

# ADDRESSING DIGITAL CHALLENGES IN WEST VIRGINIA

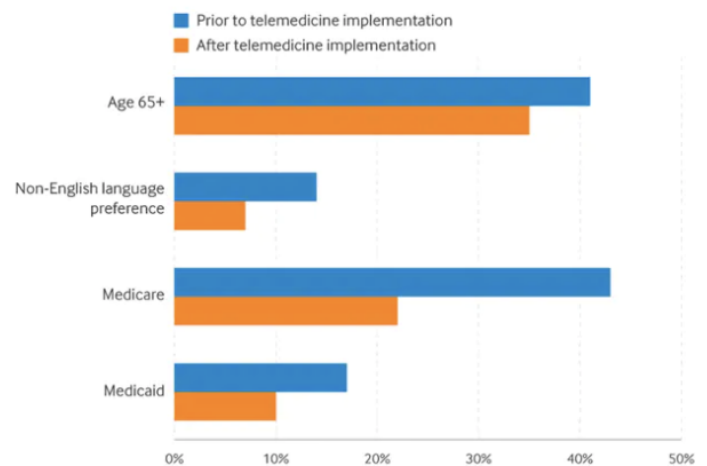
## DIGITAL STATUS IN THE USA IN GENERAL :

In general, effective digital connection decreases with age, income, education level and rural location.

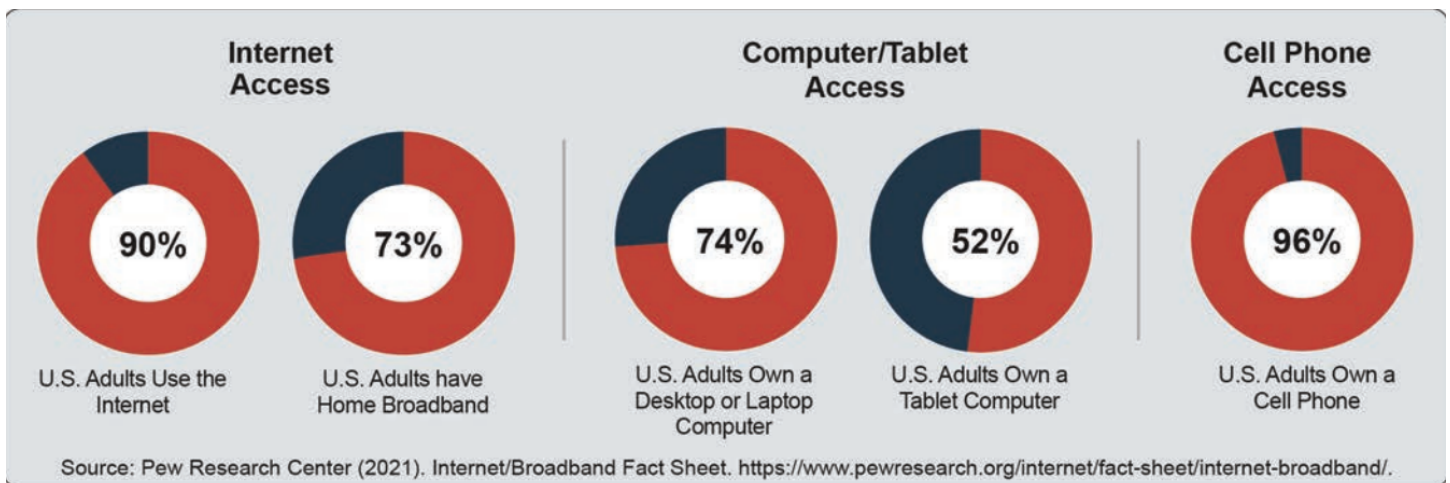
## Be Aware of Digital Divide

- Older adults<sup>[a]</sup>
  - Make up 18% of population
  - Only 55% own a smartphone or have broadband internet access
  - Only 60% able to find a website or send an email
- Poor and low income individuals<sup>[a]</sup>
  - 71% own a smartphone
  - 53% have basic digital literacy
- Rural
  - 63% have broadband<sup>[b]</sup>
  - 71% own smartphone<sup>[c]</sup>

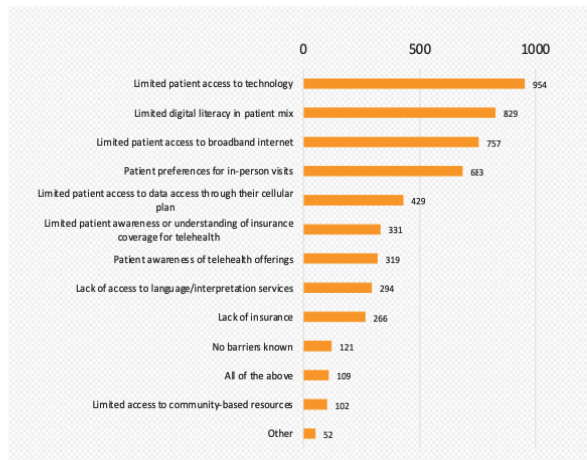
Patient Visits by Age, Language, and Insurance Before and After Telemedicine Scale-Up<sup>[a]</sup>



a. Nouri S, et al. *NEJM Catal Innov Care Deliv.* May 4, 2020; b. Pew Research Center. Demographics of Internet and Home Broadband Usage in the United States. 2019; c. Pew Research Center. Demographics of Mobile Device Ownership and Adoption in the United States. 2018.



## Physicians identify the digital divide as the biggest barrier to virtual care for patients



"Reduce the digital divide that impairs many patients' access to telehealth services."

