

# Addressing Digital Equity for Equitable, Accessible Health Care

JUNE 2023

## INTRODUCTION: WHY DIGITAL EQUITY IS NECESSARY FOR HEALTH EQUITY

At the onset of the COVID-19 pandemic, at a time when physical distancing was the most effective way to mitigate the spread of the virus, non-critical health care turned entirely online for all Californians. For California’s safety net populations, this was the first time, thanks to pandemic-permitted policy changes, that telehealth was a major, accessible health care delivery tool. The necessity of virtual care also magnified that many individuals and communities across the state that persistently lacked access to health care and were most at risk for COVID-19 also lacked access to reliable, sufficient, and affordable internet, or broadband and connectivity—effectively rendering telehealth services inaccessible to those that needed them most.

As health care becomes increasingly reliant on technology, broadband is the nexus in making the future of health care equitable and accessible for communities historically lacking access to care. Telehealth, virtual care, health information exchange, and future technology innovations all require reliable broadband and connectivity. Without addressing the digital barriers to health, the combination of telehealth, data exchange, and technology will not fulfill its potential of increasing equity and access to health care for California communities.

Social Determinants (or Drivers) of Health (SDoH) are the conditions and environments that influence health risks and the overall wellbeing of people. Broadband impacts many SDoH, making it a super determinant of health. Existing disparities in availability, affordability, and adoption of broadband and technology tools were intensified by COVID-19. These disparities have only increased as more essential aspects of life, such as school, work, and health care continue to move to an online platform or modality. To fully participate in today’s rapidly changing economy and modern society, all individuals need access to digital tools, devices, and skills training. Despite the advancements in technology, communities across California continue to face immense challenges and barriers in achieving digital equity.

## THE OPPORTUNITY

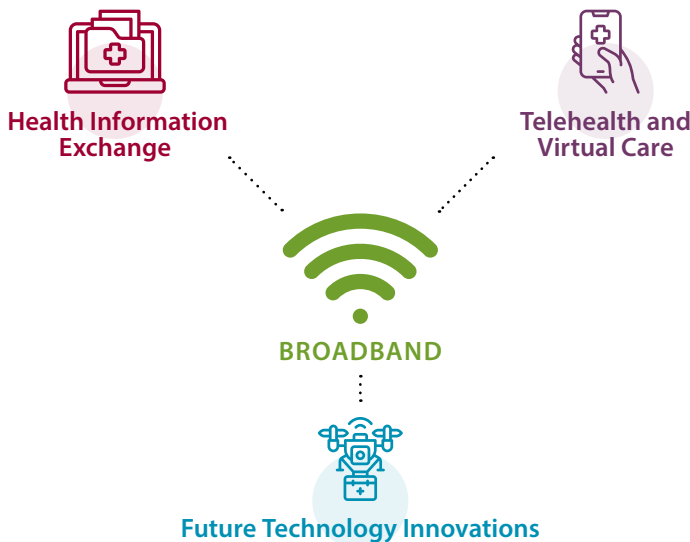
**Historic, One-Time \$6 Billion Investment in Broadband <sup>1</sup>**

**+**

**Policy Change Making Telehealth a Permanent Health Care Delivery Tool in Medi-Cal <sup>2</sup>**

**=**

**Opportunity for More Accessible Health Care and Better Health Outcomes**



## PURPOSE OF THIS ISSUE BRIEF

This issue brief emphasizes the actionable ways health care stakeholders and the health care delivery system can harness this pivotal moment in California to close digital equity gaps and ensure an equitable and accessible future of health. This brief highlights the roles health care stakeholders can and should take in closing the digital divide, the state and federal regulation of broadband, and where and how to meaningfully engage in efforts to advance digital equity at the state and local levels. This issue brief also includes highlights and lessons learned from ongoing community-driven digital equity initiatives ITUP has been working on.

