



Number 9  
MARCH 2022

## Keeping Communities Connected

### Library Broadband Services During the COVID-19 Pandemic

PREPARED BY AMELIA BRYNE AND MARIJKE VISSER

#### Abstract

Libraries play a critical role in bridging the broadband connectivity gap. This role became even more apparent when the global COVID-19 pandemic forced work, school, and other daily tasks online. As the need for internet connectivity skyrocketed millions of Americans lost access as the institutions they relied on for connectivity, including library buildings, closed due to health concerns. This left a substantial gap in connectivity that needed to be addressed immediately. This paper examines how libraries rose to the challenge to provide internet access and technology to those who otherwise would lack such access. It documents both widespread practices and unique strategies employed by U.S. public libraries to keep Americans connected during this challenging time. It concludes that investments in library broadband, Wi-Fi, and related devices made during the pandemic not only helped to address immediate needs, but also lay the groundwork for economic recovery as the pandemic recedes.

## KEY TAKEAWAYS

- **Libraries nationwide have kept communities connected** during the COVID-19 pandemic by providing outdoor Wi-Fi, hotspot lending, and virtual and in-building resources and technology support. Federal aid has helped libraries to improve and expand these critical services.
- **Library staff responded quickly** to the unfolding public health crisis, leveraging their knowledge of local connectivity gaps and community needs to partner with community organizations, local governments, and businesses to offer broadband service.
- **Investments in library broadband capacity, Wi-Fi, and related devices and services made during the pandemic** helped not only to address immediate needs, but also to strengthen libraries to support post-pandemic economic recovery.
- **While emergency funding has been a needed boost, long-term investment in broadband is also needed** as the ability of libraries to provide connectivity is tied to the availability of broadband infrastructure and funding for digital inclusion programs.

## INTRODUCTION

America's libraries have long been a cornerstone for equitable access to information and broadband services. The country's nearly 17,000 public libraries offer no-fee internet access, Wi-Fi, and devices, such as computers and tablets. Many offer formal digital skills building classes, informal assistance with digital tasks, as well as hotspots and devices for loan—helping to connect underserved communities, bridge the digital divide, and empower people online. At the start of the COVID-19 pandemic a majority of libraries were temporarily forced to close their buildings to the public.<sup>1</sup> Acutely aware of their role in providing essential connectivity to jobseekers, students, parents, older Americans, veterans, small business owners, the homeless, and many more, the nation's libraries quickly pivoted to continue to offer public internet access and other services while adhering to public health guidelines. As it became clear that the pandemic would not be over soon, libraries again adjusted to offer relevant services over the longer term.

Thus, throughout 2020 and into 2021 libraries across the nation have mobilized their existing resources and community relationships to continue to provide—and to further extend—internet access. These library services have been a crucial source of support as the millions of Americans who rely on library resources made an unexpected transition to completing work, attending school, and conducting essential life tasks remotely. While the pandemic exacerbated significant connectivity gaps which still have yet to be adequately addressed, without efficient and comprehensive library intervention the digital disparities experienced during COVID-19 would likely have been much worse. This paper documents these actions by libraries.

### The Pandemic and the Digital Divide

Over the past several decades the internet has become deeply integrated in virtually all aspects of daily

life—from banking to job searching to homework. And yet, millions of Americans continue to lack adequate broadband access and digital skills. For some communities—particularly rural and remote areas, high-speed internet is simply not available. For others, the cost of a typical internet subscription is too great for a limited budget to bear. Even when connected, some lack the skills or devices to take advantage of the opportunities that broadband provides. According to the Federal Communications Commission (FCC), 14.5 million Americans do not have a high-speed fixed internet connection.<sup>2</sup> Others estimate this disconnect is even greater.<sup>3</sup> Regardless of the exact numbers, it is clear that connectivity varies geographically and by demographic group and that this has significant impacts on people's lives (see **Box 1**).



**The global COVID-19 pandemic forced additional work, school, and other daily tasks online, exacerbating already existing digital divides. The pandemic undercut the digital safety net provided by public libraries.**

life—

The pandemic exacerbated already existing digital divides. Simultaneously, the pandemic undercut the digital safety net provided by public libraries and others, such as schools and workplaces—many of which closed their doors due to public health concerns. The Pew Research Center finds that while only 77% of Americans have home broadband, 93% use the internet, indicating that a significant portion of the population gets online in other ways.<sup>4</sup> Within the course of days, or even hours, the institutions that millions of under-connected Americans rely upon suddenly became inaccessible. This left substantial gaps in connectivity which needed to be addressed immediately. Americans experienced many unexpected connectivity challenges. At the outset of the pandemic, for example, individuals lacking home internet had significant difficulties applying for unemployment benefits as these offices were often too overwhelmed to answer phone calls.<sup>5</sup> Those with mobile-only internet—most typically individuals with lower incomes, lower levels of education, and people of color<sup>6</sup>—also faced barriers as many states lacked mobile-enabled websites for unemployment claims filing.<sup>7</sup>

Overall, individuals, families, and communities have faced multiple digital challenges throughout the pandemic, many of which were a result of the pre-existing digital divide. These include:

- **Availability**—Is home broadband service available? According to the Federal Communications Commission, in urban areas 99% of Americans have access to high-speed fixed internet service (25Mbps/3Mbps). In rural areas, that number falls to 73.3%, while only 46.6% of rural Tribal communities have fixed broadband coverage.<sup>8</sup>
- **Adoption**—If internet service is available, are people taking advantage of it? As of 2021 Pew Research found that approximately three quarters (72%) of rural Americans have the internet at home. In comparison, 77% of urban households and 79% of suburban ones reported having home broadband.
- **Affordability**—Are broadband service and end-user devices (computers, tablets, etc.) affordable for the household in question? Some research suggests that the majority of households lacking home broadband are in urban and suburban areas, not rural ones—due primarily to affordability and not access issues.<sup>9</sup>

- **Usability**—Do people have adequate digital and technical skills to effectively use the internet and related devices?
- **Adequate bandwidth**—With additional devices and near-constant home internet use, is bandwidth sufficient to support required activities?<sup>10</sup>
- **Data caps**—Are there data caps on the household's broadband usage, and, if so, is the allotted data adequate to meet increased connectivity needs? Is additional data affordable?

