

Digital inequity 101

Your guide to understanding digital disparities



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Today's speaker



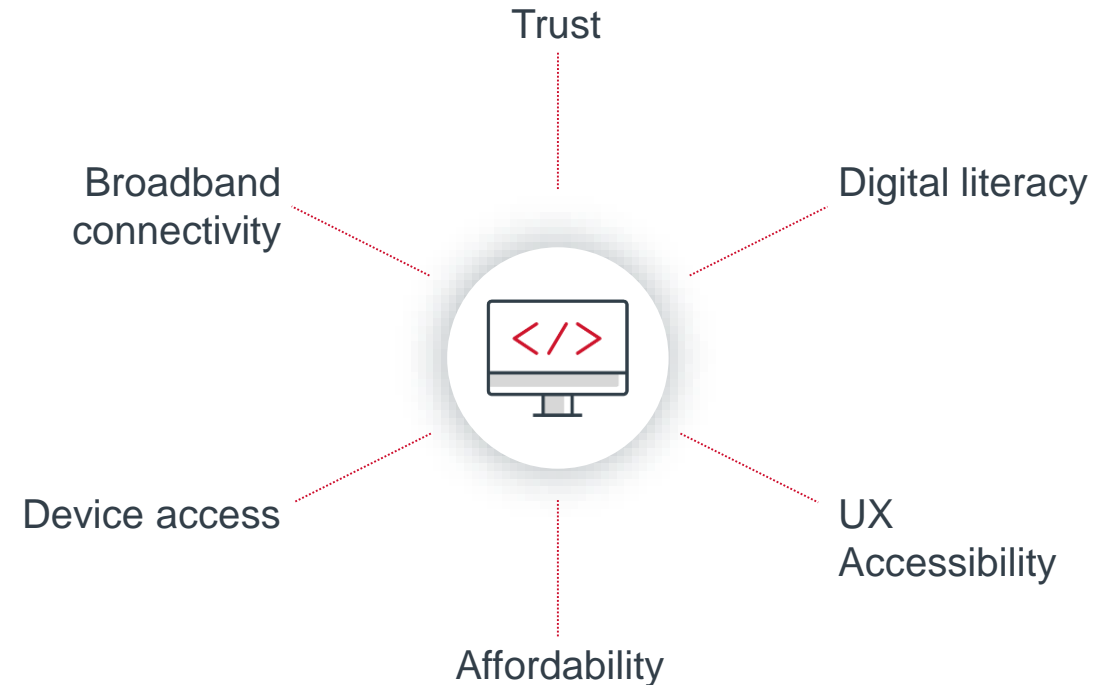
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What is digital inequity?

“Digital literacies and internet connectivity have been called ‘**super social determinants of health**’ because they address all other social determinants of health.

Nature

Elements of digital inequity



Source: Sieck C, Sheon A, Ancker J, Castek J, Callahan B and Siefer A, "Digital inclusion as a social determinant of health," March 17, 2021, *Nature*.

Why we aren't talking about the “digital divide”

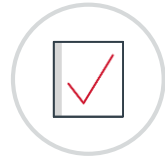
Problematic assumptions built into the term “digital divide”