## BACKGROUND: SETTING THE CONTEXT FOR DIGITAL EQUITY IN CALIFORNIA

## CALIFORNIA BROADBAND POLICY TIMELINE

2010

The California Broadband Council (CBC) was established by [SB 1462 \(Chapter 338, Statutes of 2010\)](#) to promote broadband deployment in unserved and underserved areas of the state as defined by the California Public Utilities Commission (CPUC), and broadband adoption throughout the state.

August 2020

Governor Newsom signed [Executive Order N-73-20](#) directing the CBC to develop a statewide Broadband Action Plan and promote digital equity throughout California.

July 2021

The [Fiscal Year \(FY\) 2021-2022 budget](#) allocated a \$6 billion multi-year investment that will give more Californians access to broadband coverage. Governor Newsom signed the trailer bill [SB 156](#) to accelerate the state's commitment to closing the digital divide by increasing equitable, affordable access to high-speed internet service across California.

July 2021

The [FY 2021-2022 budget](#) allocated \$3.25 billion of the broadband investment funds to develop, acquire, construct, maintain, and operate a statewide "open-access middle-mile" network overseen by the California Department of Technology (CDT) and the Office of Broadband Digital Literacy. The design and construction of the middle-mile network is monitored by the Middle-Mile Advisory Committee (MMAC).

July 2021

The [FY 2021-22 budget](#) allocated \$2.75 billion broadband investment funds to last-mile infrastructure grants, the establishment of a loan-loss recovery account, and a technical assistance program overseen by the CPUC.

## CALIFORNIA TELEHEALTH POLICY CONTEXT

Prior to the COVID-19 pandemic, telehealth and virtual care were not widely used as a health care delivery tool. For Medi-Cal members, significant [policy barriers](#) prevented the use of telehealth, especially for primary care and behavioral health. In March 2020, the federal Centers for Medicare and Medicaid Services (CMS) and the California Department of Health Care Services (DHCS) approved telehealth flexibilities for Medi-Cal providers and members during the public health emergency (PHE).<sup>2,3</sup>

Approved flexibilities, such as payment parity and both audio or video modalities, facilitated telehealth as a permanent health care delivery tool and extended the reach of care to low-income Californians which, historically, includes communities most impacted by the digital divide.<sup>2,3</sup>

## FEDERAL AND STATE REGULATION OF BROADBAND

## Federal Communications Commission (FCC)

The FCC is the federal agency that sets the standards for broadband speeds and collects broadband data. Per the Infrastructure Investment and Jobs Act (IIJA), the FCC is tasked with adopting final rules to facilitate equal access to broadband services that prevent digital discrimination and promotes equal access to robust broadband internet service. The cross-agency Task Force to Prevent Digital Discrimination oversees the development of model policies and best practices that states and local governments can adopt to ensure internet service providers (ISPs) do not engage in digital discrimination.<sup>4</sup>



## National Telecommunications and Information Administration (NTIA)

The NTIA is the federal agency that advises the President on telecommunications and information policy issues. The NTIA established anchor institutions and helps establish broadband infrastructure through various programs such as, the [Digital Equity Act \(DEA\)](#), and [Broadband Equity Access and Deployment \(BEAD\)](#). NTIA's [Broadband Infrastructure Program](#) is a \$288 million broadband deployment program directed to partnerships between a state and providers to support broadband infrastructure deployment to areas lacking broadband, especially in rural areas.



## California Public Utilities Commission (CPUC)

The CPUC is the state government entity that initiates rulemaking and regulations and oversees the implementation of many broadband investments, including broadband infrastructure and collecting broadband accessibility data. The CPUC makes broadband data publicly available to inform public policies intended to direct broadband projects equitably.<sup>5</sup>



## California Department of Technology (CDT)

The CDT is the state government entity of public data, has broad responsibility and authority over all aspects of technology in California state government including oversight of the Broadband for All Initiative. CDT's [Office of Broadband and Digital Literacy](#) manages the statewide ecosystem of individuals and organizations dedicated to closing the digital divide.



## BROADBAND AND DIGITAL EQUITY AT THE STATE LEVEL

At the state level, there are many opportunities where health care entities can engage to elevate digital equity needs that make health care more accessible to California communities, especially for those who have historically faced barriers to accessing health care.

