthcare Connect Fund program, including any changes that may be made as a result of the *2017 Promoting Telehealth Order and Notice*?¹⁴⁹ Requiring health care providers to submit funding

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¹³⁹ See National Council for Behavioral Health, *New Study Reveals Lack of Access as Root Cause for Mental Health Crisis in America* (Oct. 10, 2018), available at <https://www.thenationalcouncil.org/press-releases/new-study-reveals-lack-of-access-as-root-cause-for-mental-health-crisis-in-america/> (“American mental health services are insufficient, and despite high demand, the root of the problem is lack of access – or the ability to find care”; “There is a mental health crisis in America”; “There is also a large disparity in access to mental health care based on level of income and location. Individuals located in rural areas and of lower-income are less likely to say that mental health services are extremely accessible to them.”); *America’s Growing Mental Health Crisis*, Oliver Wyman Risk Journal Vol. 8 (Dec. 1, 2018), available at <https://www.oliverwyman.com/our-expertise/insights/2018/dec/risk-journal-vol-8/emerging-risks/america-s-growing-mental-health-crisis.html> (“America’s mental health crisis has become so dire that life expectancies are declining, even as its ability to combat its historically biggest killers—cancer and heart disease—is improving.”); Perimeter Health Care, *The Mental Health Crisis*, <https://www.perimeterhealthcare.com/about/news/the-mental-health-crisis/> (last visited July 9, 2019) (“the country is in a mental health crisis”; mental health disorders “account for the third most common cause of hospitalization”; “60% of Americans with mental health conditions DO NOT RECEIVE TREATMENT.”). See also National Alliance on Mental Illness, *Mental Health by the Numbers*, <https://www.nami.org/learn-more/mental-health-by-the-numbers> (last visited July 9, 2019) (“approximately 1 in 25 adults in the U.S. (11.2 million) experiences a serious mental illness in a given year that substantially interferes with or limits one or more major life activities,” and serious mental illness “costs America \$193.2 billion in lost earnings per year.”); AJ Willingham and Elizabeth Elkin, CNN, *There’s a Severe Shortage of American Health Professionals in Rural Areas. Here’s Why That’s a Serious Problem* (June 22, 2018), <https://www.cnn.com/2018/06/20/health/mental-health-rural-areas-issues-trnd/index.html> (“A new study in the *American Journal of Preventive Medicine* finds that a majority of non-metropolitan counties (65%) do not have a psychiatrist and almost half of non-metropolitan counties (47%) do not have a psychologist.”).

¹⁴⁰ AT&T’s comments suggest that for certain remote patient monitoring services, “AT&T (the connectivity provider) contracts with and is paid by the [remote patient monitoring] solution provider” and “the connectivity provider such as AT&T generally has no direct relationship with either the [health care provider] or the patient.”

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requests for the Pilot program would allow USAC to ensure that the Pilot projects only request funding for eligible services and that the health care providers requesting funding are in fact eligible. What modifications to the Healthcare Connect Fund funding request form, if any, are necessary to use for the Pilot program? Are there other HCF certifications or processes to import to the Pilot program as well? And how should we modify these requirements, if at all? Would these modifications vary depending on the legal authority on which the Pilot program is based? If competitive bidding is required for the Pilot program, we propose requiring selected projects to submit a copy of their contract and supporting competitive bidding documentation with their funding request, as is currently required for the Healthcare Connect Fund program.¹⁵⁰

71. For purposes of administrative efficiency and to ensure that Pilot projects are not unreasonably delayed, we propose requiring Pilot program applicants who are selected to submit funding requests within six months of the date of their respective selection notices for the Pilot program. We anticipate that USAC would promptly review funding requests of selected Pilot program health care providers on a rolling basis, irrespective of when they submit their funding requests within the six-month window. Would this proposed deadline for submitting the initial funding request give participating health care providers sufficient time to select a vendor and submit a funding request? Should we require participating health care providers to submit a new funding request for each year of the Pilot program?¹⁵¹

72. We also propose requiring selected projects to certify that the provided funding will only be used for the eligible Pilot program purposes for which the support is intended.¹⁵² Should we also require participating health care providers to certify that the supported services and equipment will only be used for purposes reasonably related to the provision of health care services or instruction that the health care provider is legally authorized to provide under law?¹⁵³ Additionally, we propose requiring projects involving multiple health care providers to identify the name and contact information for the

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AT&T Comments at 10. However, CHRISTUS Health previously indicated that health care providers directly contract with the broadband service provider. See CHRISTUS Health 2015 Letter at 4 (“The Commission should consider subsidizing under the RHC program the wireless broadband contracts between the HCP and wireless carriers HCPs use for remote patient monitoring.”).

¹⁴¹ See 47 CFR § 54.642 (competitive bidding requirements and exemptions for the Healthcare Connect Fund program). The competitive bidding requirements for the Healthcare Connect Fund program require health care providers to conduct a fair and open competitive bidding process, submit a request for services (FCC Form 461), wait at least 28 days before selecting a service provider, and select the most cost-effective bid. See *id.* The current rules for the Healthcare Connect Fund program define cost-effective as “the method that costs the least after consideration of the features, quality of transmission, reliability, and other factors that the health care provider deems relevant to choosing a method of providing the required health care services.” See 47 CFR § 54.642(c). In 2017, the Commission sought comment on whether the definition of “cost-effectiveness” for the RHC support programs should be narrowed to prevent wasteful spending and provide health care providers more structure as they develop their bid evaluation process. See *2017 Promoting Telehealth Notice and Order*, 32 FCC Rcd at 1065, para. 84.

¹⁴² See, e.g., 47 CFR §§ 54.503 (E-Rate program competitive bidding requirements), 54.642 (Healthcare Connect Fund program competitive bidding requirements), 54.603 (RHC Telecommunications program competitive bidding requirements).

¹⁴³ See, e.g., *1997 Universal Service Order*, 12 FCC Rcd at 9134, paras. 480, 686, 688 (establishing competitive bidding requirements for the E-Rate program and the RHC programs to promote fiscal responsibility); *Schools and Libraries Universal Support Mechanism et al.*, Sixth Report and Order, 25 FCC Rcd at 18771-73, para. 17 (2010) (“We believe our competitive bidding rules protect against any such waste, fraud, and abuse of the E-Rate program.”); *Healthcare Connect Fund Order*, 27 FCC Rcd at 16778, para. 229 (“In the Pilot Program, competitive bidding played a key part in allowing many [health care providers] to obtain lower rates for services and to realize other purchasing efficiencies.”).

¹⁴⁴ See *supra* para. 41.

organization that will be legally and financially responsible for the activities supported through the Pilot (e.g., submitting funding requests, submitting invoicing and disbursement forms, submitting competitive bidding forms (if required)), as is required for consortia participating in the Healthcare Connect Fund program.¹⁵⁴ This requirement would identify the responsible party if disbursements must be recovered for violations of program rules or requirements. We seek comment on these proposals.

73. *Disbursements.* The *Notice of Inquiry* sought comment on how disbursements should be issued for the Pilot program.¹⁵⁵ Few commenters specifically addressed the issue of how often disbursements should be issued and which entity should receive disbursements through the Pilot program. One commenter supported monthly disbursements.¹⁵⁶ Another commenter asserted that disbursements should be issued to service providers to minimize health care providers' administrative burdens,¹⁵⁷ while two other commenters asserted that the disbursements should be issued directly to health care providers.¹⁵⁸ Another commenter recommended issuing disbursements in the form of vouchers directly to participating patients,¹⁵⁹ but other commenters argued that this approach would complicate the administration of the Pilot program, create unnecessary consumer burdens, and raise potential program integrity concerns.¹⁶⁰

74. We propose issuing disbursements to the service provider, as is the current practice for the RHC programs, for the purchase of connectivity or other eligible items pursuant to our legal authority.¹⁶¹ In practice, this would equate to monthly discounts paid towards the cost of service or eligible equipment purchased by the health care provider. We seek comment on this proposal and any alternatives that commenters may provide.¹⁶² We also propose requiring that all reimbursement requests for any health care provider-purchased services funded through the Pilot program be submitted within six months of the date of receipt of the eligible service or network equipment, and allow for extensions to this deadline where good cause exists.¹⁶³ Based on our experience with the existing RHC programs, establishing deadlines for submitting invoices would facilitate effective administration of the Pilot program.¹⁶⁴

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¹⁴⁵ See 47 CFR §§ 54.642(h)(1) (providing that for the Healthcare Connect Fund program, “an applicant that seeks support for \$10,000 or less of total undiscounted eligible expenses for a single year is exempt from the competitive bidding requirements under this section, if the term of the contract is one year or less.”), 54.503(e) (providing that for the E-Rate program, a competitive bidding exemption exists for “commercially available high-speed Internet access services for a pre-discount price of \$3,600 or less per school or library annually” and requires that the service offer at least 100 Mbps downstream and 10 Mbps upstream).

¹⁴⁶ See 47 CFR § 54.642(h) (providing competitive bidding exemptions for (1) eligible services with an annual undiscounted cost of \$10,000 if the contract term is one year or less, (2) services purchased under master services agreements negotiated by federal, state, Tribal or local government entities and awarded pursuant to applicable federal, state, Tribal, or local competitive bidding requirements, (3) services purchased under master service agreements approved under the RHC Pilot program or the Healthcare Connect Fund program that were developed and negotiated in response to an RFP that solicited proposals that included a mechanism for adding additional sites, (4) services purchased under multi-year contracts that USAC designates as “evergreen”; (5) services purchased under an approved master contract for the E-Rate program).

¹⁴⁷ At the time of this Notice of Proposed Rulemaking, the gift restriction is codified in the E-Rate program rules, but not in the rules for the RHC programs. See 47 CFR § 54.503(d)(1) (“an eligible school, library, or consortium that includes an eligible school or library may not directly or indirectly solicit or accept any gift, gratuity, favor, entertainment, loan or any other thing of value from a service provider participating in or seeking to participate in the schools and libraries universal service program. No such provider shall offer or provide any such gift, gratuity, favor, entertainment, loan or other thing of value except as otherwise provided herein.”). The gift rules permit “[m]odest refreshments not offered as part of a meal, items with little intrinsic value intended solely for presentation, and items worth \$20 or less, including meals . . .” provided that the value of these items received by any one individual “does not exceed \$50 from any one service provider per funding year.” *Id.* In 2017, the Commission sought comment on codifying a similar rule for the Rural Health Care support programs and the period when that restriction would apply. See *2017 Promoting Telehealth Notice and Order*, 32 FCC Rcd at 10659-60, para. 89.

75. For all services supported through the Pilot program, should the project's compliance with the data reporting requirements discussed below be a requirement for issuing each disbursement to the service provider? Since the purpose of Pilot program is to collect data and test the efficacy of a connected universal service support mechanism, would delay or failure to comply with data reporting requirement create sufficient reason to hold disbursements until the error is corrected? We seek comment on the best methods to ensure participants are regularly reporting useful and required program data including whether and how to tie the data submission requirement to the reimbursement of Pilot program support.

76. *Ensuring Effective and Responsible Use of Funds.* Consistent with the other existing universal service support programs, to ensure the fiscally responsible use of Pilot program funds and guard against waste, fraud, and abuse, we propose adopting document retention and production requirements for health care providers and service providers participating in the Pilot program, and also propose making individual projects subject to random compliance audits.¹⁶⁵ Specifically, we propose applying to the Pilot program (1) section 54.648(a) of the Healthcare Connect Fund program rules, which makes participating health care providers and service providers subject to random compliance audits,¹⁶⁶ and (2) section 54.648(b)(1)-(3) of the Healthcare Connect Fund program rules, which require participating health care providers and service providers to retain documentation sufficient to establish compliance with the rules and requirements for the Pilot program for at least five years and produce such documents to the Commission, any auditor appointed by the Administrator or the Commission, or any other state or federal agency with jurisdiction.¹⁶⁷ Are there any other rules or requirements for the RHC support programs, the E-Rate program, or the Lifeline program not specifically mentioned in this Notice

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¹⁴⁸ As of the drafting of this Notice of Proposed Rulemaking, health care providers participating in the Healthcare Connect Fund program were required to submit an online Form 461 (Description of Request for Services) to initiate the competitive bidding process, and USAC posts this form on its website for service providers to review. See 47 CFR §§ 54.642(e)-(f); USAC, Rural Health Care, Step 4 Request Services, <https://www.usac.org/rhc/healthcare-connect/individual/step04/default.aspx> (last visited July 9, 2019) (describing the submission of the Form 461 and posting of requests for services). In 2017, the Commission proposed changes to streamline the forms for the RHC support programs. See *2017 Promoting Telehealth Notice and Order*, 32 FCC Rcd at 10662, paras. 96-97.

¹⁴⁹ Currently, health care providers participating in the Healthcare Connect Fund submit an online funding request (FCC Form 462) and are required to provide copies of the contract and the competitive bidding documents (e.g., copies of all bids and the scoring matrix). See 47 CFR § 54.643(a); USAC website, Step 6, Submit Funding Requests, <https://www.usac.org/rhc/healthcare-connect/individual/step06/default.aspx> (last visited July 9, 2019) (describing the process for submitting funding requests for the Healthcare Connect Fund). In 2017, the Commission proposed changes to streamline the forms for the RHC support programs. See *2017 Promoting Telehealth Notice and Order*, 32 FCC Rcd at 10662, paras. 96-97.

¹⁵⁰ See 47 CFR §§ 54.643(a)(3)-(4).

¹⁵¹ See 47 CFR § 54.507(d) (requiring eligible entities to “file new funding requests each funding year”). While the rules for the Healthcare Connect Fund program allow for multi-year funding commitments, this approach has proven to be administratively complex and the Commission suspended on its own motion the rule permitting multiple-year funding commitments for the Healthcare Connect Fund for funding year 2018. See 47 CFR § 54.644(a); *Rural Health Care Support Mechanism*, Order, WC Docket No. 02-60, at 3, 5, paras. 9, 12 (2019), available at <https://docs.fcc.gov/public/attachments/FCC-19-45A1.pdf>.

¹⁵² See, e.g., *RHC Pilot Program Order*, 22 FCC Rcd at 20409, para. 93.

¹⁵³ See 47 CFR § 54.615(c)(4).

¹⁵⁴ See 47 CFR § 54.631(c)(1) (discussing legal and financial responsibility for consortia participating in the Healthcare Connect Fund program).

¹⁵⁵ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7840, para. 50.

¹⁵⁶ See Center mHealth Comments at 6.

of Proposed Rulemaking that we should apply to the Pilot program?

77. With respect to audits, the Office of the Managing Director and the Bureau would have the authority to direct USAC to conduct targeted audits as necessary to ensure Pilot program funds are being used consistent with the program. We believe that a five-year document retention period after the final disbursement is made would provide sufficient time to conduct audits and any other investigations related to the Pilot program. We seek comment on this proposal.

D. Pilot Program Goals and Metrics

78. The *Notice of Inquiry* sought comment on several potential goals for the Pilot program.¹⁶⁸ In addition, the *Notice of Inquiry* proposed several metrics and methodologies for gathering data and measuring progress towards the proposed goals.¹⁶⁹ Today, we propose to focus on four primary program goals and seek comment on this approach: (1) improving health outcomes through connected care; (2) reducing health care costs for patients, facilities, and the health care system; (3) supporting the trend towards connected care everywhere; and (4) determining how USF funding can positively impact existing telehealth initiatives. Further, we seek comment on appropriate metrics and methodologies to measure Pilot projects' progress towards these goals.

