



COVID-19 RESPONSE

BROADBAND ACCESS ACROSS OKLAHOMA DURING COVID-19

Learn about the importance of broadband connectivity in our society during the pandemic.

The COVID-19 pandemic has highlighted the importance of broadband connectivity in our society. K-12 and college students have transitioned to online learning, many professionals have shifted to teleworking arrangements, and applying for unemployment or small business assistance programs typically requires filing documents via the internet. Individuals and households lacking an internet connection are even more cut off from friends and family during social distancing. A survey of Oklahoma school districts in the early stages of the pandemic found that 167,000 out of 700,000 students (24%) lacked an internet connection at home. Being disconnected – regardless of the reason – has never been a bigger disadvantage.

Even before COVID-19 arrived, the Oklahoma broadband situation was relatively poor. A 2018 report ranked Oklahoma 47th out of 50 states in terms of average speeds and percent of residents connected. The most recent official data from the Federal Communications Commission (FCC) shows that nationally, 94% of people have access to the official “broadband” threshold speed of 25 Megabits per second (Mbps) download and 3 Mbps upload. In Oklahoma, that number stands at 79%. More strikingly, only 48% of our rural residents have access to a broadband connection, which is significantly lower than the 74% at the national level (Figure 1).

Figure 2 demonstrates more than 75% of the population lacks broadband access in some Oklahoma counties.

BROADBAND ADOPTION BY HOUSEHOLDS

The above discussion focuses on the availability of broadband internet access – where providers have chosen to offer consumers the option to connect at high speeds.

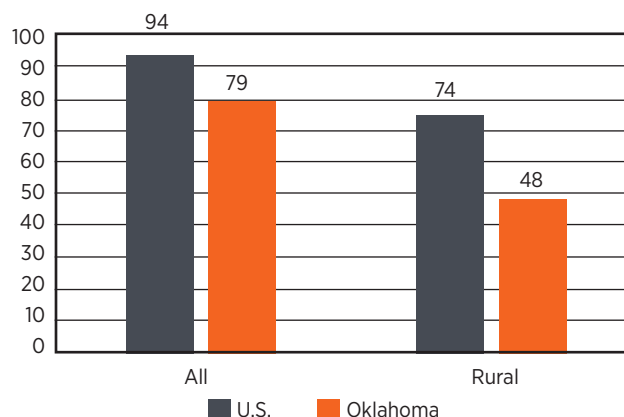


Figure 1: Broadband availability rates for U.S. and Oklahoma (2017).

Source: FCC 2018 Broadband Deployment Report

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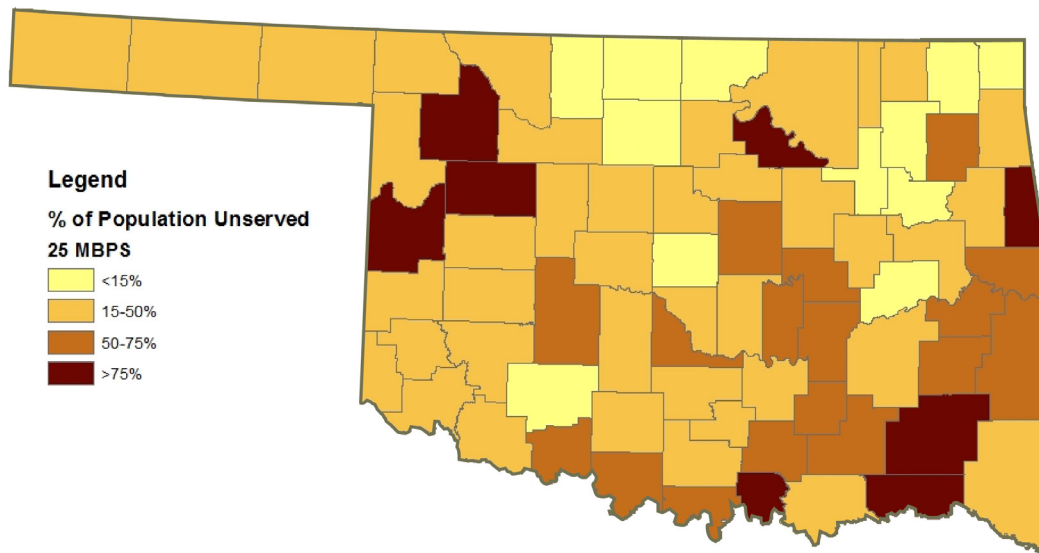


Figure 2: Broadband availability by county in Oklahoma (2017).

Source: FCC Form 477, December 2017

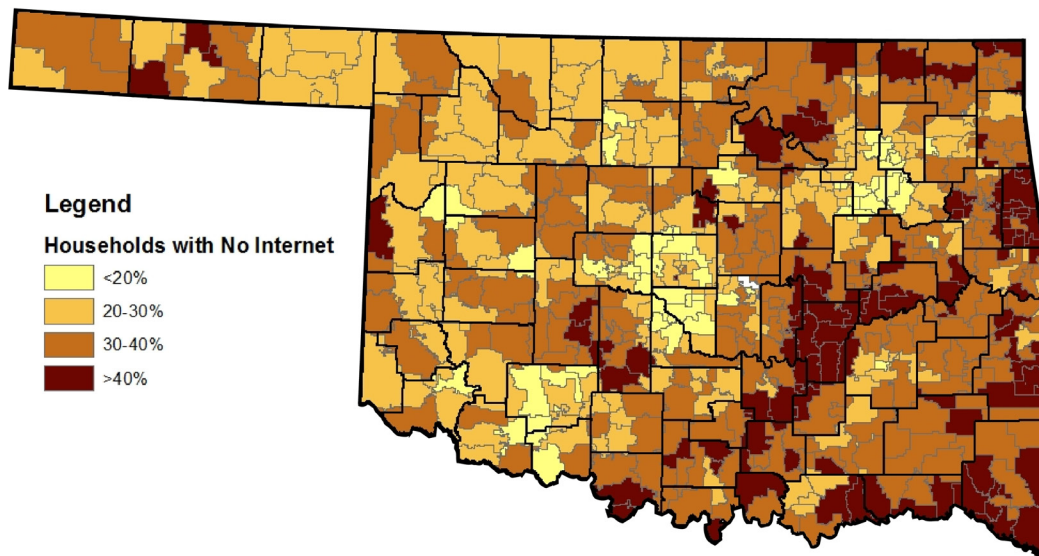


Figure 3: Percentage of Oklahoma households with no internet, by school district.