### California Broadband for All Initiative

Led and administered by the CDT, the Broadband for All Initiative advances California's commitment to addressing digital inequities. Access to affordable reliable broadband is key to creating equity and impacts education, workforce development, economic development, health care, and public safety.

- **California Broadband Council (CBC)**  
Promotes broadband deployment in unserved and underserved areas (as defined by the CPUC) and broadband adoption throughout the state.
- **Middle-Mile Advisory Committee (MMAC)**  
CDT's Office of Broadband and Digital Literacy oversees the design and construction of the middle-mile network and created a [nine-member MMAC](#) which monitors the development and construction of the open-access middle mile network.
- **State Digital Equity Plan (SDEP)**  
Will identify barriers to and promote digital equity for California communities. The SDEP will serve as a blueprint for allocating federal funding to equitably close the digital divide.
  - **Outcome Area Workgroups (OAWGs)**  
Convenes subject matter experts and practitioners to develop strategies that align with SDEP priorities through the lens of the digital equity barriers of ten covered populations. There are six OAWGs in total, including the health and digital literacy and inclusion workgroups which are most relevant for advancing digital equity in health care.

### CPUC: Digital Equity Rulemaking

CPUC rulemaking develops regulations for the implementation of broadband investments and for creating broadband accessibility maps. The CPUC:

- **Open-Access Middle-Mile**  
Identifies priority areas for middle-mile network locations that will enable last-mile service connections.
- **Federal Funding Account**  
Disseminates \$2 billion in funding for last mile broadband infrastructure projects to connect unserved and underserved Californians with high-speed broadband service. [Rulemaking \(R.\) 20-09-001](#)
- **Loan Loss Reserve**  
Oversees \$750 million funds related to financing deployment of broadband infrastructure by local governments or non-profit agencies. [Rulemaking \(R.\) 20-08-021](#)
- **Local Agency Technical Assistance (LATA grants)**  
Oversees the \$50 million program to reimburse Tribes and local agencies for pre-construction expenses facilitating deployment of broadband network projects to areas in need. [Rulemaking \(R.\) 20-08-021](#)
- **California Advanced Services Fund (CASF)**  
Disseminates \$150 million funds each year to provide broadband access to no less than 98% of California households in each consortia region.
- **Rural and Urban Regional Broadband Consortia Grant Account**  
Provides grants to assist with infrastructure grant applicants in project development or grant application process for consortia's facilitating deployment of broadband services. [Rulemaking \(R.\) 20-08-021](#)

## CALIFORNIA BROADBAND POLICY TIMELINE

### November 2021

The Infrastructure, Investment, and Jobs Act (IIJA) set forth a \$65 billion investment into broadband of which \$48.2 billion will be administered by the National Telecommunications Information Administration (NTIA).

### November 2021

The IIJA included \$42.5 billion for the [Broadband Equity, Access, and Deployment \(BEAD\) Program](#) to expand high-speed internet access by funding planning, infrastructure deployment, and adoption programs.

### December 2021

The FCC launched the [Affordable Connectivity Program \(ACP\)](#) to help eligible households reduce their monthly internet bill by up to \$30, and \$75 for households on qualifying Tribal lands.

### July 2022

CDT submitted the [State of California's application](#) for the NTIA's State Digital Equity Planning Grant Program and it is currently under review.

### December 2022

CPUC received \$5 million in [BEAD funding](#) for the initial State Digital Equity Plan (SDEP) planning process.

### January 2023

CDT began developing the BEAD-funded [SDEP](#) and will include five key components designed to meet the goals of the Digital Equity Act (within the IIJA) while supporting California's vision, objectives, and strategies for digital equity.

### \*November 2023

SDEP will be submitted to NTIA.

\*As of May 2023, this is the proposed timeline to complete and submit the SDEP report to the NTIA.