## How Libraries Bridge the Connectivity Gap

Since the 1990s the country's nearly 17,000 public libraries have provided a digital safety net—ensuring that Americans without home internet connections or those who lack the necessary digital skills can get online. School and higher education libraries are also an important source of internet access and assistance for K–12, community college, and university students nationwide. Beyond basic access to digital infrastructure, libraries offer community members the opportunity to leverage these tools to explore their passions—offering coding programs for teens, start-up

### BOX 1. Digital disparities have very real impacts for both youth and adults

- **Young people lack adequate access:** A 2018 Pew Research Center study found that nearly one-in-five teens couldn't always finish their homework because of a lack of connectivity. The study also found that about one-third of households with school children (ages 6 to 17) whose annual income falls below \$30,000 a year lack a high-speed internet connection at home, versus just 6% of such households earning \$75,000 or more a year.<sup>11</sup> This so-called "homework gap" threatens to result in educational and opportunity gaps.<sup>12</sup> This divide, which impacts 16.9 million students,<sup>13</sup> became painfully clear during the pandemic when schooling moved online.<sup>14</sup>
- **People of color disproportionately face access barriers:** About eight-in-ten whites (82%) own a computer (desktop or laptop), compared with just 58% of blacks and 57% of Hispanics. There are also significant ethnic and racial differences in broadband adoption, with whites being more likely than either Hispanics or blacks to have a broadband connection at home.<sup>15</sup>

- **Veterans lack access in rural areas:** A lack of connectivity can impact access to health information and healthcare. According to the Veterans Health Administration's Office of Rural Health "there are 2.7 million Veterans enrolled in Veterans Affairs (VA) who are living in rural communities, 42% of them do not have internet access at home, which could support their use of VA telehealth services."<sup>16</sup>
- **Seniors lack connectivity despite increasing need for online services:** As of 2019, the Pew Research Center found that 27% of adults over 65 did not use the internet, and 41% did not use broadband at home—much lower connectivity and usage rates as compared to other age groups.<sup>17</sup> While this population has been perhaps the most in need of telehealth, grocery delivery, digital socializing, and other online services during the pandemic, older Americans face significant barriers to internet access and use.



incubators, makerspaces, and more. As a result, library staff are often deeply knowledgeable about local connectivity needs and digital skills gaps.

Libraries and librarians are also prepared when it comes to disaster response. Following the key role that libraries played in the Hurricane Katrina recovery the Federal Emergency Management Agency (FEMA) recognized libraries as essential community institutions for post-disaster restoration.<sup>18</sup> Libraries have aided their communities through other storms, fires, and slower moving but devastating health crises—such the opioid epidemic.<sup>19</sup> As librarian Amy Brunvand writes, “the reason libraries are so effective to re-ground and re-center communities in crisis is that they already serve a similar if less urgent role in more normal times, with goals for literacy, civic engagement and community resiliency, as well as collections that preserve community memory, identity, history and a sense of place.”<sup>20</sup> Many libraries have disaster plans created to support community resiliency during and after disasters, as well

as experience leveraging both their physical resources and information expertise during difficult times.<sup>21</sup>

The magnitude of the public health crisis and the high stakes of being left unconnected required the mobilization of federal, state, and local governments to address this pressing divide (see **Box 2**). These interventions leveraged actors from both the public and private sectors and highlight the importance of libraries in closing connectivity gaps.

## Library Broadband Services During the Pandemic

As the COVID-19 pandemic began to unfold, the country’s libraries—as in past crises—acted rapidly. While libraries responded to community needs in multiple ways, they specifically recognized the essential role they play in internet access and the highly important nature of online connectivity during this particular crisis. While facing their own organizational challenges and

### BOX 2. Federal government actions to address broadband gaps during COVID-19

**A**t the national level, funding, new legislation, and other initiatives helped increase connectivity—at least temporarily—during the pandemic. For example:

- In March 2020 the Federal Communications Commission (FCC) encouraged broadband and telephone service providers, as well as trade associations, to take the Keep Americans Connected Pledge. More than 800 companies and associations signed the pledge, committing to: refrain from terminating service to residential or small business customers because of their inability to pay their bills due to the disruptions caused by the pandemic; waive late fees due to economic circumstances related to the pandemic; and open their Wi-Fi hotspots to any American who needs them.
- The FCC also offered support to library and school E-Rate recipients,<sup>22</sup> “urged companies with low-income broadband programs to expand and improve them,” and “called on broadband providers to relax their data usage limits in appropriate circumstances and take steps to promote remote learning and telehealth.”<sup>23</sup>
- Additionally, Coronavirus Aid, Relief, and Economic Security (CARES) Act (March 2020) funding for internet connectivity initiatives was provided to institutions across the country.

The Institute of Museum and Library Services (IMLS) received \$50 million, a portion of which was awarded as grants to libraries.<sup>24</sup> Still, the approximately \$3.28 billion allocated towards improving broadband connectivity via the CARES Act overall (not library-specific) was far less than the estimated \$80-90 billion needed to substantially improve the nation’s digital infrastructure.<sup>25</sup>

- Later on, the federal relief package approved as part of the Consolidated Appropriations Bill of 2021 (December 2020), as well as the American Rescue Plan Act (March 2021), allocated further funds to support broadband connectivity via libraries, schools, and in rural areas as well as home broadband.<sup>26</sup> Specifically, the IMLS received an additional \$200 million in pandemic response funding to aid libraries,<sup>27</sup> while other funding allowed the FCC to establish a \$7.17 billion Emergency Connectivity Fund intended to “help schools and libraries provide the tools and services their communities need for remote learning during the COVID-19 emergency period.”<sup>28</sup>



uncertainties, libraries pivoted to make use of existing resources and relationships. Libraries immediately stepped up to offer safe connectivity options by: providing and/or procuring outdoor (“parking lot”) Wi-Fi; loaning hotspots and other devices such as tablets and laptops; offering virtual, curbside, and in-library support for the tasks that library users need to complete online; and engaging in connectivity-related partnerships with schools, non-profits, industry, and local government (See **Box 3** for a summary of the library connectivity approaches). Each of these library roles in the COVID-19 response is further documented below.

### Libraries provide Wi-Fi

Building on their already existing broadband and Wi-Fi infrastructure, libraries found creative ways to continue to provide the public with Wi-Fi access during the pandemic. Despite many libraries temporarily closing their doors, Wi-Fi remained on allowing patrons to

access it from library parking lots. When travel to libraries was difficult or restricted, libraries brought mobile internet to specific neighborhoods or explored ways to extend the library’s broadband signal to reach more households and farther into the community. Additionally, libraries have engaged in comprehensive efforts to connect their communities through local partnerships and build on knowledge of gaps in local broadband infrastructure.

