



## US's digital divide 'is going to kill people' as Covid-19 exposes inequalities

Exclusive research shows drop in connectivity is impacting rural and urban areas with populations already underserved by the medical system or racked with poverty

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The Covid-19 crisis is exposing how the cracks in the US's creaking digital infrastructure are potentially putting lives at risk, exclusive research shows.

With most of the country on lockdown and millions relying on the internet for work, healthcare, education and shopping, research by M-Lab, an open source project which monitors global internet performance, showed that internet service slowed across the country after the lockdowns.

“This is going to kill people,” said Sascha Meinrath, co-founder of M-Lab.

In late March, most people in 62% of counties across the US did not have the government's minimum download speed for broadband internet, according to M-Lab.

Between February and mid March, when the pandemic was only just beginning to hit the US, there was a 10% increase in how many counties saw download speeds fall below the government standard, representing about one in 10 US counties, M-Lab found.

“Now that people’s livelihoods, schools and lives, are literally on the line, we can’t survive,” Meinrath said. “These communities that are underserved are not going to be able to transition to an online workplace or school environment.”

Internet service providers (ISPs) have said networks are performing well despite increases in traffic, but the M-Lab analyses of IP address connection speeds found those claims conceal what is happening at an individual level.

ISPs are failing to meet the US government’s standard for download speed, which impacts uses such as video streaming, for most of their customers, according to M-Lab. In 29.4% of counties, most customers are not getting the government-required upload speed.

The Federal Communications Commission (FCC) says 21 million Americans lack high-speed internet access but other studies have estimated the number at close to 42 million.

### **‘One report found 42 million Americans were without internet’**

Then, there is the wide swath of the country which has no internet at all.

The FCC said more than 21.3 million people don’t have any internet access, though many experts think this is an undercount because the FCC’s reporting system is flawed. Broadband Now, a company which helps people find ISPs, said in a February report the number is close to 42 million. Microsoft researchers have pinned the number without access at 163 million Americans.

To address that gap, students without access to internet have been forced to roam their home towns looking for open wifi networks. Facing a remote learning crisis, some school districts are paying for their students’ internet to make remote learning possible.

A school in Texas set up a stationary wifi hotspot in the parking lot of its football stadium where students can park and connect. In Prince George’s county, just east of Washington DC, the school district plans to distribute laptops to students who don’t have a computer at home and pay for internet for students who do not have it. Miami-Dade county public schools have distributed more than 82,000 laptops to students.

### **‘Bronx county, the poorest of New York’s boroughs, saw a sharp drop in broadband speeds’**

The internet is key to accessing information about the coronavirus. Human Rights Watch said that closing the digital divide was necessary to preserve human rights during the outbreak.

People seeking medical care are being told to avoid hospitals and doctors’ offices in favor of video or phone calls with their doctors. And while a delayed connection might be irritating in an office video conference, in a healthcare setting, it can lead to worse quality care. In May 2017, the American Medical Informatics Association (AMIA) urged the US government to recognize broadband access as a social determinant to health.

“The solutions we have to shelter in place, but carry on, it just doesn’t work,” said Meinrath.

After looking at the internet connection speeds for individual IP addresses, M-Lab found that more than 50% of customers in 325 US counties stopped getting internet download speeds that met the government definition of broadband between the final two weeks of February and the final two weeks of March.

The drop in connectivity is affecting both rural and urban areas with populations already underserved by the medical system or racked with poverty.

Bronx county in New York, the poorest of New York City's five boroughs, has witnessed a sharp drop in broadband speeds. More than 1.41 million people live in the Bronx, a 42.4 sq mile (110 sq km) area, and their median broadband speed dropped 10Mbps - megabits per second.

ISPs must also deliver a connection which has a minimum 3Mbps upload speed to meet the FCC standard for broadband.

In a household where students are being asked to teleconference their teachers while their parents dip in and out of work meetings on Zoom and other platforms, the upload speed needed is far beyond the 3Mbps minimum.

M-Lab found the number of counties which did not reach the government standard for upload speed increased by 4.4% between February and March.

Meinrath, a professor at Penn State University, experienced this firsthand when his internet "failed miserably" while he was on a teleconference, coincidentally, with network engineers about network capacity. He suspected it was because one of his children was probably teleconferencing with a teacher during his work call.

ISPs such as Comcast, Verizon and AT&T have noted an increase in traffic but said networks are performing well.

These companies are also among the 650 ISPs which have agreed not to terminate service for customers and businesses who are unable to pay their bills because of the economic cost of the coronavirus outbreak as part of the FCC's "Keep America Connected Pledge".

In Congress, the Democratic House speaker, Nancy Pelosi, included \$2bn for schools and libraries to help keep people connected in a draft version of an economic stimulus bill responding to coronavirus, but it was scrubbed out of the final legislation. Instead \$200m is being directed to telehealth initiatives and \$125m to distance learning.

### **'If you don't have internet access you're cut off from society'**

Gigi Sohn, a former senior staff member at the FCC, said this was far from enough money to meet the broadband needs of people during the coronavirus outbreak. "Congress didn't take it seriously," said Sohn.

People fighting to shrink the digital divide, like Sohn, are concerned the increase in internet use is hitting a nation that already had significant disparities in broadband access.

"It's a shame it's taken a pandemic for people to realize if you don't have internet access you're cut off from participation in society," said Sohn, a distinguished fellow at the Georgetown Law Institute for Technology Law and Policy.

Sohn, Meinrath and others have testified that the digital divide was exacerbating disparities in the US, but it's the coronavirus outbreak which has brought these concerns to the forefront.

“Now we have something where actually we have no choice but to rely on the connectivity we were told was there, but actually it isn't,” Meinrath said. “Now that's coming crashing down.”

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