"Many of my patients are not that well versed in technology and telehealth is a real big challenge for them."

"Advancing telehealth without providing patients with the appropriate technology or education to use it, leaves those patients behind and widens the gaps."

Which of the following, if any, do you perceive as barriers to your patients using telehealth? (select all that apply) N=1,531  
Is there any additional insight or thoughts you would like to share regarding the impact of telehealth on you, your practice, or your organization?

### From AMA 2021 Telehealth Survey Report:

<https://www.ama-assn.org/system/files/telehealth-survey-report.pdf>

### DIGITAL STATUS SPECIFIC TO WEST VIRGINIA

There are multiple issues limiting telehealth success in the State of West Virginia:

- Access to equitable broadband service
- Access to digital devices
- Digital literacy
- Financial resources to support digital interaction
- Digital divide is magnified in each of the above parameters by advanced age, economic status, education level and rural geographic location.

From the West Virginia Social Survey Report, **Internet Access in West Virginia:** Hudnall, Erin, Katie E. Corcoran, and Christopher P. Scheitle. 2020. "Internet Access in West Virginia." WVSS -20 -03. West Virginia Social Survey Reports. Survey Research Center at West Virginia University. Morgantown, West Virginia.

<https://survey.wvu.edu/files/d/2ecc6402-b338-46b5-9c06-2a881c72d1e8/internet-access-accessible.pdf>

#### Background:

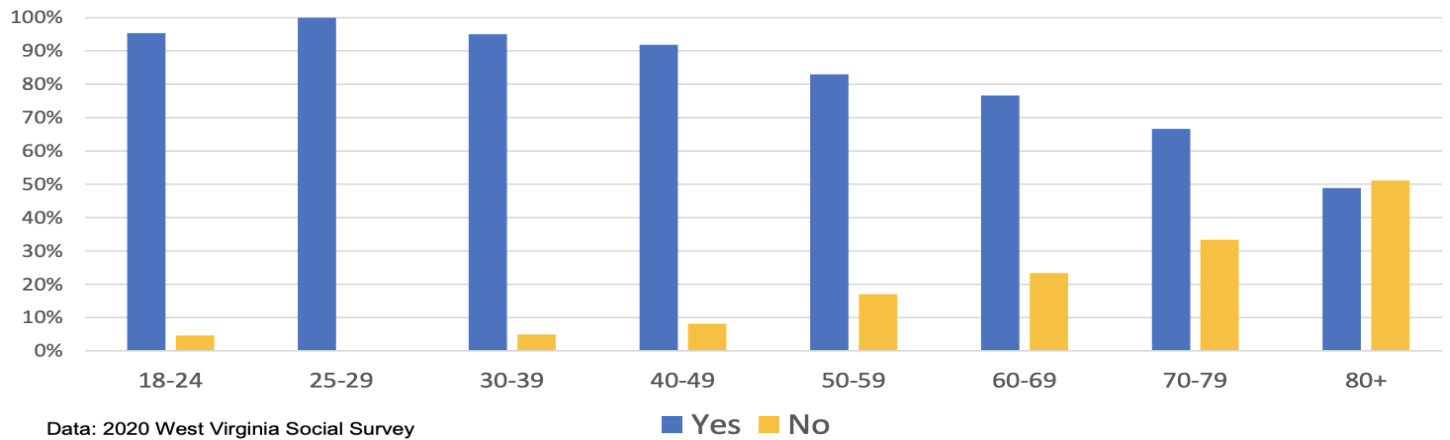
- In 2019, 56% of the world had internet access in their homes with North America being the highest at 94%.
- Correlation depends most on income and education level.
- NOTE: Race was not addressed in the study

#### Highlights:

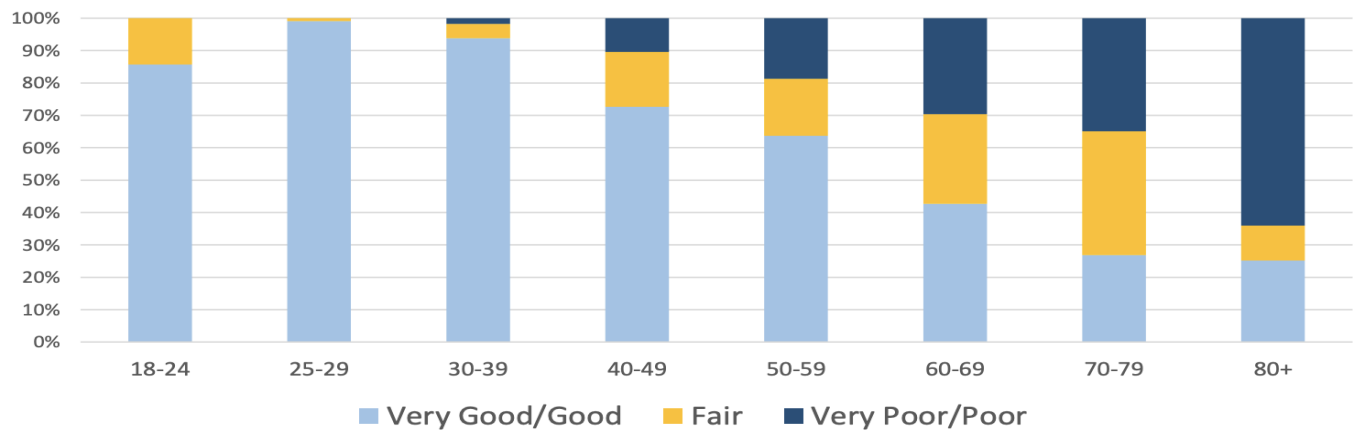
- 83% of West Virginians have access to the internet in their homes.
- Of those reporting that they do not have access to internet in their homes, 33% reported accessing the internet through an internet-enabled mobile device, like a smartphone or tablet.
- Access to the internet at home is most common among West Virginia residents who have high household incomes and education.
- Self-reported ratings of ability to use the internet are highest among residents with high incomes and education.

