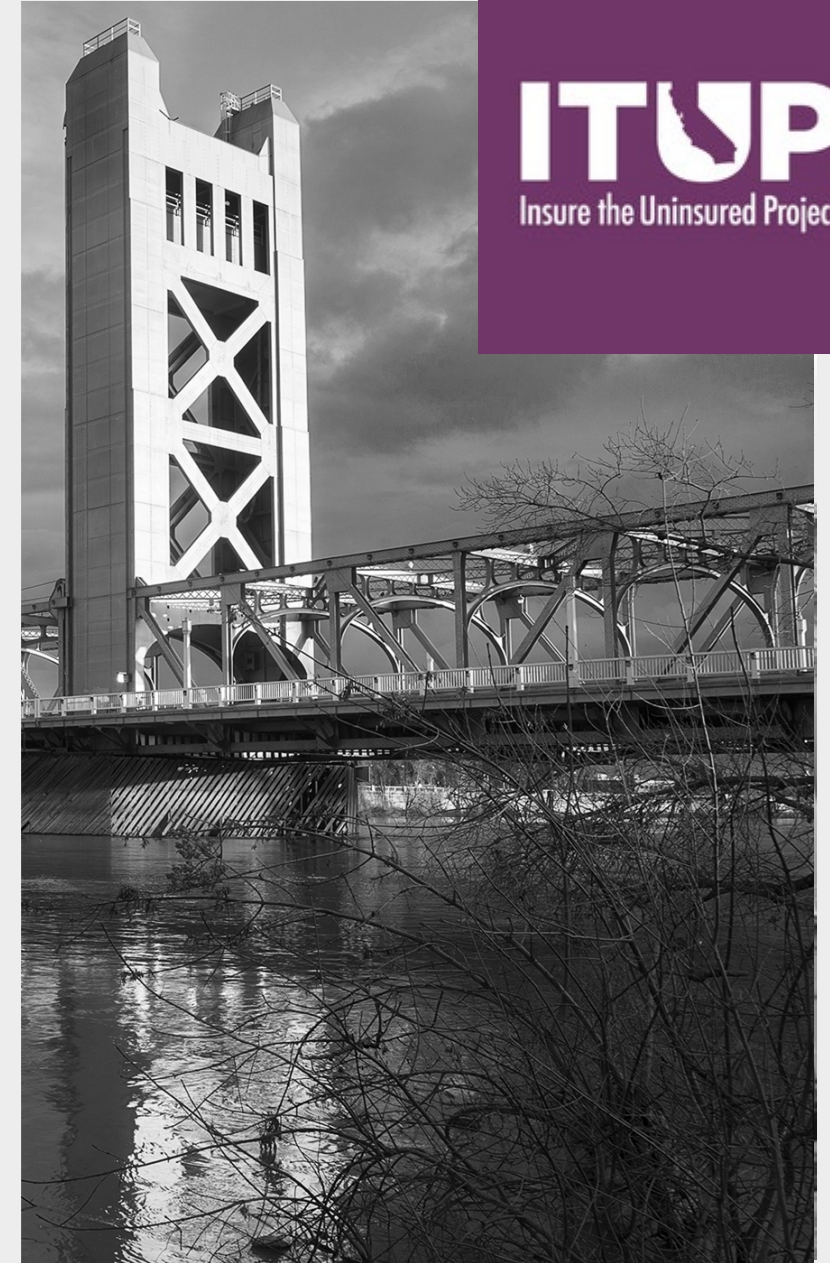


The Role of Digital Health in a Post-COVID Health Care System

2022 Northern California State of Reform Health Policy Conference
March 23, 2022

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About ITUP: Mission and Vision



Mission

Promote innovative and workable policy solutions that expand health care access and improve the health of all Californians.

Vision

ITUP believes that all Californians should have a fair opportunity to live their healthiest lives.

