

Informing California's State Digital Equity Plan

May 2023

Introduction

On April 12, 2023, Insure the Uninsured Project (ITUP) and the Institute of Local Self-Reliance (ILSR) held an in-person Broadband Bootcamp event, *Closing Equity Gaps Broadband Bootcamp for Health Care Stakeholders*. Over twenty health stakeholders including representatives from state government, policy, philanthropy, and the health care delivery system attended the bootcamp and contributed to the conversations that culminated in this report.

Throughout the event, participants connected on how digital equity impacts health care delivery for California communities. The bootcamp agenda included: opportunities for attendees to learn about broadband; explore state-level opportunities to engage in broadband and digital equity initiatives; and learn how to contribute to the State Digital Equity Plan (SDEP) by planning actionable ways the health care sector can facilitate closing the digital divide to make the future of health care more accessible and equitable.

The California Department of Technology (CDT) presented during the second panel, *Elevating Health Care Connectivity Needs*, providing an overview of the SDEP and the current takeaways of the Health Outcome Area Workgroup (OAWG), and the upcoming Broadband Equity, Access, and Deployment (BEAD) Regional Planning Workshops. Following CDT's presentation, ITUP facilitated a workshop to gather information and data on the digital equity needs of the populations served by those in attendance. The discussions that took place during the workshop are highlighted in this report.

Question 1: What are the digital barriers to health you've encountered in your work and/or what digital barriers to health have the communities you serve faced in accessing health care?

Participants identified digital barriers to health that are grouped into four categories or themes, including:

- Lack of Broadband Availability and/or Adoption
- Lack of Digital Literacy/Navigation/Education Programs and Technical Capacity
- Lack of Data and Information on Individual and Community Needs
- Systemic Barriers Impeding Utilization of Telehealth for Communities

In addition to these themes, participants also broadly discussed a need for transparency in the SDEP planning process and how the state's investments in broadband and digital equity will impact California

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communities. Historic investments in broadband are being made at the state and federal levels and there is a need for transparency and accountability in the role of stakeholders in the planning and grantmaking processes. As the SDEP planning moves forward, it will be critical to have clear communication with stakeholders to ensure that community voices drive the allocation of these historic investments toward solutions that address the needs of California's covered populations. As of the time of the bootcamp, participants were unclear on how the available funds are being used and whether there are sufficient funds to support statewide infrastructure needs, and if those investments will support California communities equitably.

#1: Lack of Broadband Availability and/or Adoption

Broadband Affordability

- Many California communities are unable to afford broadband/Wi-Fi subscriptions because it comes down to either purchasing Wi-Fi service, or groceries and medications. Seven in ten Californians are unable to purchase broadband for \$60/month or less (excluding promotions and government programs) and six in ten Californians are unable to purchase a fiber internet plan.ⁱ In the San Joaquin Valley, the percentage of households with internet subscriptions decreases as incomes increase across the region (San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and Kern Counties). Even among higher-income earning households (\$75,000 or more), up to five percent of households are not connected. This is even more salient for older adults living on fixed incomes.
- Although subsidies are available through the [Affordable Connectivity Program](#) to assist low-income Californians with internet affordability challenges, many individuals and families are not aware of the program and how to access the resources. For context, of the 5.8 million eligible California households, only 1.9 million (33%) are enrolled in the Affordable Connectivity Program.ⁱⁱ ITUP, along with its partners, and the California Emerging Technology Fund (CETF), have been engaged in [outreach to health stakeholders](#) about the ACP program. In addition, federal funding for the [ACP program will exhaust summer 2024](#).

Disparities in Broadband Availability

In the San Joaquin Valley, seven of eight counties have less internet access (by availability of Internet Service Providers, ISPs) than California in general, and all eight have lower rates of internet adoption compared to state averages. In isolated and unconnected communities across California, provider shortages and broadband unavailability render health care professionals inaccessible. The absence of broadband availability in rural counties results in communities continuing to experience an ongoing health crisis.

