Addressing the Digital Divide

Virginia Wireless Association

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MITRE | CMS Alliance to Modernize Healthcare

Agenda

- Brief FFRDC Overview
- Definition of Digital Divide
- Barriers to Digital Adoption
- Opportunities Going Forward

FFRDC Overview

Applying a Unique Vantage Point Across Government

We serve as a bridge between government agencies and as a channel for agencies to collaborate with industry and academia.

Because MITRE operates seven different FFRDCs, our sponsors reap the benefits of research and expertise that cut across our entire organization.

MITRE's collaborative culture is an asset for cross FFRDC sharing.

MITRE's Work

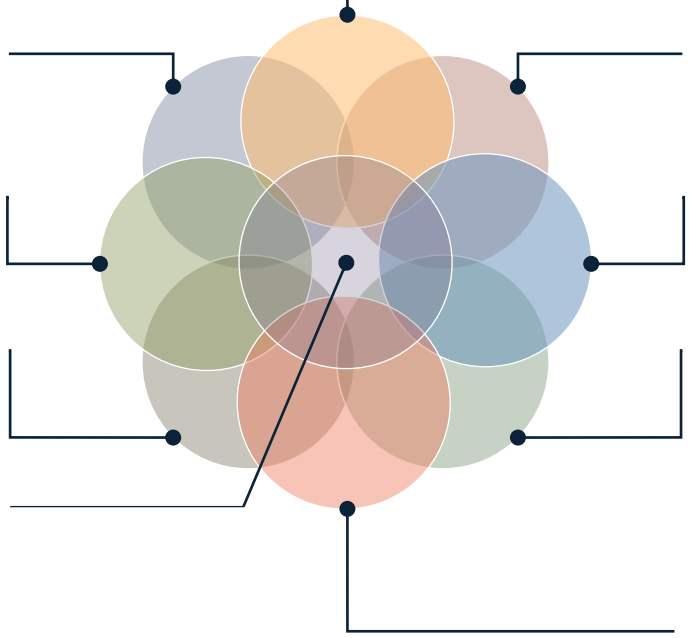
DoD[1]
Department of Defense

FAA
Federal Aviation Administration

DHS
Department of Homeland Security

U.S. Courts
The Administrative Office of the U.S. Courts

Other
In addition to government sponsors, MITRE works with industry, academia, and global partners.



TREASURY[2]
Internal Revenue Service and all Treasury bureaus

SSA
Social Security Administration

NIST
National Institute of Standards and Technology

HHS
Department of Health and Human Services and non-HHS organizations with health/well-being missions

VA
Department of Veterans Affairs

[1] Includes an Intelligence Community that also ranges beyond DoD.
[2] The Center for Enterprise Modernization supports DOC, USDA, OMB, and other federal civilian organizations.

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Defining the Digital Divide

Merriam-Webster defines digital divide as the ”economic, educational, and social inequalities between those who have computers and online access and those who do not“

- **Digital equity has emerged as a *critical component to success* of health, education and economic well being, amplified by pandemic**
- **Key component of digital equity is ensuring that public and private investments in digital connectivity and access *are reaching all* populations including rural, urban, disabled, racial/ethnic minorities and others**
- **High cost of computers *previously viewed* as the most significant barrier to benefitting from digital advancements**
- **Digital divide has shifted from access to computers and smartphones to inequity between those who and do not have *bandwidth* and those who may lack adequate *digital literacy***

- Digital Divide | Definition of Digital Divide by Merriam-Webster (merriam-webster.com)

Call to Action

- **President Biden has called for comprehensive approach to advance equity for all, including people of color and those historically underserved, marginalized, and adversely affected by persistent poverty and inequality**
- **All executive departments and agencies have been charged with addressing inequities in policies and programs that serve as barriers to equal opportunity**
- ***Digital equity* is a core component to address inequities and can help create opportunities for communities that have been historically underserved**
- **The pandemic has magnified gaps between individuals who do and do not have *access to devices and internet across* health, education and economic stability**

- What is the Digital Divide? | The San Diego Foundation (sdfoundation.org)

Broadband Priority for all Individuals

- **Broadband is a key part of HHS Secretary Becerra's plan to address disparities — urban and rural — and to preserve access to digital health after the pandemic,**

- **RWJ Foundation notes that, "Everything from a child's education, to being able to call for an ambulance, to being able to have a telemedicine consult to just being able to find information that might be vital for what you need is really dependent on the quality and the basic access...of your connectivity to the internet"**

- **Although telehealth visits expanded during the pandemic, broadband dead zones and lack of high-resolution video technology, expensive smartphones and unlimited data plans means virtual appointments are still out of reach for many patients.**