A survey conducted by the Public Library Association (PLA) in March 2020 revealed that some 93% of libraries kept their Wi-Fi on even when their buildings were closed to the public. In cases where outdoor Wi-Fi was lacking or inadequate to meet needs, some libraries added or expanded this service with the help of federal COVID recovery grant funds by installing extenders to expand wireless signal range. In Idaho, for example, CARES Act funds helped buy equipment to enable 51 libraries in communities of fewer than 10,000 people to provide 24/7 Wi-Fi access to the public.<sup>29</sup>

## **BOX 3. Library Connectivity Solutions During the COVID-19 Pandemic<sup>30</sup>**

### **1. Providing Wi-Fi**

- Strengthening wireless signals and extending activation hours, so people can access Wi-Fi from outside library buildings
- Mapping internet availability and connectivity needs in the community and identifying gaps
- Partnering with local government, businesses, and community organizations to set up additional outdoor and drive-in Wi-Fi hotspot locations
- Using library vehicles to bring hotspots to neighborhoods in need of connectivity at advertised times
- Making use of new technology such as TV White Space and AirFiber to extend broadband in rural areas<sup>31</sup>

### **2. Loaning hotspots and other devices**

- Purchasing and loaning hotspots for home use
- Partnering with schools to get mobile hotspots to students in need
- Targeting hotspots to specific populations (e.g., homeless, veterans, low-income residents)



### **3. Offering virtual and in-library support**

- Providing tech support and digital skills help by phone
- Adapting in-person workshops to be held online
- Providing socially distanced computer stations and devices for jobseeking, accessing government services, telehealth, and more
- Offering curbside printing, faxing, and copying services
- Redesigning library layout, procedures, and furniture to minimize virus transmission

### **4. Engaging in connectivity-related partnerships**

- Partnering with digital equity organizations, community leaders and service providers to provide broadband access and reduce connectivity barriers

Throughout the pandemic library parking lot Wi-Fi has provided a critical baseline connectivity.<sup>32</sup> Among the uses, libraries reported that “patrons frequently used Wi-Fi in the parking lot to apply for unemployment benefits and complete job applications while we were closed to the public.”<sup>33</sup> Other uses have included completing school work, accessing telemedicine, and staying connected with friends and family (see **Box 4**). Parking lot Wi-Fi has also provided unexpected benefits. For instance, the Boca Raton Public Library in Florida, reported that, “due to [the] parking shortage at the local university, we have a high number of adult students on laptops, [using the library Wi-Fi and] participating in online classes and research.” While the library had not set out to specifically aid university students, its Wi-Fi helped meet an emergent need. In sum, the widespread availability of this service at libraries allowed many Americans to complete crucial tasks as the country was forced to adapt to fast changing circumstances.

Libraries also have worked to extend their Wi-Fi signals further beyond library walls. The Twin Lakes Library system in Georgia, for one, used TV White space to expand connectivity. The library also investigated

Some 81% of libraries surveyed by the Public Library Association in March 2020 reported that they already had a policy of leaving Wi-Fi on after hours prior to COVID-19 and continued to do so. Meanwhile, 12% of libraries had expanded or added this service in response to the pandemic. Additionally, prior to COVID-19, 36% of libraries surveyed had located Wi-Fi access points to improve access outside the building (i.e., going beyond simply leaving the signal on and actively working to improve it for use beyond library walls). In turn, 8% of libraries had expanded or added this service in light of COVID-19.<sup>35</sup>



using AirFiber technology, which provides faster access speeds to expand options for the rural community though it requires line of sight.<sup>34</sup> Meanwhile, in Boone County, Kentucky, the Florence Branch Library ran a pilot initiative to test expanding the library’s Wi-Fi by creating a wide area mesh network. The network could reach 200

#### BOX 4. What has library broadband helped people to do during the pandemic?

During the COVID-19 pandemic people across the country have used library Wi-Fi and hotspots for many purposes. These include, but are not limited to:

##### Education

- Participating in K-12 remote learning
- Engaging in higher education remote learning

##### Work

- Working remotely
- Job searching and submitting unemployment paperwork
- Attending virtual job interviews
- Holding virtual and outdoor meetings
- Supporting small business and community organization events



##### Health

- Finding COVID-19 testing locations or accessing test results online
- Staying informed with public health updates and other news
- Enrolling in healthcare
- Accessing telemedicine



##### Well-Being

- Keeping in touch with friends and family to combat isolation
- Accessing e-books, audiobooks, and other materials to help pass the time during lockdowns, quarantine, and social distancing

households in an area where connectivity gaps exist.<sup>36</sup> While, in Canaan, Vermont—a remote part of the state with limited access to broadband—the library used a grant from Microsoft to extend Wi-Fi to a popular park.<sup>37</sup>

Additionally, recognizing that library locations are not easily accessible to all—especially at times when using public transit was restricted or inadvisable—libraries have brought mobile internet to specific neighborhoods via library vehicles. In Kansas, for example, the Topeka and Shawnee County Public Library repurposed two of its bookmobiles as Wi-Fi hotspots. Both were set up in southeast Topeka to support local high school students who lack internet access at home.<sup>38</sup> Under normal circumstances many young people use library broadband to complete homework assignments. In this case, and others, librarians recognized that with remote schooling, youth in their communities—whose families did not have adequate broadband at home—would need to be connected and worked to provide that connectivity in relevant locations.

In another example, as part of the Wi-Fi on Wheels initiative, the Orange County Public Libraries in California have brought internet connectivity to low broadband neighborhoods throughout the County. Wi-Fi on Wheels trailers are parked at pre-designated locations each week to provide broadband for up to 150 users within a 300-yard radius. In addition, library outreach staff are present to answer questions, provide information about library services, and register patrons for library cards. Children’s books and job search resources are also available from the vehicle in English, Spanish, and Vietnamese.<sup>39</sup> Initiatives such as these illustrate how libraries developed and implemented relevant pandemic services—responding to connectivity needs and more—based on their knowledge of local communities.

During the pandemic libraries have also used their understanding of gaps in local internet infrastructure to strategically develop efforts to bridge the digital divide. In Arkansas, the Malvern-Hot Spring County Library helped to address the fact that 35% of the county has no form of internet access available. As the library explained, “due to the COVID crisis, and the immediate switch to online classes for students, we recognized the need for Wi-Fi access within the community. Some students are a 30-minute drive from their school campus, so we felt that placing the devices at central points throughout the county would provide the best



**W**ith a bird’s eye view of internet needs, libraries have also engaged in more comprehensive efforts to connect their communities. In rural Pottsboro, Texas, besides installing a wireless access point on the roof of the library to extend Wi-Fi to cars in the parking lot, the library led an initiative to get local businesses to keep their Wi-Fi networks active and allow the public to access them even if their stores were closed. In addition, the library procured a mobile hot-spot trailer from the Information Technology Disaster Resource Center, a nonprofit that typically provides emergency communications and other resources to communities following natural disasters. The trailer was installed in a hotel parking lot in a part of town lacking free public Wi-Fi access. In this way, the library used its understanding of local needs to create a much more robust and widespread network of Wi-Fi options than would have been possible without partnership.<sup>41</sup>

access.” To achieve this goal the library contacted local businesses in varied locations and asked them to host some of the library’s 50 hotspots which are normally loaned out to patrons. As some areas of the county have very limited mobile phone coverage as well, the library compared provider coverage to identify the best option for these “hard to connect” areas. The library plans to keep these community hotspots active beyond the crisis, as “people have begun to rely on these Wi-Fi access points in our most rural areas.”<sup>40</sup>