## TAKING ACTION: HOW HEALTH CARE CAN ADVANCE DIGITAL EQUITY IN CALIFORNIA

## HEALTH CARE ROLES IN CLOSING THE DIGITAL DIVIDE

To ensure that the historic investments in California to close the digital divide include solutions to break down digital barriers to health equity and health care access, health care stakeholders need to engage at all levels of government and in wide ranging activities. Stakeholders include:

- [California Health and Human Services Agency](#)
- [Department of Aging](#)
- [Department of Health Care Services](#)
- [Department of Public Health](#)
- [Department of Social Services](#)
- [Department of Health Care Access and Information](#)
- [Center for Data Insights and Innovation](#)
- Clinics
- Hospitals
- Health Plans
- Health Care Providers
- Community Health Workers/Promotores/Representatives
- Enrollment Navigators
- Community-Based Organizations

## EXAMPLES OF ROLES FOR HEALTH CARE STAKEHOLDERS

### Participate in State-Level Initiatives to Elevate the Unique Needs to Create Equitable, Accessible Health Care

Health care stakeholders at the state and local level have a critical role in shaping the implementation of the California Broadband for All Initiatives and CPUC rulemaking and regulations. For example, health care stakeholders can, and should, provide public comment and input into the development of the middle-mile infrastructure projects and the SDEP (See ITUP's report: [Informing California's State Digital Equity Plan](#)). In addition, health care stakeholders can also provide [comments](#) to the CPUC to inform regulations and rulemaking. Historically, health care voices and issues are not raised in broadband-related efforts, but recent one-time investments being made by the state provide the opportunity for those voices to be included to further break down digital barriers to health care. All of these efforts drive the priorities of both broadband infrastructure and available funding and resources. If health care stakeholders are not at the table, the opportunity to address digital barriers to health care will be missed.

### Contributing to the Data: Who Faces Digital Barriers to Care and What are They?

While there are ongoing state and federal advocacy efforts to improve broadband maps, it is unclear when accurate data will be publicly available.<sup>4,5,6</sup> Accurate broadband maps would help illuminate geographic regions facing digital barriers to health. In the meantime, Californians struggling with lack of broadband and connectivity will continue to be left behind. The health care ecosystem, especially those serving Medi-Cal members through community clinics and community-based organizations providing direct care to consumers, can play an active role in collecting and using digital barrier information. This direct source data can be used to guide programs and solutions for broadband and connectivity issue barriers that are preventing the effective use of telehealth and technology to access care.

### Leveraging Health Facilities for Community Broadband

[Anchor Institutions](#) are flagship community institutions such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that are sometimes connected to fiber even when fiber services are not commercially available to the broader community. Because of this, they can function as a connection to the Internet backbone—facilitating broadband access for vulnerable populations.<sup>7</sup>

The terms anchor institutions and community anchor institutions can be used interchangeably. Many anchor institutions already serve as central hubs for communities to access available resources, including supports for broadband access. Anchor institutions such as those under the umbrella of health care, can also play a more direct role in providing broadband access to communities by enhancing their broadband infrastructure to provide the network directly to the communities they serve.

### Funding Support for Anchor Institutions

[BEAD funding](#) can be leveraged to deploy and/or upgrade broadband network facilities to provide or improve service to community anchor institutions. BEAD-funded community anchor institution projects must be centered around equity and inclusivity and include a plan to promote outreach efforts to their community's. Anchor institutions can and should promote awareness of and engagement in opportunities that community members can engage in on broadband and digital literacy.

## Addressing Digital Literacy and Inclusion

To make telehealth and virtual care equitable and accessible for all Californians, digital skills training will be needed for both consumers and providers. The health care workforce, including community health workers/promotores, will be at the forefront of helping patients navigate digital platforms and engage on telehealth. Training in digital navigation will be paramount.



## Connecting People to Existing Broadband Adoption Programs

Programs like the Affordable Connectivity Program (ACP) are available to the nearly one-third of Californians enrolled in the state's Medi-Cal program.<sup>8</sup> Health care stakeholders can and should play a role in making sure those eligible are aware of and enrolled in the internet and connectivity programs that might be available to them. This could include internet subsidies, like those afforded by the ACP program, local assistance programs, and services to get people access to devices and digital literacy training etc.