The Specifics

Some 15% of U.S. households lack high-speed Internet and 1/3 of low-income households lack high-speed internet

- ***Black and Hispanic adults*** **are less likely than whites to own a computer or have high speed internet at home - 82% of whites, 58% of blacks and 57% of Hispanics own a computer**
- **Ownership of *smartphones is comparable* across populations - some 80% of whites, blacks and Hispanics own a smartphone**
- **Whites are more likely than blacks or Hispanics to report having *broadband connection* at home**
- ***Mobile devices*** **are more likely to be used by black and Hispanic people for online access options**
- **Some 25% of Hispanics and 23% of blacks, compared with 12% of whites , are "*smartphone only*" internet users because they lack broadband service at home but own a smartphone**
- **However, blacks, Hispanics and lower-income smartphone users are twice as likely as whites to have *canceled or cut off* service because of financial challenges**

- **https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/**
- **https://www.pewresearch.org/fact-tank/2019/08/20/smartphones-help-blacks-hispanics-bridge-some-but-not-all-digital-gaps-with-whites/**

Age and Race Challenges

Age and race may also be barriers to digital access

- **More than 30% of US households headed by a person *age 65 or older* do not have a computer and more than half do not have a smartphone**
- ***Children in low-income households* are less likely to have a computer at home compared with higher income students**
- **More than 30% of *Hispanic or black children* do not have a computer at home, compared to 14% of white children**
- **Home internet usage rises with increasing age - some 40% of children ages 3-5 use the internet at home, compared with 57% of age 6-11 and 71% of age 12-17**

- **Ensuring The Growth Of Telehealth During COVID-19 Does Not Exacerbate Disparities In Care | Health Affairs**
- **https://www.childtrends.org/indicators/home-computer-access**

Digital Health Literacy

***Digital health literacy*, or comfort associated with using digital tools, may also serve as a barrier**

- **Some 46% of blacks and 48% of Hispanics believe they would *benefit from training* in using computers, smartphones and the internet compared with 20% of whites**
- **Digital health literacy and equity are closely linked - low literacy levels contribute to digital inequality**
- ***College degree holders* are 10X more likely to routinely use the internet and computers compared to individuals with high school education or lower**
- **Lower education may also contribute to *lack of awareness* and understanding of issues related to privacy, health data use, and data protection**
- **Digital readiness may also include attitudes and behaviors that impact comfort and willingness to use digital technology**

Income Contributors to the Digital Divide

- **Higher-income individuals ($75,000) are 20X more likely to *access the internet* than lower-income individuals ($30,000)**
- **Wealthier families are 10X more likely to *own computers* and have access to high-speed internet than lower-income families**
- **FCC notes significant household income differences between those with and without *broadband***
  - **Almost 30% of adults with household incomes <$30,000/yr do not have a *smartphone***
  - **More than 40% do not have *broadband services or computer*; majority of lower-income adults do not own a tablet**
  - **As of early 2019, 26% of adults from low-income households are "*smartphone-dependent,"* they own a smartphone but do not have broadband internet at home**

- **https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/**

Geographic Contributors to the Digital Divide

Geographical Restrictions

- **Nationally, some 30 million Americans do not have full digital access**
- **While urban and rural areas may lack internet access, *urban regions* are more likely to have access to 4G or fiber optic internet than rural or mountainous zones**
- **Although most without internet access live in rural areas, barriers also impact *urban settings* – In NYC, almost 50% of low-income households lack internet access**
- **97% of Americans in urban areas have access to high-speed, fixed service**
- **Only 65% have access in rural areas and only 60% on tribal lands**

- Digital Literacy and Learning in the United States | Pew Research Center

SDOH Contributors to the Digital Divide

Social Determinants of Health

- **FCC has published the Mapping Broadband Health in America, which highlights connection between health outcomes (e.g., rates of diabetes, obesity and preventable hospitalizations) and Internet adoption and broadband availability**
- **Helps identify regions that lack broadband or have poor health, or both**
- **Part of Connect2Health Task Force's toolkit to better understand how broadband and other technologies can be used to improve access to healthcare**
- **Has found that connected communities have significantly different health status and outcomes than digitally isolated communities**
- **Allows the user to analyze broadband and health data at national, state and county levels to identify gaps and opportunities to expand access to digital health, including telemedicine**
- **The map also helps determine whether people living in certain areas can utilize connected health tools, like healthcare systems online or mobile health apps**

- FCC launches mapping tool to explore link between health, broadband access | MobiHealthNews