- Older residents report lower rates of access and ability to use the internet.

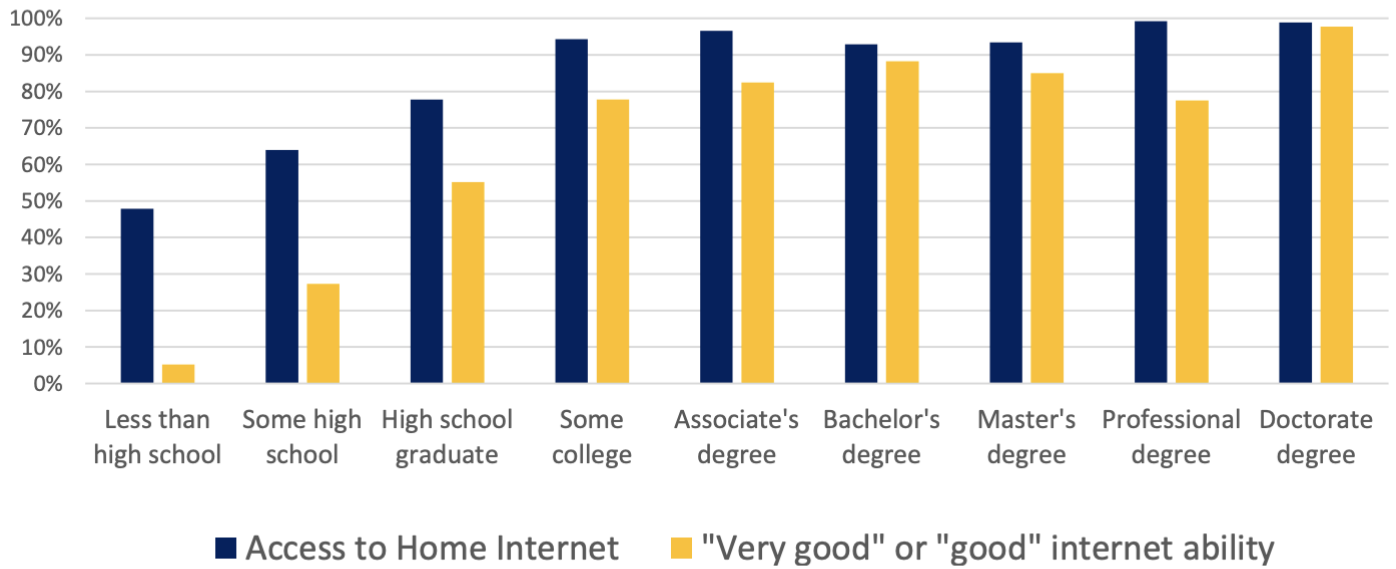
**Figure 1 - Access to the Internet at Home by Age in West Virginia**