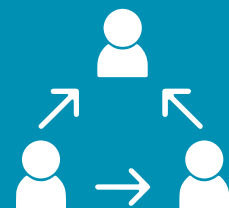
OF THE  
**5.8 million**  
 ELIGIBLE CALIFORNIANS  
**only 2.1 million**  
**(36%)**  
 are enrolled in the ACP.<sup>9</sup>

### Affordable Connectivity Program (ACP) Context

Prior to the ACP program, the Emergency Broadband Benefit (EBB) was created to assist those in need during the pandemic offering a broadband discount of up to \$50 per month towards broadband service for eligible households, and up to \$75 per month for households on qualifying Tribal lands. The EBB expired at the end of 2021 and the IJA provided \$14.2 billion to modify the EBB to be the longer-term ACP offering long-term support for eligible households. However, many estimate that based on current trends, the ACP is likely to run out by Summer 2024.

## Create, Join, or Lead a Regional Broadband Consortia

Across the state, there are fifteen active regional broadband consortia supported by CPUC CASF funds. In some, but not all, and likely not even most, regions, health care stakeholders are not active participants in their regional consortium. Health care stakeholders can and should leverage these existing community collaboratives to gain insight into regional-level broadband and digital equity efforts, to build and contribute to digital inclusion ecosystems, and to build partnerships to find the resources to lift up and move community broadband projects forward. In regions without an active consortium, motivated stakeholders can apply to the CPUC to create and/or lead a new consortium.



## INSIGHTS FROM ITUP'S REGIONAL PROJECTS

Just as health care is local, digital equity work is also powerful at the local level. Beginning in 2020, and ongoing in 2023, ITUP has worked at the county and local levels on projects to include and/or leverage health care as solutions to advance digital equity. All regions and geographies are impacted by the digital divide. Specific digital equity and broadband needs, however, vary greatly across the diverse communities in California, resulting in a need for tailored solutions that meet the unique needs of the impacted individuals and families. For example, in rural, unserved regions of the state, broadband infrastructure promised by the Middle Mile Initiative is a top priority, whereas, in more urban underserved regions where backbone infrastructure already exists, last mile solutions and internet affordability are bigger broadband barriers.

While the highlighted projects in this brief are ongoing, there is valuable insight gained from the progress that has already been made. **This section of this issue brief aims to elevate awareness of three key projects and identify the conditions needed for successfully moving the needle forward in addressing digital equity and breaking down digital barriers to health.**

## LESSONS LEARNED: REGIONAL PROJECTS TO ADDRESS DIGITAL EQUITY

### REGIONAL PLANNING: CREATING AN ACTION PLAN TO ADDRESS DIGITAL EQUITY FOR BETTER HEALTH

**Summary:** The Coalition for Digital Health Equity in San Joaquin Valley was formed in 2022 to promote equitable digital health among underserved populations in the region.

A 4-month long research and planning project aimed at:

1. Understanding the needs for broadband access and digital literacy;
2. Identifying gaps in resources to address those needs; and,
3. Developing a short-term roadmap to highlight the Coalition's priorities for immediate action.

In 2023, the Coalition is moving forward to operationalize their digital equity plan.

### LESSONS LEARNED

Coordinating and combining priorities with local partners formed a regional digital inclusion ecosystem—the first step toward making their vision a reality.



### LESSONS LEARNED

Intentional leadership and engagement from the community is fundamental in becoming a successful anchor institution.



### ANCHOR INSTITUTION: LEVERAGING A HOSPITAL'S INFRASTRUCTURE TO BRING BROADBAND TO A COMMUNITY

**Summary:** In some rural regions of the state, including Plumas County, access to broadband is limited or nonexistent. To add to the disparity, in recent years, several massive and devastating wild fires throughout the rural north counties have decimated the existing broadband infrastructure. ITUP worked with Seneca Healthcare District to create partnerships with funders and community members to explore how to leverage the hospital as an anchor institution for this community. This project is pending the state Middle Mile infrastructure and a community leader to help build the community network the hospital can then become a part of.



