

# Using Human-Centered Design to Build Sustainable Telehealth Services

North Country Telehealth Conference | September 24, 2020

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# The University of Vermont Health Network



**Academic Medical Center:** The University of Vermont Medical Center, Burlington, VT

**5 Community Hospitals:** Central Vermont Medical Center, Berlin, VT

Champlain Valley Physicians Hospital, Plattsburgh, NY

Elizabethtown Community Hospital, Elizabethtown, NY

Alice Hyde Medical Center, Malone, NY (regulatory review)

Porter Medical Center, Middlebury VT

**VNA:** Home Health and Hospice of Chittenden & Grand Isle Counties

UVM Health Network response to COVID-19:

## **All UVMHN Health Network Facilities**

**From 25 to 100+ departments deployed  
including both ambulatory and inpatient  
workflows**

**From 150 to 3200 Telehealth Platform Users  
(Providers and Staff)**

**Created Virtual PPE with TeleVideo devices in  
COVID positive patient rooms and at SNF's.**

**Established TeleVideo Programs for ED to ED  
and ICU to ICU (Critical Care)**

**Key strategies:**

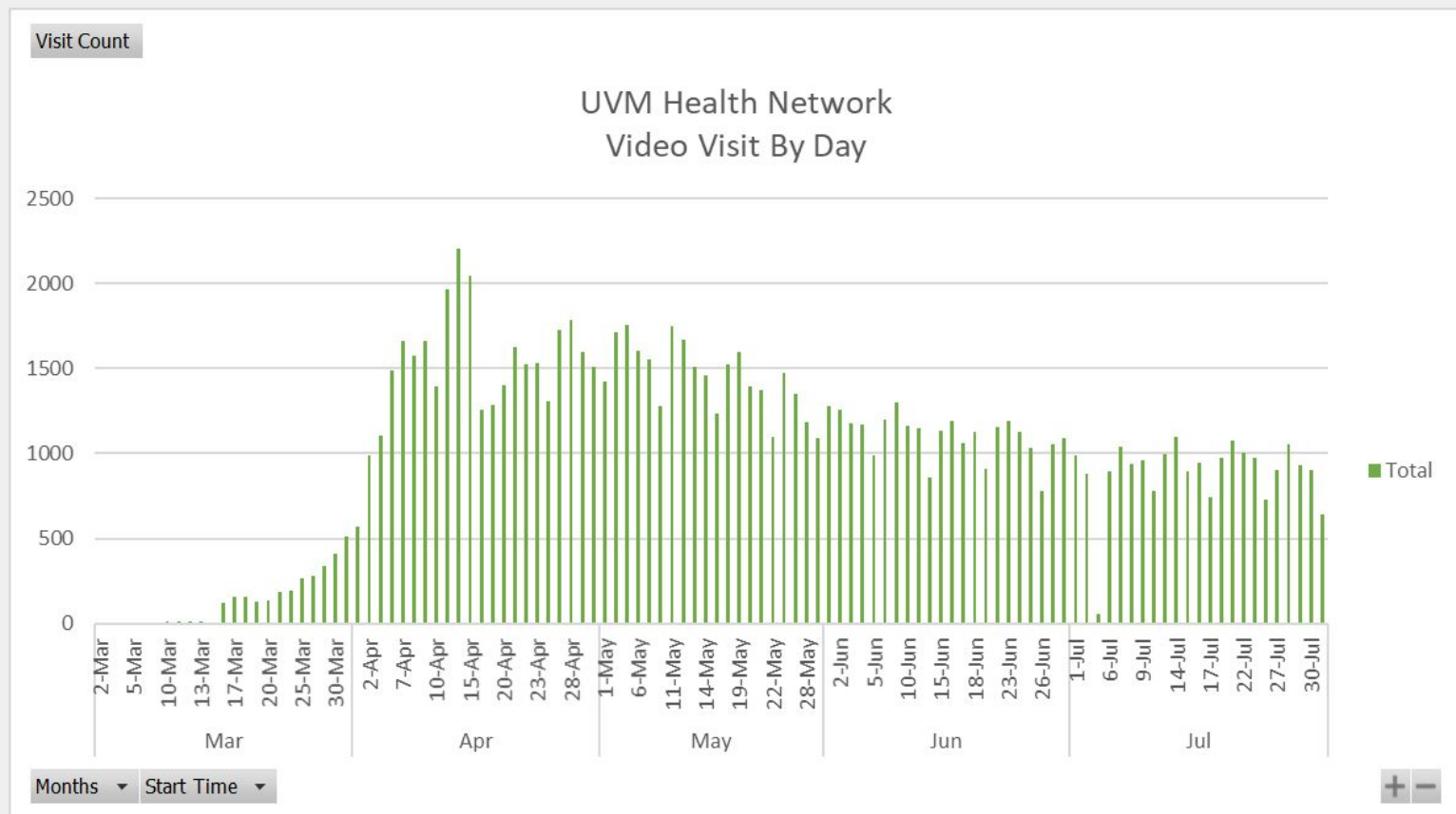
**Partnering with hiCOlab for facilitation and process design**