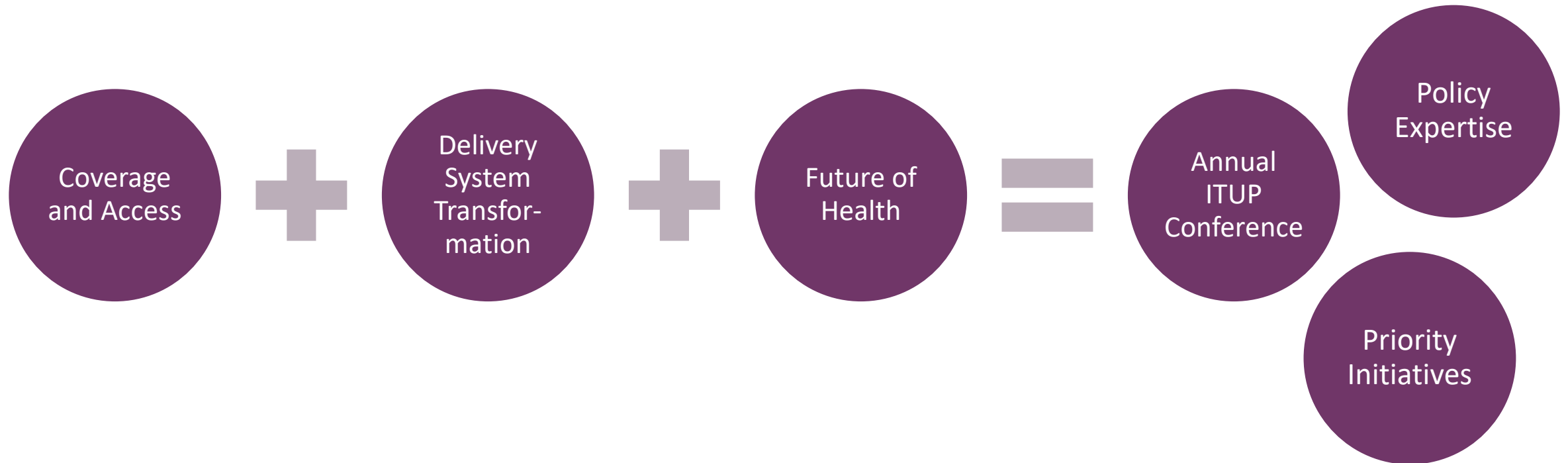
ITUP Values



ITUP seeks a health system that is:

- **Universal** – All Californians are eligible for comprehensive health coverage and services, including primary, specialty, behavioral, oral, and vision health services, as well as services that address the social determinants of health
- **Equitable** – All Californians receive health care coverage, treatment, and services that address the social determinants of health regardless of health status, age, ability, income, language, race, ethnicity, gender identity, sexual orientation, immigration status, and geographic region
- **Accessible** – All Californians have access to coverage options and services that are available, timely, and appropriate
- **Effective** – Health, health care, and related services that address the social determinants of health are person-centered, value-based, coordinated, and high-quality
- **Affordable** – Coverage and services are affordable for consumers at the point of purchase and care; and, at the health system level for public and private purchasers

Key Activities and Policy Priorities



Why Focus on Digital Equity?



- **Our Goal:** Achieve an Equitable and Accessible Health System by Closing the Digital Divide
- **Three Components**
 - Connectivity
 - Access to Devices
 - Digital Literacy
- **Needed to Fulfill the Potential of:**
 - Telehealth and Virtual Care
 - Health Information Exchange
 - Health Access and Equity
 - Future Health Innovations
- **Address the Social Determinants of Health**, including economic mobility and education

Digital Divide Consumer Impacts



- **Slow Broadband Speed**
 - As of December 2019, 96.5% of Californian households reach the 25/3 Mbps broadband access
 - However, only 73.8% of Californian households in rural regions of the state have access to this broadband availability
- **Lack of Affordability**
 - In 2019, 30% of Californians don't have access to low-cost broadband
- **Lack of Access to Devices**
 - More than 1 in 10 Californians don't have a computer
- **Lack of Access to Internet**
 - 889,000 CA residents do not have internet providers where they live, including 365,000 in LA County

How much broadband speed do residents need?

NOTE: The Federal Communications Commission (FCC) sets sufficient broadband speeds at 25 Mbps download speeds and 3 Mbps upload speeds.



