How Seattle Children's Hospital Limited the Impacts of Digital Inequity

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Improving equity and access to virtual care

Advisory Board

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Overview

The challenge

With the rapid shift to telehealth at the height of the Covid-19 pandemic, the team at Seattle Children's Hospital knew that a portion of their patient population would be left behind. But they didn't have any existing metrics or measurement methods that could accurately identify those patients, making it difficult to help them.

The organization

Seattle Children's Hospital is headquartered in Seattle, Washington. The 400-bed organization provides inpatient and outpatient services across the Pacific Northwest.

The approach

Seattle Children's began addressing digital inequities by layering social vulnerability data on top of patients' locations and no-show rates to identify patients in need. A community resource team works with those patients to determine the best methods of support. Lastly, Seattle Children's Hospital works within the community to deploy loaner devices and set up community kiosks.

The result

The concentrated efforts to address digital inequities helped Seattle Children's Hospital reduce the gap in telehealth use and the variance in MyChart activation rates among different demographic groups. The team also learned valuable lessons in how to increase technology adoption among all types of patients.

Approach

How Seattle Children's identified and supported patients in a proactive manner

Seattle Children's took an innovative approach to addressing digital inequities by proactively identifying patients in need. The team started by layering multiple data points to create a heat map of patients who might benefit from support. The team then partnered with patient resource groups to deploy customized and meaningful solutions to meet patients' individual needs.

The four ways that helped Seattle Children's address digital inequity

01 Layer data to identify patients likely affected by digital inequity

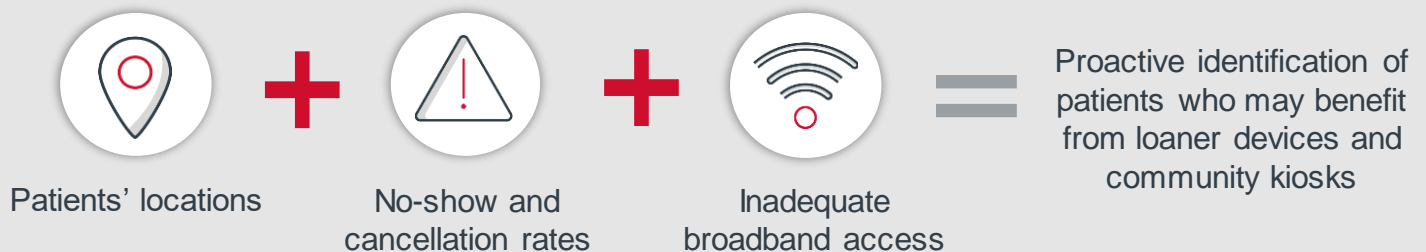**02** Partner with a community resource team to help patients access technology

03 Meet patients' diverse needs with multiple options to access care

04 Design a user-friendly experience to sustain long-term adoption

01 Layer data to identify patients likely affected by digital inequity

Seattle Children's Hospital's data team used proxy metrics to narrow down which patients might be affected by digital inequities. They pulled data points from CDC census data on social vulnerabilities, such as lack of internet access and prevalence of multi-family households. These data points were layered alongside no-show rates and a map of patients' locations. The resulting heat map gave the Seattle Children's team a better idea of regions where patients weren't accessing care because they lacked the necessary digital means. (See figure 1 on page 10.)

How Seattle Children's uses data to identify and support patients

Patients' locations **+** No-show and cancellation rates **+** Inadequate broadband access **=** Proactive identification of patients who may benefit from loaner devices and community kiosks

The different social vulnerabilities can be toggled on and off to get a better understanding of why those patients might benefit from support. For example, areas on the map with high no-show rates and a lack of internet connectivity might benefit from the placement of community kiosks instead of loaner devices.

The heat map has already been useful in addressing digital inequities. Directors use the map for other areas of strategic growth such as kiosk placement, broadband connectivity offerings, telehealth expansion opportunities, and additional services for vulnerable populations.

02 Partner with a community resource team to help patients access technology

The community resource team at Seattle Children's plays a crucial role in building relationships with patients, ultimately earning their trust. Patients, especially those who haven't had a lot of interaction with the health system, often feel uncomfortable asking for help. That makes it difficult for health systems to identify effective methods of support when patients can't, or won't, describe the kinds of support they need.

Seattle Children's community resource team (which existed before Covid-19) includes members who speak most languages used in the area, and all members are trained in cultural humility. (See Our Take on cultural humility.)