### Libraries loan hotspots and other devices

Even before the pandemic, many libraries began developing and implementing hotspot loan programs,

recognizing the need for library users to get online beyond library walls. These initiatives—sometimes targeted to specific populations such as students, jobseekers, or the homeless—allow patrons to check out hotspots for periods of time, ranging from weeks to months (See **Box 5**). Not surprisingly, as the pandemic unfolded, demand for this service rose in many communities. In Texas, for example, just before the pandemic shuttered schools and businesses (early March 2020) 10 Dallas libraries received 900 hotspots for people to borrow. Two weeks later, all of them were checked out.<sup>42</sup> The March 2020 PLA survey found that 21% of library respondents reported offering hotspot check-outs as a service prior to COVID-19 and continued to do so; in addition 2% of libraries immediately expanded or added this service when the pandemic shut things down.<sup>43</sup>

Libraries across several states reported strong demand for hotspots during the pandemic. In a typical example, an Arizona library noted via email that “the hotspot lending program is one of the library’s most popular and requested services.” Similarly, the Garland County Library in Arkansas, which has 10 hotspots for circulation, wrote that, “we have a tremendous need in our community for these—we have on average about 50 holds [for hotspots]. They are the most requested item that the library has in our collection.”

Nevertheless, the prevalence of hotspot lending as a library service varies by state. For instance, in Georgia, 11% of libraries provided hotspots during FY2020,



**T**he Williamsburg (Va.) Regional Library outfitted its mobile library services vans as hotspots, bringing Wi-Fi and printing services to neighborhoods-in-need. Above, the mobile library services outreach manager drives a van providing Wi-Fi to the community.

while roughly 50% of libraries in Louisiana did.<sup>44</sup> In Utah, federal funding helped bring hotspot lending to 30 library systems, a marked increase from the pre-pandemic period.<sup>45</sup> The number and type of devices libraries have available to check out also varies widely and is based on library budget, size, and service area. When possible, libraries have increased the number of hotspots available for loan in response to COVID-19. A library in Virginia noted that (as of December 2020) “all of our 45 hotspots are checked out and are in high demand, especially amongst students. We currently are working to configure 250 new hotspots that we will add

### **BOX 5. Hotspot Lending Programs Connect the Disconnected**

**W**hile hotspots and other connectivity-related devices are typically available for loan to the general public, some libraries reserve devices for specific populations according to local need. For example:

- In Washington, of its 1,000 hotspots the Seattle Public Library system sets aside several hundred for people most in need. Librarians partner with local community groups to lend library hotspots directly to those experiencing homelessness as well as those living in the city’s ‘tiny home’ villages. All hotspots are available to check out for several months at a time and are often combined with training sessions from library staff.<sup>46</sup>
- One library in Virginia partners with the local literacy group and a refugee assistance group to get hotspots to these populations.<sup>47</sup>
- Hotspots on loan from the Kirkwood Public Library in Missouri are prioritized for senior facilities.<sup>48</sup>
- And, the Broward County Libraries Division in Florida offers free mobile internet service hotspots for veterans, active military, and their dependents.<sup>49</sup>



to our current circulating collection. We are on track to have at total of 400 hotspots by the end of FY21.”<sup>50</sup>

Library hotspots have enabled a myriad of uses during the pandemic—ranging from supporting jobseekers, to students, to parents, to businesses, both at the pandemic’s outset and in the longer term. Some libraries, for example, acted as bridges—helping community members stay connected until they could work out a more permanent solution. As one library wrote: “During the closure period [when] the schools closed, several teachers did not have internet at home. We were able to get the hotspots to them for their remote teaching. Now the school district has had time to prepare and the teachers are ok.”<sup>51</sup> Library hotspots also helped to shore up additional broadband demand that arose as a result of the pandemic. A Pennsylvania library noted, “one of our patrons used [a library hotspot] for their son during the COVID shutdown for schoolwork and distance learning. They only had limited data on their phone.”

Over the pandemic period library hotspots have supported many other community services. Examples range from enabling connectivity at a local shelter that assists survivors of domestic violence in Utah,<sup>52</sup> to making it possible for community members (mostly seniors) to conduct virtual medical appointments in Florida, to helping a small-town minister in Montana provide Wi-Fi in a cemetery so that family members who could not travel to attend the service could still participate via Zoom. By the fall of 2020 nearly one-third (32.6%) of public libraries offered a hotspot loan service, including 51.8% of urban libraries, 47.4% of suburban libraries, and 25.5% of town and rural libraries.<sup>53</sup> Still, despite the demand for and many applications of hotspot lending, many libraries lack the funds to expand it. Further funding could catalyze a more comprehensive rollout of this service in each state, which could help expand connectivity during the pandemic recovery phase, as well as beyond.

Finally, libraries also know the importance of supporting home broadband and have worked to seed adoption during the pandemic by acting as trusted liaisons. Libraries are well suited to play this role—acting as a connector—as they are a key source of internet in most communities, and therefore a common place to turn to for connectivity help. The Dayton Metro Library in Ohio, for example, received federal funding to cover the cost of wireless service and equipment for four months for 800

## Libraries Are an Internet Lifeline

**T**he Lantana Public Library in Florida writes, “Our community is an underserved one, and so many rely on us for internet access to pay bills, get in touch with lawyers, send time cards to employers in order to be paid, apply for the Affordable Care Act, apply for Medicare/Medicaid benefits, apply for unemployment and find out the status of it, apply for jobs, update resumes, do homework, participate in virtual learning, hold virtual meetings, and so much more.” When the library temporarily closed due to COVID-19 in March 2020, it was very distressing for community members for whom library broadband is a lifeline. In one example, a librarian reported, “a patron called and inquired about computer use to fill out unemployment. When I told him we were closed, he started to sob, ‘But how am I supposed to fill out the paperwork to get paid, if all of the libraries are closed? It’s the only computer access I have!’” Stories like this underscore the impact of library closures during the pandemic on those individuals who rely on library computers and assistance to apply for jobs, access medical information, complete schoolwork, or other key tasks.



library card holders. At the end of that period, program participants who were potentially eligible for lower rates through a low-cost broadband program offered by an internet service provider could transfer the service into their own name or return the equipment and let the service end. Programs like this can be a critical leg up for financially struggling families, tech-shy residents, and community members unaware of the possibility of the subsidized broadband service.<sup>54</sup>

## Libraries offer virtual and in-building support

While the majority of library buildings have been closed to the public at some point during the pandemic, many libraries found ways to continue their most important services as well as to innovate new ones to meet emerging needs.<sup>55</sup> For example, when the pandemic forced the library in Roxbury Township, New Jersey to close, staff quickly shifted to offer planned small business workshops online, adapting the content to be relevant to the challenges facing the business community. In one

class, “Google My Business and Crisis Management,” participants learned how to develop and enhance their virtual storefronts, including how to customize their message, manage reviews, and communicate with past and future customers.<sup>56</sup> While many libraries work to support small businesses and entrepreneurship under normal circumstances, the game-changing nature of the pandemic meant that new kinds of support were needed. The Schlow Centre Region Library in Pennsylvania, in turn, began offering access to Zoom subscriptions to help people stay connected when they could not gather in the physical space of the library. The library’s Zoom “virtual community rooms” can be reserved for two hours at a time and accommodate up to 300 people.<sup>57</sup>

