



# Digital Health Equity: 3 sample initiatives from UC Davis

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Outpatient Video Visits: Readiness Scoring and communication

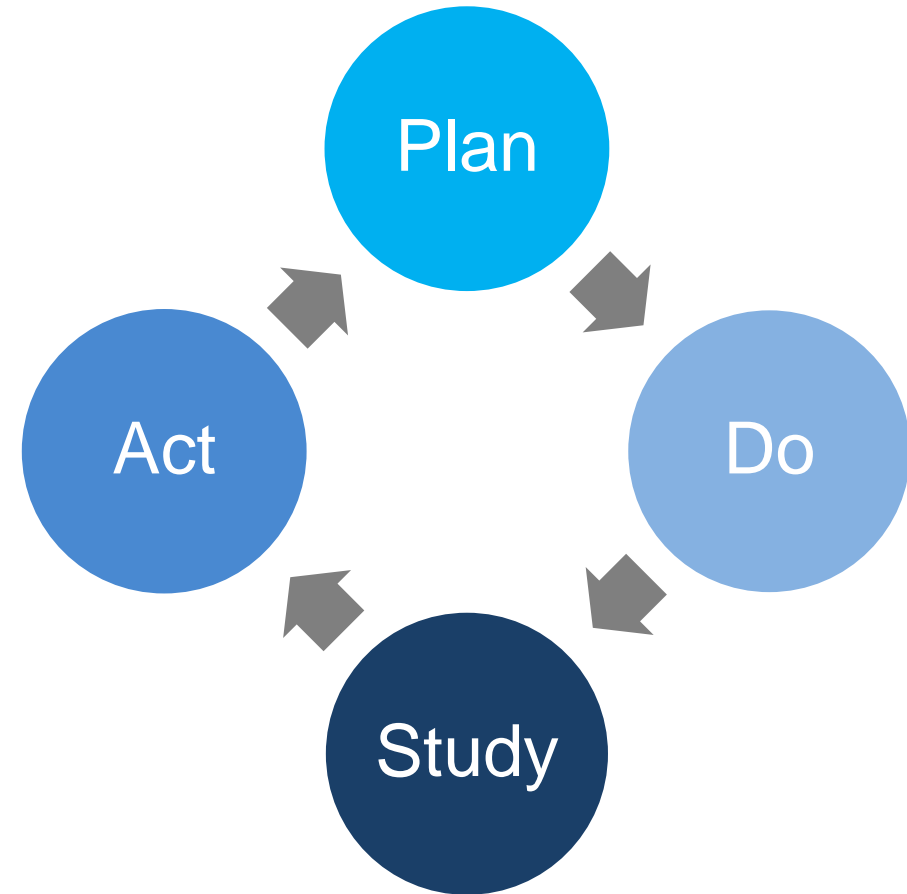


Inpatient Telehealth Family Visits



Virtual Family Centered Rounds

# Continuous Process Improvement Across Telehealth Service Lines



## Outpatient Video Visits: Pediatrics



**Table.** Patient characteristics associated with having a video visit rather than an in-person visit

	Unadjusted OR, 95% CI	Adjusted OR, 95% CI *
<b>Race &amp; Ethnicity</b>		
Non-Hispanic White	Ref	Ref
Latinx or Hispanic	0.59, 0.52–0.68	<b>0.86, 0.73–1.00</b>
African American or Black	0.85, 0.68–1.06	1.02, 0.81–1.29
Asian	0.94, 0.77–1.15	1.21, 0.98–1.49
Other	0.29, 0.20–0.41	<b>0.41, 0.29–0.59</b>
<b>Language</b>		
English	Ref	Ref
Spanish	0.25, 0.19–0.33	<b>0.27, 0.20–0.37</b>
Other	0.39, 0.27–0.55	<b>0.50, 0.34–0.75</b>
<b>Insurance</b>		
Private	Ref	Ref
Public	0.71, 0.64–0.80	<b>0.77, 0.67–0.88</b>
Distance, 100 miles	1.22, 1.16–1.28	1.25, 1.19–1.32