Source: U.S. Census ACS 2014-18 Table S2801

A separate aspect is the adoption of internet access – one that is heavily influenced by the cost of that service and a household’s individual economic situation. Recent Census data indicates more than 40% of Oklahoma households making less than \$20,000 per year have no internet connection. This number shrinks to 6% for households earning more than \$75,000 per year. Figure 3 shows school district data on the percentage of households without any type of internet access. There are clearly some regional dis-

crepancies, with the more urban areas surrounding Tulsa, Oklahoma City and Lawton having fewer households that lack a connection. Alternatively, many school districts in the southeastern part of the state have more than 40% of their households without an internet connection. Some districts attempted to overcome this problem by distributing mobile hotspots or paper-based school assignments to households lacking internet; nonetheless, the transition away from traditional school was likely much more difficult

for students in these households. OSU has partnered with more than 15 rural libraries to loan out mobile hotspots for households lacking a connection; you can find more information at <http://agecon.okstate.edu/hotspot/>.

TELEWORK/DIGITAL VULNERABILITY

The COVID-19 pandemic also shed light on the importance of telework, which typically requires a broadband connection. Not all jobs or industries are conducive to remote work; for example, teleworking is not an option for most agriculture or leisure/hospitality employees, while the majority of finance employees could potentially work remotely. A recent analysis from Purdue's Center for Regional Development combined data on the connectivity situation in a county with its potential for remote work to develop a measure of digital vulnerability. Figure 4 shows Oklahoma counties span the full range of results: some have little digital vulnerability because they have relatively good broadband access and their dominant industries typically permit telework; others are highly vulnerable

due to their poor connectivity and industry composition in sectors where telework is not common.

The length of the current pandemic is unknown, and many individuals across the state will continue to work remotely even as businesses reopen. Broadband access has received a large amount of attention (and funding) during the federal response, including a funding boost to deploy rural broadband as part of USDA's Reconnect program; state grants to support the transition to online learning for K-12 and university students; and funding telehealth programs for rural health facilities. However, addressing areas with poor internet access will take time. "Digital inclusion" efforts to help households without an internet connection are gaining traction, and typically involve efforts from local schools, libraries and non-profits. The "new normal" in the wake of COVID-19 will likely include higher levels of awareness about the importance of broadband for all members of society, and policy makers should continue to seek ways to promote its availability and use across geographies and industries.

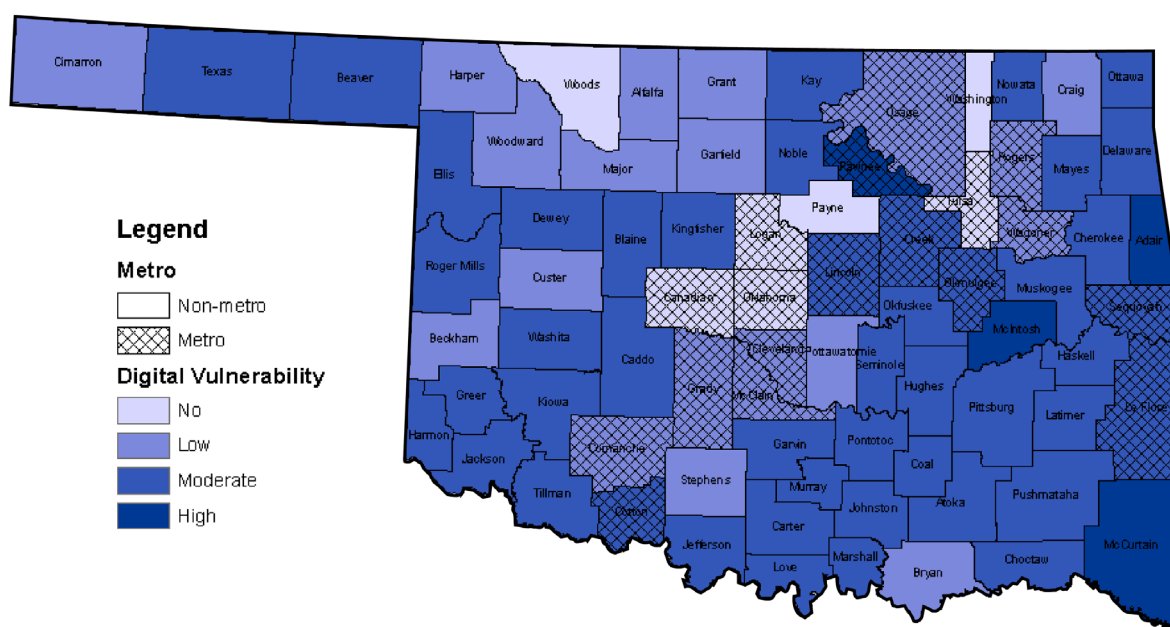


Figure 4: Digital Vulnerability (broadband access / adoption and potential for remote work).

Source: <https://pcrd.purdue.edu/blog/remote-work-and-the-coronavirus.php>