SMART Policy Network

POLICY BRIEF

March 2021

Substance Misuse and Addiction Resource for Tennessee Policy Network (SMART)

Better Broadband for Better Health

KEY POINTS

- Broadband access is increasingly seen as a "super-determinant" of health, affecting not only healthcare delivery but educational and employment opportunities. Furthermore, investing in broadband infrastructure has been directly linked to rapid economic growth.
- When it comes to the treatment of substance use disorder (SUD), telehealth directly addresses the most common access barriers faced by rural patients. This is a crucial strategy for reducing healthcare spending, as every $1 spent on evidence-based treatment for SUD saves $12 in healthcare and criminal justice costs. However, telehealth is not being utilized in rural areas as much as it could be, due to a lack of broadband internet access and affordability.
- Approximately 500,000 Tennesseans – mostly in rural areas – lack access to broadband, and it is estimated that 61 of the 95 counties in Tennessee need to improve their broadband infrastructure in order to provide sufficient speeds to handle telehealth services. At least 160,000 homes in these underserved areas are **not** currently eligible for federal funding.
- The Tennessee Broadband Accessibility Act of 2017 established a grant program to streamline the development of broadband infrastructure in these underserved areas, but funding is still short of estimated need. For fiscal year 2021, Governor Bill Lee has proposed increasing the state's broadband development budget from $15 million to $200 million. This funding would significantly kickstart the development of broadband infrastructure across the state, especially in rural areas.

Broadband internet is defined by the Federal Communications Commission (FCC) as download speeds of **25 megabytes per second (Mbps)** or more and **upload speeds of 3 Mbps or more**, which can be annotated as "25/3" service. 10/1 service, a category pertaining to federal funding that will be discussed below, thus refers to download speeds of 10 Mbps and upload speeds of 1 Mbps.

Expanding Telehealth Improves Health and Saves Money

Telehealth is the fastest growing method of healthcare delivery in the United States, and its usage has increased even faster due to expanded regulatory permissions in response to the COVID-19 pandemic. Telehealth improves access to care by:

- eliminating physical distance as a barrier
- addresses the rural provider shortage (for both primary and specialty care)
- and is associated with better healthcare outcomes
- high patient satisfaction, and
- lower healthcare costs
  - » A 2008 study found that telehealth was associated with a 19% reduction in hospital admission rates and a 25% reduction in admission duration, leading to savings of **$1,600 per patient per year**.
  - » A study of nursing home patients found that use of telehealth significantly reduced hospitalization rates and resulted in net savings to Medicare of **$151,000 per nursing home per year**.
  - » Telehealth is also associated with better medication adherence and lower admission rates and overall lower healthcare costs for VA patients.
  - » Excess rates of diabetes, hypertension, and cardiovascular disease cost Tennessee over $5 billion in 2015, and these rates are expected to rise through 2030. Treating these conditions requires access to primary care, which about 1 in 5 Tennesseans lack. Expanding broadband would increase usage of telehealth in rural areas, improving access to primary care and further reducing healthcare costs.

In 1954, President Eisenhower announced he would cancel a planned decrease to the gas tax so that $225 million could be added to the budget for the federal highway program. 35 years and almost $468 billion (in 2011 dollars) later, Eisenhower's dream of a "mighty network of highways" was completed, facilitating $15 trillion worth of freight. **Investing in broadband in the 21st century is equivalent to building our national interstate highway infrastructure in the 20th.** It is vital to the future strength of the economy, creates jobs, and brings significant benefit to rural communities.

Barriers to Broadband Expansion

Expanding broadband access in rural areas is difficult. Geographic barriers such as hills and valleys interfere with signal strength and make it more expensive to lay and maintain cable. Furthermore, with fewer potential customers per mile of cable and less than 40% of rural Tennesseans voicing a willingness to pay for a subscription (due to high costs and unreliable signal strength), internet service providers (ISPs) have expressed concerns over low return on investment (ROI) for expanding broadband to underserved areas.

Demand for broadband is nevertheless high. A recent study of rural Tennesseans (with the average yearly full time income of $25,000) were willing to travel up to 20 miles to a library to use the broadband connection for research, work and educational purposes and to help children with schoolwork, demonstrating a desire for faster internet speeds. The only limiting factor is that there is not currently sufficient internet infrastructure for households at this income level to justify subscribing at current market prices (about $60/month) for the quality of services available in these areas at this time, even though the demand for 25/3 service is high.