\* Multivariable logistic regression model included: age, gender, race/ethnicity, language, insurance, clinic type, clinic-home distance



## Outpatient Video Visits: Pediatrics

- Promoting in a way that reaches all patient families
- Offering to all patient families
- Mitigating digital literacy barriers
- Expanding resources to support families' specific needs
- Engaging and empowering personnel to expand access

*Language appropriate VV materials*

*Automated VV reminders in top 10 non-English languages*

*Tech support outreach to non-English patients*

*On-demand integration of interpreters*

*Patient navigators*

*Bypass platform activation*

*User-friendly dashboard*

# Key Principles

1. Patient First -- Empathy.
  - EMR based. Not EMR limited.
  - Support
  - The story cannot be told with data alone. Context matters.
2. Video First -- If you use a phone, you can do video.
  - Video is hard.
  - Test and improve continuously and choose partners you can work with continuously
  - Multiple Paths for success
  - Backup and fallback systems and workflows

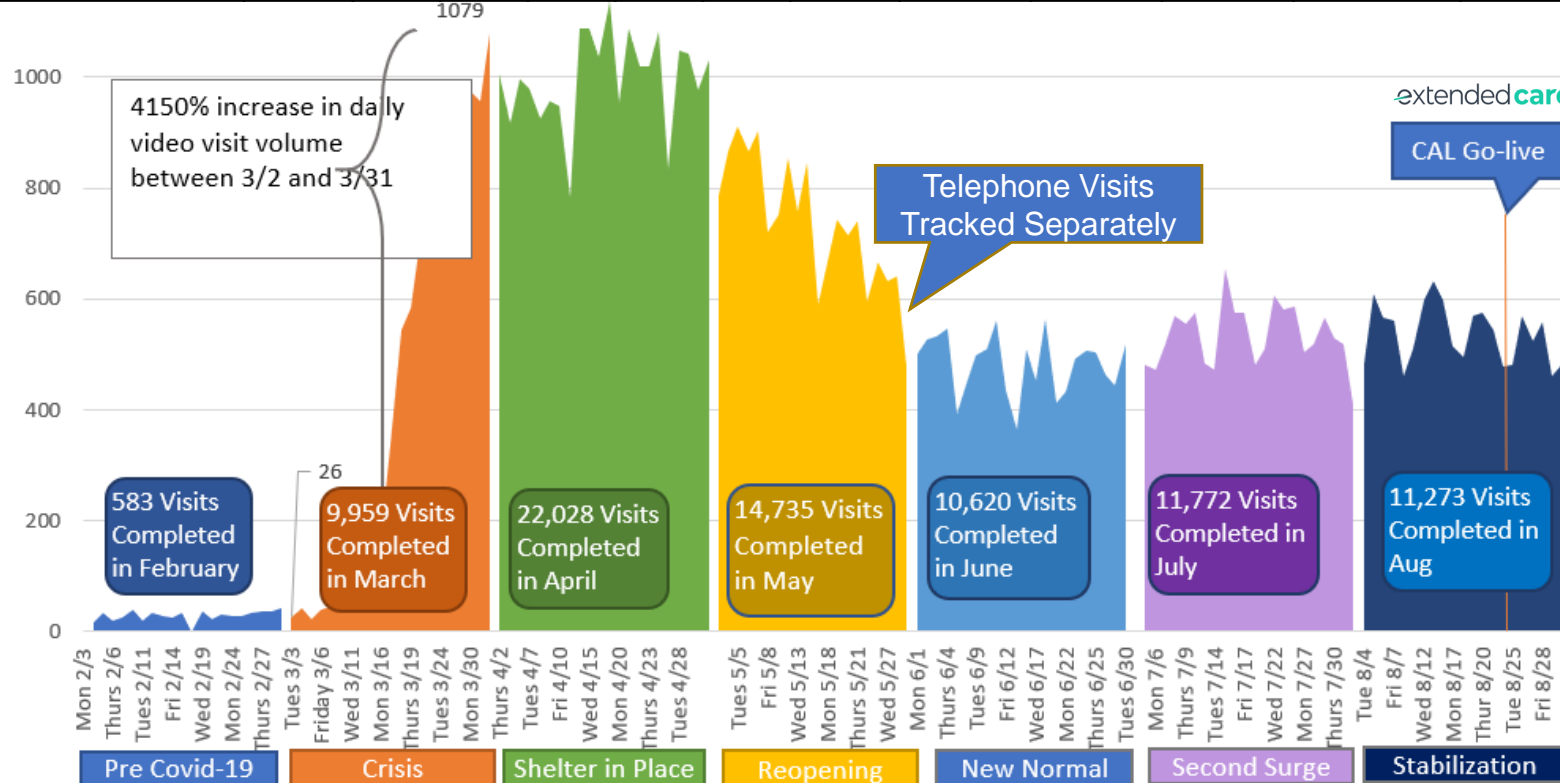
What should we measure to improve?