Partnering with social workers, the community resource team serves as the intake for patients and families who live in areas identified on the heat maps. The team works with patients to better understand their individual needs and educates patients about potential solutions to determine which would work best. These interactions help the community resource team point patients toward loaner devices or community kiosks. The team also encourages adoption of the virtual care technology through education and digital literacy training.

03 Meet patients' diverse needs with multiple options to access care

Seattle Children's loaner device program and community kiosks, which were funded through grant money, provide options to patients with different needs. For example, loaner programs work well in rural areas where travel is a hurdle to accessing health care. Community kiosks work well in areas with high populations of people who lack access to Wi-Fi.

Loaner program

The loaner program provides patients with tablets and options for internet connectivity so they can access the patient portal and conduct virtual visits. The team at Seattle Children's Hospital retain oversight on the devices by restricting new app downloads and limiting the available apps to Zoom, MyChart, their own Seattle Children's app, and an internet browser. The devices are shipped to the patients for free or can be picked up at a clinic, depending on the patient's preferences.

Community kiosks

Kiosks have been placed throughout communities in public places such as homeless shelters, libraries, and schools. Social distancing requirements during Covid-19 interrupted the placement of community kiosks, but the team at Seattle Children's is exploring future opportunities.

To participate in the kiosk program, every resource location had to sign a memorandum of understanding (MOU) and agreed to wipe the device after every use to ensure privacy.

04 Design a user-friendly experience to sustain long-term adoption

Seattle Children's Hospital knows that successfully reducing digital inequities depends on long-term adoption of the technology. Here are some tactics that Seattle Children's uses to ensure a user-friendly experience:

▷ **Keep devices consistent between inpatient, outpatient, loaner programs, and kiosks**
Seattle Children's Hospital uses the same tablets across all health care settings to make it easier for patients to become comfortable using the technology.

▷ **Accommodate patients with inclusive user experience (UX) design**
The team employed a UX designer to create educational materials and design the technology to support all patients, including non-English-speaking patients and patients who are deaf or hard of hearing. Some of the features included:

- Instructions translated into multiple languages and tailored to specific reading levels

- Sign language, closed captioning, and other accessibility features

- Option for patients who are deaf or hard of hearing to connect with provider who is also deaf or hard of hearing

▷ **Allow patients to use devices for non-health care activities**
In addition to accessing health care, patients can use the devices for things like schoolwork, family Zoom calls, and browsing the internet. Letting patients use the devices other activities helps increase digital literacy, which is critical for education and employment opportunities.

Results

How we know it's working

Seattle Children's efforts to address digital inequity helped close the gap in telehealth utilization between English-speaking and Spanish-speaking patients[1] from a 5% difference in September 2020 to a 1% difference in April 2021. (See figure 2 on page 11.)

The efforts to address digital inequity also helped reduce the disparity in the number of English-speaking versus non-English-speaking patients registered for the patient portal. From February 2020 through March 2021, that difference fell from 30.9% to 6.7%. (See figure 3 on page 12.) Seattle Children's has plans to continue working with community partners to reduce that gap further.

80%
Decrease in the gap in telehealth use between English-speaking and Spanish-speaking patients

78%
Decrease in variance of registration for patient portal among English-speaking and non-English speaking patients

Lessons learned

Seattle Children's is still iterating on solutions to reduce digital inequity. Here are some of the lessons the organization learned from their initial efforts:

1. Plan for legal agreements to be the hardest part of the whole process.

2. Build time into the planning process to find the right resources for the program.

3. Make sure the loaner devices can be controlled remotely in case they're lost or stolen.

4. Ensure there is a constant feedback loop with both patients and physicians participating in the program.

5. Be adaptable and flexible as you build out the program—things won't go according to plan.

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1. Some of Seattle Children's data was broken down into English-speaking and non-English speaking groups. Other data was specifically broken into English-speaking and Spanish-speaking groups.