**Building a multi-functional team from across the organization**

**Creating a patient onboarding and support function with our Patient Access Service Center**

**Launching a remote training response  
Standing up a support hotline**

## Video visit volume:





**In December 2019, Telehealth began an intensive learning project with hiCOLab which was focused on addressed telehealth barriers within Porter Medical Center Primary Care.**

**The goals of the learning project were:**

- To educate the Telehealth team on human-centered design methods and tools.**
- To improve Porter's telehealth program.**
- To help hiCOLab develop and test a design education program for UVMHN.**

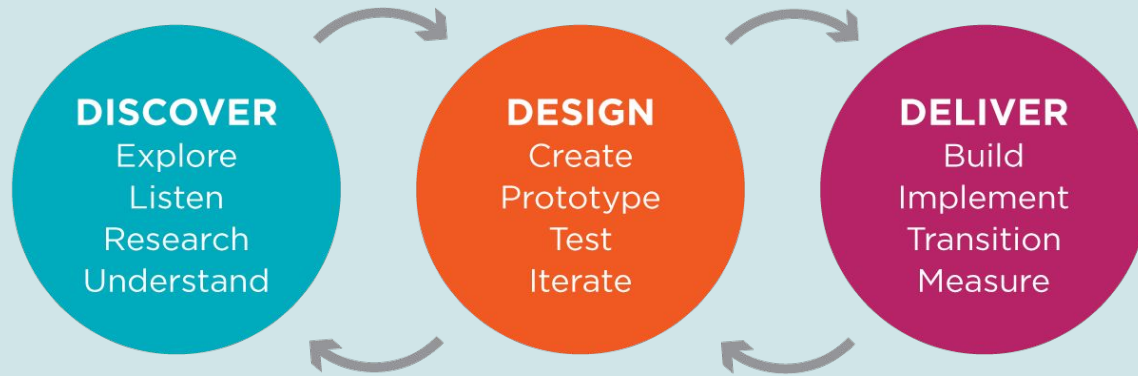




**hiCOLab is a design and innovation lab  
at the UVM Medical Center.**