### **Attended Telehealth Visits:**

- Based on schedule appointments
- Includes No-shows.
- Doesn't measure last minute cancellations and reschedules.
- No measure of video quality or connection issues.
- Doesn't differentiate between phone and video

# 6 months post COVID

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Video Visits	155	242	253	317	357	583	9959	22028	14735	10620	11722	11,273
Unique Prov	79	112	123	157	160	191	776	941	904	833	849	886



- 14 Video Visit Support staff.
- Proactive Call out program.
- Video telemetry available to verify video connection.
- Telephone visits tracked separately.
- Now technically possible to understand and stratify reasons for “failures”.

# Telemetry from

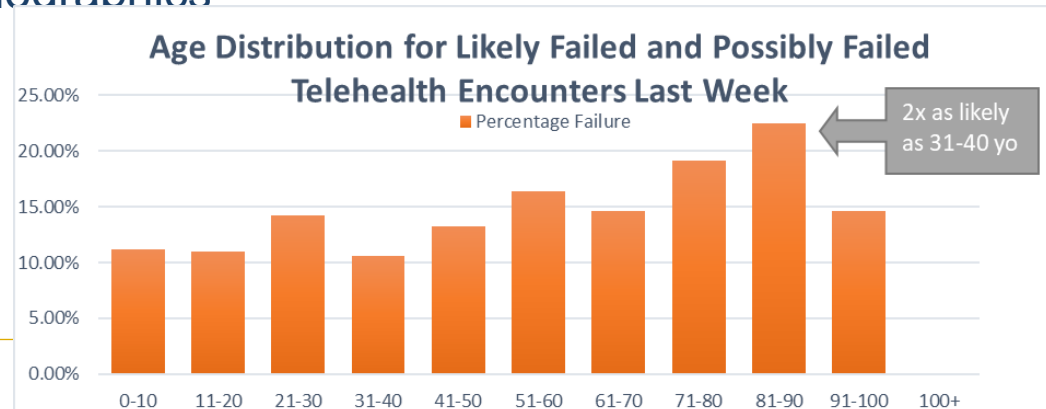
- Connection/Disconnection time for all participants.
- Audio and Video checks
- Device and OS types
- Network Telemetry (Bandwidth, Latency, Jitter)

## Video Visit Quality telemetry



# Demographics and workflow data from Epic

- MyChart Logins (and login failures)
- eCheck-in workflow completion
- Completed Appointments
- Missed connections.
- Demographics