Additionally, libraries found ways to offer virtual support to people who either have trouble accessing the internet at home or who need help to complete online tasks. Again, as many Americans typically rely on libraries for this type of assistance, libraries were a natural place for people to turn during the pandemic as the ability and confidence to do things online become even more critical. The Salt Lake City Public Library in Utah, for one, partnered to develop a Digital Navigators Program. The program adapts traditional digital inclusion support like troubleshooting computer issues or uploading forms, providing individuals with one-on-one digital skills help via phone service.<sup>58</sup> Other libraries reported offering similar services on a more informal basis, with librarians “getting on the phone from their homes to talk people through everything from accessing telemedicine resources to making their first Zoom call.”<sup>59</sup> While providing this assistance remotely can be a challenge, librarians were able to use their expertise in this area to help community members adapt to unexpected circumstances.

Libraries have also invested in making their physical spaces and computing stations safe to use in keeping with social distancing practices. As the pandemic continued throughout 2020 and into 2021 these modifications have allowed libraries to offer in-person services. Beyond basic social distancing and disinfection

measures, libraries worked hard to make it possible for community members to make use of library devices and in-building broadband. Some libraries, for example, installed plexiglass between computers that were less than six feet apart, increasing the number of public computers available for use.<sup>60</sup> Others purchased laptops to allow for socially distanced working in the library,<sup>61</sup> or provided computing resources to meet pandemic-specific needs. The Las Vegas–Clark County Library District in Nevada, for example, began offering Wi-Fi, laptops, and free printing to students at its five Homework Help Centers to assist with distance learning.<sup>62</sup>

Another emerging use of library broadband connections and computing devices is telemedicine<sup>63</sup>—an application with clear relevance during the pandemic, and which could be expanded for use beyond this particular crisis. An analysis of the role rural public libraries can play to reduce telemedicine inequities conducted by University of Virginia Associate Professor of Nursing Pamela DeGuzman found that “the vast majority of Virginia libraries had the four components necessary for telemedicine to work well: fixed

broadband, computers, technologically savvy staff and private spaces where telehealth visits could take place.”<sup>64</sup> Libraries across the nation have similar capacities and could further develop them with targeted funding. More widespread library involvement in telemedicine is especially critical for people who do not have high-capacity home broadband or who lack the necessary digital skills and related equipment (blood pressure cuffs, scales, webcams, etc.), and is one way to address the disparities in access to and use of telemedicine.<sup>65</sup>

### Libraries engage in connectivity-related partnerships

Libraries are part of a larger digital equity ecosystem, and, in many cases, have pre-existing partnerships and relationships with local groups with which they work to help achieve community connectivity goals (see **Box 6**).<sup>66</sup> Thus, as the pandemic unfolded libraries led and joined many multi-actor efforts to address connectivity



**While the majority of library buildings have been closed to the public at some point during the pandemic, many found ways to continue their most important services as well as to innovate new ones to meet emerging needs.**

gaps in this new context. For example, as COVID-19 forced school closures across the nation, schools and libraries worked together—formally and informally—to get teachers and students online. For instance, in Colorado, the Boulder Public Library “received a grant to purchase 275 additional hotspots at the beginning of the pandemic. They partnered with the local school district to distribute 125 to students lacking reliable internet and distributed the remaining 150 to seniors and others residing in low-income neighborhoods.”<sup>67</sup> In another example, the Kenton County Public Library in Kentucky created a new position titled School Services Coordinator to assist families and schools during distance learning. Some of the duties of the School Services Coordinator include providing library cards to teachers and students; promoting the wide range of library digital resources; providing training to schools on using online services; and coordinating IT support to schools as needed.<sup>68</sup>

Libraries have worked with non-profit, industry, and local government partners as well to cover COVID-19–induced connectivity gaps. In California, for example, the Los Angeles County Library partnered with the United Way of Greater Los Angeles to bring remote library access to homeless individuals during the pandemic. Librarians created 7,000 online activity kits including digital library card IDs and PIN numbers for distribution to local organizations serving homeless populations, as well as other vulnerable individuals, through the Project Roomkey initiative.<sup>69</sup> Meanwhile, in West Virginia, 255 libraries participated in a statewide effort to establish over 1,000 free wireless internet access points as part of the Kids Connect initiative.<sup>70</sup> And, in Colorado, the Buena Vista Public Library partnered with the town to expand

## CONCLUSION

Libraries across the nation have played a critical role in keeping communities connected during the COVID-19 pandemic—demonstrating their ability to respond creatively to emerging needs during challenging times. Libraries not only provided basic access via outdoor Wi-Fi and hotspot lending but have also offered virtual and in-library resources and technology support. Additionally, library staff are often deeply knowledgeable about local connectivity needs, and work together

### BOX 6. Libraries Connect Communities

Local governments often partner with libraries and recognize them as providing valuable community resources when it comes to broadband services and education. In a survey from the International City/County Management Association (ICMA),<sup>72</sup> when asked to rank the role of their local libraries in moving community priorities forward, respondents selected the following five areas as important or highly important:



- Access to high-speed Internet service (73%)
- Digital literacy (65%)
- Early childhood education (65%)
- Primary and secondary school attainment (59%)
- Online/virtual learning (52%)

During the COVID-19 pandemic, library resources and expertise in these areas have indeed been a support for many communities.

its public Wi-Fi service to a local park.<sup>71</sup> In each of these cases, and many others, existing library infrastructure, community connections, and/or technical expertise were mobilized to support internet access in the context of unforeseen circumstances.

In short, in times of crisis and calm libraries play many roles in helping to ensure digital inclusion—including identifying connectivity gaps, adapting service to local needs, and partnering to extend resources.

with community organizations, local governments, and businesses to provide Wi-Fi at libraries and beyond library grounds. During the pandemic library broadband has been offered to and is being used by a wide variety of community members (students, workers, parents, teachers, homeless, veterans, tribal members, small businesses, seniors, rural residents, and others) to accomplish a range of important tasks (applying for jobs, accessing telemedicine, completing schoolwork, etc.).

At the same time, libraries face several challenges related to providing connectivity services. For one, while many libraries see a clear need for programs like hotspot lending locally, due to tightly stretched budgets, they are not able to add or expand this service to the degree to meet demand. Other libraries are located in communities where broadband availability is scarce or uncertain—meaning that hotspots may not work in every area of the community.<sup>73</sup> Thus, the ability of libraries to aid in connectivity is tied to the availability of library funding and broadband infrastructure across the country.