Supporting artifacts

Figure 1: Heat map with layered data points
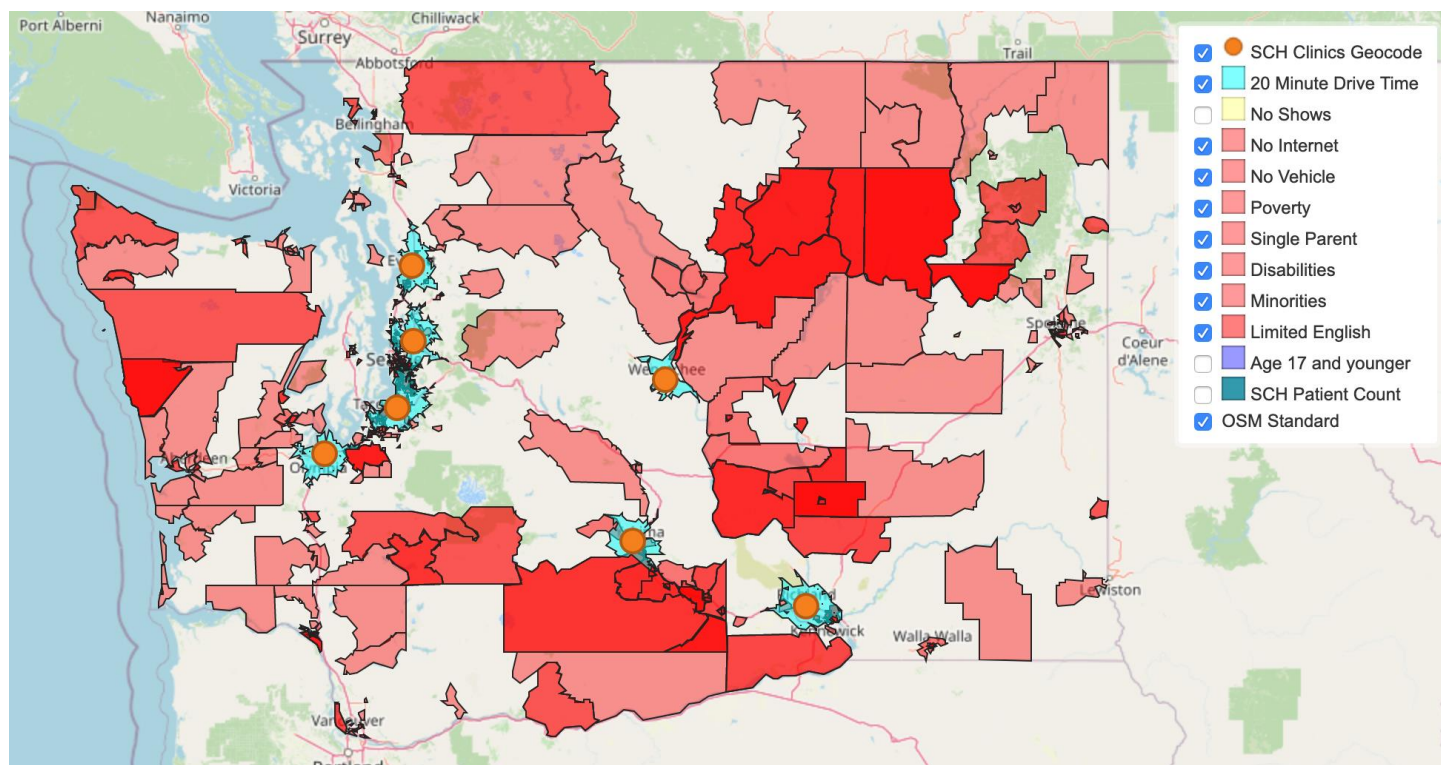
Source: Seattle Children's Hospital

SUPPORTING ARTIFACTS

Supporting artifacts (cont.)

Figure 2: Results – Telehealth visits

Difference in **%Telehealth Visits** between
Families with English Languages and Families with Spanish Languages

Source: Seattle Children's Hospital

Supporting artifacts (cont.)

Figure 3: Results – MyChart Activation Rates

**MyChart Activation
with Key implementation Dates**
Families with English language vs. with language other than English

—— Families with English language

—— Families with language other than English

Telehealth,
04-01-20

Telehealth
expansion with
MyChart,
06-15-20

MyChart
enrollment
content (all
languages),
08-01-20

Called pending
and inactive
MyChart LOE
families (6 weeks),
09-01-20

Telehealth video
on .org page,
10-01-20

EPIC integration,
10-03-20

Loaner device,
Spanish text
reminders (7
and 2 day),
12-01-20

Telehealth
video on .org
page (spanish),
02-01-21

Telehealth
same day link
in 7 languages,
03-02-21

**Widest
gap: 30.9%
difference
(Feb, 2020)**

**Current
data: 6.7%
difference
(Mar, 2021)**

Source: Seattle Children's Hospital

Related content

Advisory Board resources

CHEAT SHEET

Digital inequity

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BLOG POST

The 'digital divide' is stopping your patients from accessing telehealth. Here's how to bridge it.

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BLOG POST

Partnership, persistence, and patience: Key lessons from our panel on digital equity

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WEBINAR

Digital Inequity 101: Your guide to understanding digital disparities

Watch now

STARTER LIST

How to bridge the 'digital divide'

Read now

RESOURCE

Topic page: Social determinants of health

Read now

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