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Chairman Wicker, Ranking Member Schatz, and Members of the Committee, thank you for the opportunity to appear before you today. I am Michael Adcock, Executive Director for the Center for Telehealth at the University of Mississippi Medical Center (UMMC) in Jackson, Mississippi. I am honored to talk to you this morning about telehealth and the ways that its power can be harnessed to address healthcare needs across America.

Mississippi has significant healthcare challenges, leading the nation in heart disease, obesity, cardiovascular disease and diabetes. These and other chronic conditions require consistent, quality care - a task that is made harder by the rural nature of our state. In order to improve access to care and give Mississippians a better quality of life, it is clear that we need something more than traditional, clinic and hospital-based services.

Telehealth has been a part of the healthcare landscape in Mississippi for over 14 years, beginning with an aggressive program to address mortality in rural emergency departments. In 2003, three rural sites were chosen to participate in a program that would allow UMMC board certified emergency medicine physicians to interact with and care for patients in small, rural emergency rooms via a live, audio-video connection. The TelEmergency program has grown to serve more than 20 hospitals and continues to produce outcomes on par with that of our Level 1 trauma center.

Today, the UMMC Center for Telehealth delivers more than 30 medical specialties in over 200 sites across the state including rural clinics, schools, prisons and corporations. The depth and breadth of this network allows us to deliver world-class care in 68 of our state's 82 counties and provide access for patients who might otherwise go untreated. Over the last decade, we have conducted over 500,000 patient encounters through telehealth. Maximizing our utilization of healthcare resources through the use of technology is the only way we can reach all of the Mississippians who need lifesaving health care. These world class services would not be available in local communities and homes without broadband connectivity.

One program that has been very impactful for our patients is remote patient monitoring (RPM), which manages chronic disease in a patient's home. RPM is designed to educate, engage and empower patients so that they can learn to take care of themselves. Our initial pilot with diabetics in the Mississippi Delta was a public/private partnership between critical access hospital North Sunflower Medical Center, telecommunications provider C Spire, technology partner Care Innovations, the Mississippi Division of Medicaid, Office of the Governor of Mississippi and UMMC. The purpose of the pilot

was to test the effectiveness of remote patient monitoring using technology in a rural, underserved area. The results of the study showed a marked decrease in blood glucose, early recognition of diabetes-related eye disease, reduced travel to see specialists and no diabetes-related hospitalizations or emergency room visits among our patients. This pilot demonstrated a savings of over $300,000 in the first 100 patients over six months. The Mississippi Division of Medicaid extrapolated this data to show potential savings of over $180 million per year if 20 percent of the diabetics on Mississippi Medicaid participated in this program. The benefits were not only financial and health related. Many of the patients who participated in this program did not have internet connectivity in their homes and some had never accessed the internet. This program opened up a whole new world to them and has sparked their interest in staying connected.

The pilot demonstrated how educating patients about their disease and empowering them to care for themselves is extremely beneficial and is best done in their home. Bringing this technology into the home requires access to reliable broadband coverage. Initially, wired broadband in the home was thought to be the easiest way to provide the connectivity needed, but because only one third of Mississippians have access to residential fixed broadband, this is not always a reliable option. To provide the most reliable connectivity, we partnered with C Spire, a regional telecommunications company, to connect to our patients via mobile broadband. This worked during the pilot program and continues to be our go to solution for connecting patients to the resources they need for remote patient monitoring. However, as telehealth grows and additional services are available in the home, a more reliable, fixed solution will be necessary.

Given the success of the pilot, UMMC Center for Telehealth has expanded remote patient monitoring to include adult and pediatric diabetes, congestive heart failure, hypertension, bone marrow transplant and kidney transplant patients. Working closely with a patient's primary care provider, we continue to grow this program both in terms of volume and number of diseases that can be managed. It gives patients the knowledge and tools they need to improve their health and manage their chronic disease.

While our Center continues to find ways to connect patients to the care they need, too many Americans still lack access to broadband, particularly the 23 million Americans living in rural areas. Ten percent of all Americans (34 million people) and 39 percent of rural Americans lack access to 25 Mbps/3 Mbps service. FCC data shows that as many as one in three households do not subscribe to Internet service. In Mississippi the digital divide is even more pronounced. In our state, only 34% of Mississippians have access to residential fixed broadband connections, with only three counties showing greater than 60% residential broadband access.

Mississippi spans 48,000 square miles, two thirds of our counties are more than a 40 minute drive from specialty care. When people live that far from specialty care, at best, care is delayed. At worst, care is never received. Telehealth allows us to deliver care in areas where it would not normally be available. In order to deliver care in an efficient manner across our state, expansion of reliable and available broadband is essential. The Center for Telehealth has worked closely with local and national telecommunications

providers to expand bandwidth in sites across Mississippi. These partnerships, along with investment from the FCC's Universal Service Fund program, have made broadband more available and affordable in many regions. We were honored to have FCC Commissioner Clyburn in our state multiple times to see firsthand the importance of broadband access to improving health outcomes throughout Mississippi.

More can and should be done. Legislation authored by Chairman Wicker would improve the validity and reliability of wireless coverage and expand broadband to rural areas and communities that are truly in need. S. 1621, the Rural Wireless Act, will help close the digital divide experienced by many, especially in rural and remote geographic areas, where disease burden is greatest.

We also support S. 1988, the Streamlining Permitting to Enable Efficient Deployment of Broadband Infrastructure Act of 2017 (SPEED Act). This bill will eliminate delays that often raise costs and slow the deployment of broadband to rural areas. It will also fast-track the deployment of next generation broadband that is critical to advancing innovative technologies in telemedicine.

The benefits of telehealth are not available to patients without access to high speed internet across America. As technology and healthcare services expand to meet patients where they live, broadband coverage must improve to make this care accessible.

Thank you for taking the time to focus on how access to broadband in rural areas can help to close the digital divide, bring health care resources to remote communities and create a connectedness that transcends location. Without broadband, health care cannot operate outside of America's hospitals and clinics and cannot harness the power of technology to better treat our patients.

Thank you for inviting me to testify today and for your time and attention to this very important matter.