Investments in library broadband, Wi-Fi, and related devices made during the pandemic and going forward

promise not only to help address immediate needs, but also to lay the groundwork for economic recovery as the pandemic recedes. Increased Wi-Fi, hotspots for loan, and end-user devices acquired by libraries now will

assist jobseekers and many others. These and other resources will help support residents who are experiencing economic hardship as they look for jobs, learn new workplace skills, or transition to new careers.<sup>74</sup> Additionally, new services libraries have developed during the pandemic—such as Zoom workshops for jobseekers and small business owners<sup>75</sup>—are likely

to help ease the transition from remote to in-person programs and assistance.



**Investments in library broadband, Wi-Fi, and related devices made during the pandemic and going forward promise not only to help address immediate needs, but also to lay the groundwork for economic recovery as the pandemic recedes.**

**AMELIA BRYNE** is co-Director of DeepTech.org, a research consultancy that investigates the social impact of telecommunications technologies. She has worked with the American Library Association Public Policy and Advocacy Office, the University of Helsinki, the Social Science Research Council, the Community Wireless Infrastructure Research Project, byDesign eLab, and other public interest research projects and institutions. Her research has been published in journals such as *Telematics & Informatics*, *Policy & Internet*, and the *Journal of Community Informatics*.

**MARIJKE VISSER** is Library Section Supervisor and Continuing Education Coordinator at the Maine State Library where she works with a team of six specialists to support the professional development needs of Maine's libraries. Previously she was Senior Policy Advocate at the American Library Association's Public Policy and Advocacy Office in Washington, D.C. Her work covered telecommunications policy including the federal E-rate program, broadband adoption and use through libraries, and national partnerships.

For further information about this publication, contact the co-authors Amelia Bryne ([amelia@deeptech.org](mailto:amelia@deeptech.org)) or Marijke Visser ([marijkea@gmail.com](mailto:marijkea@gmail.com)) or at the American Library Association, Alan Inouye ([ainouye@alawash.org](mailto:ainouye@alawash.org)).

Published March 2022. © 2022 American Library Association.

This work is licensed under a Creative Commons Attribution License, available at: <http://creativecommons.org/licenses/by/3.0/>.



American Library Association | Public Policy & Advocacy  
1615 New Hampshire Avenue, N.W., First Floor, Washington, D.C. 20009  
Telephone 202-628-8410 | Fax 202-628-9419 | [www.ala.org/wo](http://www.ala.org/wo)

## ENDNOTES

---

1. In May 2020, 62% of library buildings were fully closed to the public; 26% were offering curbside service; 11% had other limitations on access but not fully closed (e.g., by appointment or limited number of people allowed in the building at a given time); and 1% were fully open. American Library Association (2020a). "Libraries Respond: COVID-19 Survey," May 12-18, 2020. Available at: [http://www.ilovelibraries.org/sites/default/files/PLA-MAY-2020-COVID-19-Survey-Results\\_PDF-Summary-web.pdf](http://www.ilovelibraries.org/sites/default/files/PLA-MAY-2020-COVID-19-Survey-Results_PDF-Summary-web.pdf)
2. Federal Communications Commission (2021). "Fourteenth Broadband Deployment Report." Available at: <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/fourteenth-broadband-deployment-report>
3. Busby, J and Tanberk, J. (2021). "FCC Reports Broadband Unavailable to 21.3 Million Americans, BroadbandNow Study Indicates 42 Million Do Not Have Access." Available at: [https://broadbandnow.com/research/fcc-underestimates-unserved-by-50-percent-and-US-Government-Accountability-Office-\(2018\)-Broadband-Internet-FCCs-Data-Overstate-Access-on-Tribal-Lands](https://broadbandnow.com/research/fcc-underestimates-unserved-by-50-percent-and-US-Government-Accountability-Office-(2018)-Broadband-Internet-FCCs-Data-Overstate-Access-on-Tribal-Lands). September 7, 2018. Available at: <https://www.gao.gov/products/GAO-18-630>
4. *Pew Research Center (2021). "Internet/Broadband Factsheet." April 7, 2021. Available at: https://www.pewresearch.org/internet/fact-sheet/internet-broadband/*
5. See, for example: Wilcox, J.K. (2020). "Libraries and Schools Are Bridging the Digital Divide During the Pandemic." *Consumer Reports*, April 29, 2020. Available at: <https://www.consumerreports.org/technology-telecommunications/libraries-and-schools-bridging-the-digital-divide-during-the-coronavirus-pandemic/>
6. Cherewka, A. (2020). "The Digital Divide Hits U.S. Immigrant Households Disproportionately During the COVID-19 Pandemic." Migration Policy Institute. September 3, 2020. Available at: <https://www.migrationpolicy.org/article/digital-divide-hits-us-immigrant-households-during-covid-19>
7. Andreason, S. et al. (2020). "The Digital Divide and the Pandemic: Working from Home and Broadband and Internet Access." Federal Reserve Bank of Atlanta. June 29, 2020. Available at: <https://www.frbatlanta.org/cweo/workforce-currents/2020/06/29/the-digital-divide-and-the-pandemic-working-from-home-and-broadband-and-internet-access>
8. U.S. Department of the Interior, Indian Affairs (2019). "Expanding Broadband Access." Available at: <https://www.bia.gov/service/infrastructure/expanding-broadband-access>
9. *Ibid*, Pew Research Center (2021). Perrin, A. (2019). "Digital Gap Between Rural and Nonrural America Persists," Pew Research Center. May 31, 2019. Available at: <https://www.pewresearch.org/fact-tank/2019/05/31/digital-gap-between-rural-and-nonrural-america-persists/> and Khazan, O. (2020). "American's Terrible Internet Is Making Quarantine Worse," *The Atlantic*. August 17, 2020. Available at: <https://www.theatlantic.com/technology/archive/2020/08/virtual-learning-when-you-dont-have-internet/615322/>
10. LaPierre, S. (2020). "Digital Access During COVID-19." *Public Libraries Online*. May 12, 2020. Available at: <http://publiclibrariesonline.org/2020/05/digital-access-during-covid-19/>
11. Anderson, M. and Perrin, A. (2018). "Nearly One-in-Five Teens Can't Always Finish Their Homework Online Because of the Digital Divide." Pew Research Center. Available at: <https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/>
12. Basu, T. (2020). "Why the 'Homework Gap' is Key to American's Digital Divide." *MIT Technology Review*. October 13, 2020. Available at: <https://www.technologyreview.com/2020/10/13/1010243/jessica-rozenworcel-homework-gap-key-to-americas-digital-divide/>
13. Rosenworcel, J. (2021). "The Emergency Connectivity Fund is Live!" Federal Communications Commission, June 29, 2021. Available at: <https://www.fcc.gov/news-events/notes/2021/06/29/emergency-connectivity-fund-live>
14. For example, see: Getchell, A. (2021). "Survey Shows the Majority of Students Lacked Proper Access to Devices, Wi-Fi for Remote Learning During COVID.