**Figure 2 - Ability to Use the Internet by Age in West Virginia**

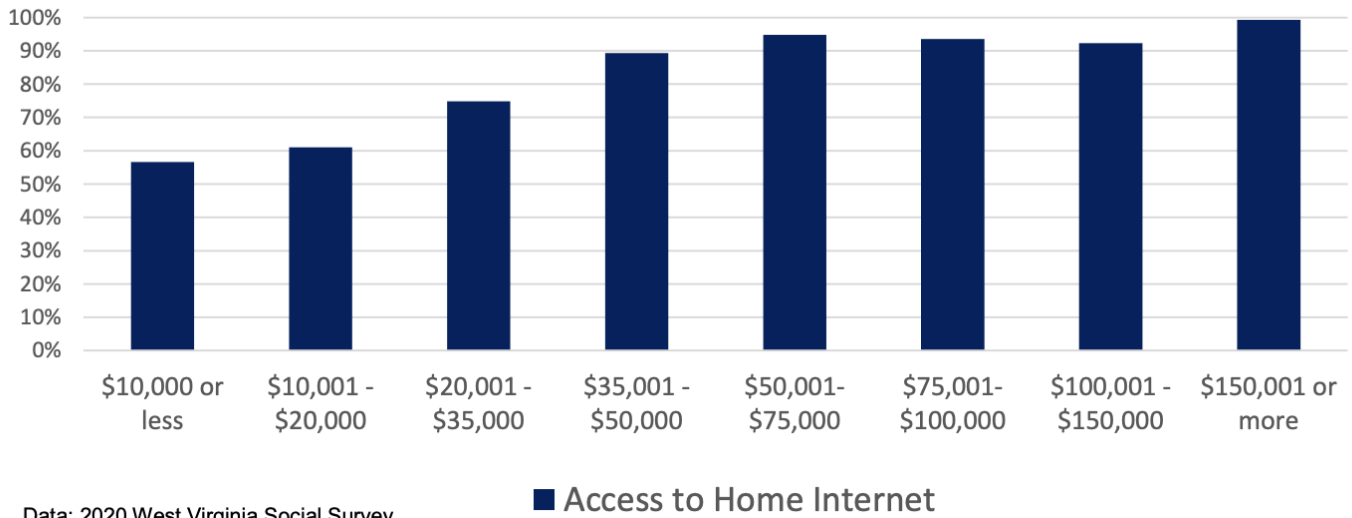


**Figure 3 - Access to the Internet at Home and Ability to Use the Internet by Education in West Virginia**



Data: 2020 West Virginia Social Survey

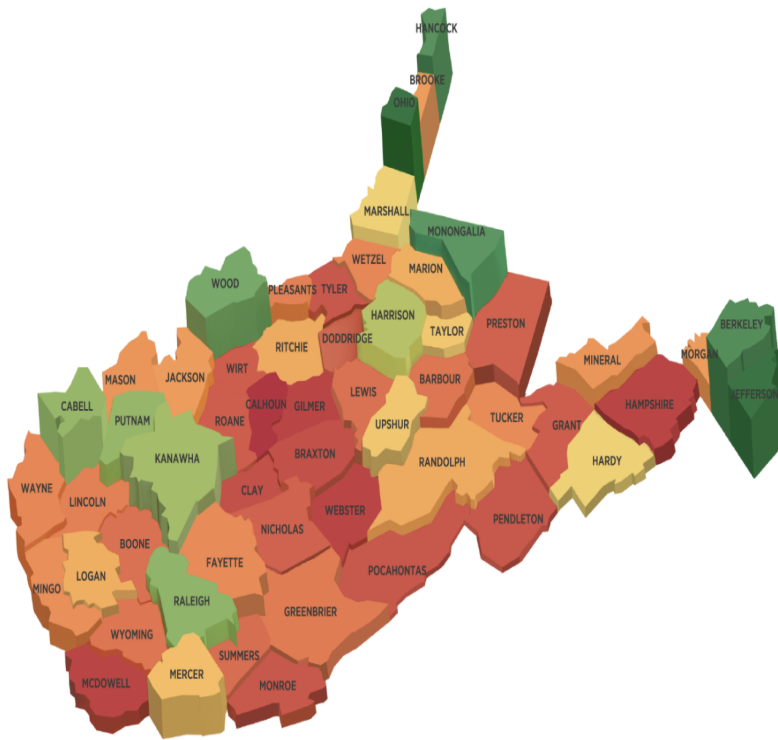
**Figure 4 - Access to Home Internet by Income in West Virginia**



Data: 2020 West Virginia Social Survey

**As of 2019:**

**West Virginia: Gap in broadband usage vs. population density**

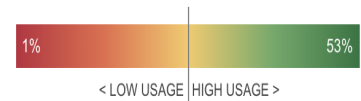


**Broadband Usage Gap**

RURAL		URBAN	
85%	0.62	62%	0.66
million people		million people	

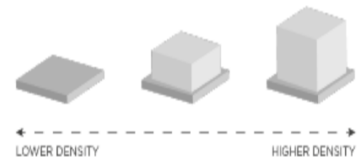
Number (or percentage) of people in urban or rural counties not using the Internet at broadband speeds, as of November 2019. Broadband speed as defined by the FCC is at least 25 Mbps/ 3 Mbps. Urban and rural gap is defined by people living in urban, mostly rural and completely rural counties as defined by the US census. (Source: Microsoft)

**Broadband Usage by County**



< LOW USAGE | HIGH USAGE >

**Population Density**



**PROGRAMS AVAILABLE TO MITIGATE ISSUES WITH BROADBAND AND DEVICE ACCESS:**

**LIFELINE:**

- **Description:** Federal Communications Commission Program started in 1985 as part of the Universal Service Fund. Provides a **discount on phone service for qualifying low-income consumers** and those on Tribal Lands.
- **Details: as of Dec 2021**
  - **1000 min of mobile voice,**
  - **Mobile broadband: Speed 3GB, Usage allowance 4.5GB,**
  - **Fixed broadband: 20/3mbps Usage allowance: 1024GB**
  - **Voice support per month: \$5.25**

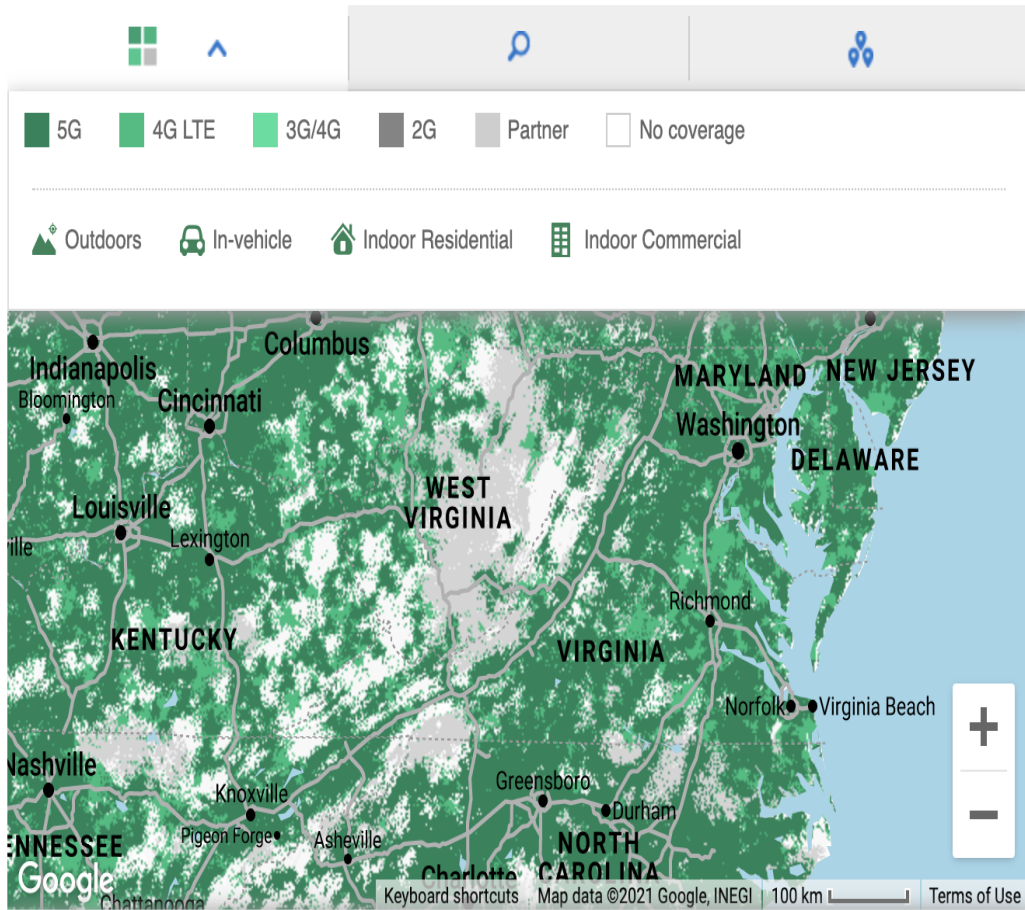
- o **Broadband support per month: \$9.25**
- **Eligibility: (any one of the following)**
  - o Income below 135% poverty level
  - o Supplemental Security Income (SSI)
  - o Supplemental Nutrition Assistance Program (SNAP) or Food Stamps
  - o Medicaid
  - o Federal Public Housing Assistance (FPHA)
  - o Bureau of Indian Affairs General Assistance
  - o Food Distribution Program on Indian Reservation (FDPIR)
  - o Head Start (must satisfy income qualifying standard)
  - o VA Veterans Pension (Supplemental Income for Wartime Veterans)
  - o VA Survivors Pension
- **How to apply:** <https://www.checklifeline.org/lifeline>