It is binary



It is an infrastructure problem

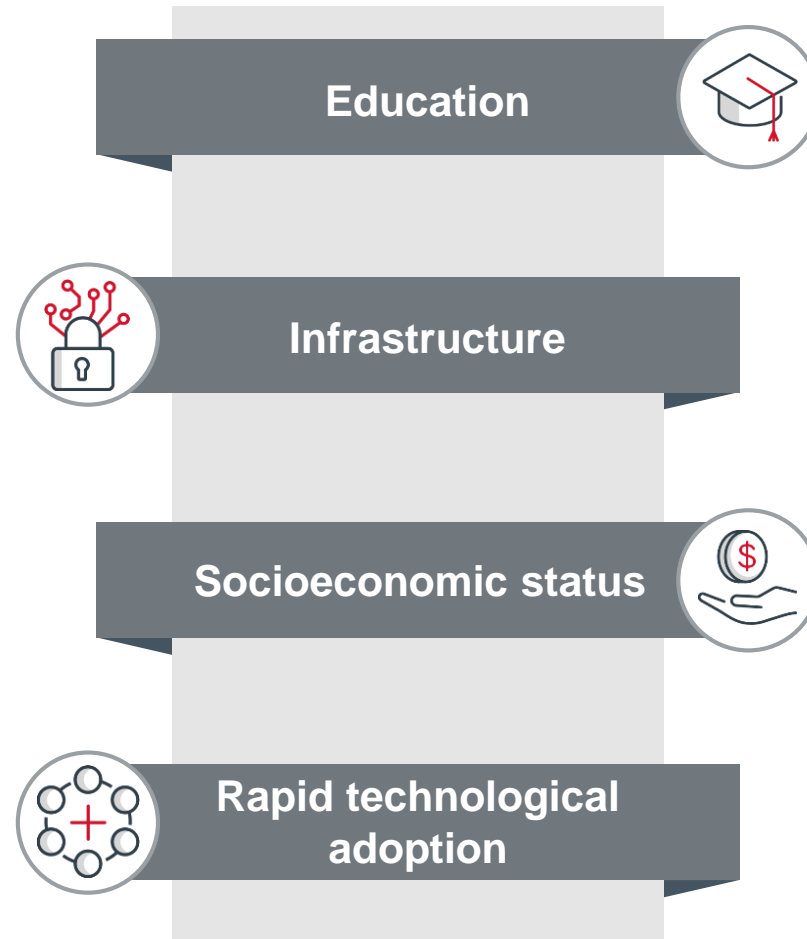


It has a single, finite solution



It is someone else's problem

Structural forces have led to current digital inequities



Covid-19 exacerbates impact of existing inequities

Aspects of daily life that require more technology due to Covid-19



Education



Remote work



Social interaction



Access to groceries



Telehealth

Digital transformation is a top health care priority...

Providers

#1 Digital transformation is CFO's top priority for 2021

78% Of strategic planners expect to increase capital expenditure in IT and digital health technologies

Purchasers

67% Of payers said the pandemic has caused them to increase their outlook for investment in health care IT

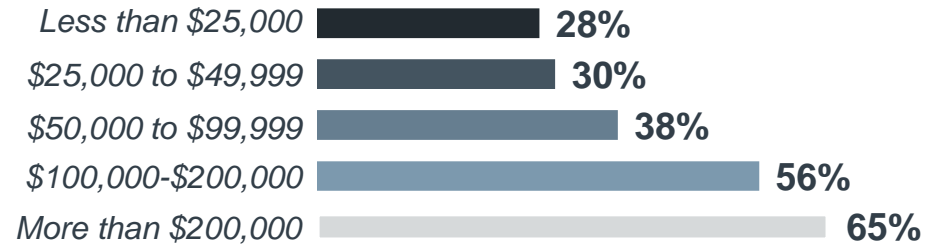
71% Of surveyed employers are accelerating telehealth and virtual care offerings

Source: "[Change healthcare-HCEG research: Covid-19 reshuffles healthcare executives' priorities](#)", Business Wire, September 2020; Gelbaugh C, "[2021 strategic planner survey results](#)," Advisory Board, March 2021; "[2021 BDO healthcare CFO outlook survey](#)," BDO; "[Large U.S. employers accelerating adoption of virtual care, mental health services for 2021](#)," Business Group on Health survey finds," Business Group on Health, August 2020.

...but digital inequities mean patients are left behind

Low-income patients

Telehealth use by income level



Non-white patients

7%

Rate of telemedicine adoption in clinics primarily dedicated to a racially-diverse Medicaid population in Pacific NW

Rural patients

<40%

Percentage of people living 70+ minutes from a PCP who have necessary bandwidth for a telehealth visit

Patients with limited internet skills

48%

vs.