- Masslive.com, March 2, 2021. Available at: <https://www.masslive.com/news/2021/03/survey-shows-the-majority-of-students-lacked-proper-access-to-devices-wifi-for-remote-learning-during-covid.html>
15. Perrin, A. and Turner E. (2019). "Smartphones Help Blacks, Hispanics Bridge Some—But Not All—Digital Gaps with Whites." Pew Research Center. August 20, 2019. Available at: <https://www.pewresearch.org/fact-tank/2019/08/20/smartphones-help-blacks-hispanics-bridge-some-but-not-all-digital-gaps-with-whites/>
  16. McKinley, S. (2019). "Working Together to Bring Broadband to Rural Veterans." Microsoft blog. May 22, 2019. Available at: <https://blogs.microsoft.com/on-the-issues/2019/05/22/working-together-to-bring-broadband-to-rural-veterans/>
  17. Pew Research Center (2021). "Internet/Broadband Factsheet." April 7, 2021. Available at: <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/>
  18. Brunvand, A. (2019). "Reasons to Love Your Library: Think of Them As 'Resilience Centers,'" *Catalyst*. March 1, 2019. Available at: <https://catalystmagazine.net/reasons-to-love-your-library-think-of-them-as-resilience-centers/>
  19. *Ibid*, Brunvand (2019).
  20. *Ibid*, Brunvand (2019).
  21. Stricker, M. (2018). "From Facilities to Trauma: Disaster Planning at Community Resiliency at Your Library," WebJunction. January 30, 2018. Available at: <https://www.webjunction.org/events/webjunction/disaster-planning-community-resiliency.html>
  22. Universal Service Administrative Co., "COVID-19 Response," <https://www.usac.org/e-rate/resources/covid-19-response/>
  23. Federal Communications Commission, "Keep Americans Connected," <https://www.fcc.gov/keep-americans-connected>
  24. Institute of Museum and Library Services (2020), "Federal Government Invests \$50 Million in Museums, Libraries to Address Digital Divide During COVID-19." March 27, 2020. Available at: <https://www.imls.gov/news/federal-government-invests-50m-museums-libraries-address-digital-divide-during-covid-19>
  25. McHale B. and Simmerman, A. (2021). "Why Didn't the CARES Act Solve the Digital Divide?" Schools, Health & Libraries Broadband Coalition. March 15, 2021. Available at: <https://www.shlb.org/blog/2021/03/Why-didnt-the-CARES-Act-solve-the-digital-divide/>
  26. Brodtkin, J. (2020). "\$50-Per-Month Emergency Broadband Subsidies Approved in Pandemic Stimulus," *ArsTechnica*, December 22, 2020. Available at: <https://arstechnica.com/tech-policy/2020/12/50-per-month-emergency-broadband-subsidies-approved-in-pandemic-stimulus/> and National Law Review (2021). "Broadband Support Opportunities for State and Local Governments Under the American Rescue Plan Act of 2021." March 15, 2021. Available at: <https://www.natlawreview.com/article/broadband-support-opportunities-state-and-local-governments-under-american-rescue>
  27. Institute of Museum and Library Services (2021). "Federal Government Invests \$200 Million in Libraries and Museums to Stimulate American Communities," March 11, 2021. Available at: <https://www.imls.gov/news/federal-government-invests-200m-libraries-and-museums-stimulate-american-communities>
  28. Federal Communications Commission, "Emergency Connectivity Fund," <https://www.fcc.gov/emergency-connectivity-fund>
  29. "\$2 Million in CARES Funding Going to Idaho Libraries to Boost Broadband," *Argus Observer*. Available at: [https://www.argusobserver.com/independent/news/2-million-in-cares-funding-going-to-idaho-libraries-to-boost-broadband-24-7-in/article\\_3c9d2d86-fcf7-11ea-92c6-537eef276bff.html](https://www.argusobserver.com/independent/news/2-million-in-cares-funding-going-to-idaho-libraries-to-boost-broadband-24-7-in/article_3c9d2d86-fcf7-11ea-92c6-537eef276bff.html)
  30. See, for example: *Ibid*, LaPierre (2020) and Texas State Library and Archives Commission (2020). "Texas State Library and Archives Commission Awards More Than \$1.06 Million in CARES Act Grants to 38 Texas Libraries." July 23, 2020. Available at: <https://www.tsl.texas.gov/node/67656>
  31. Enis, Matt (2021). "Connecting the Last Mile: Libraries Find Innovative Solutions for Broadband Access." *Library Journal*. January 14, 2021. Available at: <https://www.libraryjournal.com/?detailStory=Connecting-the-Last-Mile-Libraries-Find-Innovative-Solutions-for-Broadband-Access-covid-19>
  32. There was significant demand for library parking-lot Wi-Fi in Louisiana, for example. See: Chief Officers of State Library Agencies (2020). "Survey for Hotspot Act Stories." Internal data of the American Library Association. November 2020.
  33. Reynolds, S. (2020). "ALA Information Request—Broadband Services Provided by FL Public Libraries. Marion County Public Library System Response." Email.