79. We believe these constitute sound goals for the Pilot program and they are consistent with our statutory obligation to promote universal service. Section 254(c)(1), for example, directs the Commission to keep in mind when establishing the definition of services supported by USF “the extent to which such telecommunications services are essential to education, public health, or public safety.”¹⁷⁰ Moreover, section 254(h)(2)(A) directs the Commission to establish rules to enhance access to advanced telecommunications and information services for health care providers.¹⁷¹ Additionally, section 254(b)(3) provides that “[c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to advanced telecommunications and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.”¹⁷²

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¹⁵⁷ See American Hospital Association Reply Comments at 6.

¹⁵⁸ See OCHIN Comments at 5; AT&T Comments at 11.

¹⁵⁹ See American Cable Association Comments at 3.

¹⁶⁰ See TracFone Comments at 9-10; TruConnect Comments at 7.

¹⁶¹ See USAC website, Rural Health Care Programs, Healthcare Connect Fund Program, Step 5 Invoice USAC, <https://www.usac.org/rhc/healthcare-connect/SP/step05/default.aspx> (last visited July 9, 2019) (“Once received, USAC processes the FCC form 463 and if approved, funds are distributed to the service provider.”); USAC website, Step 6, Rural Health Care Programs, Telecommunications Program, Invoice USAC <https://www.usac.org/rhc/telecommunications/service-providers/step06/default.aspx> (last visited July 9, 2019) (discussing the service provider process for invoicing USAC and receiving payment for the Telecommunications Program).

¹⁶² See, e.g., AT&T Comments at 11 (recommending the Commission provide funding directly to the health care provider).

¹⁶³ See 47 CFR § 54.645(b) (“All invoices must be received by the Administrator within six months of the end date of the funding commitment.”).

¹⁶⁴ See *2017 Promoting Telehealth Notice and Order*, 32 FCC Rcd at 10661, paras. 94-95 (discussing how an invoice deadline promotes the efficient administration of the Healthcare Connect Fund and stating that for the Telecommunications program, which historically did not have an invoice deadline, “USAC has often had to contact applicants and service providers to encourage them to complete and submit their invoices. Allowing service providers to submit invoices whenever they choose has compromised USAC’s ability to administer the [RHC] Telecom Program’s disbursement process efficiently and effectively and has forced USAC to keep committed but undisbursed funding on its books for excessively long periods of time.”).

We believe our proposed goals will help advance these principles, and we seek comment on that conclusion.

80. *Proposed Program Goals.* First, we intend that the Pilot will help improve health outcomes through connected care. Several comments in the record expressed support for including this as a program goal. For example, Hughes stated that the “provision of telehealth services expands access to high-level care and closes geographic barriers experienced by patients.”¹⁷³ TruConnect stated that the “use of telemedicine applications on smartphones and devices benefits those who use them and will especially help rural patients who must travel great distances to health care providers.”¹⁷⁴ According to the American Heart Association, a “strong and growing body of evidence identifies telehealth and remote patient monitoring as cornerstones of advanced healthcare systems.”¹⁷⁵

81. Commenters also identified several specific ways in which broadband access can improve health outcomes. For example, the Medical University of South Carolina (MUSC) and Gila River Telecommunications, Inc. (GRTI) both note that greater access to telehealth can enable health care providers to more easily engage their patients in the daily management of chronic conditions.¹⁷⁶ Commenters also note that broadband access for telehealth purposes increases the likelihood that patients will seek out medical care, and also increases the likelihood that patients will follow a prescribed course of treatment.¹⁷⁷ Commenters stated that telehealth can reduce emergency room visits and hospital admissions and readmissions,¹⁷⁸ and can lead to increased contact with specialists.¹⁷⁹ We agree with these assessments and therefore propose to include improvement of health outcomes through connected care as a goal of the Pilot program.

82. We also believe the Pilot program can ultimately help reduce health care costs for patients, facilities, and the health care system, and propose to adopt that program goal. We seek comment on this proposal. In the *Notice of Inquiry*, the Commission asked how the Pilot program could help identify effective means of improving health care affordability for patients, including by reducing the burden of out-of-pocket expenses like transportation costs for rural and remote patients.¹⁸⁰ Similarly, the

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¹⁶⁵ See 47 CFR § 54.516 (document retention and production, and audit requirements for the E-Rate program); 47 CFR § 54.417(a) (document retention and production requirements for the Lifeline program); 47 CFR §§ 54.320 (a)-(b) (document retention and production and compliance audits for the High Cost programs); 47 CFR § 54.648 (document retention and production and audit requirements for the Healthcare Connect Fund program); 47 CFR § 54.619 (document retention and production and audit requirements for the RHC Telecommunications program).

¹⁶⁶ See 47 CFR § 54.648(a).

¹⁶⁷ See 47 CFR § 54.648(b) (“(1) Participants, including Consortium Leaders and health care providers, shall maintain records to document compliance with program rules and orders for at least 5 years after the last day of service delivered in a particular funding year. Participants who receive support for long-term capital investments in facilities whose useful life extends beyond the period of the funding commitment shall maintain records for at least 5 years after the end of the useful life of the facility. Participants shall maintain asset and inventory records of supported network equipment to verify the actual location of such equipment for a period of 5 years after purchase. (2) Vendors shall retain records related to the delivery of supported services, facilities, or equipment to document compliance with program rules and orders for at least 5 years after the last day of the delivery of the supported services, equipment or facilities in a particular funding year. (3) Both participants and vendors shall produce such records at the request of the Commission, any auditor appointed by the Administrator or the Commission, or of any state or federal agency with jurisdiction.”).

¹⁶⁸ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7832-34, paras. 17-27.

¹⁶⁹ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7842-43, paras. 58-67.

¹⁷⁰ See 47 U.S.C. § 254(c)(1).

¹⁷¹ 47 U.S.C. § 254(h)(2)(A).

¹⁷² 47 U.S.C. §§ 254(b)(3), (6).

Commission stated that the Pilot program could help identify the circumstances in which support for telehealth services could create savings for health care providers and the Medicaid program.¹⁸¹

83. Many commenters noted the potential for the Pilot program to greatly reduce travel time for rural and remote patients, significantly reducing out-of-pocket costs for patients, in addition to reducing the need to miss work or school to see a health care provider.¹⁸² Commenters also noted that reduction in travel times could lower costs for physicians and health care providers.¹⁸³ The University of Arkansas for Medical Sciences stated that insurers will “witness cost savings when fewer beneficiaries experience long-term, costly morbidities.”¹⁸⁴ The Medical Home Network described the ability of telemedicine to increase communication between a primary care physician and a specialist, “expediting wait times for patient appointments, and reducing unnecessary referrals and emergency room visits.”¹⁸⁵ In particular, Hughes, citing to videoconferencing capabilities at the University of California, Davis, found that “patients avoided nearly 5 million miles of travel and \$3 million in travel expenses by being able to videoconference the treatment center in Sacramento.”¹⁸⁶ CHRISTUS Health provided data on a remote monitoring pilot in partnership with a carrier and vendor in Texas, and found that after one year of study, the pilot program reduced the cost of care by an estimated \$236,000 per year for congestive heart failure patients enrolled in the pilot.¹⁸⁷ Thus, based on the record, we believe the program could help reduce health care costs for patients, facilities, and the health care system overall and seek comment on this program goal.

84. Next, we propose to establish a goal of supporting the trend toward bringing health care directly to the consumer.¹⁸⁸ The *Notice of Inquiry* observed that there is a trend away from relying on connectivity solely within and between physical health care centers and towards a “connected care everywhere” model—a trend that has shown promising results for patients, communities, and the health care system.¹⁸⁹ The *Notice of Inquiry* sought comment on using the Pilot program to support the current

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¹⁷³ Hughes Network Systems, LLC Comments at 9.

¹⁷⁴ Sage Telecom Communications d/b/a TruConnect Comments at 6.

¹⁷⁵ American Heart Association Comments at 1.

¹⁷⁶ See The Medical University of South Carolina (MUSC) Comments at 3 (“MUSC’s findings suggest remote patient monitoring is extremely effective in diabetes and most likely hypertension control, and believes that mobile applications be a game changer in treating most chronic illnesses where the patient can be effectively engaged in day-to-day treatment and monitoring.”); see also Gila River Telecommunications, Inc. (GRTI) Comments at 7 (“Engaging patients in the treatment of their chronic disease is one critical element to better management of the disease and greater access to telehealth can aid in overcoming that obstacle.”).

¹⁷⁷ Hughes Comments at 11-12 (citing to a study by UC Davis, noting that “because telemedicine was significantly cheaper and more convenient for patients, they were more likely to seek out medical care.”); NTCA Reply Comments at 2-3 (stating that consumers are more likely to obtain regular medical care when they have access to telehealth); GRTI Comments at 8; Center for the Advancement of mHealth Reply Comments at 2 (stating that telehealth can result in an “increase in patient compliance with care plans related to increased care access and more affordable health care services.”); Children’s Health Comments at 2-3; OCHIN Comments at 3.

¹⁷⁸ MUSC Comments at 4; Virginia Telehealth Network Comments at 3; Center for Advancement of mHealth Reply Comments at 1-2; Medical Home Network Comments at 5.

¹⁷⁹ Medical Home Network Comments at 4-5.

¹⁸⁰ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7833, para. 22.

¹⁸¹ *Id.*

movement towards direct-to-consumer health care to ensure that low-income Americans can realize the benefits of this trend.¹⁹⁰

85. Commenters broadly support making this a program goal for the Pilot. GRTI, for example, noted that the Commission “has an opportunity to support the trend towards greater use of connected care and the benefits of such a policy,” and supports the goal of evaluating success of the Pilot program based in part on how it furthers this trend.¹⁹¹ The American Heart Association, commenting on the benefits and costs of the move towards ubiquitous connected care, noted the ability of telehealth to provide “instant healthcare at a fraction of the cost regardless of the patient’s health care status or geographic location,” but also noted potential ethical issues, including questions of trust, confidentiality, privacy, and informed consent.¹⁹² MUSC stated that as part of the movement towards connected care everywhere, the Pilot program should support the participation of rural and underserved consumers in the direct-to-consumer health care market.¹⁹³ We seek comment on adopting this program goal. We encourage commenters to specifically address how making USF dollars available to support the connectivity that enables telehealth applications can promote access to health care services for patients outside of the confines of brick-and-mortar medical facilities.

86. Finally, we anticipate that the Pilot will help us determine how USF funding can positively impact existing telehealth initiatives, and we propose to include this as a goal of the Pilot program. In the *Notice of Inquiry*, the Commission stated that it sought “to ensure that the pilot program enhances existing telehealth initiatives by the Commission and other federal agencies.”¹⁹⁴ The Commission observed that it currently has several initiatives to assist with the expansion of health care connectivity in rural and underserved areas including through the Rural Health Care programs and the Connect2Health Task Force. In addition, the Commission noted various other telehealth programs established by other federal agencies, for example, the VA’s Home Telehealth Program and several

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¹⁸² University of Arkansas for Medical Sciences Comments at 2; MUSC Comments at 4; GRTI Comments at 8; National Association of Accountable Care Organizations Comments at 1.

¹⁸³ Resolution Care Comments at 2 (“Palliative care providers are able to monitor patient status and intervene to address problems without spending hours driving to patient homes, enabling this rarely scarce resource to be deployed more efficiently and effectively.”); National Association of Accountable Care Organizations Comments at 1 (“With modern telecommunications, health care providers can visit with patients outside of brick and mortar facilities, cutting down on time and resources of a traditional office visit.”); OCHIN Comments at 2 (“[T]elemedicine lowers the cost of providing health care, reduces travel time and expenses for patients, providers and doctors.”).

¹⁸⁴ University of Arkansas for Medical Sciences Comments at 2.

¹⁸⁵ Medical Home Network Comments at 5.

¹⁸⁶ Hughes Comment at 11.

¹⁸⁷ CHRISTUS Health Comments at 2.

¹⁸⁸ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7832, para. 21.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ GRTI Comments at 8.

¹⁹² American Heart Association Comments at 6-7.

¹⁹³ MUSC Comments at 3.

initiatives run by the Department of Health and Human Services (HHS).¹⁹⁵

87. Numerous commenters assert that the Commission should consider working with HHS, in particular CMS, the National Coordinator for Health Information Technology (ONC), the Health Resources and Services Administration (HRSA), and the Indian Health Service.¹⁹⁶ The Virginia Telehealth Network similarly proposed that the Commission consider collaborating with private sector entities that are providing broadband Internet access service to vulnerable populations that might benefit from connected care services.¹⁹⁷

88. We seek comment on this proposed goal. How can the funding of connectivity for telehealth through the Connected Care Pilot complement other Commission initiatives, such as the Rural Health Care Program and the Connect2Health Task Force? How can the Pilot program complement other Commission programs to provide connectivity to low-income consumers, like the Lifeline Program, and rural and remote consumers, like the High Cost Fund? Other than the VA's Home Telehealth program, what existing federal programs, if any, specifically fund connectivity for patients to enable the provision of telehealth? How can the Commission best collaborate with other federal agencies pursuing this goal?

89. *Metrics.* We seek comment on the best metrics and methodologies for measuring progress towards our proposed program goals. For example, are there specific ways in which broadband-enabled telehealth applications can improve health outcomes that could be demonstrated through the Pilot program? In the *Notice of Inquiry*, we proposed several metrics: reductions in emergency room or urgent care visits in a particular geographic area or among a certain class of patients; decreases in hospital admissions or re-admissions for a certain patient group; condition-specific outcomes such as reductions in premature births or acute incidents among sufferers of a chronic illness; and patient satisfaction as to health status.¹⁹⁸ Are there other metrics for measuring this goal? For example, commenters suggested measuring adherence to medication and care plans as a possible metric, because of the correlation with reducing morbidity and mortality.¹⁹⁹ How can we best measure whether and to what extent telehealth can promote adherence to medication and care plans? Similarly, how can we measure patient satisfaction as to health status?

90. We also encourage commenters to explain the specific ways we could measure how universal service support for connectivity will improve health outcomes through telehealth. Do low-income consumers face budget constraints that are not adequately addressed by existing programs that prevent them from adopting connected care services via broadband Internet access service? In such cases, what alternatives do those consumers use to obtain medical care, and do those alternatives result in poorer health outcomes? Do health care providers face budgetary shortfalls with respect to funding broadband Internet access connections for connected care services, or other information services or equipment that health care providers need to provide connected care services such that the Fund can help serve a crucial funding need?²⁰⁰ In what other ways will universal service funding for connectivity promote improved

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¹⁹⁴ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7833, para. 23.

¹⁹⁵ *Id.*

¹⁹⁶ CHI Comments at 7; MUSC Comments at 4; OCHIN Comments at 4.

¹⁹⁷ Virginia Telehealth Network Comments at 11.

¹⁹⁸ *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7842, para. 61.

¹⁹⁹ CHRISTUS Health Comments at 5; Center for Advancement of mHealth Reply Comments at 1-2; *see also* MUSC Comments at 3 (stating that MUSC believes “mobile applications will be a game changer in treating most chronic illnesses.”); GRTI Comments at 7 (“Engaging patients in the treatment of their chronic disease is one critical element to better management of the disease.”).

²⁰⁰ Based on the record, Virginia Telehealth Network, the VA, and potentially other health care providers currently fund patient residential broadband access. *See, e.g.*, Virginia Telehealth Network Comments at 2 (“VTN members (continued....)”).

health outcomes through telehealth?