### **Emergency Broadband Benefit (EBB):**

**NOTE PROGRAM STARTED IN FEBRUARY 2021, NOW CLOSED AS OF DEC 31, 2021, TRANSITIONED TO ACP**

- **Description:** Program was initiated in February 2021 **during COVID PHE to improve access to devices and broadband.**
- **Scope:** \$3.2Billion in funding. Initially, EBB Program was to continue until funding is expended or until 6 months after the Public Health Emergency ends. Once the Infrastructure Bill was passed, it was decided that the EBB program would transition into the Affordable Connectivity Program (ACP) with no further enrollees after Dec 31, 2021. Those enrolled in the EBB program as of Dec 31, 2021, will continue to receive the EBB benefit until March 1, 2022 and then transition automatically to the ACP.
- **Program Provider:** Administered by Q link. EBB is a limited time program funded by US government COVID-19 relief effort to provide discounts on monthly broadband internet access service and certain connected devices.
- **How to Qualify:** Those who qualify must be enrolled in Medicaid, SNAP, SSI, Federal Public Housing Assistance, or Veterans and Survivors Pension Benefit Fund. Patients can also qualify according to income of less than 135% of poverty level.
- **Details:** Qualifying customers received a \$50 discount for unlimited data, talk and text using 4GLTE/5G network via Sprint/T-Mobile towers or partners and can connect to 10million free WIFI locations. They can bring their own phone/keep their number or obtain one new device per household. For discount on one device (phone or tablet), there is a co-pay of \$10.01 per household per month. If already using **Lifeline** program through another service, it must be switched to Q link with sign on.
- **Contacts:** Chat or call at 611 or 1 (855) 754 - 6543.
- **Caveats:** Be aware that cellular coverage in rural areas of WV is not guaranteed. If you live in an area where network coverage does not reach with at least a “good” or “better” standard, the system will let patient know before submitting application. Be sure to access the website to read all information before applying for this service. <https://qlinkwireless.com/lifeline/emergency-broadband-benefit.aspx>





[FAQS ▾](#)

[Map and Service Info](#)

**What factors affect coverage?**

**Tell me more about your coverage**

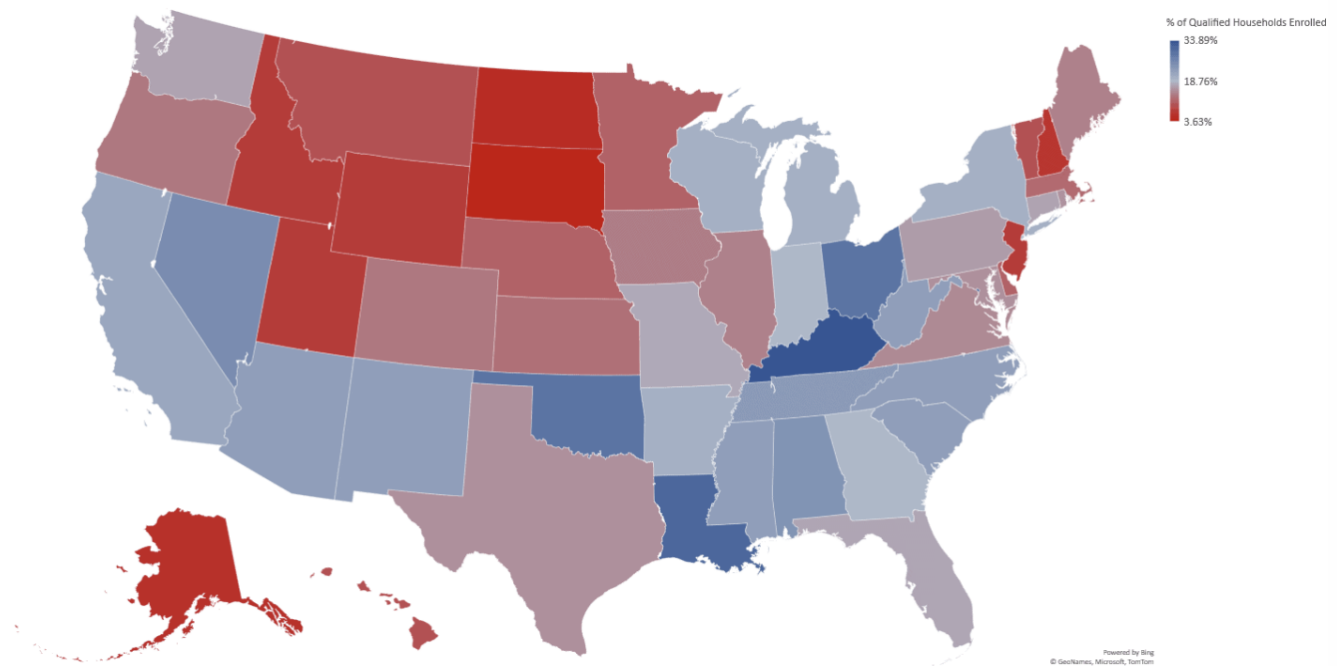
## DID WEST VIRGINIANS ACCESS THE EMERGENCY BROADBAND BENEFIT PROGRAM (EBB)?