	9/28/2020	9/29/2020	9/30/2020	10/1/2020	10/2/2020
<b>Successful VV Total</b>	<b>470</b>	<b>590</b>	<b>519</b>	<b>562</b>	<b>456</b>
MYC Video Visits	414	482	418	451	359
Video Visits – Other	56	108	101	111	97
<b>Patient No Shows</b>	<b>74</b>	<b>58</b>	<b>71</b>	<b>67</b>	<b>49</b>
<b>Definitely Failed VV</b>					
Visits with FAILED smartphrase	5	9	10	4	11
Visits with no simultaneous connection	0	1	2	6	4
Visits with missed connections	5	3	10	4	10
<b>Likely Failed VV</b>					
Visits with connections < 5 min	32	38	45	27	26
Visits completed w/o ExC session	8	10	5	6	1
Visits switched to Telephone Enc	23	31	31	25	33
<b>Visits which likely used other technology</b>					
Video Visits – Other	56	108	101	111	97
Visits completed w/o ExC session	8	10	5	6	1



# Mitigating risk: Targeted Call outs

Callouts to targeted patients to prepare for visits

## Workqueue Criteria:

- Not MyChart Active
- Patient Age > 60
- Non-English language
- previous failed visit
- previous failed test
- Cancer Center

# Measuring Impact:

*Visits*

~~Wins above replacement~~

5% increase in video visit success rate when the patient was called by the helpdesk beforehand – representing a net gain of more than 50 video visits completed per week.

	September	October	November	December	January	February
<b>Video Visit Success Rate</b>	<b>87.2%</b>	<b>88.4%</b>	<b>88.9%</b>	<b>89.1%</b>	<b>89.7%</b>	<b>90.9%</b>
<b>Video Visit Failure Rate</b>	<b>13.9%</b>	<b>12.7%</b>	<b>12.0%</b>	<b>12.0%</b>	<b>10.8%</b>	<b>9.7%</b>
Visits w/ FAILEDVIDEO SmartPhrase in Note	0.8%	0.7%	0.6%	0.6%	0.8%	0.6%
Patient Connection, No Provider	3.1%	2.5%	2.3%	2.4%	2.1%	1.8%
Missed Connections - Both Parties Join But Don't Overlap	1.3%	0.8%	0.7%	0.7%	0.7%	0.7%
MYC Video Visits, Completed, w/o ExC Session	1.7%	1.4%	1.5%	1.2%	1.2%	0.9%
MYC Video Visits, No Show Status, w/ Recent MyChart Activity	0.9%	1.0%	0.6%	0.7%	0.5%	0.4%
MYC Video Visits, Switched to Telephone Enc	6.1%	6.4%	6.3%	6.4%	5.6%	5.4%

# Conclusion: It's not the tool, it's the communication.

- We must encourage communication, not replace it.
- You can't automate empathy or understanding, but tools can encourage it.
- As Video becomes more common, we must move from preventing failures to enhancing outcomes.
- Goal is to provide care, not technology.

Let's build a communication tool!