91. We also ask commenters to provide, where available, data and other information to help evaluate the potential for cost savings through telehealth. In addition to the specific areas of cost savings discussed above, in what other ways can the provision of telehealth produce cost savings for patients, facilities, and the health care system? We further ask commenters to provide information on the specific way in which universal service support for connectivity to enable telehealth will produce cost savings. And we seek comment on the best metrics to evaluate progress towards this goal. How can we best measure the savings from, for example, reduction in travel miles and travel time for patients and physicians? How can we measure the effect of healthier patients on costs faced by health care providers and insurers? To what extent do these measures depend on accurate metrics on the health outcomes of the patients of pilot programs? What metrics exist to determine the cost savings from a reduction in hospital admissions or re-admissions, or a reduction in emergency room visits?

92. How can we measure our progress in supporting the trend toward bringing health care directly to the consumer? Will that funding enable access for patients and providers that would not otherwise have access to telehealth, perhaps by bringing telehealth into new geographic areas or attracting new funding for existing telehealth services? Will funding connected care pilots draw attention to, and increase the effectiveness of, future connected care applications, thereby promoting the development of connected care? Would it help incent more health care providers to purchase broadband, in order to bring connected care services to more patients? We also seek comment on any potential costs of ubiquitous connected care, including the ethical issues raised by the American Heart Association.²⁰¹ How should these issues impact whether the Commission sets increased use of connected care as a goal of the Pilot program?

93. Finally, we seek comment on how we can determine whether the Pilot program supports existing Commission and federal efforts to promote telehealth. How can we avoid duplicating existing efforts or otherwise overlap with programs that promote connectivity for telehealth? We propose to require Pilot program proposals to identify non-USF sources of funding or support, and to also require reporting from Pilot program participants to help the Commission identify how USF support for connected care broadband connectivity can leverage existing or new efforts to support other components of successful telehealth services. We seek comment on this approach.

E. Data Gathering and Reporting

94. For the Commission to evaluate the success of the Pilot program, it is critical to establish tools and procedures to gather data from the Pilot program participants on progress toward achieving our stated Pilot program goals. In addition, this information will allow the Commission to evaluate the progress of each project and ensure that Pilot program funds are being used efficiently and effectively. Ultimately, this data will determine the success of the Pilot program and will help inform the Commission about the long-term viability of a connected care program like the one discussed today.

95. *Reporting Intervals.* We propose requiring participating health care providers to submit regular reports with anonymized, aggregated data that will enable the Commission to monitor the progress of each project and ultimately evaluate the Pilot program, as a condition of receiving the

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also provide broadband connectivity to enable the use of those remote monitoring tools where patients lack broadband services at home.”); Eli Richman, Fierce Healthcare, *The VA Tried Out Loaning Thousands of iPads to Veterans for Telehealth. Now They Plan to Double the Program* (Sept. 19, 2018), <https://www.fiercehealthcare.com/tech/va-expects-to-double-tablet-leasing-program-for-at-need-veterans-potentially-distributing-12>.

²⁰¹ See American Heart Association Comments at 7 (“[T]hese technologies present some ethical questions, ranging from the small scale individual questions of trust and efficacy to the societal issues of health and longevity gaps related to economic status.”).

proposed support. We seek comment on the required reporting intervals (e.g., quarterly, annually) and the information that should be included in the reports. For example, TeleHealthCare America proposed quarterly reports, and we seek comment on whether quarterly intervals would be sufficient.²⁰² Is there a shorter or longer reporting interval that would be more appropriate when analyzing outcomes from clinical trials? Do clinical trials commonly report interim results before completion of the trial? What types of information are reported on an interim basis and would such results provide reliable information? Or should we delay reporting of health outcomes until the study is completed? What is the standard practice in medical research? Could such reports create difficulties for blinding protocols?

96. *Clinical Trials.* We seek comment on the appropriate methods for measuring the health effects of the connected care Pilot projects. Should all projects be required to conduct randomized controlled trials to determine the effect of the treatments on patients' health? Are there alternative, less costly methods that are statistically sound and can accurately measure the effect of the treatment? Are these alternative methods generally accepted in the scientific and medical communities? If the proposed treatment in a Pilot project has already been extensively studied and the health benefits are generally accepted by the medical community, and the pilot's purpose is to uncover other effects, such as the impact on the costs of providing health care or the broader impacts of subsidized access to broadband Internet access services for connected care, is there any need to require the reporting of health outcomes?

97. Would different clinical trials be better served by different reporting requirements and, if so, could these be judged as part of the proposed project methods? Should we require participants to file a detailed annual report, and shorter reports on a quarterly basis? We are mindful of the burden that reporting can create for participants, particularly those that do not regularly report information to the Commission and seek to minimize this burden while still providing a mechanism for participants to provide valuable information. We encourage commenters to discuss the burdens and the best methods to alleviate them.

98. *Data Fields.* We propose that the regular reports from each participating project include information on a number of data fields that will enable the Commission to monitor the progress of each project towards the overall goals of the Pilot program. We seek comment on the data Pilot program participants should provide in regular reports to enable us to measure progress towards these goals. We propose several data fields that should be part of regular reporting from Pilot participants. These fields include: the number of patients participating in the pilot project each month; the number of patients participating in the pilot project being treated for specific health conditions; the types of connected care services provided for each condition; average frequency of patient use of each type of connected care service; health outcomes for patients; and average cost-savings per patient. We seek comment on the proposed use of these data fields. Are there other types of information we should require Pilot program participants to report on a regular basis? Should we require pilot beneficiaries to submit raw health data on study participants or is it sufficient for beneficiaries to provide estimates of the effect of the treatment? Should we require any type of certification as to the accuracy of the information provided?

99. To obtain information regarding patient experience, we propose requiring health care providers to conduct regular surveys of participating patients. The purpose of these surveys is to collect information regarding data such as patient cost savings, saved travel miles, patient satisfaction and comfort with the provided connected care services. Given the additional time and expense in administering patient surveys, reviewing data, and reporting it to the Commission, should health care providers conduct these surveys on a quarterly basis, or on a longer timeframe, such as after the completion of the clinical trial?

100. We also propose collecting additional information from Pilot program patient participants at the time of enrollment to better understand the impact of the Pilot program on the goals identified above, including whether the patient already has a mobile and/or home broadband connection, the speed,

²⁰² TeleHealthCare America Comments at 5.

technology and broadband data usage for any broadband connection the patient already has, and what devices the patient uses to connect to the Internet. What other information might be important to know at the time of enrollment to help establish a baseline for measuring the impact of the Pilot program? Which party would be in the best position to collect this information from participants?

101. As noted above, we propose that all data provided by Pilot program participants should be anonymized and aggregated, and if that is impossible, for example, because there are so few participants within a reporting area their data could be used to identify individuals, then masked. Should the regular reports from each pilot project be made publicly available? If so, is the Commission's website, or USAC's website, the best place to host this information? Should we allow project participants to request delay of publication until the project is completed if publication might impact the experiment? We anticipate that these reports would not raise any HIPAA or other privacy concerns because the proposed required data would be submitted on an aggregated, anonymized basis. We seek comment on this conclusion. Further, are there other privacy or security measures that the Commission and USAC should take to ensure proper receipt, storage, and use of the data? We are acutely aware of the data protections and sensitivities surrounding health data and seek comment on the best ways to ensure proper handling of this information.

102. We also propose that Pilot program participants provide information regarding their experience with the Pilot program. For example, we are interested in measuring the costs that Pilot program participants experience in designing their programs, submitting applications to the Commission, and ensuring ongoing compliance with the Pilot's rules and procedures. We propose to ask on a regular basis for these types of cost and time estimates to evaluate whether the Pilot program is an administratively feasible method of distributing funding for connected care services. This information will be critical if, following the Pilot, the Commission chooses to make a connected care program permanent, and seeks to minimize applicant burdens in so doing.

103. *Forms.* In addition, we seek comment on the forms that participants will use to provide this information. Are there existing Commission forms from other USF programs, in particular the Rural Health Care program, that can be used to report data for the Pilot program? Should the Commission establish new forms for the purposes of the Pilot program?

F. Legal Authority

104. The Commission's stewardship of the universal service support mechanisms and determinations concerning the services that are eligible for universal service funding are bound by section 254 of the Act, as amended by the 1996 Act. The *Notice of Inquiry* sought comment on the Commission's legal authority to establish the Pilot program.²⁰³ Below, we propose and seek comment on our sources of legal authority for the Pilot program. We seek comment on the potential impact of our legal authority on the structure, administrability, and effectiveness and efficiency of the Pilot program. Are there any additional potential sources of legal authority that we should consider?

105. Based on our review of the record and our reading of the statute, we believe that the Commission's rural health care legal authority in section 254(h)(2)(A) of the Act supports the proposed Pilot program. Section 254(h)(2)(A) directs the Commission to "establish competitively neutral rules, (A) to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and non-profit . . . health care providers. . . ." ²⁰⁴ The Commission has previously explained that it has "broad discretion regarding how to fulfill this statutory mandate."²⁰⁵ We seek comment on whether we should rely on the rural health care legal authority in section 254(h)(2)(A) as our authority to create the proposed Pilot program, and how relying

²⁰³ See *Connected Care Notice of Inquiry*, 33 FCC Rcd at 7831-32, paras. 14-15.

²⁰⁴ 47 U.S.C. § 254(h)(2)(A).

²⁰⁵ *Healthcare Connect Fund Order*, 27 FCC Rcd at 16700, para. 49.

on this legal authority would impact the structure of the Pilot program.

106. Several commenters argued that section 254(h)(2)(A) provides the Commission with legal authority to establish the proposed Pilot program.²⁰⁶ The Commission previously relied on this statutory provision as its legal authority for the RHC Pilot program and the Healthcare Connect Fund program, which were designed to develop dedicated health care provider networks and fund broadband Internet access services used directly by health care providers, and network equipment necessary to make the supported services functional.²⁰⁷ The Commission has not previously relied on this statutory provision to provide support for connectivity between patients and health care providers, however. We believe the most feasible way to structure the Pilot program would be to have the health care provider purchase the broadband Internet access service needed by the patient to access connected care services from a broadband carrier or a connected care company (e.g., a remote patient monitoring company) and then provide the telehealth service, including the underlying Internet broadband access service, to the patient directly.²⁰⁸ We therefore seek comment on whether and how section 254(h)(2)(A) could be interpreted to authorize the creation of a Pilot program that would support patient broadband Internet access service connections for connected care.

107. We request information on how providing health care providers support for patient-centered connected care enhances health care provider “access to advanced telecommunications and information services” consistent with section 254(h)(2)(A). Is there an argument that patient broadband Internet access service falls within section 254(h)(2)(A) when it is purchased by a health care provider and used for medical purposes? Is the legal argument for supporting connectivity underlying technologies such as remote patient monitoring under section 254(h)(2)(A) stronger where the health care provider purchases the residential broadband Internet access service as part of a complete solution or package and provides the connected care services to the patient? Does the fact that a health care provider cannot serve a patient at the patient’s location through connected care unless the patient has a broadband Internet access connection provide a basis for relying on the rural health care authority in section 254(h)(2)(A)? Is there an argument that individual patient broadband connections for connected care services fall within the scope of section 254(h)(2)(A) because they extend the health care provider’s network by allowing the health care provider to send and receive communications to its patients wherever the patients are located, and thus would enhance access to advanced service “for” the health care provider, as required by section 254(h)(2)(A)?

108. We also seek comment on whether section 254(h)(2)(A) would also authorize the Commission to provide funding under the Pilot program for health care provider purchases of services—other than patient connectivity—that are used to provide connected care services but that are not already eligible for support through the Healthcare Connect Fund program.²⁰⁹ For example, companies may offer cloud-based solutions, finished service packages, or complete suites of services that allow health care providers to provide telehealth, including connected care.²¹⁰ Are these services “information services”

²⁰⁶ See Virginia Telehealth Network Comments at 12; American Hospital Association Comments at 5; SHLB Comments at 6; University of Arkansas for Medical Sciences and e-Link Comments at 2; CHRISTUS Health Comments at Attachment page 6.

²⁰⁷ *RHC Pilot Program Order*, 22 FCC Rcd at 20367, para. 15 (discussing the legal authority and purpose of the RHC Pilot program); *Healthcare Connect Fund Order*, 27 FCC Rcd at 16699-701, paras. 44, 49 (discussing the legal authority for the Healthcare Connect Fund program and the purpose and goals of the Healthcare Connect Fund program).

²⁰⁸ See, e.g., CHRISTUS Health Comments at 5, WC Docket No. 17-310 (rec. Feb. 2, 2018).

²⁰⁹ Through the Healthcare Connect Fund program, eligible health care providers and consortia of eligible health care providers can receive support for “any advanced telecommunications.”

²¹⁰ See, e.g., Care Innovations website, <https://news.careinnovations.com/blog/telehealth-infographic-the-power-of-platform-as-a-service-paas> (last visited July 9, 2019) (describing Care Innovations’ Platform-as-a-Service solutions); (continued....)

under section 254(h)(2)(A), for which the Commission is required to develop competitively neutral rules to enhance access for health care providers?²¹¹ Are there other types of services that qualify as “information services” under section 254(h)(2)(A)? We seek additional information about, and examples of, these services and the components of these services, including any network equipment required to make these services functional. We also seek specific information and data that would help us determine whether these types of services could qualify as supportable information services under section 254(h)(2)(A). Finally, we seek information on how these types of services help health care providers provide connected care services, and whether health care providers have difficulty affording these types of services without USF support.

109. We believe that the universal service principles in sections 254(b)(1) and (b)(3) of the Act, and section 254(j) of the Act provide additional statutory support for a Pilot program that would provide USF support to enable health care providers to provide connected care technologies to eligible low-income consumers.²¹² Sections 254(b)(1) and (b)(3), provide, respectively, that the Commission’s universal service policies must be based on the principles that “[q]uality services should be available at just, reasonable, and affordable rates” and “[c]onsumers in all regions of the Nation, including low-income consumers . . . should have access to telecommunications and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to those services provided in urban areas.”²¹³ Section 254(j) ensures the continuation of the Lifeline program through any subsequent changes to the Universal Service Fund.²¹⁴ In addition, section 154(i) also authorizes the Commission to “perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions.”²¹⁵

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YorkTel website, <https://www.yorktel.com/healthcare/telehealth/univagohe/> (last visited July 9, 2019) (describing the Univago HE Telemedicine Video Platform-as-a-Service which provides everything that health care providers need to “video-connect patients with clinicians, care teams, family and more.”); InTouch Health website, <https://intouchhealth.com/virtual-care-platform/> (last visited July 9, 2019) (describing InTouch Health’s fully integrated virtual care platform). AT&T’s comments also indicate that remote patient monitoring vendors may offer health care provider a service package that includes the patient residential broadband Internet access service. See AT&T Comments at 10 (“AT&T (the connectivity provider) contracts with and is paid by the [remote patient monitoring] solution provider” and “the connectivity provider such as AT&T generally has no direct relationship with either the [health care provider] or the patient.”)

²¹¹ See 47 U.S.C. § 254(h)(2)(A). Section 3 defines information services as “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service.” 47 U.S.C. § 153(24). Section 3 also defines “telecommunications” as “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” 47 U.S.C. § 153(50). In concluding that broadband Internet access service is an information service, the Commission explained that “[t]he record reflects that fundamental purposes of broadband Internet access service are for its use in ‘generating’ and ‘making available’ information to others, for example through social media and file sharing; ‘acquiring’ and ‘retrieving’ information from sources such as websites and online streaming and audio applications, gaming applications, and file sharing applications; ‘storing’ information in the cloud and remote servers, and via file sharing applications; ‘transforming’ and ‘processing’ information such as by manipulating images and documents, online gaming use, and through applications that offer the ability to send and receive email, cloud computing and machine learning capabilities; and ‘utilizing’ information by interacting with stored data.” *Restoring Internet Freedom*, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311, 323, para. 30 (2017). The Commission further explained that these were not “merely incidental uses of broadband Internet access service” and that broadband Internet access services was “designed and intended” for these particular purposes. *Id.*

²¹² 47 U.S.C. §§ 254(b)(1), (3), and 254(j). See also, e.g., American Hospital Association Comments at 6 (“Further, the fundamental purpose of the program can be easily reconciled with the broader universal service principles

(continued....)