- WV ranked 12<sup>th</sup> in % of qualifying households enrolled in EBB
- WV enrolled 22.66% of those qualifying households

From Broadband Now Report on the EBB:

<https://broadbandnow.com/internet/emergency-broadband-benefit-report>

The following map shows the percentage of qualified households in each state that are enrolled in the program:



**Affordable Connectivity Program (ACP)**, a Federal Communications Commission (FCC) Benefit Program:

**NOTE: THIS PROGRAM WILL REPLACE THE EMERGENCY BROADBAND BENEFIT PROGRAM GOING FORWARD AS OF JAN 1, 2022.** Information from <https://www.fcc.gov/acp>

Other references: <https://broadbandnow.com/report/affordable-connectivity-program/>

- **Description:** Program was established November 15, 2021, with the signing of the Infrastructure Investment and Jobs Act to **improve access to devices and broadband.**
- **Scope:** **\$14 Billion in funding.** Initially, EBB Program was to continue until funding is expended or until 6 months after the Public Health Emergency ends. Once the Infrastructure Bill was passed, it was decided that the EBB program would transition into the Affordable Connectivity Program (ACP) with no further enrollees in EBB after Dec 31, 2021. Those enrolled in the EBB program as of Dec 31, 2021, will continue to receive the EBB benefit until end of March 2022 and then transition automatically to the ACP which has no set end date as long as it continues to be funded.
- **Program Provider:** Enrollee can choose a participating broadband/device provider.
- **How to Qualify:** A household is eligible if a member of the household meets at least one of the criteria below:
  - Has an income that is at or below 200% of the [Federal Poverty Guidelines](#);
  - Participates in certain assistance programs, such as SNAP, Medicaid, Federal Public Housing Assistance, SSI, WIC, or [Lifeline](#);
  - Participates in one of several Tribal specific programs, such as Bureau of Indian Affairs General Assistance, Tribal Head Start (only households meeting the relevant income qualifying standard), Tribal TANF, or Food Distribution Program on Indian Reservations;
  - Is approved to receive benefits under the free and reduced-price school lunch program or the school breakfast program, including through the USDA Community Eligibility Provision;
  - Received a Federal Pell Grant during the current award year; or



- o Meets the eligibility criteria for a participating broadband provider's existing low-income program.
  - **Details:**
    - o Up to \$30/month discount for broadband service.
    - o Up to \$75/month discount for households on qualifying Tribal lands; and
    - o A one-time discount of up to \$100 for a laptop, desktop computer, or tablet purchased through a participating provider if the household contributes more than \$10 but less than \$50 toward the purchase price.
    - o The Affordable Connectivity Program is limited to one monthly service discount and one device discount per household.
  - **Contacts: Two-Steps to Enroll**
    - o Go to [ACPBenefit.org](https://www.acpbenefit.org) to apply or print out a mail-in application; and
    - o Contact your preferred participating provider to select a plan and have the discount applied to your bill.
    - o Some providers may have an alternative application that they will ask you to complete.
    - o Eligible households must **both apply for the program and contact a participating provider to select a service plan.**
    - o **Call 877-384-2575 or find more information about the Affordable Connectivity Program at [fcc.gov/ACP](https://www.fcc.gov/ACP)**
  - **Caveats: Be aware that cellular/internet coverage in rural areas of WV is not guaranteed.** If you live in an area where network/cellular coverage is spotty or poor bandwidth, be sure to compare different providers before making your choice. Refer to coverage maps at <https://broadbandnow.com/>
- 

## HOW CAN WEST VIRGINIA IMPROVE THE QUALITY AND REACH OF OUR BROADBAND?

From article in Government Technology **October 2021**:

<https://www.govtech.com/network/west-virginia-unveils-billion-dollar-broadband-strategy>