## Data dilemmas: What is the root cause?

### **No Show / Cancel:**

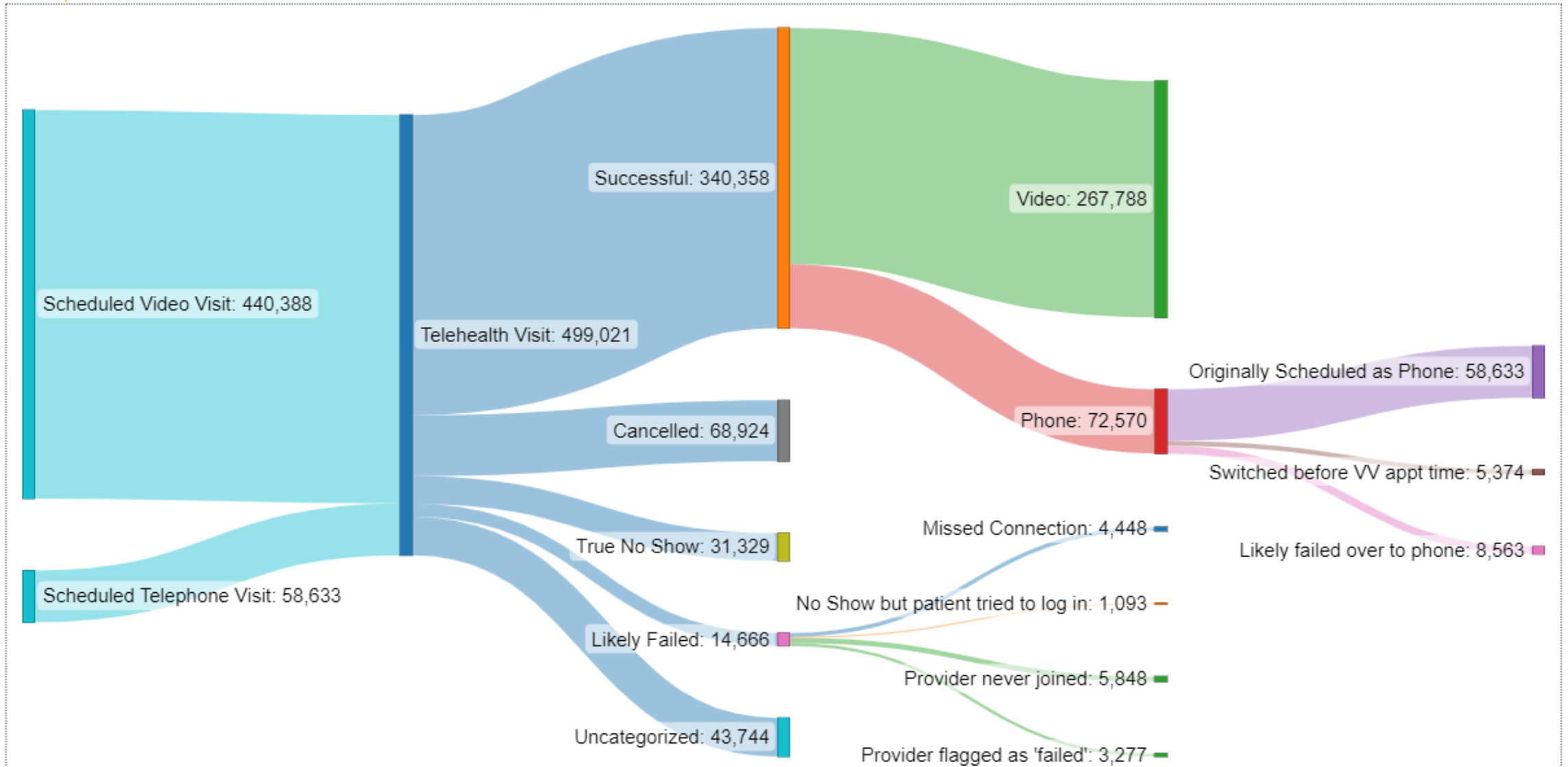
- Patient forgot
- Patient forgot login
- Patient not MyChart active
- Proxy access issue
- Patient used new device without login saved.
- Patient got tired of waiting and left
- Switched to Phone Visit on patient or provider request

### **Telephone Visits:**

- Network
- Device Issue
- Insufficient preparation
- Hardware Issue
- Software Issue
- Inappropriate location for video
- Video visit not offered

Technology or Equity?

# UC Davis outcome of scheduled telehealth visits



A video visit readiness assessment and communication tool can help staff work together to support patients

identify visits where action by staff will increase the chance of success


and

increase communication between clinic staff, support, and patients

Readiness Score

Communication

VV/TV Test VV Support Actions

  VVwq- PT READY




 

VVwq- PT READY

**Video Visit Technical Risk**

  Video Visit support needed  No Video Visit support needed/requested





Patient has had a successful Video Visit in the past year

Preferred language is NOT English

Most recent hardware self-test failed

Details available.  
Score can be overridden.