#2: Lack of Digital Literacy/Navigation/Education Programs and Technical Capacity

Digital Literacy/Education Programs

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Participants identified digital literacy and a lack of digital skills as a major digital barrier to health—especially in making telehealth an accessible health care delivery tool. Insight from participants include:

- Many individuals lack the basic digital skills to set up, or use the Internet;
- Patients and telehealth users lack training/support to effectively participate;
- Digital literacy support benefits patients and health care providers in telehealth settings. Participants identified the need for providers to receive training in digital inclusivity. These skills are needed and can positively impact California's health care workforce perceptions and utilization of telehealth as a health care delivery tool;
- There are relatively few programs available for digital navigators, digital skills training, and digital literacy, and none that are specifically focused on telehealth and virtual care;
- Workforce shortages are prevalent across the state, inhibiting consistent workflows, and digital navigators are no exception. Given the ongoing workforce crisis, there are minimal digital navigators and supports in California's workforce. Their work has been immensely impacted, complicating their ability to connect California communities with the resources and supports they need to successfully participate in today's rapidly changing economy and modern society; and,
- Older Californians experience ageism associated with technology and a lack of digital literacy training. Even available technology assistance results in hesitancy to use technology for this population.

Language Barriers – Inhibiting Communities from Accessing Health Care

For Californians who have broadband access, can afford it, and have a device to utilize telehealth, many are still faced with yet another herculean challenge: language access. With minimal translators available to support non-native English-speaking patients, many are left to rely on their children and other family members as translators/interpreters during appointments. Many non-English speaking patients are unfamiliar with basic digital skills (i.e., emails, myChart, patient portal, etc.) and thus rely on their family members to assist and guide them through this process. Insufficient staffing to support synchronous interpretations during appointments and translation of patient materials (reports, diagnosis, instructions for care, etc.) significantly impact the length, quality, and patient experience of the appointments.

Device Access

Access to appropriate and sufficient devices varies across demographic groups in California. Low-income households are less likely to have access to devices, with 10% of Californians reporting not having a desktop, laptop, or other computing device at home.ⁱⁱⁱ Device access is especially limited among low-income, Black, and Latinx households. In addition, older adults that do have access to devices, typically use older technology that is not updated enough to facilitate synchronous video appointments or chats.

#3: Lack of Data and Information on Individual and Community Needs

Participants identified the need for more data and information collection to better capture the overlap of digital and health equity. Data and information need, and concern include:

- A concern that there is little to no information available on the direct impact of broadband/digital literacy/devices on health outcomes. The lack of clear understanding of who in California has adequate access to high-quality broadband services, devices, and digital literacy is problematic for defining and addressing digital equity issues in health care, and;
- A related concern around the ability to identify digital barriers to health that patients are experiencing. For example, health plans, including Medi-Cal Managed Care Plans, currently use claims and encounter data to identify and track telehealth utilization across different modalities. However, current health data cannot capture a patient's connectivity (availability of internet and/or appropriate devices) or digital skill status. In the Medi-Cal program (low-income Californians in this program are more likely to experience digital barriers to telehealth and virtual care), telehealth is a relatively new health care delivery tool and data collection is limited. To identify and break down digital barriers to health care, the following connectivity data is vital: 1) broadband availability, 2) broadband affordability, 3) access to devices, and 4) digital literacy needs.

#4: Systemic Barriers Impeding Utilization of Telehealth for Communities

California has made strides in removing policy barriers to telehealth, particularly for Medi-Cal members, including payment parity and permitting different telehealth modalities. However, at the local level, there is a lack of commitment and buy-in necessary to increase the utilization of telehealth services for communities. The lack of support and compliance from counties, health plans, providers, hospitals, and clinics significantly impacts who can access telehealth services. Less access to high-quality broadband services results in less utilization of telehealth services consequently decreasing individual/consumer buy-in of telehealth and virtual care.

Question 2: How do digital barriers to health contribute to, or worsen health disparities?

There is insufficient data to effectively study the direct correlation between digital inequities and health disparities and outcomes, much of the evidence comes in the form of anecdotes. Additionally, telehealth and virtual care were infrequently used or not used at all as health care delivery tools for individuals and communities served by the Medi-Cal program before the pandemic. Therefore, there is scant rigorous evidence to connect the dots between digital barriers and their impacts on health disparities. There were two anecdotes shared at the event on this topic.

- Being unconnected, especially in a crisis, is fatal to California communities. With social-isolation orders during the COVID-19 pandemic, hospitals being flooded with patients, and even some rural hospitals closing, the mortality rate of individuals in Central Valley communities increased because they could not access health care. Public transportation interruptions due to the

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pandemic, lack of personal transportation options, hospital closures, and no access to the internet and/or devices directly contributed to individuals' deaths. Participants from the Central Valley/San Joaquin Valley shared these anecdotes, but it is unlikely that they were the only communities to experience such dire consequences when care was entirely inaccessible during the pandemic.