- FCC states 30% of WV businesses and residences do not have reliable broadband service in 2021.
- There are three main initiatives to develop Broadband in WV:
  - o **Rural Digital Opportunity Fund (RDOF):** Federal Communication Commission (FCC) program: WV currently has the highest rate of RDOF funding per capita in the USA.
    - FCC program to provide billions of dollars to improve rural broadband networks.
    - Budget: \$20.4 billion over 10 years to providers via auction process.
    - RDOF will be split into 2 phases:
      - PHASE 1: (Currently underway) \$16.1 Billion to census blocks **TOTALLY UNSERVED** by **EXISTING** broadband providers.
      - PHASE 2: \$4.1 billion to areas not completed in Phase 1 and census blocks currently **UNDERSERVED**.
  - o **West Virginia State Broadband Initiative (WVSBI):** Operated by Office of Broadband and Broadband Council and will use ARPA and state funding to increase broadband through four award programs:
    - **Line Extension Advancement and Development (LEAD)** which will dole out money to providers to expand fiber and cable networks;
    - **GigReady Initiative** which will match the money that local governments are putting into broadband projects;
    - **Major Broadband Project Strategies (MBPS)** which will aid more complex multicounty projects; and

- **Wireless Internet Networks (WIN)** which will focus on wireless solutions for areas where fiber isn't an option.
- o **Leveraging existing funding**

## ACCURATE MAPPING OF CURRENT BROADBAND STATUS IS AN IMPORTANT STARTING POINT

From Government Technology Article September 2021:

<https://www.govtech.com/network/with-broadband-grants-coming-west-virginia-maps-speeds>

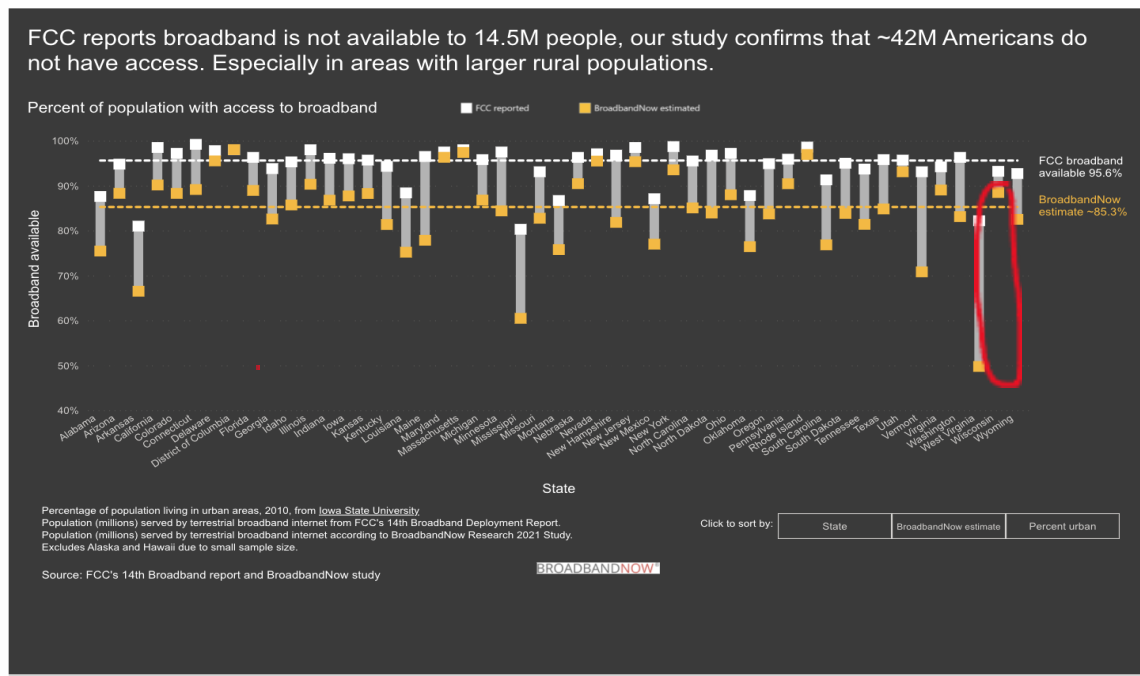
- WV is investing \$138 million in American Federal Rescue Plan funds to accurately map broadband access in West Virginia.
- FCC maps are known to be **inaccurate** due to use of self-reported data.

FROM the **BROADBAND NOW RESEARCH**: <https://broadbandnow.com/research/data>

- BroadbandNow Estimates Availability for all 50 States; Confirms that more than 42 million Americans Do Not Have Access to Broadband. Busby, John; Tanberk, Julia; Cooper, Tyler May 27, 2021.
- **Average false positive reporting rate of broadband coverage by FCC is 21% USA overall and 36% in WV** meaning that FCC report coverage where there is none. See Graphic below.

## Estimating Broadband Availability By State

BroadbandNow Research checked more than 1,000 addresses manually in each state, except for Alaska and Hawaii, which we have excluded. Below is a table showing the FCC's estimate of residents without broadband access, compared to BroadbandNow's estimate.



FROM Tanberk, J., Cooper, T., The State of Broadband in America, Q3 2021. Published 11/08/2021  
 Broadbandnow.com <https://broadbandnow.com/research/q3-broadband-report-2021>

- Definition: “Broadband Coverage” per FCC is 25/3 mbps download/upload. Broadband Now feels this should be at minimum 100/25 and feel upload speed should be symmetrical to download speed of at least 100mbps to allow sending of files across networks.