The risk score is based on a 0-10 scale:

- 0** suggests there is **low risk** the patient may miss their video visit appointment.
- 10** suggests there is a **high risk** that the patient may miss their video visit.
-  The icon for 10 appears for patients who have scores of 11+ so that the numerical scale remains 0-10.
-  The stop sign indicates the patient was manually flagged to have IT support prior to their video visit.
-  The green check indicates the patient has had a successful video visit in the past year, a successful last hardware self-test, or a score of 0.
-  The green circle with a check means the patient has asked not to be contacted for future video visit assistance.

**Automated Scoring:** (0-10, 10 is the highest)\*

- No active MyChart = 9
- Preferred language not English = 6
- No Video visit in the past year = 4
- No Video Visit in past 2 years = 8
- Most recent hardware self-test failure = 5
- 55-64yo = 3
- 65-74yo = 4
- 75yo+ = 5
- Successful self-test or Successful last VV (unless the self-test fails) brings everything to 0

# Lessons learned

- Who should use a pre-visit readiness tool?
  - Patients?
  - Providers
  - Support Staff?
  - Clinical Staff?
  - IT staff?Yes.

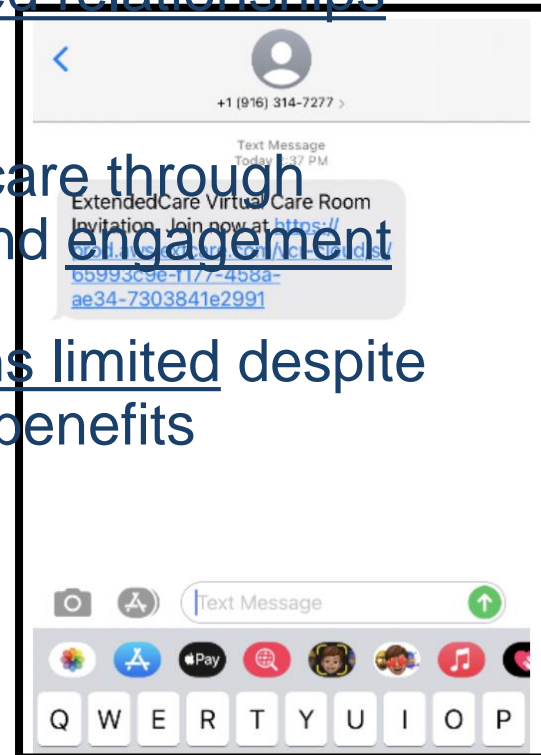
Automation supports communication, and improves the quality of communication, but it can rarely replace it.





Inpatient  
Telehealth Family  
Visits

- Inpatient TH enhances the patient and family experience through strengthened relationships and increased support
- Inpatient TH enhances patient care through improved information sharing and engagement
- Adoption of Inpatient TH remains limited despite the ubiquitous perception of its benefits