110. We believe that using a discrete, time-limited Pilot program to obtain additional data about the benefits of broadband-enabled connected care services, and how universal service funds could better support the adoption of broadband-enabled connected care services, as well as broadband Internet access service more generally, is consistent with these statutory provisions. We note that the Commission previously relied on sections 254(b)(1) and (b)(3) and 154(i) to establish the limited Lifeline Broadband Pilot program, which provided participating low-income consumers support for bundled broadband service or stand-alone broadband service to test the impact of Lifeline support on broadband adoption.²¹⁶ We seek comment on relying in part on the low-income legal authority for the proposed Pilot program and how relying on low-income legal authority would impact the structure of the Pilot program. For example, would relying on low income legal authority require us to limit Pilot projects to those serving exclusively low-income individuals?

111. We also seek comment on whether we should rely on our low-income legal authority to provide support for broadband Internet access connections for connected care services through the Pilot program, and rely on our rural health care legal authority to provide support for information services not already funded through the Healthcare Connect Fund program that health care providers use to provide connected care services. How would this approach impact the structure and administrability of the Pilot program? Would it result in a Pilot program structure that incentivizes participation from eligible health care providers, service providers, and patients better than under the other proposed legal authorities?

112. For example, if a health care provider contracts with a remote patient monitoring solution provider for a package that includes broadband connectivity for patients, patient remote monitoring equipment, and software for the health care provider to process data received by the patient's remote monitoring equipment, could the Commission fund some parts of that overall package via its Rural Health Care legal authority and other parts through its low-income legal authority? If the health care provider needed additional broadband capacity to its location to support that remote monitoring service, could the Commission also support that additional capacity through this Pilot program?

113. Are there other services we should consider supporting consistent with our legal authority? For example, in the Commission's Rural Health Care Pilot Program, participants were permitted to purchase equipment integral to running their broadband networks, such as servers, routers, firewalls, and switches, or to upgrade their existing equipment and increase bandwidth.²¹⁷ We seek comment on our legal authority to fund such services here.

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Congress established in 254(b) (*e.g.*, the availability of quality services at just, reasonable, and affordable rates; access to advanced telecommunications and information services in all regions of the United States; access to advanced telecommunications and information services in all regions of the United States, access to services and rates comparable to those offered in urban areas; and promotion of [health care provider] access to advanced telecommunications services.”); University of Arkansas for Medical Sciences and Arkansas e-Link Comments at 2 (“UAMS and Arkansas e-Link believe that sections U.S.C. § 254(b)(1), (2), (3), (6); U.S.C. § 254(h)(2)(A), and U.S.C. § 254(c)(1); U.S.C. § 254(c)(3) support FCC authority to create a Pilot program and waiver for advanced services and technologies as marketplace status evolves.”).

²¹³ 47 U.S.C. §§ 254(b)(1), (b)(3).

²¹⁴ 47 U.S.C. § 254(j).

²¹⁵ 47 U.S.C. § 154(i).

²¹⁶ *2012 Lifeline Order*, 27 FCC Rcd at 6797-98, paras. 328-30 (describing the Lifeline Broadband Pilot program and citing to sections 254(b)(1), (3), and 4(i) as the legal authority for that Pilot program).

²¹⁷ Wireline Competition Bureau Evaluation of Rural Health Care Pilot Program Staff Report, WC Docket No. 02-60 (Aug. 13, 2012), at 10.

IV. PROCEDURAL MATTERS

114. *Initial Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended,²¹⁸ the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) for this Notice of Proposed Rulemaking (Notice), of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this Notice. The IRFA is in Appendix A. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.²¹⁹ In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.²²⁰

115. *Initial Paperwork Reduction Act Analysis.* This document contains proposed information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the OMB to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

116. *Ex Parte Rules – Permit-But-Disclose.* The proceeding this Notice initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²²¹ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

117. *Comment Filing Procedures.* Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.

²¹⁸ See 5 U.S.C. § 603.

²¹⁹ See 5 U.S.C. § 603(a).

²²⁰ See *id.*

²²¹ 47 CFR §§ 1.1200 *et seq.*

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
 - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
 - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
 - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington, DC 20554.

118. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be publicly available online via ECFS.²²² These documents will also be available for public inspection during regular business hours in the FCC Reference Information Center, which is located in Room CYA257 at FCC Headquarters, 445 12th Street, SW, Washington, DC 20554. The Reference Information Center is open to the public Monday through Thursday from 8:00 a.m. to 4:30 p.m. and Friday from 8:00 a.m. to 11:30 a.m.

119. *People with Disabilities.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

V. ORDERING CLAUSES

120. IT IS ORDERED that, pursuant to the authority contained in sections 1 through 4, 201, 254, and 403 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. §§ 151 through 154, 201, 254, and 403 this Notice of Proposed Rulemaking IS ADOPTED.

121. IT IS FURTHER ORDERED that, pursuant to applicable procedures set forth in sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on this Notice of Proposed Rulemaking on or before 30 days from publication of this item in the Federal Register, and reply comments on or before 60 days from publication of this item in the Federal Register.

122. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

²²² Documents will generally be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

Marlene H. Dortch
Secretary

APPENDIX

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities from the policies and rules proposed in this Notice of Proposed Rulemaking (Notice). The Commission requests written public comment on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided on the first page of the Notice. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. The Commission is required by section 254 of the Communications Act of 1934, as amended, to promulgate rules to implement the universal service provisions of section 254 and “to establish competitively neutral rules—(A) to enhance to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit . . . health care providers”⁴ The Commission is also required to base policies for the preservation and advancement of universal services on principles including “[q]uality rates should be available at just, reasonable, and affordable rates” and “[c]onsumers in all regions of the Nation, including low-income consumers . . . should have access to telecommunications service and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.” In this Notice, we propose a Connected Care Pilot program (Pilot) that will assist us in satisfying these requirements by providing support for eligible health care providers to provide connected care to low-income patients, including veterans and those in medically underserved communities. We seek comment on whether the Pilot program should fund broadband Internet access services or other information services used by health care providers to provide connected care services and network equipment necessary to make the supported services functional. We expect that the data gathered from the Pilot program will help us understand how and whether USF funds could be used to promote health care provider and low-income patient adoption and use of connected care services.

3. We propose four goals for the proposed Pilot program and also propose a three-year duration and budget of \$100 million for the Pilot program.⁵ We also propose and seek comment on the application process and the objective criteria for selecting projects among the applications we receive for the Pilot program, and propose and seek comment on awarding additional points during the evaluation process for proposed projects that would primarily serve veterans or rural or Tribal areas or populations or primarily treat diabetes, heart disease, opioid addiction, mental health conditions, or high-risk pregnancy.⁶ We believe that we will be able to fund a range of diverse projects throughout the country. We propose the specific requirements for health care providers, including vendor selection requirements, requirements

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-12, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ *Id.*

⁴ See 47 U.S.C. § 254; 47 U.S.C. § 254(h)(2)(A).

⁵ See Notice, *supra*, sections III(A), III(D).

⁶ See Notice, *supra*, section III(B).

for requesting funding and reimbursements, and audit and document retention requirements, and data reporting requirements.⁷ Finally, we propose specific requirements for participating service providers including indicating interest in participating in the Pilot program, requesting disbursements, and document retention and audit requirements.⁸ Participating consumers may also be required to complete consumer surveys.

B. Legal Basis

4. The legal basis for the Notice of Proposed Rulemaking is contained in sections 1 through 4, 201, 254, and 403 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. §§ 151 through 154, 201, 254, and 403.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁹ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”¹⁰ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.¹¹ A small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).¹² Nationwide, there are a total of approximately 29.6 million small businesses, according to the SBA.¹³ A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”¹⁴

6. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.¹⁵ First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA’s Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.¹⁶ These types of small businesses represent 99.9% of all businesses in the United States which translates to 29.6 million businesses.¹⁷

⁷ See Notice, *supra*, sections III(C), III(E).

⁸ See Notice, *supra*, sections III(C).

⁹ 5 U.S.C. § 603(b)(3).

¹⁰ 5 U.S.C. § 601(6).

¹¹ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

¹² See 15 U.S.C. § 632.

¹³ See SBA, Office of Advocacy, “Frequently Asked Questions, Question 2- How many small businesses are there in the U.S.?” <https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2017-WEB.pdf> (Aug. 2017).

¹⁴ 5 U.S.C. § 601(4).

¹⁵ See 5 U.S.C. § 601(3)-(6).

¹⁶ See SBA, Office of Advocacy, “Frequently Asked Questions, Question 1 – What is a small business?” <https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2017-WEB.pdf> (Aug. 2017).

7. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”¹⁸ Nationwide, as of August 2016, there were approximately 356,494 small organizations based on registration and tax data filed by nonprofits with the Internal Revenue Service (IRS).¹⁹

8. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”²⁰ U.S. Census Bureau data from the 2012 Census of Governments²¹ indicates that there were 90,056 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.²² Of this number there were 37,132 general purpose governments (county²³, municipal and town or township²⁴) with populations of less than 50,000 and 12,184 special purpose governments (independent school districts²⁵ and special districts²⁶) with populations of less than 50,000. The 2012 U.S. Census Bureau data for most types of governments in the local government category show that the majority of these governments have populations of less than 50,000.²⁷ Based on this data we estimate that at least 49,316 local government jurisdictions fall in the category of “small governmental jurisdictions.”²⁸

9. Small entities potentially affected by the proposals herein include eligible non-profit and public health care providers and the service providers offering them services, including telecommunications service providers, Internet Service Providers (ISPs), and vendors of the eligible services and equipment that would be supported by the Pilot program.²⁹

1. Health Care Providers

10. *Offices of Physicians (Except Mental Health Specialists)*. This U.S. industry comprises

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¹⁷ See SBA, Office of Advocacy, “Frequently Asked Questions, Question 2- How many small businesses are there in the U.S.?” <https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2017-WEB.pdf> (Aug. 2017).

¹⁸ 5 U.S.C. § 601(4).

¹⁹ Data from the Urban Institute, National Center for Charitable Statistics (NCCS) reporting on nonprofit organizations registered with the IRS was used to estimate the number of small organizations. Reports generated using the NCCS online database indicated that as of Aug. 2016 there were 356,494 registered nonprofits with total revenues of less than \$100,000. Of this number, 326,897 entities filed tax returns with 65,113 registered nonprofits reporting total revenues of \$50,000 or less on the IRS Form 990-N for Small Exempt Organizations and 261,784 nonprofits reporting total revenues of \$100,000 or less on some other version of the IRS Form 990 within 24 months of the Aug. 2016 data release date. See <http://nccs.urban.org/sites/all/nccs-archive/html/tablewiz/tw.php> where the report showing this data can be generated by selecting the following data fields: Show: “Registered Nonprofit Organizations”; By: “Total Revenue Level (years 1995, Aug to 2016, Aug)”; and For: “2016, Aug” then selecting “Show Results.”

²⁰ 5 U.S.C. § 601(5).

²¹ See 13 U.S.C. § 161. The Census of Government is conducted every five (5) years compiling data for years ending with “2” and “7”. See also Program Description, Census of Governments, <https://factfinder.census.gov/faces/affhelp/jsf/pages/metadata.xhtml?lang=en&type=program&id=program.en.COG#>

²² See U.S. Census Bureau, 2012 Census of Governments, Local Governments by Type and State: 2012 - United States-States. <https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG02.US01>. Local governmental jurisdictions are classified in two categories - General purpose governments (county, municipal and town or township) and Special purpose governments (special districts and independent school districts).

²³ See U.S. Census Bureau, 2012 Census of Governments, County Governments by Population-Size Group and State: 2012 - United States-States. <https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG06.US01>. There were 2,114 county governments with populations less than 50,000.

establishments of health practitioners having the degree of M.D. (Doctor of Medicine) or D.O. (Doctor of Osteopathy) primarily engaged in the independent practice of general or specialized medicine (except psychiatry or psychoanalysis) or surgery. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.³⁰ The SBA has created a size standard for this industry, which is annual receipts of \$11 million or less.³¹ According to 2012 U.S. Economic Census, 152,468 firms operated throughout the entire year in this industry.³² Of that number, 147,718 had annual receipts of less than \$10 million, while 3,108 firms had annual receipts between \$10 million and \$24,999,999.³³ Based on this data, we conclude that a majority of firms operating in this industry are small under the applicable size standard.

11. *Offices of Physicians, Mental Health Specialists.* This U.S. industry comprises establishments of health practitioners having the degree of M.D. (Doctor of Medicine) or D.O. (Doctor of Osteopathy) primarily engaged in the independent practice of psychiatry or psychoanalysis. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.³⁴ The SBA has established a size standard for businesses in this industry, which is annual receipts of \$11 million dollars or less.³⁵ The U.S. Economic Census indicates that 8,809 firms operated throughout the entire year in this industry.³⁶ Of that number 8,791 had annual receipts of less than \$10 million, while 13 firms had annual receipts between \$10 million and \$24,999,999.³⁷ Based on this data, we conclude that a majority of firms in this industry are small under the applicable standard.

12. *Offices of Dentists.* This U.S. industry comprises establishments of health practitioners having the degree of D.M.D. (Doctor of Dental Medicine), D.D.S. (Doctor of Dental Surgery), or D.D.Sc. (Doctor of Dental Science) primarily engaged in the independent practice of general or specialized dentistry or dental surgery. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers. They can provide either comprehensive preventive, cosmetic, or emergency care, or specialize in a single field of dentistry.³⁸ The SBA has established a size standard for that industry of annual receipts of \$7.5 million or

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²⁴ See U.S. Census Bureau, 2012 Census of Governments, Subcounty General-Purpose Governments by Population-Size Group and State: 2012 - United States – States.

<https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG07.US01>. There were 18,811 municipal and 16,207 town and township governments with populations less than 50,000.

²⁵ See U.S. Census Bureau, 2012 Census of Governments, Elementary and Secondary School Systems by Enrollment-Size Group and State: 2012 - United States-States.

<https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG11.US01>. There were 12,184 independent school districts with enrollment populations less than 50,000.

²⁶ See U.S. Census Bureau, 2012 Census of Governments, Special District Governments by Function and State: 2012 - United States-States. <https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG09.US01>. The U.S. Census Bureau data did not provide a population breakout for special district governments.

²⁷ See U.S. Census Bureau, 2012 Census of Governments, County Governments by Population-Size Group and State: 2012 - United States-States - <https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG06.US01>; Subcounty General-Purpose Governments by Population-Size Group and State: 2012 - United States–States - <https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG07.US01>; and Elementary and Secondary School Systems by Enrollment-Size Group and State: 2012 - United States-States.

<https://factfinder.census.gov/bkmk/table/1.0/en/COG/2012/ORG11.US01>. While U.S. Census Bureau data did not provide a population breakout for special district governments, if the population of less than 50,000 for this category of local government is consistent with the other types of local governments the majority of the 38, 266 special district governments have populations of less than 50,000.