9%

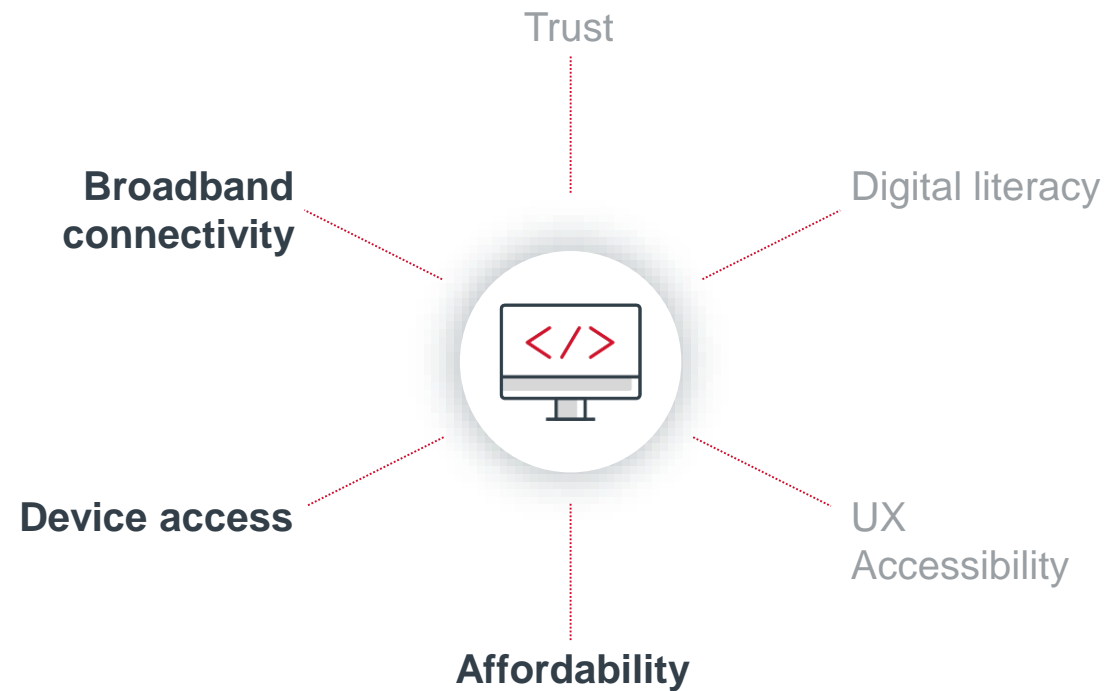
Portal use for patients who use the internet at least once per day

Portal use for patients who do not use internet at least once per day

Source: Thronson, L. et al., "The pandemic of health care inequity," JAMA Network Open, October 2020; Tyrrell R. "How Covid-19 has changed consumer behavior and preferences," Advisory Board, June 29, 2020; "As the country reopens safety concerns rise," Sage Growth/Blackbook Research, May 11, 2020.

Access is a foundational issue

Elements of digital inequity



Source: Sieck C, Sheon A, Ancker J, Castek J, Callahan B and Siefer A, "Digital inclusion as a social determinant of health," March 17, 2021, *Nature*.

Broadband divide is everywhere, not just rural areas

Across the U.S.:

- 42 million lack broadband connection
- Digital redlining in cities systematically expands broadband to wealthy areas only

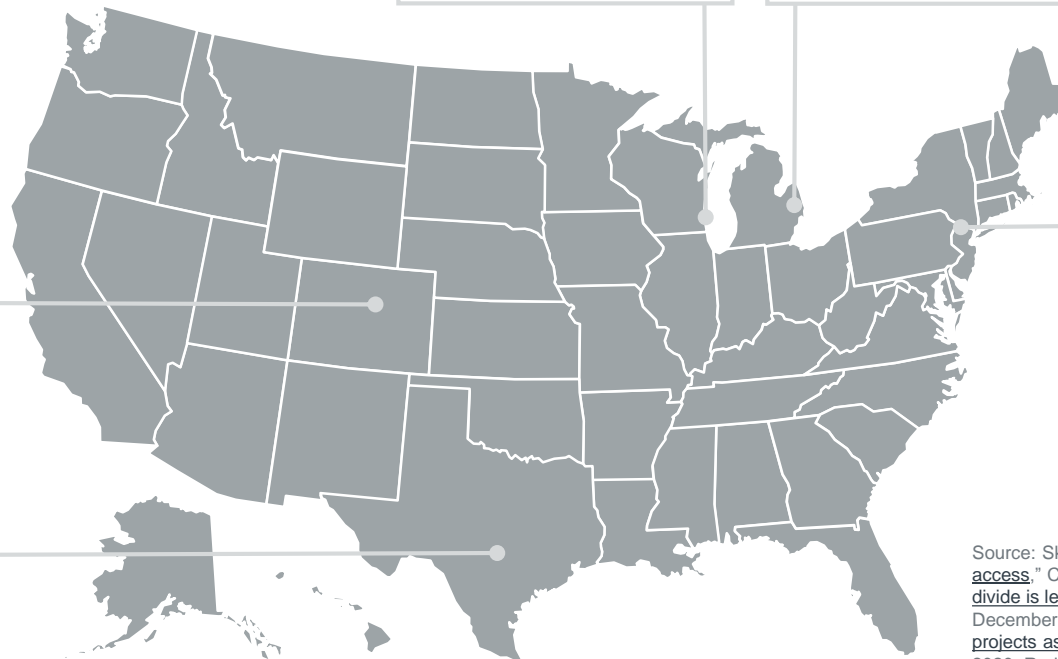
Chicago:
20% of children under 18 lack broadband