# Inpatient Telehealth Family Visits: Quantitative Phase

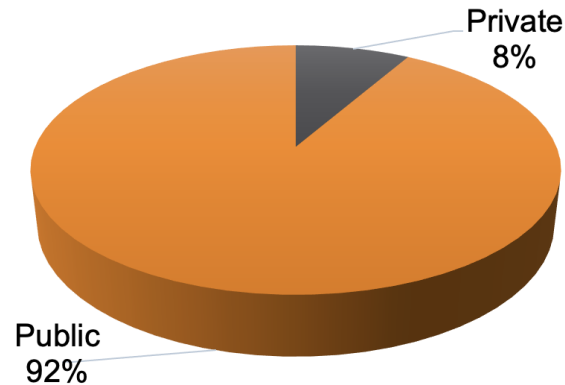


*“We offer it every single time... It’s become part of our script to everyone”*

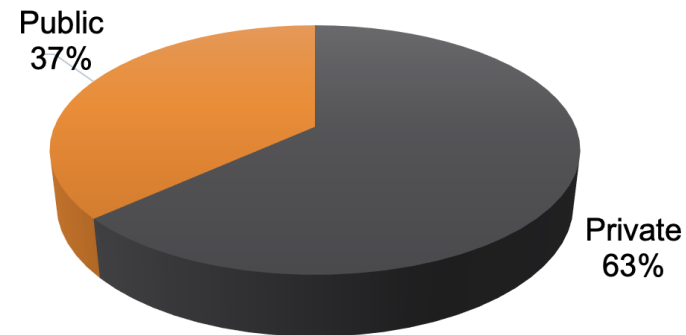


*“Patients and family members know enough to be able to ask for it... or a nurse identifies a need”*