## COMMUNITY POWER BUILDING AND ADVOCACY: DRIVING CHANGE WITH A CROSS-SECTOR COALITION

**Summary:** Starting in 2020, the California Community Foundation launched a multi-year [Digital Equity Initiative](#) to build a cross-sector coalition to build community power in advocating for fast, reliable, and affordable internet for Los Angeles communities.

This coalition is made up of community and advocacy organizations in:

- Education
- Immigration
- Environmental justice
- Housing
- Health care

Coalition Advances Digital Equity by:

- Mobilizing at the county and the state level
- Engaging in story banking
- Conducting on-the-ground research
- Providing technical assistance for state and local government engagement

## LESSONS LEARNED

Visionary leadership and commitment are essential in gaining community investment.

Cross-sector collaboration, power building, and leveraging the organizations that understand the needs of the communities is essential for moving the needle forward for digital equity.



## CONDITIONS THAT DRIVE SUCCESS IN LOCAL DIGITAL EQUITY INITIATIVES

Across all three local projects summarized above, there are key conditions that are critical to success, including: a strong, dedicated organization, entity, or leader to organize, convene, and move a project forward, an inclusive regional broadband consortia, and cross-sector engagement.

### ORGANIZING LEADER

A dedicated leader is crucial to the success of local digital equity initiatives. Identifying a community leader that both understands the health care system and can dedicate time and resources to organizing the local environment (health and other non-health community stakeholders) is necessary as it takes time, motivation, and resources to successfully complete a broadband planning process, build a digital equity coalition, and research, write, and operationalize a digital equity plan. A leader that can champion the needs of a community is imperative to ensuring that the local solutions to digital equity will best serve the community. Even without a global pandemic to recover from, health care leaders and the health care delivery system are experiencing a workforce crisis and major implementation challenges caused by state initiatives like California Advancing and Innovating Medi-Cal (CalAIM) and coverage expansion efforts. Having a dedicated community leader will ensure:

- The right community partners are engaged and leveraged,
- There is timely advocacy and engagement at the local and state levels,
- Funding opportunities are leveraged to support the work, and,
- The project continues to make progress.

### ACTIVE AND INCLUSIVE REGIONAL BROADBAND CONSORTIA

Across the state, there are [fifteen active regional broadband consortia](#) supported by the CPUC CASF funds (out of the Rural and Urban Regional Broadband Consortia Account). These consortia can and should be utilized to facilitate community-driven collaboration to assess and identify community broadband and digital equity needs and potential solutions to bridge connectivity gaps. In the regional project summaries, [San Joaquin Valley Regional Consortia](#) (led by the California Partnership for the San Joaquin Valley) and [Los Angeles Digital Equity Action League](#) (LA DEAL) Consortia (co-led by LA Economic Development Corporation and UNITE-LA) are examples of engaging and inclusive regional consortia that are driving action for digital equity in their respective regions.

However, not all regional consortia are inclusive of important sectors, such as health care, in their convenings and activities, but despite this, they remain an important partner in moving local initiatives forward. Successful engagement with local regional consortia, or the effective recruitment of a local leader to apply for funding to organize a regional consortium that fills a community gap, can provide support to build community power and drive progress for local digital equity initiatives.

### CROSS-SECTOR ENGAGEMENT

Broadband being a super determinant of health innately means that to be effective, solutions to expand access and adoption of broadband cannot and should not exist in a vacuum. Local initiatives need to include health care, business and economic development, education, government, human rights advocates, economic justice advocates, and more. The more industries and sectors at the table, the more resources that can be braided together and leveraged, and the better chances there are for the communities most impacted by the digital divide to get connected to reliable, sufficient, and affordable internet.