- Social isolation and loneliness can have huge negative impacts on physical health, increasing the risk of premature mortality. The COVID-19 pandemic implemented social-distancing restrictions preventing in-person visits to skilled nursing homes, long-term care facilities, and the homes of older adults. Health vulnerabilities and stay-at-home ordered social isolation were particularly challenging for many older adults, exacerbating their circumstances. Many were fearful, hesitant, and reluctant to use any devices that were given to them as they had no prior experience in using the technology. A trusted messenger, be it a family member (grand-daughter, niece, etc.) or a caretaker who was able to take the time to slowly explain and teach, proved necessary to assist older adults with understanding how to use devices and unlock the ability to connect with family members during such stressful times.

Questions 3-5: 3) What solutions for digital barriers to health care access have you/could you use in your work to make access to health care more accessible for the communities you work for or with 4) What supports or policies are needed to operationalize the solutions identified for breaking down digital barriers? 5) In what ways can the SDEP help support you in breaking down the digital divide to advance health equity in your work (highlighted in purple)?

**In the following section, the questions listed above were combined as all three questions intersect and guide the rationale of the solutions created to address digital barriers to health care access.*

Digital Literacy Programs

There is a need for clear and consistent digital literacy educational programs for patients and providers, as well as for caretakers assisting with accessing telehealth services. This will help address the literacy challenges listed in the section above. These literacy programs and supports should be tailored and appropriate for specific populations including non-native English speakers and older adults (i.e., not a one size fits all approach).

What's Needed from the SDEP:

- *Investment in statewide training and education for providers/patients/users on telehealth; and,*
- *Increase in funding to support a workforce that provides language supports and translation services synchronously during appointments.*

Data Collection Efforts

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Accurate broadband data is needed to reflect the realities of California communities' experiences. Connectivity data is critical, including broadband availability, broadband adoptability, broadband speeds, broadband affordability, access to devices, digital literacy needs, enrollment in ACP, etc.

What's Needed from the SDEP:

- *Allocate funding dedicated to data collection pilots in various regions/counties to assist in creating digital literacy programs that serve the communities; and,*
- *Build infrastructure to support locally relevant and accurate data collection across the state to identify and break down digital barriers to health care such as broadband availability, affordability, access to devices, and digital literacy needs.*

Outreach, Education, and Community Engagement

Amplify community voices throughout the policy-making process.

What's Needed from the SDEP:

- *Provide financial support for technical assistance in digital health navigation and/or support to train community health workers in digital navigation;*
 - *Provide funding to create a technical assistance marketplace that providers, users, and community-based organizations (CBOs) can access to assist the communities they serve;*
 - *Create a centralized location (i.e., TA marketplace for digital health navigation) to gather resources, information, and supports across various regions and disseminate pertinent information to California communities; and,*
 - *Create educational materials for local leaders, elected officials, city council members, etc. to assist in breaking down digital barriers in health care allowing for clear communication and cross-sector partnerships.*
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Appendix A

Roadmap for Digital Health Equity in the San Joaquin Valley

Executive Summary

January 10, 2023

Coalition for Digital Health Equity in San Joaquin Valley

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Valley Children's Hospital

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Introduction

The COVID-19 pandemic has exacerbated existing inequities in our current healthcare system and created greater urgency to identify and deploy innovative strategies to ensure health care for everyone. Enhanced use of digital technologies such as telemedicine, remote patient monitoring and remote patient education can significantly improve access for all patients regardless of where they live and their socio-economic status. Equitable use of technology to improve health must be accompanied by strategies to address barriers to access by underserved communities. The U.S. Internet for All initiative and California Broadband for All initiative are providing much needed focus on delivering digital equity.

The Coalition for Digital Health Equity in the San Joaquin Valley was formed in 2022 to promote equitable **digital health** among underserved populations in the region. The San Joaquin Valley region encompasses eight counties representing both urban and rural populations: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties. The Coalition launched a four-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 the priorities for immediate action. This document summarizes the approach and reports on the Coalition's roadmap for the first year.

Approach

This project was conducted from September to December 2022 with monthly convenings of the Coalition members interspersed with planning committee meetings. The work involved two primary steps. The first step was to assess the state of broadband access and digital health adoption in the region in order to understand the needs and gaps. The needs assessment involved the use of publicly available sources of data that allowed analysis at the level of at least county or zip-code. The second step was prioritization and planning. The identified needs and gaps were prioritized to focus on those which the Coalition could and should address. The roadmap was developed to reflect these priorities along with specified objectives and plans for implementation in 2023. While most of the work was completed remotely, the prioritization activities were conducted during an in-person, facilitated workshop.