²⁸ *Id.*

²⁹ 47 CFR §§ 54.601, 54.621.

less.³⁹ The 2012 U.S. Economic Census indicates that 115,268 firms operated in the dental industry throughout the entire year.⁴⁰ Of that number 114,417 had annual receipts of less than \$5 million, while 651 firms had annual receipts between \$5 million and \$9,999,999.⁴¹ Based on this data, we conclude that a majority of business in the dental industry are small under the applicable standard.

13. *Offices of Chiropractors.* This U.S. industry comprises establishments of health practitioners having the degree of D.C. (Doctor of Chiropractic) primarily engaged in the independent practice of chiropractic. These practitioners provide diagnostic and therapeutic treatment of neuromusculoskeletal and related disorders through the manipulation and adjustment of the spinal column and extremities, and operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.⁴² The SBA has established a size standard for this industry, which is annual receipts of \$7.5 million or less.⁴³ The 2012 U.S. Economic Census statistics show that in 2012, 33,940 firms operated throughout the entire year.⁴⁴ Of that number 33,910 operated with annual receipts of less than \$5 million per year, while 26 firms had annual receipts between \$5 million and \$9,999,999.⁴⁵ Based on that data, we conclude that a majority of chiropractors are small.

14. *Offices of Optometrists.* This U.S. industry comprises establishments of health practitioners having the degree of O.D. (Doctor of Optometry) primarily engaged in the independent practice of optometry. These practitioners examine, diagnose, treat, and manage diseases and disorders of the visual system, the eye and associated structures as well as diagnose related systemic conditions. Offices of optometrists prescribe and/or provide eyeglasses, contact lenses, low vision aids, and vision therapy. They operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers, and may also provide the same services as opticians, such as selling and fitting prescription eyeglasses and contact lenses.⁴⁶ The SBA has established a size standard for businesses operating in this industry, which is annual receipts of \$7.5 million or less.⁴⁷ The 2012 Economic Census indicates that 18,050 firms operated the entire year.⁴⁸ Of

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³⁰ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621111 “Offices of Physicians (except Mental Health Specialists)” <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621111&search=2012+NAICS+Search&search=2012>.

³¹ 13 CFR § 121.201, NAICS Code 621111.

³² U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621111, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621111.

³³ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$11 million or less.

³⁴ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621112 “Offices of Physicians, Mental Health Specialists”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621112&search=2012+NAICS+Search&search=2012>.

³⁵ 13 CFR § 121.201, NAICS Code 621112.

³⁶ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621112, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621112.

³⁷ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$11 million or less.

³⁸ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621210 “Offices of Dentists”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621210&search=2012+NAICS+Search&search=2012>.

³⁹ 13 CFR § 121.201, NAICS Code 621210.

that number, 17,951 had annual receipts of less than \$5 million, while 70 firms had annual receipts between \$5 million and \$9,999,999.⁴⁹ Based on this data, we conclude that a majority of optometrists in this industry are small.

15. *Offices of Mental Health Practitioners (except Physicians)*. This U.S. industry comprises establishments of independent mental health practitioners (except physicians) primarily engaged in (1) the diagnosis and treatment of mental, emotional, and behavioral disorders and/or (2) the diagnosis and treatment of individual or group social dysfunction brought about by such causes as mental illness, alcohol and substance abuse, physical and emotional trauma, or stress. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.⁵⁰ The SBA has created a size standard for this industry, which is annual receipts of \$7.5 million or less.⁵¹ The 2012 U.S. Economic Census indicates that 16,058 firms operated throughout the entire year.⁵² Of that number, 15,894 firms received annual receipts of less than \$5 million, while 111 firms had annual receipts between \$5 million and \$9,999,999.⁵³ Based on this data, we conclude that a majority of mental health practitioners who do not employ physicians are small.

16. *Offices of Physical, Occupational and Speech Therapists and Audiologists*. This U.S. industry comprises establishments of independent health practitioners primarily engaged in one of the following: (1) providing physical therapy services to patients who have impairments, functional limitations, disabilities, or changes in physical functions and health status resulting from injury, disease or other causes, or who require prevention, wellness or fitness services; (2) planning and administering educational, recreational, and social activities designed to help patients or individuals with disabilities, regain physical or mental functioning or to adapt to their disabilities; and (3) diagnosing and treating speech, language, or hearing problems. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.⁵⁴ The SBA has established a size standard for this industry, which is annual receipts of \$7.5 million or less.⁵⁵ The 2012 U.S. Economic Census indicates that 20,567 firms in this industry operated throughout

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⁴⁰ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621210, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621210.

⁴¹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁴² See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621310 “Offices of Chiropractors”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621310&search=2012+NAICS+Search&search=2012>. See also NAICS code 621310, 13 CFR § 121.201.

⁴³ 13 CFR § 121.201, NAICS Code 621310.

⁴⁴ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621310, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621310.

⁴⁵ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁴⁶ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621320 “Offices of Optometrists”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621320&search=2012+NAICS+Search&search=2012>.

⁴⁷ 13 CFR § 121.201, NAICS code 621320.

⁴⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621320, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621320.

the entire year.⁵⁶ Of this number, 20,047 had annual receipts of less than \$5 million, while 270 firms had annual receipts between \$5 million and \$9,999,999.⁵⁷ Based on this data, we conclude that a majority of businesses in this industry are small.

17. *Offices of Podiatrists.* This U.S. industry comprises establishments of health practitioners having the degree of D.P.M. (Doctor of Podiatric Medicine) primarily engaged in the independent practice of podiatry. These practitioners diagnose and treat diseases and deformities of the foot and operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.⁵⁸ The SBA has established a size standard for businesses in this industry, which is annual receipts of \$7.5 million or less.⁵⁹ The 2012 U.S. Economic Census indicates that 7,569 podiatry firms operated throughout the entire year.⁶⁰ Of that number, 7,545 firms had annual receipts of less than \$5 million, while 22 firms had annual receipts between \$5 million and \$9,999,999.⁶¹ Based on this data, we conclude that a majority of firms in this industry are small.

18. *Offices of All Other Miscellaneous Health Practitioners.* This U.S. industry comprises establishments of independent health practitioners (except physicians; dentists; chiropractors; optometrists; mental health specialists; physical, occupational, and speech therapists; audiologists; and podiatrists). These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.⁶² The SBA has established a size standard for this industry, which is annual receipts of \$7.5 million or less.⁶³ The 2012 U.S. Economic Census indicates that 11,460 firms operated throughout the entire year.⁶⁴ Of that number, 11,374 firms had annual receipts of less than \$5 million, while 48 firms had annual receipts between \$5 million and \$9,999,999.⁶⁵ Based on this data, we conclude the majority of firms in this industry are small.

19. *Family Planning Centers.* This U.S. industry comprises establishments with medical staff primarily engaged in providing a range of family planning services on an outpatient basis, such as contraceptive services, genetic and prenatal counseling, voluntary sterilization, and therapeutic and

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⁴⁹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁵⁰ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621330 “Offices of Mental Health Practitioners (except Physicians)”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621330&search=2012+NAICS+Search&search=2012>.

⁵¹ 13 CFR § 121.201 NAICS Code 621330.

⁵² U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621330, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621330.

⁵³ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁵⁴ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621340 “Offices of Physical, Occupational and Speech Therapists and Audiologists”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621340&search=2012+NAICS+Search&search=2012>.

⁵⁵ 13 CFR § 121.201, NAICS Code 621340.

⁵⁶ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621340, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621340.

⁵⁷ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

medically induced termination of pregnancy.⁶⁶ The SBA has established a size standard for this industry, which is annual receipts of \$11 million or less.⁶⁷ The 2012 Economic Census indicates that 1,286 firms in this industry operated throughout the entire year.⁶⁸ Of that number 1,237 had annual receipts of less than \$10 million, while 36 firms had annual receipts between \$10 million and \$24,999,999.⁶⁹ Based on this data, we conclude that the majority of firms in this industry are small.

20. *Outpatient Mental Health and Substance Abuse Centers.* This U.S. industry comprises establishments with medical staff primarily engaged in providing outpatient services related to the diagnosis and treatment of mental health disorders and alcohol and other substance abuse. These establishments generally treat patients who do not require inpatient treatment. They may provide a counseling staff and information regarding a wide range of mental health and substance abuse issues and/or refer patients to more extensive treatment programs, if necessary.⁷⁰ The SBA has established a size standard for this industry, which is \$15 million or less in annual receipts.⁷¹ The 2012 U.S. Economic Census indicates that 4,446 firms operated throughout the entire year.⁷² Of that number, 4,069 had annual receipts of less than \$10 million while 286 firms had annual receipts between \$10 million and \$24,999,999.⁷³ Based on this data, we conclude that a majority of firms in this industry are small.

21. *HMO Medical Centers.* This U.S. industry comprises establishments with physicians and other medical staff primarily engaged in providing a range of outpatient medical services to the health maintenance organization (HMO) subscribers with a focus generally on primary health care. These establishments are owned by the HMO. Included in this industry are HMO establishments that both provide health care services and underwrite health and medical insurance policies.⁷⁴ The SBA has established a size standard for this industry, which is \$32.5 million or less in annual receipts.⁷⁵ The 2012 U.S. Economic Census indicates that 14 firms in this industry operated throughout the entire year.⁷⁶ Of that number, 5 firms had annual receipts of less than \$25 million, while 1 firm had annual receipts

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⁵⁸ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621391 “Offices of Podiatrists”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621391&search=2012+NAICS+Search&search=2012>.

⁵⁹ 13 CFR § 121.201, NAICS Code 621391.

⁶⁰ U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1262SSSZ4, Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012, NAICS code 621391, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621391.

⁶¹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁶² See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621399 “Offices of All Other Miscellaneous Health Practitioners”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621399&search=2012+NAICS+Search&search=2012>.

⁶³ 13 CFR § 121.201, NAICS Code 621399.

⁶⁴ U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1262SSSZ4, Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012, NAICS code 621399, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621399.

⁶⁵ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$7.5 million or less.

⁶⁶ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621410 “Family Planning Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621410&search=2012+NAICS+Search&search=2012>.

⁶⁷ 13 CFR § 121.201, NAICS Code 621410.

between \$25 million and \$99,999,999.⁷⁷ Based on this data, we conclude that approximately one-third of the firms in this industry are small.

22. *Freestanding Ambulatory Surgical and Emergency Centers.* This U.S. industry comprises establishments with physicians and other medical staff primarily engaged in (1) providing surgical services (e.g., orthoscopic and cataract surgery) on an outpatient basis or (2) providing emergency care services (e.g., setting broken bones, treating lacerations, or tending to patients suffering injuries as a result of accidents, trauma, or medical conditions necessitating immediate medical care) on an outpatient basis. Outpatient surgical establishments have specialized facilities, such as operating and recovery rooms, and specialized equipment, such as anesthetic or X-ray equipment.⁷⁸ The SBA has established a size standard for this industry, which is annual receipts of \$15 million or less.⁷⁹ The 2012 U.S. Economic Census indicates that 3,595 firms in this industry operated throughout the entire year.⁸⁰ Of that number, 3,222 firms had annual receipts of less than \$10 million, while 289 firms had annual receipts between \$10 million and \$24,999,999.⁸¹ Based on this data, we conclude that a majority of firms in this industry are small.

23. *All Other Outpatient Care Centers.* This U.S. industry comprises establishments with medical staff primarily engaged in providing general or specialized outpatient care (except family planning centers, outpatient mental health and substance abuse centers, HMO medical centers, kidney dialysis centers, and freestanding ambulatory surgical and emergency centers). Centers or clinics of health practitioners with different degrees from more than one industry practicing within the same establishment (i.e., Doctor of Medicine and Doctor of Dental Medicine) are included in this industry.⁸² The SBA has established a size standard for this industry, which is annual receipts of \$20.5 million or less.⁸³ The 2012 U.S. Economic Census indicates that 4,903 firms operated in this industry throughout the entire year.⁸⁴ Of this number, 4,269 firms had annual receipts of less than \$10 million, while 389 firms had annual receipts between \$10 million and \$24,999,999.⁸⁵ Based on this data, we conclude that a

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⁶⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621410, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621410.

⁶⁹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$11 million or less.

⁷⁰ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621420 “Outpatient Mental Health and Substance Abuse Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621420&search=2012+NAICS+Search&search=2012>.

⁷¹ 13 CFR § 121.201 NAICS Code 621420.

⁷² U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621420, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621420.

⁷³ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

⁷⁴ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621491 “HMO Medical Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621491&search=2012+NAICS+Search&search=2012>.

⁷⁵ 13 CFR § 121.201 NAICS code 621491.

⁷⁶ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621491, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621491.

majority of firms in this industry are small.

24. *Blood and Organ Banks.* This U.S. industry comprises establishments primarily engaged in collecting, storing, and distributing blood and blood products and storing and distributing body organs.⁸⁶ The SBA has established a size standard for this industry, which is annual receipts of \$32.5 million or less.⁸⁷ The 2012 U.S. Economic Census indicates that 314 firms operated in this industry throughout the entire year.⁸⁸ Of that number, 235 operated with annual receipts of less than \$25 million, while 41 firms had annual receipts between \$25 million and \$49,999,999.⁸⁹ Based on this data, we conclude that approximately three-quarters of firms that operate in this industry are small.

25. *All Other Miscellaneous Ambulatory Health Care Services.* This U.S. industry comprises establishments primarily engaged in providing ambulatory health care services (except offices of physicians, dentists, and other health practitioners; outpatient care centers; medical and diagnostic laboratories; home health care providers; ambulances; and blood and organ banks).⁹⁰ The SBA has established a size standard for this industry, which is annual receipts of \$15 million or less.⁹¹ The 2012 U.S. Economic Census indicates that 2,429 firms operated in this industry throughout the entire year.⁹² Of that number, 2,318 had annual receipts of less than \$10 million, while 56 firms had annual receipts between \$10 million and \$24,999,999.⁹³ Based on this data, we conclude that a majority of the firms in this industry are small.

26. *Medical Laboratories.* This U.S. industry comprises establishments known as medical laboratories primarily engaged in providing analytic or diagnostic services, including body fluid analysis, generally to the medical profession or to the patient on referral from a health practitioner.⁹⁴ The SBA has established a size standard for this industry, which is annual receipts of \$32.5 million or less.⁹⁵ The 2012 U.S. Economic Census indicates that 2,599 firms operated in this industry throughout the entire year.⁹⁶ Of this number, 2,465 had annual receipts of less than \$25 million, while 60 firms had annual receipts between \$25 million and \$49,999,999.⁹⁷ Based on this data, we conclude that a majority of firms that

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⁷⁷ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$32.5 million or less.

⁷⁸ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621493 “Freestanding Ambulatory Surgical and Emergency Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621493&search=2012+NAICS+Search&search=2012>.

⁷⁹ 13 CFR § 121.201 NAICS Code 621493.

⁸⁰ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621493, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621493.

⁸¹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

⁸² See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621498 “All Other Outpatient Care Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621498&search=2012+NAICS+Search&search=2012>.

⁸³ 13 CFR § 121.201 NAICS Code 621498.

⁸⁴ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621498, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621498.

⁸⁵ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$20.5 million or less.

operate in this industry are small.

27. *Diagnostic Imaging Centers.* This U.S. industry comprises establishments known as diagnostic imaging centers primarily engaged in producing images of the patient generally on referral from a health practitioner.⁹⁸ The SBA has established size standard for this industry, which is annual receipts of \$15 million or less.⁹⁹ The 2012 U.S. Economic Census indicates that 4,209 firms operated in this industry throughout the entire year.¹⁰⁰ Of that number, 3,876 firms had annual receipts of less than \$10 million, while 228 firms had annual receipts between \$10 million and \$24,999,999.¹⁰¹ Based on this data, we conclude that a majority of firms that operate in this industry are small.