Detroit: 40% of households are completely offline

New York:
2.2 million lack broadband

Denver: 20% of residents do not have high-speed internet access

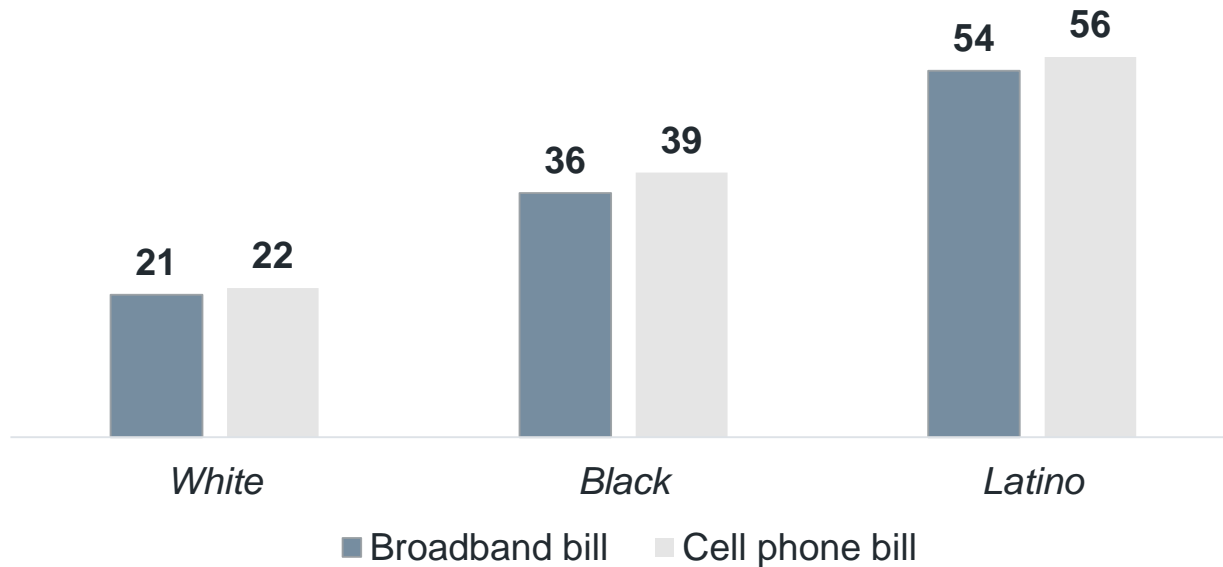
San Antonio: miles of unconnected “dark cable”



Source: Skandul E, “[Why New York City needs universal internet access.](#)” City and State NY, August 2019; Bach T, “[Detroit’s digital divide is leaving nearly half the city offline.](#)” Detroit Metro Times, December 2017; Asher-Schapiro A, “[U.S. cities back broadband projects as COVID-19 exposes digital divide.](#)” Reuters, November 2020; Reddick C, et al., “[Determinants of broadband access and affordability: An analysis of a community survey on the digital divide.](#)” Cities, November 2020.

Why isn't cellular a cure-all? Affordability

Percentage by race worried about paying their broadband or cell phone bill



One woman in particular [canceled] her appointment...after exhausting her monthly allotment. The patient had used up all her time planning her brother's funeral after he died of Covid-19.

Washington Post

Average monthly prices in U.S. for:

Cell phone: \$71

Internet: \$50-60

Starlink: \$99

Source: Vogels E, et al., "53% of Americans say the internet has been essential during the Covid-19 outbreak," Pew Research Center, April 2020; Asher-Ejiofor Z, "Cut your family's cell phone bill," CNN Money, April 2012; Dilley J, "How much should I be paying for high-speed internet?," High Speed Internet, January 2021; Romm T, "Lacking a Lifeline: How a federal effort to help low-income Americans pay their phone bills failed amid the pandemic," Washington Post, February 2021.