Needs Assessment Findings

According to the California Broadband Council there are five major barriers that prevent Californians from accessing or adopting adequate broadband service: availability, affordability, devices, digital skills, and data quality.¹ The status of the San Joaquin Valley is worse than the State of California in general on

¹ <https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/12/BB4All-Action-Plan-Final.pdf>

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four of these barriers to digital equity (data quality was not analyzed).

- **Availability:** Seven of the eight counties in San Joaquin Valley have lower rates of availability of internet access than California in general, and all eight have lower levels of internet subscriptions.²
- **Affordability:** The percentage of households with internet subscriptions decreases with income across the San Joaquin Valley. Even the highest income households (\$75,000 or more) are not all connected, between 1-5% depending on the county.³
- **Devices:** All San Joaquin Valley counties are at or worse than the all-state rate of computer/smartphone device ownership.⁴
- **Digital Skills:** There are only a scant handful of programs in San Joaquin Valley for digital navigators, digital skills training, and digital literacy, and none focused on digital health.⁵

Assessment of the current state of digital health equity—the downstream effect of high quality, reliable and affordable broadband on digital health adoption and health conditions—was challenging.

Assessment was hampered by a lack of local data on health literacy/digital health literacy and adoption of digital health such as remote patient monitoring and telehealth. A few findings were uncovered.

- **Health status:** Based on interactive FCC maps that cross reference health indicators with internet availability per county, most of the San Joaquin Valley experiences high rates of diabetes, obesity, and fair/poor health in the same areas as low internet adoption.⁶
- **Telehealth:** Audio-only telehealth is preferred in low-income groups in California, whereas high-income groups use more video.⁷
- **Telehealth:** Latinx and black populations in California have more difficulty and less satisfaction with telehealth.⁸

The level of need for broadband access and digital health in San Joaquin Valley is deep at every level of the population, both urban and rural, low and moderate-income. Combined with well-documented population health disparities, San Joaquin Valley is a region that requires critical attention to digital health equity.

Digital Health Equity Roadmap

² Coalition analysis of 2021 American Communities Survey data

³ Coalition analysis of American Communities Survey data in 2021 inflation-adjusted income levels

⁴ Coalition analysis of 2021 American Communities Survey data

⁵ Based on an ad hoc search of the web and digital inclusion advocacy organization databases

⁶ <https://www.fcc.gov/reports-research/maps/connect2health/>. FCC broadband data are reliant on ISP-reported data that may not accurately reflect local internet connectivity conditions.

⁷ <https://www.census.gov/programs-surveys/household-pulse-survey/data.html#phase3.5>

⁸ <https://www.chcf.org/search-images/?swpquery=telehealth>

Vision

The Coalition envisioned a future five years hence in which there was universal availability of digital health tools and technologies, supported by both remote and in-person delivery of training curricula, and wide-spread interoperability and integration of technology with healthcare processes. The consequences of the use of digital health resources would include trust among community-based organizations (healthcare and others) who deliver the resources and the residents they serve. In addition, residents and organizations would see better efficiency, access to information, and the ability to communicate their own health stories (e.g., needs, preferences, conditions). Finally, these efforts will lead to better health, satisfaction, and health equity. (See Figure 1)