- Average USA price for “Affordable” broadband coverage is \$47.86/month (\$50.71 if looking at 10 top providers in the country)

FROM : <https://broadbandnow.com/West-Virginia>

BROADBANDNOW®

[Internet Providers](#)

[Resources](#)

[Our Research](#)

[About](#)

[Compare Plans](#)

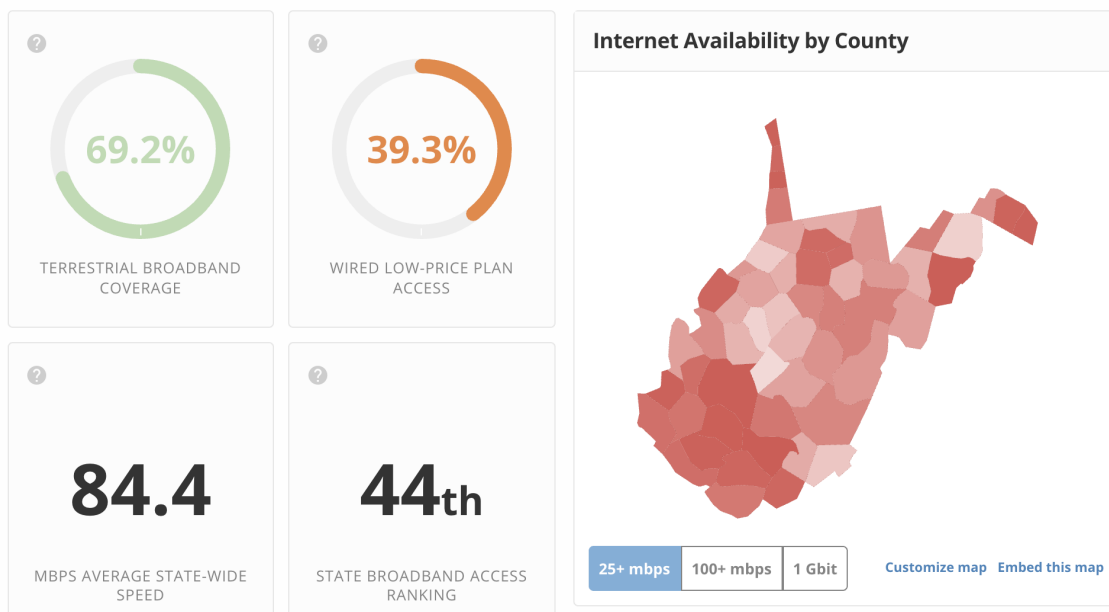
## Internet Service Providers in West Virginia

Enter a ZIP code to find and compare internet providers in West Virginia:

ie. 12345

Search

## West Virginia Internet Coverage and Availability



### High-Speed Internet Access

- 80.4%** of West Virginians have access to broadband 100mbps or faster.
- 59.2%** of West Virginians have access to 1 gigabit broadband.

### Wired Internet Access

- 95.5%** of West Virginians have access to wireline service
- 4.8%** of West Virginians have access to fiber-optic service
- 79.4%** of West Virginians have access to cable service
- 88.3%** of West Virginians have access to DSL service

Note **huge variations** of coverage county to county in WV: There is much work to do for equitable digital coverage in West Virginia. FROM Broadband Now as above.

Metro & Rural County Coverage	
County Name	% Broadband Coverage
Cabell	96.2%
Calhoun	27.3%
Clay	23.5%
Doddridge	48.9%
Fayette	83.1%
Gilmer	37.3%
Grant	47.9%
Greenbrier	73.7%
Hampshire	29.1%
Hancock	96.3%
Hardy	98.2%
Harrison	90.1%
Jackson	Lightshot Screenshot

**Bipartisan Infrastructure Deal: Infrastructure and Jobs Act (Signed into Federal Law Nov 6, 2021)**

*From White House Briefing Room Fact Sheet: The Bipartisan Infrastructure Deal Nov 6, 2021. Statements and Releases*

The ACT: Ensure every American has access to reliable high-speed internet. Broadband internet is necessary for Americans to do their jobs, to participate equally in school learning, health care, and to stay connected. Yet, by one definition, more than 30 million Americans live in areas where there is no broadband infrastructure that provides minimally acceptable speeds – a particular problem in rural communities throughout the country. And, according to the latest OECD data, among 35 countries studied, the United States has the second highest broadband costs. The Bipartisan Infrastructure Deal will deliver \$65 billion to help ensure that every American has access to reliable high-speed internet through a historic investment in broadband infrastructure deployment. The legislation will also help lower prices for internet service and help close the digital divide, so that more Americans can afford internet access.

Hopefully this bill will send some financial resources to WV to help with lack of connectivity noted by Broadband Now.

---

**IMPROVING DIGITAL LITERACY IN WEST VIRGINIA:**

## **West Virginia Legislature 18-2E-12 Mountain State Digital Literacy Project:**

<https://code.wvlegislature.gov/18-2E-12/>

Summary:

- Onset: School Year 2020-2021 Pilot Project
- Details: State Board determines number of schools eligible to participate with varying geographic and demographic characteristics grades K-8. Board may use a third party to support program.
- Reports: Due Jan 1, 2020: State Board to produce report on the development, structure, and fiscal estimate of the Mountain State Digital Literacy Project. Due Jan 1, 2025: State Board shall submit evaluation of the pilot project's impact on the performance and progress of the students at the participating schools. They will make recommendation for continuation, expansion, or termination.

## **RESOURCES FOR DIGITAL LEARNING FOR YOUR PATIENTS :**

General online, free resources to improve digital literacy:

<https://www.microsoft.com/en-us/digital-literacy> : used by schools, nonprofits, and governments

<https://cyberseniors.org/> : connects young, tech-savvy people with support and training for senior citizens, not only helping them to improve their digital skills, but also reducing social isolation.

<https://grow.google/applied-digital-skills/>: A free, flexible video-based curriculum that prepares students of all ages for the growing number of jobs that require basic digital skills.

## **DIRECT FROM YOUR PRACTICE:**

Consider producing a simple step by step video instructing patients on how to download the app required for your EHR portal, your hospital's EHR portal and how to access your telehealth program. Attach this video to your website and add it to your "Virtual Waiting Room" playlist.