Biden calls to revitalize digital infrastructure

American Jobs Plan addresses broadband access and affordability

“Broadband for all: Inside President Biden's \$100 billion plan to improve internet access”

USA Today

“Biden plans to spend \$100bn to bring affordable internet to all Americans”

The Guardian

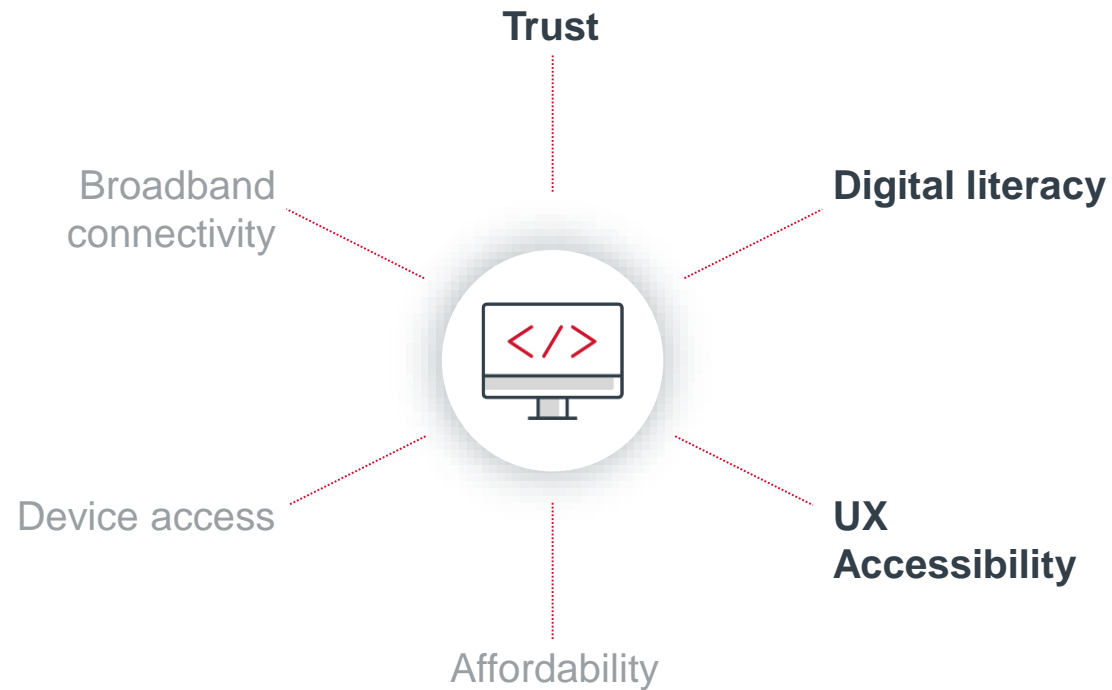
Three areas of focus within the plan

1. Build high-speed broadband infrastructure to reach 100% coverage
2. Promote transparency and competition among internet providers
3. Reduce the cost of broadband internet service and promote more widespread adoption

Source; Arbel, T. "[Broadband for all: Inside President Biden's \\$100 billion plan to improve internet access](#)", USA Today, April 3, 2021; Paul, K. "[Biden plans to spend \\$100bn to bring affordable internet to all Americans](#)", The Guardian, April 1, 2021; "[Fact Sheet: The American Jobs Plan](#)", The White House, March 31, 2021.

Without adoption, access is moot

Elements of digital inequity



Source: Sieck C, Sheon A, Ancker J, Castek J, Callahan B and Siefer A, "Digital inclusion as a social determinant of health," March 17, 2021, *Nature*.

Tech is foundational, but literacy is a true limiting step



The ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

American Library Association



#2

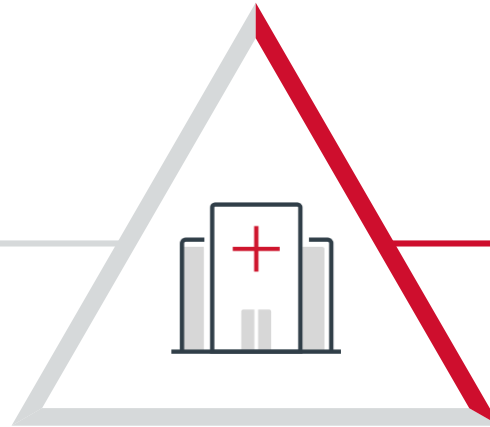
Physicians identify “low digital literacy” as second biggest issue preventing patients from using telehealth, behind only “lack of access to technology”

Digital literacy and digital health literacy are intertwined

Elements of digital and digital health literacy

Digital literacy

- Information search and appraisal
- Functional skills
- Effective communication
- Sociocultural viewpoints
- Critical thinking and evaluation
- E-safety



Digital health literacy

- Symptom and condition research
- Provider and clinic search
- Patient portal use
- Medication adherence
- Telehealth appointments (phone or video)

Source: Shively, K., "Components of Digital Literacy,"
National Library of Medicine, "Digital Health Literacy,"

English proficiency exacerbates digital illiteracy

38%
Reported to the Census Bureau that they speak English “less than very well”

67.3M
Of U.S. residents in 2018 spoke a language other than English at home

48%
Of native Spanish speakers in the U.S. say digital literacy training would help “a lot” in making important decisions.