34. *Ibid*, LaPierre (2020).
35. Public Library Association (2020a). "Public Libraries Respond to COVID-19: Survey of Response & Activities." March 2020. Available at: <https://www.ala.org/pla/issues/covid-19/march2020survey>
36. Daly, N. (2020). "A Plan to Close the Wi-Fi Gap Moves Forward." *NKY thrives*. October 22, 2020. Available at: <https://nkythrives.com/inthenews/boone-county-library-closes-wifi-gap.aspx>
37. Allen, S. (2020). "Stories from a Library." Email. Part of the DigitalLead: Rural Libraries Creating New Possibilities project, sponsored by Microsoft. Story from Sharon Ellingwood White, director of the Alice M. Ward Memorial Library in Canaan, VT.
38. *Ibid*, Wilcox (2020).
39. Brazil, B. (2020). "OC Public Libraries Launches Program to Boost Internet Access in Underprivileged Communities." *L.A. Times*. October 29, 2020. Available at: <https://www.latimes.com/socal/daily-pilot/entertainment/story/2020-10-29/o-c-public-library-wi-fi-on-wheels>
40. Kamal, S. (2020). "July Hotspot Stories." Story from Adam Webb, director of the Malvern-Hot Spring County Library in Arkansas Email.
41. *Ibid*, Wilcox (2020).
42. Cooper, B. (2020). "How Hot Spots are Bridging Southern Dallas' Digital Divide During the Coronavirus Pandemic." *Dallas Morning News*. August 28, 2020. Available at: <https://www.dallasnews.com/news/public-health/2020/08/28/how-hot-spots-are-bridging-southern-dallas-digital-divide-during-the-coronavirus-pandemic/>
43. *Ibid*, Public Library Association (2020a).
44. *Ibid*, Chief Officers of State Library Agencies (2020).
45. *Ibid*, Chief Officers of State Library Agencies (2020).
46. Kirchner, L. (2020). "Millions of Americans Depend on Libraries for the Internet. Now They're Closed." *The Markup*. June 25, 2020. Available at: <https://themarkup.org/coronavirus/2020/06/25/millions-of-americans-depend-on-libraries-for-internet-now-theyre-closed>
47. *Ibid*, Virginia Libraries (2020).
48. Missouri (2020). "Coronavirus Aid, Relief, and Economic Security Act (CARES) Grants Awarded July 2020." Available at: <https://www.sos.mo.gov/CMSImages/LibraryDevelopment/CARESONlineposting.pdf>
49. Broward County Library, "Veterans," <https://www.broward.org/Library/Pages/Veterans.aspx>.
50. Virginia Libraries (2020). "Public Libraries and Hotspots Survey." December 2020. Internal data of the American Library Association.
51. Public Library Association (2020b). "Hotspot Follow Up Survey." Part of the DigitalLead: Rural Libraries Creating New Possibilities project, sponsored by Microsoft. November 2020. Internal data of the Public Library Association.
52. *Ibid*, Chief Officers of State Library Agencies (2020).
53. Public Library Association (2021). "Public Library Technology Lending & Outreach." Available at: <https://www.ala.org/pla/sites/ala.org.pla/files/content/data/Snapshot-TechLending21.pdf>
54. Spicker, K. (2020). "Ohio Library System to Connect 800 Homes to Free Internet." *GovTech*, December 16, 2020. Available at: <https://www.govtech.com/network/ohio-library-system-to-connect-800-homes-to-free-internet.html>
55. American Library Association (2020b). "Public Libraries Launch, Expand Services During COVID-19 Pandemic." April 9, 2020. Available at: <http://www.ala.org/news/press-releases/2020/04/public-libraries-launch-expand-services-during-covid-19-pandemic-0>
56. Roxbury Public Library (2020). "Spotlight Libraries Survey." Response from the Roxbury Public Library, NJ. Part of the Libraries Lead project, sponsored by Google. June 19, 2020. Internal data of the American Library Association.
57. Schlow Centre Regional Library, "Reserve a Virtual Community Room," <https://www.schlowlibrary.org/virtual-rooms>
58. Urban Libraries Council (2020). "Digital Navigators." Available at: <https://www.urbanlibraries.org/initiatives/digital-navigators>
59. *Ibid*, Wilcox (2020).
60. Institute of Museum and Library Services (2020). "IMLS CARES Act State Library Spotlight: How Rhode Island Went Digital." IMLS Blog, November 2020. Available at: <https://www.imls.gov/blog/2020/11/imls-cares-act-state-library-spotlight-how-rhode-island-went-digital>
61. Alaska State Libraries, Archives & Museums (2020). "Alaska State Libraries and Museums Awarded Federal CARES Act Funding." June 30, 2020. Available at: <https://lam.alaska.gov/press/releases/Alaska-State-Libraries-and-Museums-Awarded-Federal-CARES-Act-Funding>
62. Las Vegas-Clark County Library District (2020). "Homework Help Centers Assist with Distance

- Learning.” August 21, 2020. Available at: <https://lvccld.org/blogs/post/homework-help-centers-assist-with-distance-learning/>
63. Flanagan, J. (2020). “Besides Books, Rural Librarian’s Focus is Telehealth.” Texas Women’s University News & Events. October 15, 2020. Available at: <https://twu.edu/slis/news-events/besides-books-rural-librarians-focus-is-telehealth/>
  64. DeGuzman, P. B. et al. (2020). “Evaluation of Rural Public Libraries to Address Telemedicine Inequities.” *Public Health Nursing*, 37(5), 806-811. Available at: doi:10.1111/phn.12777 Also see: <https://bluesyemre.com/2020/08/21/check-out-telemedicines-next-frontier-local-libraries/>
  65. A study conducted by University of Pennsylvania-affiliated researchers found that in the early months of the pandemic “older people, non-English-speaking people and Asian people used telemedicine at lower rates” and “patients who were Black, Latinx, older, female and poorer used video visits less.” See: Jagannathan, M. (2021). “Telemedicine Provides a Lifeline During Pandemic—For Wealthier Americans.” *MarketWatch*. January 12, 2021. Available at: <https://www.marketwatch.com/story/these-vulnerable-populations-had-trouble-accessing-telemedicine-during-the-pandemic-and-that-could-worsen-existing-inequities-11609884738>
  66. Rhinesmith, C. and Kennedy, S. (2020). “The Impacts of COVID-19 on Digital Equity Ecosystems.” Benton Institute for Broadband & Society. November 18, 2020. Available at: <https://www.benton.org/blog/impacts-covid-19-digital-equity-ecosystems>
  67. *Ibid*, LaPierre (2020).
  68. Artino, L. (2020). “Kenton Co. Library Creates Program to Assist Families, Schools During Distance Learning.” Fox19Now. August 26, 2020. Available at: <https://www.fox19.com/2020/08/26/kenton-co-library-creates-program-assist-families-schools-during-distance-learning/>
  69. Negron, P. (2020). “Libraries Step Up During Pandemic.” National Association of Counties. August 2, 2020. Available at: <https://www.naco.org/articles/libraries-step-during-pandemic>
  70. Office of Governor Jim Justice (2020). “Gov. Justice Unveils Interactive Map of 1,000+ Kids Connect WiFi Locations.” August 7, 2020. Available at: <https://governor.wv.gov/News/press-releases/2020/Pages/COVID-19-UPDATE-Gov.-Justice-unveils-interactive-map-of-1000-Kids-Connect-WiFi-locations-announces-WV-has-6th-lowest-Rt.aspx>
  71. Buena Vista Chamber of Commerce (2020). “Library Expands Public WiFi to McPhelemy Park.” Available at: <https://buenavistacolorado.org/bv-library-expands-public-wi-fi-to-mcphelemy-park/>
  72. Horrigan, J. (2017). “The Role of Libraries in Advancing Community Goals.” Aspen Institute. January 17, 2017. Available at: <https://www.aspeninstitute.org/publications/icma-survey/>
  73. *Ibid*, Public Library Association (2020b).
  74. Henley, H. (2020). “CARES Supplemental 2020 Snapshot.” Arizona State Library, Archives, and Public Records. Available at: [https://azlibrary.gov/sites/default/files/libdev\\_cares\\_supp\\_2020\\_snapshot.pdf](https://azlibrary.gov/sites/default/files/libdev_cares_supp_2020_snapshot.pdf)
  75. See, for example: Queen, M. (2021). “County Libraries Offer Online Workshops for Job Seekers.” My MC Media. January 29, 2021. Available at: <https://www.mymcmedia.org/county-libraries-offer-online-workshops-for-job-seekers/> and Brooklyn Public Library Events Calendar - Business, <https://www.bklynlibrary.org/calendar/list/business>