1 device	8 Mbps	8 Mbps	25 Mbps
2 devices	8 Mbps	25 Mbps	25 Mbps
3 devices	25 Mbps	25 Mbps	50+ Mbps
4 devices	25 Mbps	50+ Mbps	50+ Mbps

* Download speeds only.

Source

Types of Broadband

- **Fiber-Optic Internet Networks (Fiber):**
 - Considered the gold standard
 - Network uses glass strands to send information
 - Useful life = decades
 - Most scalable technology to make sure future bandwidth needs are met
 - Fiber infrastructure can be 'lit' or active, or can be 'dark' and inactive
- **Phone Lines:**
 - Also Known As: Digital Subscriber Lines (DSL)
 - Internet connection through phone lines
 - Uses frequencies that degrade over distances
 - Consumer needs to be located within a mile of the central office supporting the DSL to have sufficient speeds
- **Cable Modem System:**
 - Cable television services offer internet access
 - Network is based on neighborhoods, where essentially the whole community shares on connection
 - Results in slower, often insufficient speeds for consumers

Key Definitions for Health



Anchor Institutions: Anchor institutions are flagship community institutions 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. Health care facilities, schools, and libraries are examples of anchor institutions.

Digital Equity: The state of all members of a community having equal access and sufficient digital literacy to use communication technologies.

Internet Service Providers (ISPs): An entity that provides broadband services to subscribers/consumers.

Unserved Household: The California Public Utilities Code defines an unserved household as a household for which no facility-based broadband service at speeds of at least 6Mbps downstream and 1Mbps upstream.

Key Definitions for Health



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. Sometimes this is also called the "first mile."

Middle Mile: This is a term most often referring to 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.

Municipal Network: 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.

Other Definitions



Bandwidth: The speed of transmitting information across a network. Generally, 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 download a photo in 2 seconds or 2 minutes.

Broadband Speed: Typically, there are two different types of speeds the average consumer uses: download speed and upload speed.

- **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.
- **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 day 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.

Other Definitions



California Public Utilities Commission: The California regulatory agency that regulates privately-owned public utilities that includes telecommunications, or broadband.

Federal Communications Commission (FCC): The federal agency with the authority in promoting competition, innovation, and investment in broadband services. The FCC defines broadband and determines the metrics for determining whether a household or business has access to sufficient broadband internet. **The current metric was set in 2015 as 25 Mbps download speeds and 3 Mbps upload speeds.**

Fixed Wireless: A connectivity model that uses stationary wireless technology to bridge the “last mile” between the Internet backbone and the subscriber/consumer.^v 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).

How to Engage?



- California Public Utilities Commission (CPUC)
 - [Regional Broadband Consortia](#)
 - [Disadvantaged Communities Advisory Group](#)
- California Department of Technology (CDT)
 - [Middle-Mile Advisory Committee](#)
- [CA Broadband Council](#)
- Legislature
 - [ITUP's Legislative Bills Blog 2022—What We're Watching](#)
- Budget
 - [ITUP's Budget Summary 2022--Key Highlights](#)

Learn More



California Research Bureau:

[https://www.library.ca.gov/Content/pdf/crb/reports/Broadband in California May %202021.pdf](https://www.library.ca.gov/Content/pdf/crb/reports/Broadband%20in%20California%20May%202021.pdf)

Community Networks Fact Sheets and Other Resources: <https://muninetworks.org/content/resources>

Community Networks Glossary: <https://muninetworks.org/glossary>

Electronic Frontier Foundation Key Terms: <https://www.eff.org/wp/case-fiber-home-today-why-fiber-superior-medium-21st-century-broadband>

ITUP Broadband for Health Basics Fact Sheet:

<https://www.itup.org/wp-content/uploads/2021/05/Broadband-and-Health-Basics-FINAL-V1.pdf>

LA County Broadband Report (October 2021):

http://file.lacounty.gov/SDSInter/bos/bc/1113566_UtilizingExistingInfrastructureandResourcestoAccelerateDigitalEquity9-30-21.pdf

Thank You!

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