Source: Center for Immigration Studies, “[67.3 million in the United States spoke a foreign language at home in 2018](#)”; Pew Research Center, “[Smartphones help blacks, Hispanics bridge some—but not all—digital gaps with whites](#).”

Virtual care was not designed for non-English speakers

Digital limitations for LEP¹ patients



Website and patient portal navigation



Medication adherence



Telephone and video visits



Texts and appointment reminders

“I think we’re seeing what the system was built to do. We had built... these virtual care tools [that] weren’t for the limited English population. These tools were for the privileged. When we made the shift from these tools being privileged care to standard care, you see all the people who aren’t able to access them.”

JORGE RODRIGUEZ
Brigham and Women’s Hospital



1. Limited English Proficiency

Source: Westman, N., “[Telehealth wasn’t designed for non-English speakers](#),” *Verge*, June 2020.

Google Translate is not enough

Virginia Department of Health's inaccurate translation of Covid-19 vaccine information



“La vacuna no es necesaria”



✓ “The vaccine is not **required**”

✗ “The vaccine is not **necessary**”



Better clarification with adjusted translation

“The vaccine will not be mandatory for Virginians and there are no legal penalties for refusing it, but we recommend that you get it once it is available.”

Source: WRIC, [“Translation on Virginia Department of Health's Website told readers they didn't need the Covid-19 vaccine.”](#) 2021.

Digital accessibility extends beyond language

Considerations for equitable accessibility



Cultural competency in language services



Visual or audio accessibility accommodations



Inclusive user experience (UX) design

Promoting equity through inclusive UX design

- Language flexibility
- Audio accommodation
- Visual accessibility
- Physical and cognitive considerations
- Reading levels

Digital inequity is a cyclical issue

Cyclical effects of digital inequity

Health care

- Gaps in access, virtual or in-clinic
- Lower health literacy, touchpoints with providers

Socioeconomic

- Disparities in housing, nutrition, and environmental safety



Digital inequity

- Device and broadband access
- Digital literacy

Education

- Poor education opportunities
- Low technical literacy

Employment

- Lower employment opportunities
- Less skill-based positions

Taking the first step to uncover digital inequities

Prerequisite

Measure digital equity challenges at two levels

- Identify populations experiencing digital inequities
- Assess individual barriers to full access

Future steps

Secure access to broadband and devices

- Support initiatives to expand broadband access
- Distribute devices
- Offer alternative options for patients to connect

Ensure patients can use digital tools

- Provide services to improve patient digital literacy
- Incorporate interpreter and language services into digital tools
- Design platforms for improved accessibility and inclusive end-user experience

Collect patient data to clarify who lacks access

Incorporate a digital capabilities assessment at intake

Sample questionnaire:

- *How do you access the Internet at home?*
- *Which devices do you currently use for the Internet at home?*
- *How confident do you feel about doing the following tasks without any help? (send an email, look for information, complete an online form)*

Example resources:

- Intake forms: [San Francisco Digital Equity Intake Form](#)
- Digital literacy assessments: [Northstar's Essential Computer Skills Assessment](#)

Stakeholders can get data at different points in the care journey

- **Payers:** add questions for member onboarding
- **Providers:** monitor ED admissions and add questions to all intake/discharge forms

Source: "[San Francisco Digital Equity Intake Form](#)"; "[Northstar's Essential Computer Skills Assessment](#)," Northstar.

More resources on addressing digital inequity across your organization.

All resources will be shared with all of today's attendees and available on **advisory.com**

 CHEAT SHEET
Digital inequity

Coming soon

 CHEAT SHEET
Digital literacy

 OUR TAKE
Digital inequity



POLL

Where does your organization need the most help with addressing digital inequity?

- A. Attention:** We aren't concerned with these issues as an entire organization
- B. Prioritization:** We recognize the challenge but don't know what to do (or what to do first)
- C. Implementation:** We know what we need to do but don't know how to implement those changes effectively
- D. Change management:** We are doing a lot of things, but we're having a hard time driving change and we get stuck
- E. Sustainability:** We struggle to sustain focus and improve

Questions



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