Efforts to Improve Broadband Access

The FCC's Connect America Fund provides federal grant money to improve broadband infrastructure in underserved areas by awarding it to areas where ISPs are capable of providing at least 10/1 Mbps service. However, due to a lack of local ISPs with this capability in numerous areas, the Tennessee Advisory Commission on Intergovernmental Relations (TACIR) found that about 160,000 homes were not eligible for these funds. TACIR concluded that it could cost between $125 and $799 million to establish broadband access for these underserved communities that do not qualify for federal funding.

That same year, the Tennessee Broadband Accessibility Act passed, establishing a partnership with the State Library and Archives to provide grant money to areas that successfully apply to be certified as "broadband ready communities." This bill also streamlines the application process and permits electric cooperatives to provide internet service, as opposed to an ISP acting alone. These cooperatives are eligible for grant money that can reduce up to half the cost to ISPs for laying the "final mile" of cable (the most expensive and difficult aspect to broadband infrastructure development). This significantly alleviates concerns over low ROI.

The program has had a strong start – $45 million in grants were raised in the first three years of this program – but this is still far short of the need estimated by TACIR. In 2020, Governor Lee awarded $61 million to multiple broadband providers, using money administered from the federal government in response to the COVID-19 pandemic. For the 2021-2022 state budget, Governor Lee has proposed a non-recurring increase to broadband development from $15 million to $200 million. "Whether it's running a small business, accessing virtual learning or accessing health care via telemedicine, slow internet speeds have many in rural Tennessee left at a disadvantage," he said in his third state of the State address, identifying key social determinants of health affected by broadband accessibility. "A significant, one-time investment, combined with significant private investment, will get broadband to just about every community in Tennessee, and tonight, that's exactly what I'm proposing."

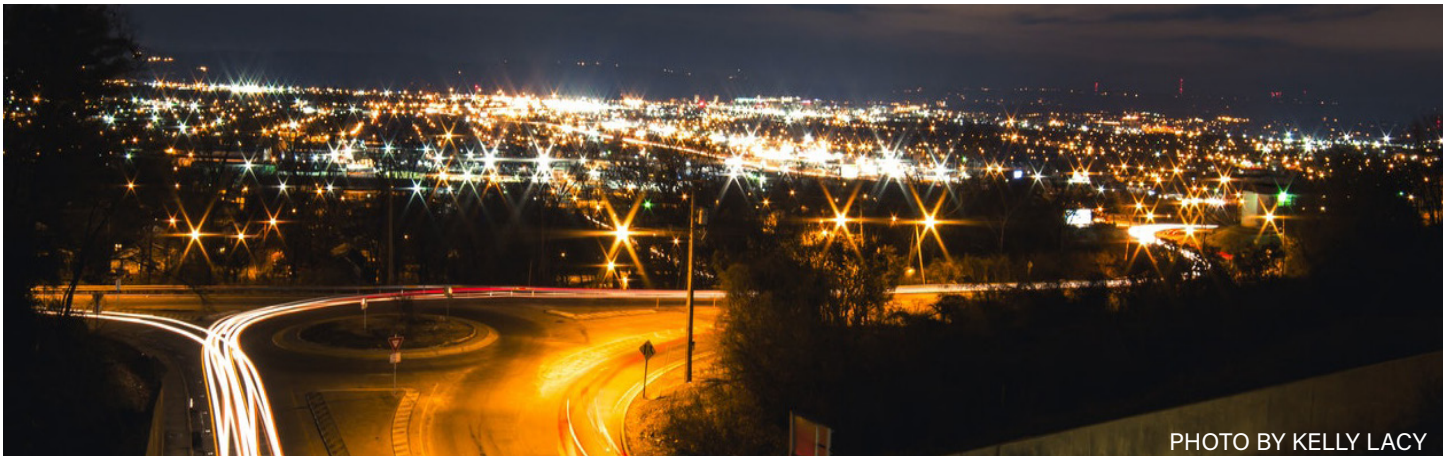

PHOTO BY KELLY LACY

The Success of Hamilton County

Chattanooga became the first city in the United States to provide public broadband internet to all of its residents in 2010. With a loan of $169 million and a $111 million grant from the federal government, Chattanooga's Electronic Power Board (EPB) laid the necessary fiber optic infrastructure. In order to "break even" on the investment, EPB would need 42,000 internet subscribers. By 2016, they had 83,000. An independent study by UT found that between 2011-2015 the broadband infrastructure was directly responsible for approximately $1 billion of economic growth, including the creation of up to 5,200 new jobs, with returns far outstripping investments at a faster rate than expected. It has also improved competition, with Comcast and Telecom now offering faster speeds and better prices across Hamilton county. While not every community needs a public fiber optic network as the means to create broadband infrastructure, it is clear that investing in that infrastructure leads to significant economic returns and subsequent growth.

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