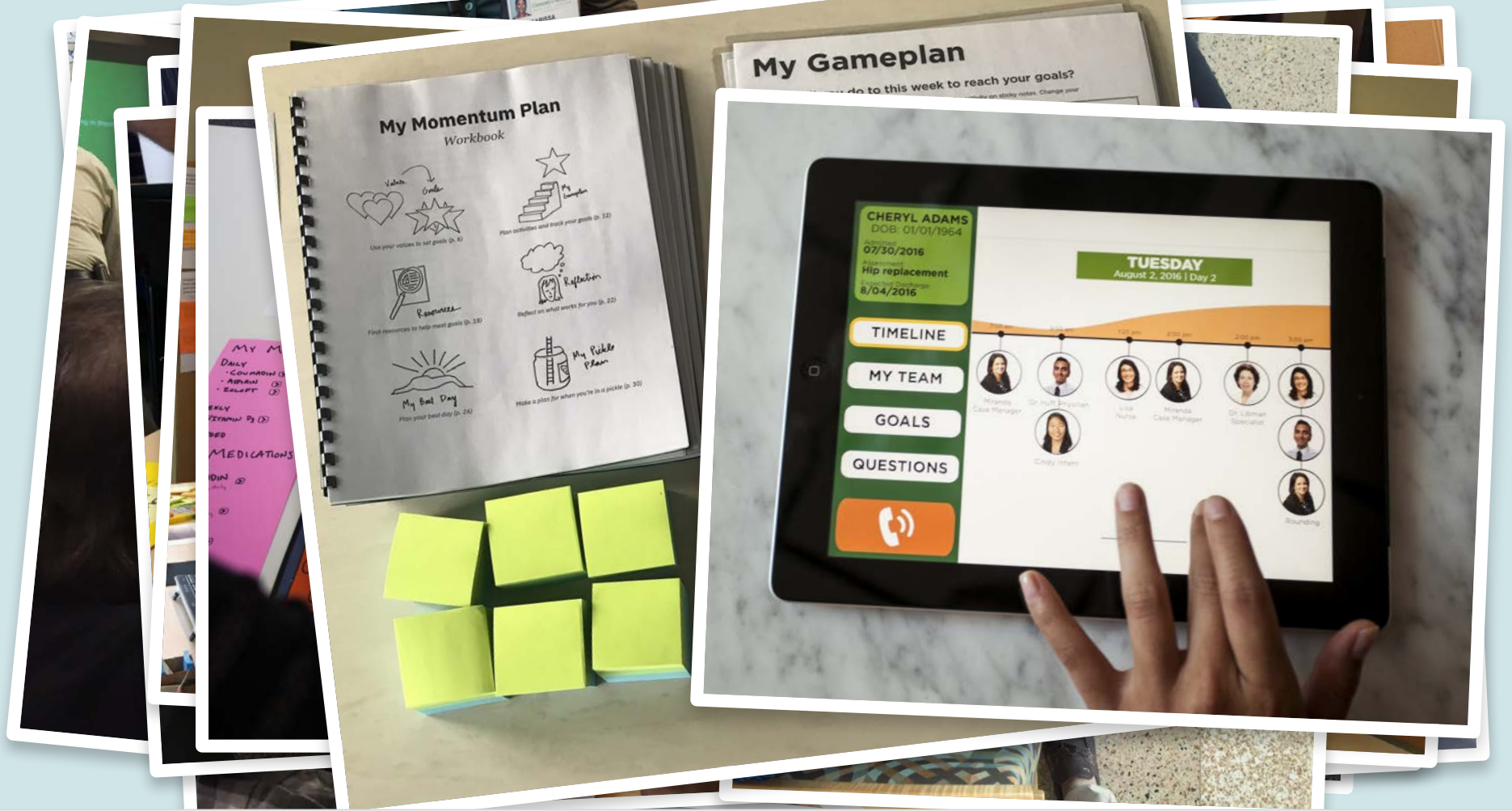
**Our work is focused on improving the  
experience of healthcare services for  
patients, their families, and healthcare  
providers and support staff.**

**Human-centered design** is  
a creative approach to problem solving  
that keeps the people you're creating  
solutions for at the center of the  
process.



*hiCOLab Design Process*





**Human-centered design helps us**

**Listen to people's stories**

**Solve the right problem**

**Gain systems awareness**

**Work together better**

**Act and learn from it, quickly**

**Be open and optimistic**

**Embrace visual thinking**

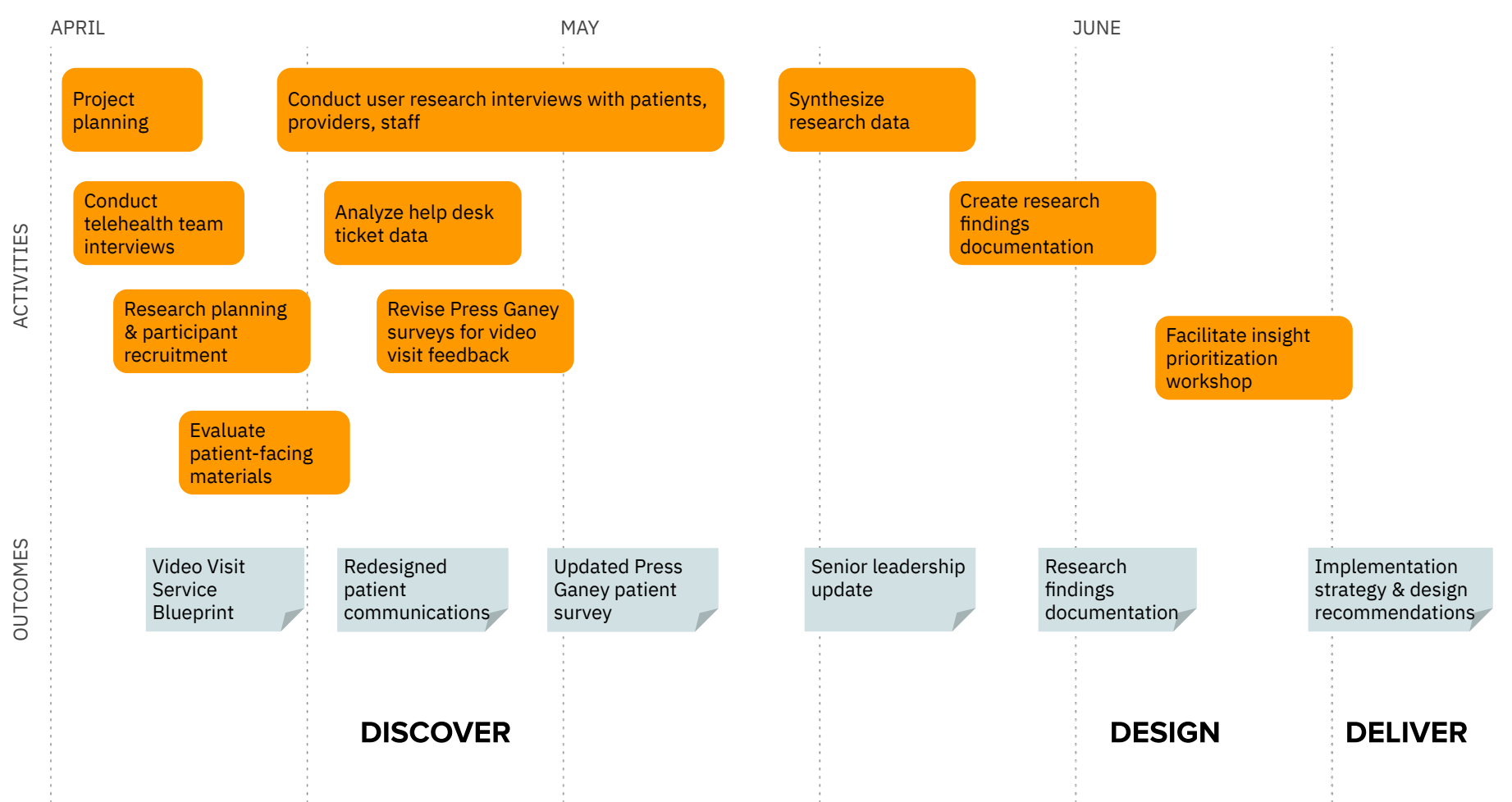
How might we improve the telehealth experience for patients, providers, and staff, so that people want to continue using telehealth in the future?