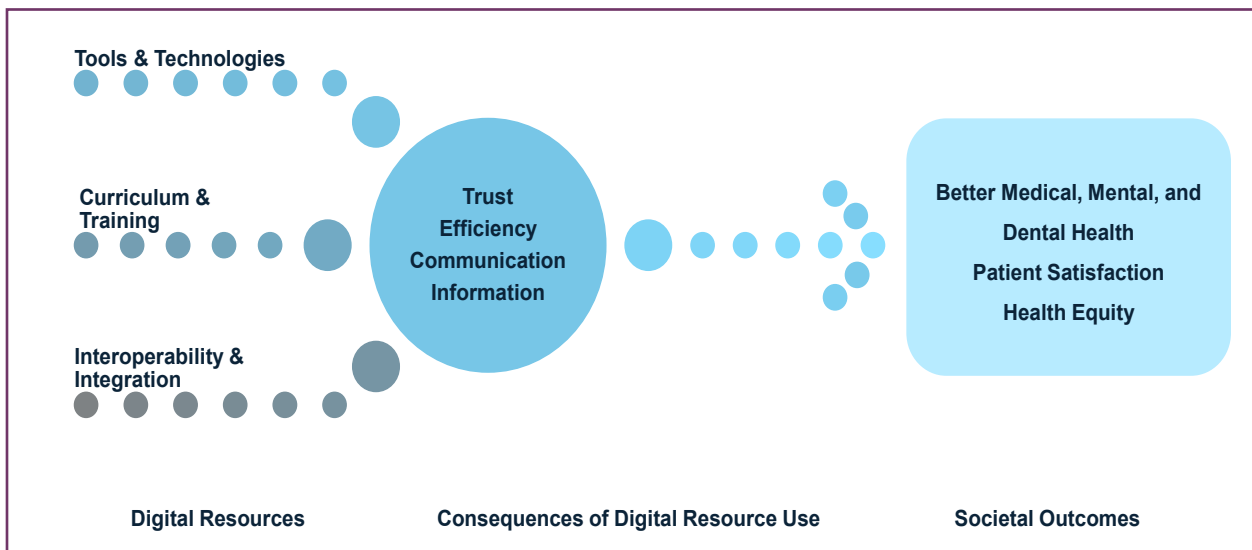


Figure 1. Vision for Digital Health Equity in San Joaquin Valley

To kick-start progress toward this vision, the Coalition determined to engage in three priorities and developed SMART objectives⁹ for each priority to drive action in 2023. Supporting these three priorities is the continued focus of the Coalition including recruiting additional members to partner in the efforts and seeking funding. The three priorities are described below.

Priority 1. Digital Literacy

Result: Demonstration of digital literacy in action

SMART Objective A: The Coalition, led by Tim Curley, will discuss partnering with the FCDI’s digital literacy committee or another relevant organization to conduct an assessment to understand the landscape of existing resources for digital literacy and education that are relevant to digital health uses

⁹ SMART is an acronym for specific, measurable, achievable, relevant, and time-bound.

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(e.g., insurance enrollment, telehealth, portals, health information seeking) and potential scale beyond Fresno. The landscape assessment will be completed, with mutually agreed talking points, and submitted to the Coalition by May 31st, 2023.

SMART Objective B: The Coalition, led by Tim Curley, will partner with an organization that currently provides digital literacy education to develop a pilot program to improve digital health literacy of residents in rural areas, individuals with diabetes, or those with other high healthcare resource needs. The action plan and pilot program will be completed and ready for execution by December 31st, 2023 to begin movement forward for healthcare focused broadband work in the San Joaquin Valley.

Priority 2. Policy Alignment

Result: Digital health policy priorities that connect and align with other sectors

SMART Objective: The Coalition, led by Tim Curley and Eduardo Gonzales, will develop a vision, platform, and related policies on improved digital literacy and full broadband access in support of digital health. It will be important to align the Coalition's policy vision and priorities with the Fresno State Office of Community and Economic Development to leverage the collective resources. The platform will be completed by May 2023 and the work will be facilitated through quarterly group meetings.

Priority 3. Full Broadband Access

Result: Accurate broadband access data for decision-making

SMART Objective: The Coalition, led by Eduardo Gonzales and Kevin Miller, will conduct a pilot with FDCI to develop more accurate maps for broadband availability and speed in Madera and Fresno counties (one rural and one urban county where FDCI has college and school relationships) in order to accurately access gaps. The pilot will build on FDCI's existing data collection and mapping approach with additional resources such as hiring students to expand the impact the FDCI project can have and lead to a strategy for scaling to the rest of the 8-county San Joaquin Valley. The maps and strategy will be presented to the California Department of Technology by December 1, 2023 in order to spur more transparent discussions around access and affordability of broadband, particularly within the last mile of connectivity, that can be translated into recommendations for the community in 2024-2025.

The Coalition will pursue short-term and small wins through each of these priorities and plans to expand on other ideas that were identified in the roadmap development process.

Conclusions

There are tremendous unmet needs related to broadband access and digital health for residents of San Joaquin Valley. The U.S. Internet for All initiative and California Broadband for All initiative provide much needed focus on delivering digital equity over the next five years. However, the Coalition cannot wait for

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these efforts to be completed to begin its work to enable **digital health equity** which builds on this connectivity. The roadmap described in this report serves as the first step toward achieving this vision and the commitment of Coalition members to making the vision a reality.

Acknowledgements

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ⁱ Broadband, [Internet in California](#), Accessed: April 21, 2023.

ⁱⁱ California Broadband for All, [Affordable Connectivity Program enrollment tracker](#), March 2023. Accessed: April 21, 2023.

ⁱⁱⁱ Hayes, J., Gao, N., & Starr, D. California's Digital Divide (June 2022). Public Policy Institute of California. Accessed: April 25, 2023.