**Visits by Insurance Type**



**Visits by Insurance Type**



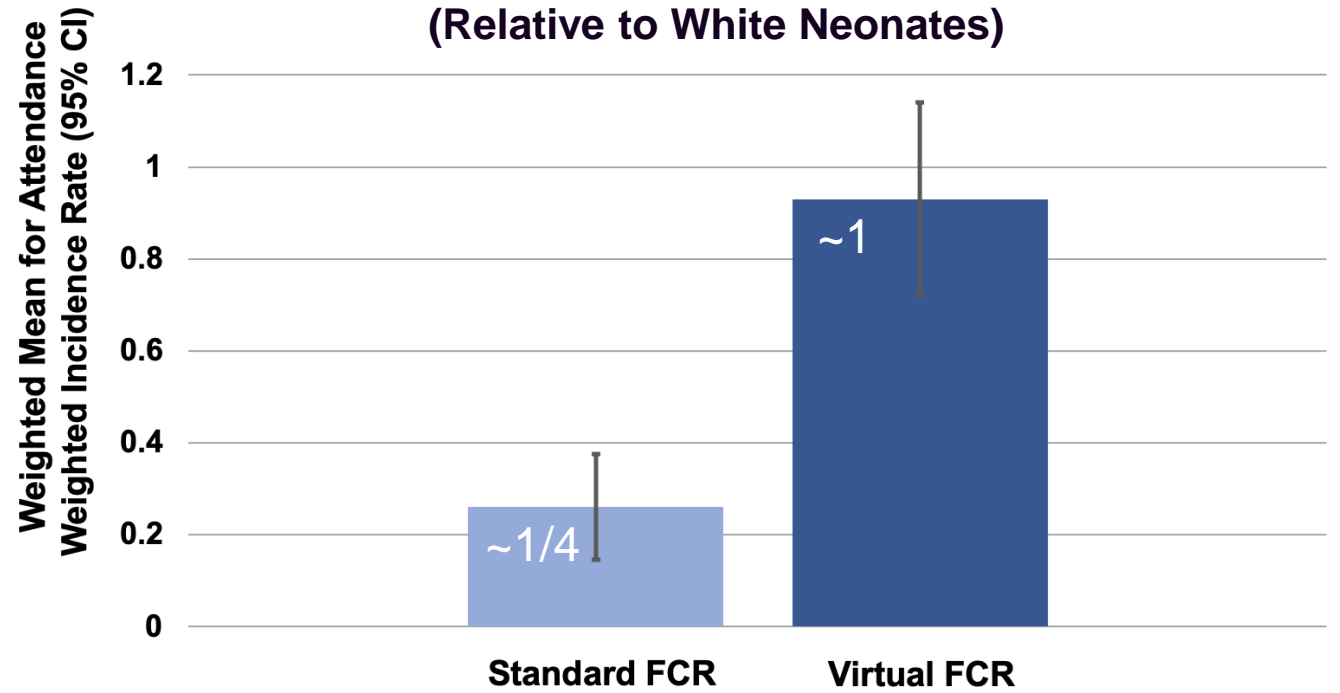
■ Private ■ Public

$p < 0.00115$



## Virtual Family Centered Rounds

### FCR Attendance for Non-White Neonates (Relative to White Neonates)

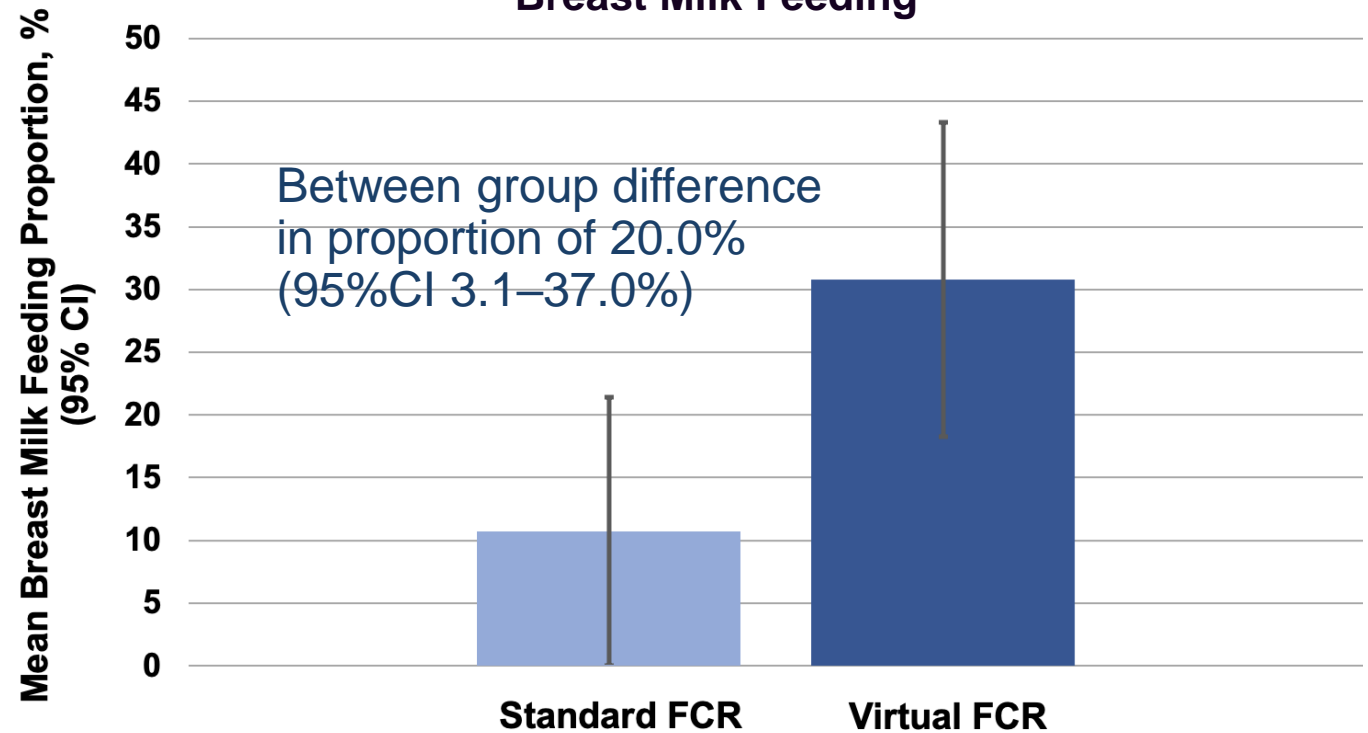


IRR for non-White\*intervention interaction was 3.55 (95%CI 2.18–5.78)



## Virtual Family Centered Rounds

### Breast Milk Feeding



*"Getting the positive affirmation from the team that breast milk is good and... talk about the nutrition every single day in rounds. It's like a positive reminder." [NICU Parent]*

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# Questions? Feedback?

**Thank you!**