## Project goals

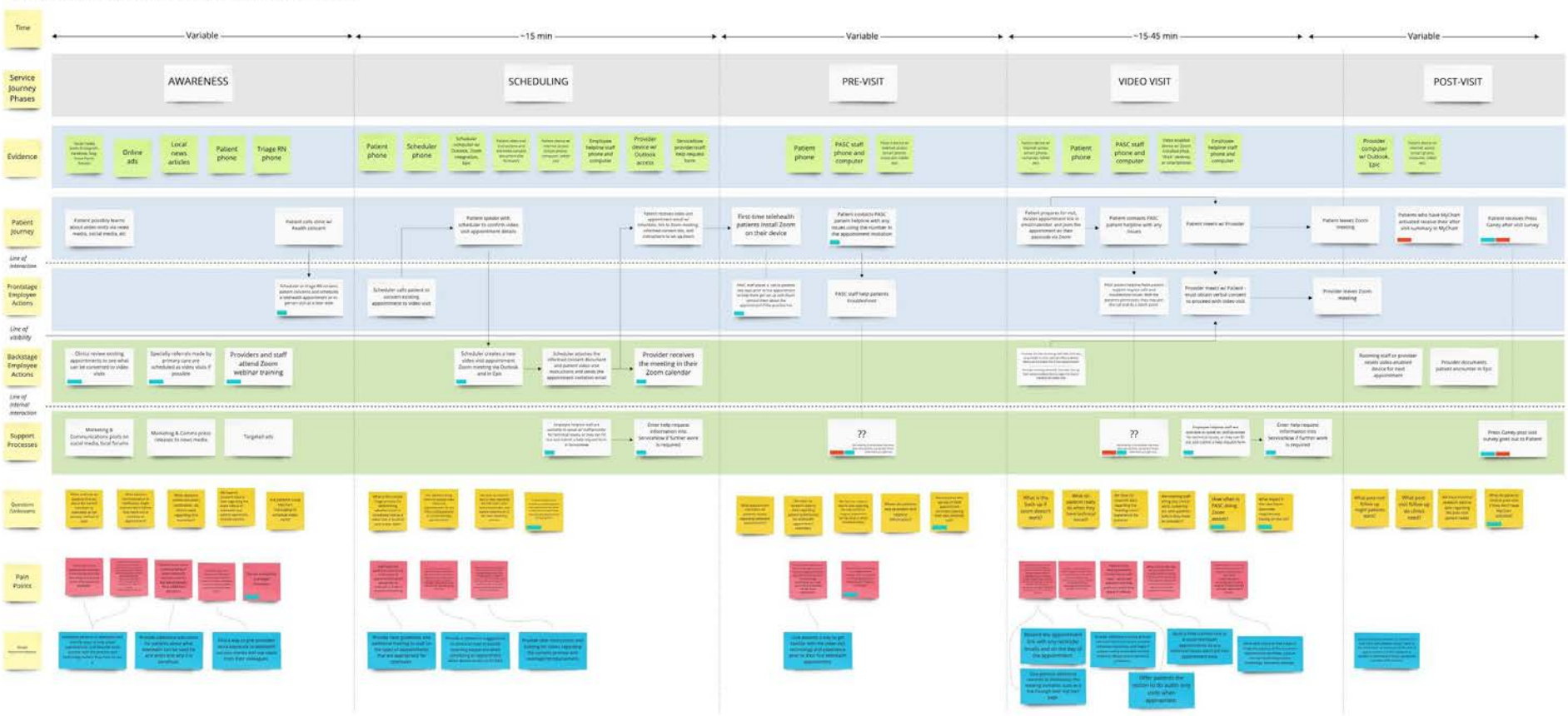
**Identify pain points and breakdowns in the telehealth video visit experience for patients, providers, and staff.**