28. *Home Health Care Services.* This U.S. industry comprises establishments primarily engaged in providing skilled nursing services in the home, along with a range of the following: personal care services; homemaker and companion services; physical therapy; medical social services; medications; medical equipment and supplies; counseling; 24-hour home care; occupation and vocational therapy; dietary and nutritional services; speech therapy; audiology; and high-tech care, such as intravenous therapy.¹⁰² The SBA has established a size standard for this industry, which is annual receipts of \$15 million or less.¹⁰³ The 2012 U.S. Economic Census indicates that 17,770 firms operated in this industry throughout the entire year.¹⁰⁴ Of that number, 16,822 had annual receipts of less than \$10 million, while 590 firms had annual receipts between \$10 million and \$24,999,999.¹⁰⁵ Based on this data, we conclude that a majority of firms that operate in this industry are small.

29. *Ambulance Services.* This U.S. industry comprises establishments primarily engaged in providing transportation of patients by ground or air, along with medical care. These services are often provided during a medical emergency but are not restricted to emergencies. The vehicles are equipped with lifesaving equipment operated by medically trained personnel.¹⁰⁶ The SBA has established a size standard for this industry, which is annual receipts of \$15 million or less.¹⁰⁷ The 2012 U.S. Economic Census indicates that 2,984 firms operated in this industry throughout the entire year.¹⁰⁸ Of that number, 2,926 had annual receipts of less than \$15 million, while 133 firms had annual receipts between \$10

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⁸⁶ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621991 “Blood and Organ Banks”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621991&search=2012+NAICS+Search&search=2012>.

⁸⁷ 13 CFR § 121.201 NAICS Code 621991.

⁸⁸ U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621991, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621991.

⁸⁹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$32.5 million or less.

⁹⁰ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621999 “All Other Miscellaneous Ambulatory Health Care Services”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621999&search=2012+NAICS+Search&search=2012>.

⁹¹ 13 CFR § 121.201 NAICS Code 621999.

⁹² U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621999, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621999.

⁹³ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

⁹⁴ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621511 “Medical Laboratories”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621511&search=2012+NAICS+Search&search=2012>.

⁹⁵ 13 CFR § 121.201 NAICS Code 621511.

million and \$24,999,999.¹⁰⁹ Based on this data, we conclude that a majority of firms in this industry are small.

30. *Kidney Dialysis Centers.* This U.S. industry comprises establishments with medical staff primarily engaged in providing outpatient kidney or renal dialysis services.¹¹⁰ The SBA has established a size standard for this industry, which is annual receipts of \$38.5 million or less.¹¹¹ The 2012 U.S. Economic Census indicates that 396 firms operated in this industry throughout the entire year.¹¹² Of that number, 379 had annual receipts of less than \$25 million, while 7 firms had annual receipts between \$25 million and \$49,999,999.¹¹³ Based on this data, we conclude that a majority of firms in this industry are small.

31. *General Medical and Surgical Hospitals.* This U.S. industry comprises establishments known and licensed as general medical and surgical hospitals primarily engaged in providing diagnostic and medical treatment (both surgical and nonsurgical) to inpatients with any of a wide variety of medical conditions. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. These hospitals have an organized staff of physicians and other medical staff to provide patient care services. These establishments usually provide other services, such as outpatient services, anatomical pathology services, diagnostic X-ray services, clinical laboratory services, operating room services for a variety of procedures, and pharmacy services.¹¹⁴ The SBA has established a size standard for this industry, which is annual receipts of \$38.5 million or less.¹¹⁵ The 2012 U.S. Economic Census indicates that 2,800 firms operated in this industry throughout the entire year.¹¹⁶ Of that number, 877 has annual receipts of less than \$25 million, while 400 firms had annual receipts between \$25 million and \$49,999,999.¹¹⁷ Based on this data, we conclude that approximately one-quarter

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¹⁰⁶ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621511, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4//naics~621511.

¹⁰⁷ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$32.5 million or less.

¹⁰⁸ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621512 “Diagnostic Imaging Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621512&search=2012+NAICS+Search&search=2012>.

¹⁰⁹ 13 CFR § 121.201 NAICS Code 621512.

¹¹⁰ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621512, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4//naics~621512.

¹¹¹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

¹¹² See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621610 “Home Health Care Services”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621610&search=2012+NAICS+Search&search=2012>.

¹¹³ 13 CFR § 121.201 NAICS Code 621610.

¹¹⁴ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621610, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4//naics~621610.

¹¹⁵ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

¹¹⁶ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621910 “Ambulance Services”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621910&search=2012+NAICS+Search&search=2012>.

¹¹⁷ 13 CFR § 121.201 NAICS Code 621910.

of firms in this industry are small.

32. *Psychiatric and Substance Abuse Hospitals.* This U.S. industry comprises establishments known and licensed as psychiatric and substance abuse hospitals primarily engaged in providing diagnostic, medical treatment, and monitoring services for inpatients who suffer from mental illness or substance abuse disorders. The treatment often requires an extended stay in the hospital. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. They have an organized staff of physicians and other medical staff to provide patient care services. Psychiatric, psychological, and social work services are available at the facility. These hospitals usually provide other services, such as outpatient services, clinical laboratory services, diagnostic X-ray services, and electroencephalograph services.¹¹⁸ The SBA has established a size standard for this industry, which is annual receipts of \$38.5 million or less.¹¹⁹ The 2012 U.S. Economic Census indicates that 404 firms operated in this industry throughout the entire year.¹²⁰ Of that number, 185 had annual receipts of less than \$25 million, while 107 firms had annual receipts between \$25 million and \$49,999,999.¹²¹ Based on this data, we conclude that more than one-half of the firms in this industry are small.

33. *Specialty (Except Psychiatric and Substance Abuse) Hospitals.* This U.S. industry consists of establishments known and licensed as specialty hospitals primarily engaged in providing diagnostic, and medical treatment to inpatients with a specific type of disease or medical condition (except psychiatric or substance abuse). Hospitals providing long-term care for the chronically ill and hospitals providing rehabilitation, restorative, and adjustive services to physically challenged or disabled people are included in this industry. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. They have an organized staff of physicians and other medical staff to provide patient care services. These hospitals may provide other services, such

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¹⁰⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621910, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621910.

¹⁰⁹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$15 million or less.

¹¹⁰ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 621492 “Kidney Dialysis Centers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=621492&search=2012+NAICS+Search&search=2012>.

¹¹¹ 13 CFR § 121.201 NAICS Code 621492.

¹¹² U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 621492, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~621492.

¹¹³ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$38.5 million or less.

¹¹⁴ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 622110 “General Medical and Surgical Hospitals”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=622110&search=2012+NAICS+Search&search=2012>.

¹¹⁵ 13 CFR § 121.201 NAICS Code 622110.

¹¹⁶ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 622110, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~622110.

¹¹⁷ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$38.5 million or less.

as outpatient services, diagnostic X-ray services, clinical laboratory services, operating room services, physical therapy services, educational and vocational services, and psychological and social work services.¹²² The SBA has established a size standard for this industry, which is annual receipts of \$38.5 million or less.¹²³ The 2012 U.S. Economic Census indicates that 346 firms operated in this industry throughout the entire year.¹²⁴ Of that number, 146 firms had annual receipts of less than \$25 million, while 79 firms had annual receipts between \$25 million and \$49,999,999.¹²⁵ Based on this data, we conclude that more than one-half of the firms in this industry are small.

34. *Emergency and Other Relief Services.* This industry comprises establishments primarily engaged in providing food, shelter, clothing, medical relief, resettlement, and counseling to victims of domestic or international disasters or conflicts (e.g., wars).¹²⁶ The SBA has established a size standard for this industry which is annual receipts of \$32.5 million or less.¹²⁷ The 2012 U.S. Economic Census indicates that 541 firms operated in this industry throughout the entire year.¹²⁸ Of that number, 509 had annual receipts of less than \$25 million, while 7 firms had annual receipts between \$25 million and \$49,999,999.¹²⁹ Based on this data, we conclude that a majority of firms in this industry are small.

2. Wireline Providers

35. *Incumbent Local Exchange Carriers (Incumbent LECs).* Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers and under the SBA size standard, such a business is small if it has 1,500 or fewer employees.¹³⁰ U.S. Census Bureau data for 2012 indicate that 3,117 firms operated during that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹³¹ Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our actions. According to Commission data, one thousand three hundred and seven (1,307) Incumbent Local Exchange Carriers reported that they were incumbent local exchange service providers.¹³² Of this total, an estimated 1,006 have 1,500 or

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¹¹⁸ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 622210 “Psychiatric and Substance Abuse Hospitals”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=622210&search=2012+NAICS+Search&search=2012>.

¹¹⁹ 13 CFR § 121.201 NAICS Code 622210.

¹²⁰ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 622210, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~622210.

¹²¹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$38.5 million or less.

¹²² See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 622310 “Specialty (Except Psychiatric and Substance Abuse) Hospitals”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=622310&search=2012+NAICS+Search&search=2012>.

¹²³ 13 CFR § 121.201 NAICS Code 622310.

¹²⁴ U.S. Census Bureau, 2012 *Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 622310, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~622310.

¹²⁵ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$38.5 million or less.

¹²⁶ See U.S. Census Bureau, 2012 NAICS Definitions, NAICS Code 624230 “Emergency and Other Relief Services”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=624230&search=2012+NAICS+Search&search=2012>.

fewer employees.¹³³ Thus using the SBA's size standard the majority of Incumbent LECs can be considered small entities.

36. Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate category for this service is the category Wired Telecommunications Carriers. Under the category of Wired Telecommunications Carriers, such a business is small if it has 1,500 or fewer employees.¹³⁴ U.S. Census data for 2012 indicate that 3,117 firms operated during that year. Of that number, 3,083 operated with fewer than 1,000 employees.¹³⁵ Based on these data, the Commission concludes that the majority of Competitive LECs, CAPs, Shared-Tenant Service Providers, and Other Local Service Providers, are small entities. According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services.¹³⁶ Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees.¹³⁷ In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees.¹³⁸ Also, 72 carriers have reported that they are Other Local Service Providers.¹³⁹ Of this total, 70 have 1,500 or fewer employees.¹⁴⁰ Consequently, based on internally researched FCC data, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and Other Local Service Providers are small entities.

37. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate category for IXCs is the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁴¹ Census Bureau data for 2012 indicates that 3,117 firms operated during that year. Of that number, 3,083 operated with fewer than 1,000 employees.¹⁴²

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¹²⁷ 13 CFR § 121.201, NAICS Code 624230.

¹²⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1262SSSZ4, *Healthcare and Social Assistance: Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the United States: 2012*, NAICS code 624230, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSSZ4/naics~624230.

¹²⁹ *Id.* The available U.S. Census data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$32.5 million or less.

¹³⁰ See 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹³¹ *Id.*

¹³² See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*).

¹³³ *Id.*

¹³⁴ 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹³⁵ 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹³⁶ See *Trends in Telephone Service*, at tbl. 5.3.

According to internally developed Commission data, 359 companies reported that their primary telecommunications service activity was the provision of interexchange services.¹⁴³ Of this total, an estimated 317 have 1,500 or fewer employees.¹⁴⁴ Consequently, the Commission estimates that the majority of interexchange service providers are small entities.

38. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate category for Operator Service Providers is the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁴⁵ Census Bureau data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁴⁶ Thus, under this size standard, the majority of firms in this industry can be considered small. According to Commission data, 33 carriers have reported that they are engaged in the provision of operator services.¹⁴⁷ Of these, an estimated 31 have 1,500 or fewer employees and two have more than 1,500 employees.¹⁴⁸ Consequently, the Commission estimates that the majority of OSPs are small entities.

39. *Local Resellers*. The SBA has developed a small business size standard for Telecommunications Resellers which includes Local Resellers.¹⁴⁹ The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households.¹⁵⁰ Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual network operators (MVNOs) are included in this industry.¹⁵¹ Under the SBA's size standard, such a business is small if it has 1,500 or fewer employees.¹⁵² U.S. Census Bureau data for 2012 show that 1,341 firms provided resale services for the entire year.¹⁵³ Of that number, all operated with fewer than 1,000 employees.¹⁵⁴ Thus, under this category and the associated small business size standard, the majority of

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¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹⁴² 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹⁴³ See *Trends in Telephone Service*, at tbl. 5.3.

¹⁴⁴ *Id.*

¹⁴⁵ 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition shows the NAICS code as 517311 for Wired Telecommunications Carriers. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹⁴⁶ http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table.

¹⁴⁷ *Trends in Telephone Service*, tbl. 5.3.

¹⁴⁸ *Id.*

¹⁴⁹ See 13 CFR § 121.201; NAICS Code 517911.

these resellers can be considered small entities. According to Commission data, 213 carriers have reported that they are engaged in the provision of local resale services.¹⁵⁵ Of these, an estimated 211 have 1,500 or fewer employees.¹⁵⁶ Consequently, the Commission estimates that the majority of Local Resellers are small entities.

40. *Toll Resellers.* The SBA has not developed a small business size standard specifically for Toll Resellers. The closest NAICS Code Category is Telecommunications Resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. MVNOs are included in this industry.¹⁵⁷ The SBA has developed a small business size standard for the category of Telecommunications Resellers.¹⁵⁸ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁵⁹ 2012 Census Bureau data shows that 1,341 firms provided resale services during that year. Of that number, 1,341 operated with fewer than 1,000 employees.¹⁶⁰ Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services.¹⁶¹ Of this total, an estimated 857 have 1,500 or fewer employees.¹⁶² Consequently, the Commission estimates that the majority of toll resellers are small entities.

3. Wireless Carriers and Service Providers

41. *Wireless Telecommunications Carriers (except Satellite).* This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and

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¹⁵⁰ U.S. Census Bureau, 2012 NAICS Definition, NAICS Code 517911 “Telecommunications Resellers,” <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2017+NAICS+Search&search=2017>.

¹⁵¹ *Id.*

¹⁵² 13 CFR § 121.201, NAICS code 517911.

¹⁵³ See U.S. Census Bureau, 2012 *Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012* (517911 Telecommunications Resellers), https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5//naics~517911.

¹⁵⁴ *Id.*

¹⁵⁵ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*).

¹⁵⁶ *Id.*

¹⁵⁷ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012>.

¹⁵⁸ 13 CFR § 121.201, NAICS code 517911.

¹⁵⁹ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012>.

¹⁶⁰ See U.S. Census Bureau, 2012 *Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012* (517911 Telecommunications Resellers), https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5//naics~517911.

¹⁶¹ *Trends in Telephone Service*, at tbl. 5.3.

wireless video services.¹⁶³ The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.¹⁶⁴ 2012 Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.¹⁶⁵ Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.¹⁶⁶ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities. The Commission's own data—available in its Universal Licensing System—indicate that, as of October 25, 2016, there are 280 Cellular licensees that will be affected by our actions today.¹⁶⁷ The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.¹⁶⁸ Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more than 1,500 employees.¹⁶⁹ Thus, using available data, we estimate that the majority of wireless firms can be considered small.

42. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.¹⁷⁰ The SBA has approved these definitions.¹⁷¹ The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, seven bidders won 31 licenses that qualified as very small business entities, and one bidder won one license that qualified as a small business entity.

43. *Satellite Telecommunications Providers.* This category comprises firms “primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”¹⁷² The category has a small business size standard of \$32.5

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¹⁶² *Id.*

¹⁶³ NAICS Code 517210. See <https://factfinder.census.gov/faces/affhelp/jsf/pages/metadata.xhtml?lang=en&type=ib&id=ib.en/ECN.NAICS2012.517210>.

¹⁶⁴ 13 CFR § 121.201, NAICS code 517210.