Contributors to the Digital Divide

Persons with Disabilities

- **Persons with disabilities have about *half the rate* of Internet access compared with people without a disability, leading to significant digital divide in their ability to effectively utilize the Internet**
- **Both metropolitan and non-metropolitan people with disabilities have lower rates of Internet use than their geographic counterparts with no disability, with *non-metropolitan people with disabilities* having the lowest rate of Internet use (26.7%) of all groups**
- **Divide may create barriers associated with intellectual, visual, and hearing abilities; adapting to changes due to aging; challenges associated with multiple disabilities; differences in fine motor skills and ability to reach or approach equipment**

- Ensuring full participation of people with disabilities in an era of telehealth | Journal of the American Medical Informatics Association | Oxford Academic (oup.com)
- Inclusive Information and Communication Technologies for People with Disabilities | Simpson | Disability Studies Quarterly (dsq-sds.org)

Telehealth for Persons with Disabilities

- Challenges for persons with disabilities may be particularly evident in the rapidly expanding use of telehealth
- Telehealth can be a barrier to care if technologies are not designed, implemented, and applied to meet individual needs
- Video-based telehealth services may need to be enhanced to include communication-related disabilities for individuals who are deaf, hard of hearing, deafblind, blind, low-vision, and speech disabled, as well as individuals who have intellectual disabilities
- As telehealth and other forms of digital health evolve, it will be critical to design tools that are accessible and responsive to their unique needs

Department of Veterans Affairs

- **VA commenced development of a national telehealth infrastructure in FY 2003**
  - Early investments in national telehealth services (e.g., tele-pathology, tele-ICU, tele-audiology, etc.)s
  - Easier transition during COVID-19 to use of telehealth services – with higher increases experienced especially for tele-mental health
- **From provider and patient surveys conducted during COVID-19 by MITRE**
  - For providers (supporting community care for Veterans), highest barriers identified during COVID-19 included:: technology challenges, access to technology and digital literacy related to delivering tele-mental health services
  - Broadband and cellular followed in ranking for barriers from provider perspective
  - Veterans were able to receive preventive care, chronic care, acute care and care related to in-hospital stays via use of telehealth services; continue to receive their prescriptions
  - Most were very satisfied or highly satisfied with telehealth care
- **VA still faces challenges related to**
  - Capturing and comparing quality metrics related to use of telehealth services based on ethnicity, race, religion, etc. – EHR data accuracy continue to be a challenge due to historical inaccuracies that resulted from early physician observation capture of race/ethnicity
  - Integration of SDoH data with the EHR

Support for Solutions

- **The National Telecommunications and Information Administration (NTIA) has created a searchable database of 50 federal broadband programs, from federal agencies with billions of dollars for broadband grants, loans and other resources**
- **The federal programs provide funding for state and local governments, schools, libraries, small businesses and other community institutions that are interested in expanding broadband access**
- **On 11/9/20, FCC announced up to $100 million from the Universal Service Fund to support connected care services to provide health care services to vulnerable populations, including low-income Americans and veterans**
- **Will help defray the costs of connected care services for eligible health care providers, up to 85% of the cost of eligible services and equipment including: (1) patient broadband Internet access services; (2) health care provider broadband data connections; (3) other connected care information services; and (4) certain network equipment**

American Rescue Plan Act support for expansion of broadband infrastructure and initiatives

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Economic Development Administration (Department of Commerce): $3 billion in additional funding to the Public Works and Economic Adjustment Assistance (PWEAA) program through September 2022

Coronavirus Capital Projects Fund (Department of the Treasury): $10 billion for “capital projects directly enabling work, education, and health monitoring, including remote options, in response to the public health emergency”; in addition to capital projects, eligible efforts include ancillary services (such as broadband mapping) to increase efficiencies of capital projects, and cost support efforts (such as subsidies)

Emergency Connectivity Fund (FCC): $7.2 billion for E-Rate support to reimburse schools and libraries for provision of eligible equipment and advanced telecommunications and information services during the pandemic, including for locations other than schools and libraries

Coronavirus State Fiscal Recovery Fund: $219.8 billion for investments in water, sewer, or broadband infrastructure

Coronavirus Local Fiscal Recovery Fund: $130.2 billion for rural community development block grants (CDBG) ($45.6 billion), rural areas ($19.5 billion), and counties ($65.1 billion, population-based), including for investments in water, sewer, or broadband infrastructure

Local Assistance and Tribal Consistency Fund: $500 million ($250 million per year for 2022 and 2023) for Tribal use only “for any governmental purpose other than a lobbying activity”

Thank you
Contact Information

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