**Learn about patient, provider, and staff perceptions of telehealth, including what makes users more or less likely to continue using telehealth.**

**Use insights from this feedback to design and implement improvements in telehealth video visits.**



# Telehealth video visit service blueprint:







Affinity Group

Affinity Group

Share



TRAINING, WORKFLOW, &amp; EQUIPMENT

Affinity Group

**With hours of research interviews and dozens of patient satisfaction surveys compiled, we sorted through the data to make sense of the emergent patterns and themes.**

PATIENT NEEDS, PREFERENCES, &amp; ATTITUDES

Affinity Gr

Affinity Group

Affinity Group

Affinity Group

MISCELLANEOUS

Affinity Group

Affinity Group

Affinity Group

Affinity G

Affinity Group

Insight #1

**Patients and providers appreciate that telehealth makes seeking care faster, more convenient, and more comfortable for patients.**

## Insight #2

**Providers are confident that telehealth is appropriate for some issues but the decision making process is complicated by individual provider comfort levels, patient ability to assist with virtual examinations or procedures, and concerns about telehealth as the default going forward.**

Insight #3

**A patient's home environment poses unique challenges for providing quality healthcare.**

#### Insight #4

**Providers are enthusiastic about using telehealth to improve patient access, but keeping up with new, evolving processes, dealing with unpredictable technology, screen fatigue, and the complete loss of in-person interactions negatively impact the provider experience.**

## Insight #5

**Telehealth has shifted provider and staff responsibilities and created new work: troubleshooting technology, figuring out how approximate in-office workflows, educating and ‘selling’ patients on video visits, and tracking which patients have done or are not willing to do video visits.**



## Insight #6

**Telehealth has a role to play in the future both as an additional component of everyday clinical practice and in the way we innovate care delivery to prioritize quality, safety, access, and patient needs.**

Project outcomes and impact:

**Clearly see video visit processes and systems.**

**Learn from (and build empathy with) dozens of users about their experience of telehealth during the rapid deployment.**

**Apply our learning to make quick improvements to the service (e.g. patient facing materials, Zoom-Epic integration).**

**Make research-led design recommendations that are evaluated and prioritized for implementation by key stakeholders.**

**Telehealth team is equipped with HCD methods/tools to continuously improve the service over a longer term.**


Bonus: **impacting organizational culture**

**The high response rate to our requests for interviews points to employee appreciation for opportunities to provide feedback.**

**People processing their experience in real time (interviews) is helping them realize the value of telehealth.**

**This work demonstrates the ability to rapidly respond to change, learn from it, and iterate innovative solutions.**

**Our skillful approach to remote work is showing the organization how we might work together differently.**



**Even if you don't have a designer or a design team, you can apply these principles to your work.**

## Recommendation #1

**Ask rigorous questions with your team to better frame the problem with more sensitivity to the underlying issues, the broader context, and the desired impact — make sure you are solving the *right* problem.**

## Recommendation #2

**Seek meaningful input and participation from your end users — patients, providers, support staff — and other key stakeholders.**



### Recommendation #3

**As early as possible, create quick experiments or prototypes to validate your assumptions and then test the impact of your work.**

#### Recommendation #4

**Build design capacity into your teams through trainings, professional development, partnerships, and new hires.**

**To learn more about human-centered design, visit <http://hicolab.org/learn>.**

- Articles, books and videos on design (and healthcare)**
- Resources on design methods and tools**
- Case studies**

**We welcome your questions and  
comments.**

**Thank you.**

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