¹⁶⁵ U.S. Census Bureau, Subject Series: Information, Table 5, “Establishment and Firm Size: Employment Size of Firms for the U.S.: 2012 NAICS Code 517210” (rel. Jan. 8, 2016).

¹⁶⁶ *Id.* Available census data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

¹⁶⁷ See <http://wireless.fcc.gov/uls>. For the purposes of this FRFA, consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

¹⁶⁸ See *Trends in Telephone Service*, at tbl. 5.3, https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

¹⁶⁹ See *id.*

¹⁷⁰ *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS)*, Report and Order, 12 FCC Rcd 10785, 10879, para. 194 (1997).

¹⁷¹ See Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC (filed Dec. 2, 1998) (*Alvarez Letter 1998*).

¹⁷² U.S. Census Bureau, 2012 NAICS Definitions, “517410 Satellite Telecommunications”; <http://www.census.gov/naics/2007/def/ND517410.HTM>.

million or less in average annual receipts, under SBA rules.¹⁷³ For this category, 2012 Census Bureau data show that there were a total of 333 firms that operated for the entire year.¹⁷⁴ Of this total, 299 firms had annual receipts of less than \$25 million.¹⁷⁵ Consequently, we estimate that the majority of satellite telecommunications providers are small entities.

44. *Common Carrier Paging.* As noted, since 2007 the Census Bureau has placed paging providers within the broad economic census category of Wireless Telecommunications Carriers (except Satellite).¹⁷⁶

45. In addition, in the *Paging Second Report and Order*, the Commission adopted a size standard for “small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.¹⁷⁷ A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.¹⁷⁸ The SBA has approved this definition.¹⁷⁹ An initial auction of Metropolitan Economic Area (“MEA”) licenses was conducted in the year 2000. Of the 2,499 licenses auctioned, 985 were sold.¹⁸⁰ Fifty-seven companies claiming small business status won 440 licenses.¹⁸¹ A subsequent auction of MEA and Economic Area (“EA”) licenses was held in the year 2001. Of the 15,514 licenses auctioned, 5,323 were sold.¹⁸² One hundred thirty-two companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, was held in 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.¹⁸³

46. Currently, there are approximately 74,000 Common Carrier Paging licenses. According to the most recent Trends in Telephone Service, 291 carriers reported that they were engaged in the provision of “paging and messaging” services.¹⁸⁴ Of these, an estimated 289 have 1,500 or fewer

¹⁷³ 13 CFR § 121.201; NAICS code 517410.

¹⁷⁴ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ4, Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012, NAICS code 517410 http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

¹⁷⁵ *Id.*

¹⁷⁶ See U.S. Census Bureau, 2007 NAICS Definitions, “517210 Wireless Telecommunications Categories (Except Satellite)”, <http://www.census.gov/naics/2007/def/ND517210.HTM#N517210> (last visited Oct. 24, 2017).

¹⁷⁷ *Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems et al.*, WT Docket No. 96-18 et al., Second Report and Order and Further Notice of Proposed Rulemaking, 12 FCC Rcd 2732, 2811-12, paras. 178-81 (1997) (*Paging Second Report and Order*); *Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems et al.*, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, 10085-88, paras. 98-107 (1999).

¹⁷⁸ *Paging Second Report and Order*, 12 FCC Rcd at 2811, para. 179.

¹⁷⁹ See Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC (Dec. 2, 1998).

¹⁸⁰ See *929 and 931 MHz Paging Auction Closes*, Public Notice, 15 FCC Rcd 4858 (WTB 2000).

¹⁸¹ See *id.*

¹⁸² See *Lower and Upper Paging Bands Auction Closes*, Public Notice, 16 FCC Rcd 21821 (WTB 2001).

employees and two have more than 1,500 employees.¹⁸⁵ We estimate that the majority of common carrier paging providers would qualify as small entities under the SBA definition.

47. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite).¹⁸⁶ Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.¹⁸⁷ For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.¹⁸⁸ Of this total, 955 firms had fewer than 1,000 employees and 12 firms had 1000 employees or more.¹⁸⁹ Thus under this category and the associated size standard, the Commission estimates that a majority of these entities can be considered small. According to Commission data, 413 carriers reported that they were engaged in wireless telephony.¹⁹⁰ Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.¹⁹¹ Therefore, more than half of these entities can be considered small.

48. *All Other Telecommunications.* The “All Other Telecommunications” category is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.¹⁹² This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.¹⁹³ Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.¹⁹⁴ The SBA has developed a small business size standard for All Other Telecommunications, which consists of all such firms with annual receipts of \$ 32.5 million or less.¹⁹⁵ For this category, U.S. Census Bureau data for 2012 shows that there were 1,442 firms that operated for the entire year.¹⁹⁶ Of those firms, a total of 1,400 had annual receipts less than \$25 million and 15 firms

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¹⁸³ See *Lower and Upper Paging Bands Auction Closes*, Public Notice, 18 FCC Rcd 11154 (WTB 2003). The current number of small or very small business entities that hold wireless licenses may differ significantly from the number of such entities that won in spectrum auctions due to assignments and transfers of licenses in the secondary market over time. In addition, some of the same small business entities may have won licenses in more than one auction.

¹⁸⁴ *2010 Trends Report* at Table 5.3, page 5-5.

¹⁸⁵ *Id.*

¹⁸⁶ U.S. Census Bureau, 2012 NAICS Definitions, 517210 Wireless Telecommunications Carriers (Except Satellite), <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2012+NAICS+Search>.

¹⁸⁷ *Id.*

¹⁸⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ5, Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012 NAICS Code 517210 (rel. Jan. 8, 2016). https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517210.

¹⁸⁹ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

¹⁹⁰ See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, Trends in Telephone Service at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*), https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

¹⁹¹ *Id.*

had annual receipts of \$25 million to \$49,999,999.¹⁹⁷ Thus, the Commission estimates that the majority of “All Other Telecommunications” firms potentially affected by our action can be considered small.

4. Internet Service Providers

49. *Internet Service Providers (Broadband)*. Broadband Internet service providers include wired (e.g., cable, DSL) and VoIP service providers using their own operated wired telecommunications infrastructure fall in the category of Wired Telecommunication Carriers.¹⁹⁸ Wired Telecommunications Carriers are comprised of establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.¹⁹⁹ The SBA size standard for this category classifies a business as small if it has 1,500 or fewer employees.²⁰⁰ U.S. Census data for 2012 show that there were 3,117 firms that operated that year.²⁰¹ Of this total, 3,083 operated with fewer than 1,000 employees.²⁰² Consequently, under this size standard the majority of firms in this industry can be considered small.

50. *Internet Service Providers (Non-Broadband)*. Internet access service providers such as Dial-up Internet service providers, VoIP service providers using client-supplied telecommunications connections and Internet service providers using client-supplied telecommunications connections (e.g., dial-up ISPs) fall in the category of All Other Telecommunications.²⁰³ The SBA has developed a small business size standard for All Other Telecommunications which consists of all such firms with gross annual receipts of \$32.5 million or less.²⁰⁴ For this category, U.S. Census data for 2012 shows that there were 1,442 firms that operated for the entire year.²⁰⁵ Of these firms, a total of 1,400 had gross annual

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¹⁹² See U.S. Census Bureau, 2017 NAICS Definitions, NAICS Code “517919 All Other Telecommunications”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517919&search=2017+NAICS+Search&search=2017>.

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ See 13 CFR § 121.201, NAICS code 517919.

¹⁹⁶ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ4, Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012, NAICS code 517919, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ4//naics~517919.

¹⁹⁷ *Id.*

¹⁹⁸ See, 13 CFR § 121.201. The Wired Telecommunications Carrier category formerly used the NAICS code of 517110. As of 2017 the U.S. Census Bureau definition show the NAICS code as 517311. See, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table No. EC1251SSSZ5, Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 NAICS Code 517110 https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5//naics~517110.

²⁰² *Id.*

receipts of less than \$25 million.²⁰⁶ Consequently, under this size standard a majority of firms in this industry firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

51. In this Notice, the Commission seeks comment on a proposed Connected Care Pilot program with a \$100 million budget and three-year duration, that would provide support for eligible low-income patients to receive discounts on residential broadband service for purposes of connected care.

52. To participate in the Pilot program, we propose that health care providers satisfy the definition of an eligible health care provider under section 254(h)(7)(B) of the Act and submit an application by the application deadline that we ultimately adopt for the Pilot program.²⁰⁷ The Notice proposes specific information that health care providers would be required to submit in an application for each pilot project proposal, including, but not limited to, information on the participating health care provider(s), description of the project and how it would further the goals of the Pilot program, estimated project budget, patient populations and the geographic areas to be served and health conditions to be treated.²⁰⁸ The Notice also proposes that the applications be made publicly available.²⁰⁹

53. The Notice proposes requirements for participating health care providers to select service providers for the supported services and other potential Pilot-program supported items, including the possibility of requiring health care providers to competitively bid the supported services.²¹⁰ In addition, the Notice proposes requiring health care providers for participating projects to submit funding requests and invoices for services and other items that are eligible for support through the Pilot program, and reports at regular intervals that would allow the Commission to monitor the status of each project and how each project is using the funding and seeks comment on the appropriate interval and contents of those reports.²¹¹ Participating service providers may also have requirements related to requesting disbursements. The Notice also proposes that participating health care providers and service providers be subject to random compliance audits, and a three or five-year document retention period.²¹²

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

54. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements

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²⁰³ See U.S. Census Bureau, 2017 NAICS Definitions, NAICS Code “517919 All Other Telecommunications”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517919&search=2017+NAICS+Search&search=2017>.

²⁰⁴ 13 CFR § 121.201; NAICS Code 517919.

²⁰⁵ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ4, Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012, NAICS code 517919, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ4/naics~517919.

²⁰⁶ *Id.*

²⁰⁷ See Notice, *supra*, sections III(A), III(B).

²⁰⁸ See Notice, *supra*, section III(B).

²⁰⁹ See *id.*

²¹⁰ See Notice, *supra*, section III(C).

²¹¹ See Notice, *supra*, section III(C).

²¹² See Notice, *supra*, section III(C).

or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”²¹³

55. We do not expect the requirements for the Pilot program to have a significant economic impact on eligible service providers or eligible health care providers because service providers and health care providers have a choice of participating. We also do not expect small entities to be disproportionately impacted. The Bureau will consider whether the proposed projects will promote entrepreneurs and other small businesses in the provision and ownership of telecommunications and information services, consistent with section 257 of the Communications Act, including those that may be socially and economically disadvantaged businesses. All eligible health care providers that choose to participate may be required to collect and submit data at regular intervals during the Pilot program and at the end of the Pilot program to USAC and the Commission, as described in section III(E) of the Notice. The collection of this information is necessary to evaluate the impact of the Pilot program, including whether the Pilot program achieves its goals. The benefits of collecting this information outweigh any costs.

56. The Notice proposes an application process that would encourage a wide variety of eligible health care providers and eligible service providers to participate, including small entities.²¹⁴ We seek to strike a balance between requiring applicants to submit enough information that would allow us to select high-quality, cost-effective projects that would best further the goals of the Pilot program, but also minimizing the administrative burdens on entities that seek to apply.

57. We propose awarding additional points during the application process for projects that are located in a rural area, would primarily serve rural patients or veterans, would serve five or more Medically Underserved Areas and Healthcare Provider Shortage Areas, as designated by the Health Resources and Services Administration by geography, or are located on Tribal lands, associated with a Tribe, or part of the Indian Health Service.²¹⁵ This recognizes the disparities in health care in rural areas and Tribal areas, and areas that are designated as Medically Underserved Areas and Healthcare Provider Shortage Areas and is aimed at increasing the likelihood projects serving these areas will be selected.

58. The reporting requirements, compliance audit requirements, and document retention requirements we propose are tailored to ensure that Pilot program funding is used for its intended purposes and so that we can obtain meaningful data to evaluate the Pilot program and inform our policy decisions. The proposed compliance audit and document retention requirements we propose are the same measures that apply to health care providers and service providers that participate in the Healthcare Connect Fund program. The proposed reporting requirements are tailored to ensure that we receive regular, meaningful data about each project. We find that ensuring that participating health care providers and service providers, including small entities, are accountable in the use of Pilot program funds and that participating health care providers submit regular, meaningful information about their projects outweighs the burdens associated with these requirements.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

59. None.

²¹³ 5 U.S.C. §§ 603(c)(1)-(c)(4).

²¹⁴ See Notice, *supra*, section III(B).

²¹⁵ See Notice, *supra*, section III(B).

**STATEMENT OF
CHAIRMAN AJIT PAI**

Re: *Promoting Telehealth for Low-Income Consumers*, WC Docket No. 18-213, Notice of Proposed Rulemaking

There are many ways to pitch the benefits of broadband. But I'm hard-pressed to think of one more powerful than telemedicine. Getting and staying healthier through the use of an Internet connection resonates among all demographic groups and geographic regions—particularly rural America, where access to quality health care can be a challenge. As former Chairman Newt Minow and I wrote last year, “[r]ecent advances in communications technology could enable millions of Americans to live healthier, longer lives. . . . [We need] forward-thinking policies on telemedicine . . . [that] bring[] our health care system more fully into the digital age.”²¹⁶

Today, the FCC continues to deliver on that vision. We propose a three-year, \$100 million Connected Care Pilot program within the Universal Service Fund to help connect patients—especially veterans and low-income families—directly with their doctors using broadband technologies. If adopted, this pilot program could provide health care providers with funding needed to purchase the communications services that will support their connected care efforts and provide valuable data as we consider future policy initiatives.

These efforts are sorely needed. Americans spend \$3,000,000,000,000 on health care every year. And that doesn't even include the collateral costs that go well beyond just paying the bill. If you live in a rural area, seeing a specialist can mean missing work, driving several hours—each way—and finding a local hotel if returning home the same day isn't feasible. Even worse, some patients may choose to forego necessary medical treatments just to avoid these additional costs.

That's where connected care comes in. Telehealth lets doctors remotely monitor and treat many conditions, especially chronic ones like diabetes, opioid dependency, high-risk pregnancies, heart disease, and cancer, without all the back-and-forth travel. By supporting health care providers' investments in telehealth, the Connected Care Pilot program could extend the patient–doctor relationship beyond the hospital and help bridge both the digital and health care divides.

I've seen the promise of these kinds of services across the country, from Department of Veterans Affairs clinics in Florida and Rhode Island to private health care facilities in Delaware and Colorado. And perhaps most memorably, I visited and shared a stage with former Atlanta Hawks star and NBA Hall of Famer Dominique Wilkins, who described how a wireless device helps him monitor his health and lets him know immediately if a diabetes-related condition needs to be addressed. If it can work for the Human Highlight Film, it can work for everyone.

The future of health care is connected care. And this is a future I want the FCC to support. The \$100 million budget we've proposed for the Connected Care Pilot program is a smart investment. It will deliver a lot of value to American consumers and won't divert resources from existing USF programs. And I believe it will better inform our understanding of how telemedicine can be used, save costs, and improve health outcomes.

I'd like to extend my gratitude to Commissioner Carr for taking the lead on this important initiative and to the staff that worked hard on this item: from the Wireline Competition Bureau, Allison Baker, Rashann Duvall, Lauren Garry, Jodie Griffin, Trent Harkrader, Kris Monteith, Nicholas Page, Ryan Palmer, Joseph Schlingbaum, and Niki Wasserman; from the Office of Economics and Analytics, Octavian Carare, Giulia McHenry, Eric Ralph, Emily Talaga, and Tracy Waldon; from the Office of

²¹⁶ Newton N. Minow and Ajit Pai, “In rural America, digital divide slows a vital path for telemedicine,” *Boston Globe* (May 21, 2018), <https://www.bostonglobe.com/opinion/2018/05/20/rural-america-digital-divide-slows-vital-path-for-telemedicine/t8n4ncsfFcUASdf7XLH38J/story.html>.