**Adoption of Broadband:** The process of obtaining daily access to the internet, either through personal devices or a secure and convenient network. It must be fast and effective to complete regular online activities.<sup>10</sup>

**Anchor Institutions:** Flagship community institutions such as a school, library, health clinic, health center, hospital, or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that are sometimes connected to fiber even when fiber services are not commercially available to the broader community. Because of this, they can act as a connection to the Internet backbone—facilitating broadband access for vulnerable populations.<sup>7</sup>

**Bandwidth:** The speed of transmitting information across a network. Generally, a higher bandwidth is desirable, especially the more individuals and devices use the same source of broadband. The amount of bandwidth available to you can determine whether you can download a photo in 2 seconds or 2 minutes.<sup>11</sup>

**Broadband:** The shorthand for quality internet service. Broadband provides high-speed internet access via multiple types of technologies, including fiber-optics, wireless, cable, and satellite.<sup>11</sup>

**Broadband Speed:** Typically, there are two different types of speeds the average consumer uses: download speed and upload speed.<sup>12</sup>

- **Download Speed:** Also referred to as downstream internet connection, download speed refers to the rate at which the user's device can receive data from the internet.<sup>12</sup>
- **Upload Speeds:** Also referred to as upstream internet connection, upload speed refers to the rate at which the user's computer can send data to the internet. Often times, DSL and cable internet only offer upload speeds at 1/10 of download speeds, which make them insufficient for modern data internet needs, like live video calls or virtual conference presentations. Fiber-optic internet networks more readily have robust connections for both upload and download needs.<sup>12</sup>

**Community-Based Organizations (CBOs):** Local, nonprofit organizations with close ties and built trust in communities that provide services to address the public health, social services, and/or health care needs of their community. The functions, structure, and services by a CBO are dependent on the needs of each community.<sup>13, 14</sup>

**Digital Equity:** The state of all members of a community having equal access and sufficient digital literacy to use communications technology.<sup>7</sup>

**Digital Literacy:** The skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information.<sup>10</sup>

**Digital Navigator:** An individual who directly assists community members in home connectivity, using the internet, devices, and software, and other skills necessary to use digital tools, such as telehealth.

**Digital Redlining:** The systematic process by which specific groups, typically low-income and marginalized communities, are deprived of equal access to broadband services thus further perpetuating and exacerbating inequities.

**Fixed Wireless:** A connectivity model that uses stationary wireless technology to bridge the “last mile” between the Internet backbone and the subscriber/consumer. This can be contrasted with **Mobile Wireless** which is transmitted from a stationary source to a moving cellphone, tablet, or laptop (cellular data, for example).<sup>15</sup>

**High Speed Access:** Access that is not less than 100 megabits per second for downloads nor 20 megabits per second for uploads and latency that is sufficient enough to support real-time, interactive applications, such as telehealth services.<sup>10</sup>

**Internet Service Providers (ISPs):** An entity that provides broadband services to subscribers/consumers.<sup>7</sup>

**Last Mile:** The portion of the internet which connects ISPs' shared infrastructure to end users, such as homes or businesses. For example, in a cellular wireless network, the last mile is the wireless connection between a base station and an individual mobile device.<sup>7</sup>

**Middle Mile:** Most often referred to as the network connection between the region and/or local network to the core network, or, the greater internet. For instance, in a rural area, the middle mile would likely connect the town's network to a larger metropolitan area where it interconnects with major ISPs.<sup>7</sup>

**Municipal Mile:** A broadband network owned by a local government, or “municipality.” These networks take many forms, from modest networks serving a few businesses to networks that are available at every address across a community. Some are run by the municipality and others are managed by an ISP under contract.<sup>7</sup>

**Telehealth:** The delivery of health care, health education, and health information services via remote technologies.<sup>16</sup>

**Unserviced Household:** A household that has insufficient or unaffordable broadband options.



## Endnotes

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## About ITUP

ITUP is an independent, nonprofit, health policy institute that has been a central voice in the California health policy landscape for more than two decades. ITUP serves as a trusted expert, grounded in statewide and regional connections with a network of policymakers, health care leaders, and stakeholders. The mission of ITUP is to promote innovative and workable policy solutions that expand health care access and improve the health of all Californians.

ITUP is generously supported by the following funders:

- California Health Care Foundation
- The California Endowment
- The California Wellness Foundation



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