General Counsel, Malena Barzilai, Ashley Boizelle, Tom Johnson, Rick Mallen, and Linda Oliver; from the Office of Managing Director, Thomas Buckley, Mark Stephens, and Cara Voth; from the Office of Communications Business Opportunities, Maura McGowan and Sanford Williams; from the Consumer and Governmental Affairs Bureau, Matthew Duchesne, Barbara Esbin, and Sayuri Rajapakse; and from the Enforcement Bureau, Rizwan Chowdhry, Pamela Gallant, Jeffrey Gee, Kalun Lee, and Keith Morgan.

**STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY**

Re: *Promoting Telehealth for Low-Income Consumers*, WC Docket No. 18-213, Notice of Proposed Rulemaking

This item continues the process of asking important questions related to the establishment of a Connected Care pilot program, and Commissioner Carr deserves credit for his dedication in pursuing this initiative.

Nonetheless, as we take further steps in establishing this program, we need to be mindful of several principles that I previously outlined at the NOI stage, and will not reiterate here. Further, it does seem important to acknowledge the use of general USF funding to pay for the pilot. This NPRM does not propose to include the pilot within any one of the four USF programs or to fund it under their budgets. However, \$100 million in funding must come from somewhere, and that source is USF ratepayers, who will inevitably see their contributions burden rise as a result.

I appreciate Commissioner Carr's hard work on this item and look forward to more in-depth discussions about the points I previously raised and creation of the pilot in the context of the larger USF.

**STATEMENT OF
COMMISSIONER BRENDAN CARR**

Re: *Promoting Telehealth for Low-Income Consumers*, WC Docket No. 18-213, Notice of Proposed Rulemaking

I recently met Cathleen in Laurel Fork, Virginia, a town of about a 1,000 people that's nestled in the Blue Ridge Mountains in southwest Virginia. Laurel Fork—and the other rural communities in Carroll County—face a distinct set of health care challenges. Diabetes rates are about one third higher than the national average. And managing chronic conditions there is complicated by several factors. Income levels are about one third below the national average. The closest hospital is in another state. And the U.S. Department of Health and Human Services (HHS) has classified Laurel Fork as a health care provider shortage area for mental health and primary care services. Indeed, there's just one mental health provider available in the county per 2,700 people.

Cathleen told me that she struggled for years with uncontrolled diabetes. She was diagnosed five years ago and receiving treatment meant a two-hour, round trip drive to see a doctor. Finding transportation and getting to the clinic wasn't easy, so, like many others dealing with chronic conditions, Cathleen stopped going in for treatment for a few years. When she went back to the doctor, her A1C levels—the blood glucose levels used to indicate diabetes—had skyrocketed to 15.5. Levels that high are considered critical and are commonly followed by strokes and heart attacks.

So Cathleen's doctor signed her up for an innovative program that's run out of the community health center in Laurel Fork. That program uses telehealth and remote patient monitoring to treat diabetes. Thanks to these connected care technologies, patients like Cathleen don't go home from the clinic empty-handed. She's given an Internet-connected home monitor, which allows endocrinologists at the clinic to remotely monitor her blood glucose levels daily, as well as her diet and physical activity. The data can be uploaded straight from Cathleen's device at her home and analyzed in the cloud. The results can then be accessed by a team in Laurel Fork or by specialists at the University of Virginia through a secure connection.

Cathleen says that the program has worked wonders for her and has helped keep her treatment on track. She follows the tips and advice that her doctors send directly to her tablet about what to eat and when to exercise. Following the six-month program, her A1C levels fell to 7.5. She has more energy, and she says she can even run after her three grandkids, of whom she has custody—something that she would not have been able to do with chronic uncontrolled diabetes.

Cathleen's story is not unique. Dr. Santen, who oversees the program, reported that remote patient monitoring lowered patients' A1C levels by 2.2 points on average, which reduced their risk of heart, kidney, and eye problems by more than 50 percent.

And, on a recent trip to West Virginia with Senator Capito, I had the chance to visit the Charleston Area Medical Center. There, Dr. Kadikoy showed us how remote ophthalmology services are being used in rural communities to help diagnose diabetes. We also met with psychiatrists and pain management specialists who are now using telehealth and virtual visits to address opioid dependency. These online sessions are providing rural West Virginia communities with access to life changing care that might not otherwise be available.

Examples like these are part of a new trend in telehealth—a trend towards connected care everywhere. Inside many hospitals and clinics across the country, patients can now access connected and cutting-edge telehealth services. The FCC, through its Rural Health Care Program, has long supported the deployment of broadband to these facilities. But technology that's limited to the confines of a brick-and-mortar hospital does little to help communities or patients that are long miles and many hours away from those facilities.

More and more, remote technologies—whether enabled by a smartphone, tablet, or other device—are bringing high-quality, affordable care to communities across the country. The potential benefits of connected care are significant. In communities across the country, I've seen firsthand how telehealth is improving patient health outcomes. For example, a study of 20 remote patient monitoring trials found a 20 percent reduction in all-cause mortalities and a 15 percent reduction in heart failure-related hospitalizations. The Veterans Health Administration's remote patient monitoring program resulted in a 25 percent reduction in days of inpatient care and a 19 percent reduction in hospital admission. Another remote patient monitoring initiative showed a 46 percent reduction in ER visits, a 53 percent reduction in hospital admissions, and a 25 percent shorter length of in-patient stay.

And the relatively limited trials to date are showing significant cost savings. A remote patient monitoring program run by the Veterans Health Administration, for example, cost \$1,600 per patient compared to the \$13,000 it costs for more traditional care. Another telehealth project in the northeastern U.S. found that every dollar spent on remote monitoring resulted in a \$3.30 return in savings. And a diabetes trial conducted by the University of Mississippi Medical Center resulted in nearly \$700,000 in annual savings due to reductions in hospital readmissions alone. Assuming just 20 percent of Mississippi's diabetic population enrolled in this program, Medicaid savings in the state would be \$189 million per year.

Given the significant cost savings and improved patient outcomes associated with connected care, we should align public policy in support of this movement in telehealth. It's the healthcare equivalent of moving from Blockbuster to Netflix. At the FCC, we can play a constructive role by helping to fund the connectivity needed to ensure that all communities get a fair shot at benefiting from new telehealth technologies. So I am glad to be leading the FCC's efforts to do just that through the Connected Care Pilot Program.

The Pilot would target funding for projects that benefit low-income patients, including those living in rural communities and veterans. We are proposing to allow eligible health care providers to obtain up to 85 percent of the costs of the broadband needed to provide remote patient monitoring and similar connected care technologies to their patients. The program would support a limited number of projects over a three-year period with controls in place to measure and verify the benefits, costs, and savings associated with connected care. This will help extend treatment beyond the four walls of the hospital and enable more patients to receive high-quality medical care wherever they are.

This vote builds on comments we received from the public after we first sought feedback on standing up this type of program last year. And there are a few more steps to go before we start accepting applications. But I want to invite all health care providers and the public to review the Notice and provide your feedback.

To be sure, the Pilot Program won't solve every challenge—there are licensing and reimbursement issues that are beyond our expertise. But we are coordinating with the Department of HHS, the VA, state and local entities, and private providers. And I hope that the Connected Care Pilot Program will help us obtain data that will allow policymakers to chip away at some of the broader set of barriers to telemedicine adoption.

From chronic disease management to pediatric cardiology, from PTSD to opioid dependency, this pilot has the potential to make a real difference for low-income individuals that currently lack access to quality health care. So I look forward to continuing to work with my colleagues at the FCC and all stakeholders as we work to stand up this program.

Finally, I want to thank the Wireline Competition Bureau for their work, especially Allison Baker, Rashann Duvall, Lauren Garry, Jodie Griffin, Trent Harkrader, Nicholas Page, Ryan Palmer, Joseph Schlingbaum, and Niki Wasserman, as well as the Office of General Counsel and the Office of Economics and Analytics for their significant contributions on the Notice we are voting on today.

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Promoting Telehealth for Low-Income Consumers*, WC Docket No. 18-213, Notice of Proposed Rulemaking

There is a maternal mortality crisis in the United States. We are the only industrialized nation with an increasing rate of death from pregnancy-related complications. The United States is now the most dangerous place to give birth in the developed world. According to the Centers for Disease Control and Prevention, this trend hits women of color especially hard. Women in rural areas also face challenges, now that more than half of rural counties no longer have a hospital with a maternity ward.

A few weeks ago I visited Arkansas. So picture the northeast corner of the state. It's the area known as the Upper Delta. It has a proud history. It was where Johnny Cash spent his childhood and Ernest Hemingway penned *A Farewell to Arms* in a barn. Its fields are known the world over for the rice they produce. But this region is also on the bleeding edge of an ugly trend—increasing maternal mortality.

In Arkansas I met a team of healthcare professionals from the University of Arkansas for Medical Sciences. They decided that in the Upper Delta it was time to do something about pregnancy-related deaths.

They described a patient in the region. She was diagnosed with preeclampsia, a hypertensive disorder that is a leading cause of maternal mortality. To manage this disorder, monitoring is key. But this patient lives in a rural area. In fact, she had to drive several hours just to give birth in a specialty hospital. There was no way she could make the same drive on a daily basis during the weeks after delivery.

So this team at the medical center got creative. They sent her home with a blood pressure cuff, a scale to monitor her weight, and a pulse oximeter to measure the levels of oxygen in her blood. She was told to connect all of these devices to a wireless gateway and to transmit daily readings to the medical center.

This was great—except for one critical detail. This patient had no wireless service at home. So every day, after performing these rituals, she climbed in her truck, drove to the top of a hill a mile away, and sent the data along.

I can't stop thinking about that story. Because we have broadband problems in this country and they can prevent us from solving healthcare problems.

Today, we start a rulemaking to develop a pilot program that will expand the kind of connected care that can make a meaningful difference to patients in rural communities, urban communities, and everything in between. This effort may not be able to solve all our connectivity problems, but I hope they put us on a course to do good. I also hope we make addressing maternal mortality front and center in this effort. We have a crisis in this country and when this pilot project is done I want this agency's efforts to make a meaningful difference. I want us to say with clarity what can be done with connected care to improve outcomes and at what cost. So as we proceed I believe this agency needs to adopt clear goals for this pilot program, informed not just by those familiar with proceedings at the Federal Communications Commission, but by those on the cutting edge of connected care.

I met those people in Arkansas. I met a similar team in Minnesota at the Mayo Clinic and health professionals in Washington state at Harborview Medical Center exploring the outer frontier of connected care. Every one of them is devoted to providing healthcare in hard places and healing the hard cases. I know this is not easy because I saw it at home growing up. My father served in the Air Force as a physician. After he left the service for civilian life, he practiced medicine. For three decades, he ran a low-income city clinic for hypertension and kidney failure. It is vital work securing reliable care for those least likely to afford it.

So I support today's rulemaking. But I want to offer a bit of caution. As we move ahead, I want this pilot project to reach far and wide. When this agency developed its first rural health care pilot project more than a decade ago, we funded projects in over forty states and in multiple territories. I think we should do one better with this effort and fund projects in every state and territory across the country.

**STATEMENT OF
COMMISSIONER GEOFFREY STARKS**

Re: *Promoting Telehealth for Low-Income Consumers*, WC Docket No. 18-213, Notice of Proposed Rulemaking

In today's world of sophisticated hospitals with advanced medical technology, each with hundreds of health care professionals, and waiting rooms brimming with patients, it's easy to forget that for much of medical history, when you talked about a "Doctor's Visit," it was the doctor that was doing the visiting. Once upon a time, physicians would travel by foot, car, and even horseback to treat patients who were too sick or hurt to make the journey themselves. Well into the twentieth century, "House Calls" were commonplace, as was the image of the friendly family physician, smiling and carrying a trademark black leather bag.

Since then, healthcare has evolved in dramatic ways. Technology has advanced, doctors have specialized, and the quality of care has increased. But gaining access to the benefits of quality health care still depends, as it always has, on connecting doctors with patients. For many Americans, in-person visits just aren't possible, either because they live too far away, because their chronic health conditions make it difficult for them to leave the home, or because there just aren't enough doctors to go around. The Health Resources & Services Administration reports that 76 million Americans live in an area with a shortage of primary care providers, and 112 million live in areas with a shortage of mental health providers.

Fortunately, broadband is bringing back the "House Call." In a new way. Thanks to connected care technology, doctors and mental health professionals have the ability to provide care and treatment in the home through video visits and remote monitoring. This is a game changer. Rural Americans no longer have to take a full day off of work to make the long drive to their doctor and back. Mental health providers can check in more regularly with patients. Folks with conditions that make it hard for them to leave the house no longer have to. And patients who require frequent monitoring and check-ins, such as those with opioid addiction, pregnant women, and those with heart disease and other chronic illnesses can stay in touch with health care providers as often as they need to while continuing to live their lives to the fullest.

Connected Care has the potential to revolutionize health care, and today's NPRM recognizes the fact that we at the FCC have to do our part. Up until now, our focus has been on connecting health care providers to the Internet and to each other, and while this remains a top priority, today we take steps toward supporting connections directly between health care providers and patients.

I've seen first-hand the potential for connections between health care providers and patients to make a world of difference, particularly when it comes to mental health. The need is real. I learned that the US is facing a critical shortage of child psychiatrists, with only about 8,600 struggling to do the work it would take 30,000 to accomplish. This shortage has a direct and substantial impact in North Carolina, a large state with predominantly rural areas and a defined "severe shortage" of child psychiatrists. I recently visited with Duke University's Integrated Pediatric Mental Health group, and they are leading on this issue with an innovative program connecting health care providers in six rural counties in North Carolina with child psychiatrists.

Through Child Psychiatry Access Programs like the one at Duke, providers working with child patients are able to call and be connected with a child psychiatrist who can provide care and advice over the phone. This was the case with one family who noticed their five-year old was exhibiting unfamiliar behavior. They took their child to their local, rural doctor who suggested the child could be on the autism spectrum. Through the Duke program, the family was able to call a child psychiatrist for a second, more specialized opinion, but unfortunately had to drive over four hours round-trip to an urban hospital in Durham to receive a full diagnosis.

Through the pilot program this NPRM proposes, programs like this Child Psychiatry Access Program could upgrade from phone calls to broadband connections, allowing children in need of timely

mental health care to receive diagnoses and follow up treatment they need, which for patients with chronic conditions will involve numerous visits, all without having to travel long distances each way. The proposed Connected Care pilot program has the potential not only to help families receive care for children, but also to help child psychiatrists see and interact with patients in the home to provide better, more personalized care.

Stories like this one highlight the difference that the proposed Connected Care program can make, particularly for those suffering from mental health conditions. For this reason, I am pleased that my colleagues agreed with my suggestion to include mental health among the list of health conditions that will be the primary focus of the proposed pilot program, and in other places where specific health conditions are identified in the NPRM.

A lot of things have changed since the early days of House Calls, but one thing that hasn't is the need for personal care and attention. This item takes important steps toward having broadband bring back the House Call, and in so doing making health care more accessible to millions of Americans in need. I'm proud that FCC is taking steps to encourage connected care, and I'm excited to see the results of the Pilot Program participants. I support this item.

I thank Commissioner Carr for his willingness to work with me on this item and I thank the Wireline Competition Bureau for their work preparing it – it has my support.