wednesday webinar

PRESENTED BY PALMETTO CARE CONNECTIONS

Telehealth Research & Reports: Strategies to Support a Sustainable Ambulatory Telehealth Model

Wednesday, December 1, 11am-12pm EST

Presenters:

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MUSC Center for Telehealth

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MUSC Center for Telehealth

This webinar is being recorded.

The webinar recording and presentation will be available after the webinar.

PALMETTO CARE CONNECTIONS™
technology. broadband. telehealth.

Introducing: *Telemedicine Research & Reports*

- Bi-annual webinar hosted by PCC and co-sponsored by MUSC and SCTA
- Goal: Sharing innovative telehealth research, evaluation and innovation occurring across SC

MUSC
Medical University of South Carolina
Changing What's Possible

National Telehealth Center of Excellence

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SOUTH CAROLINA Telehealth ALLIANCE

This presentation was supported in part by the HRSA National Telehealth Center of Excellence Award (U66 RH31458), the Agency for Healthcare Research and Quality (1R01HSO28284), and the South Carolina Telehealth Alliance. The contents are those of the speakers and do not necessarily represent the official views of, nor an endorsement, by HHS or the U.S. Government.

Objectives

The learner will:

- Describe barriers to continued adoption of ambulatory telehealth.
- Identify strategies to support continued buy-in for ambulatory telehealth among health system leadership.
- Obtain examples of key performance indicators to drive leadership decision making around ambulatory telehealth.

MUSC Center for Telehealth

SOUTH CAROLINA Telehealth ALLIANCE

MUSC Health
Medical University of South Carolina

AMERICAN TELEMEDICINE ASSOCIATION

NATIONAL TELEHEALTH CENTER of EXCELLENCE

2005-2009
Maternal Fetal Telemedicine, Telestroke, ICU, Telepsych

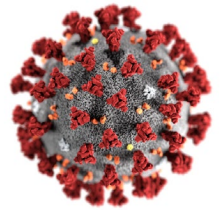
2013
State of SC telehealth investment; MUSC Center for Telehealth founded

2014
SCTA founded; headquartered at MUSC

2017
Designated by HRSA as a National Telehealth Center of Excellence

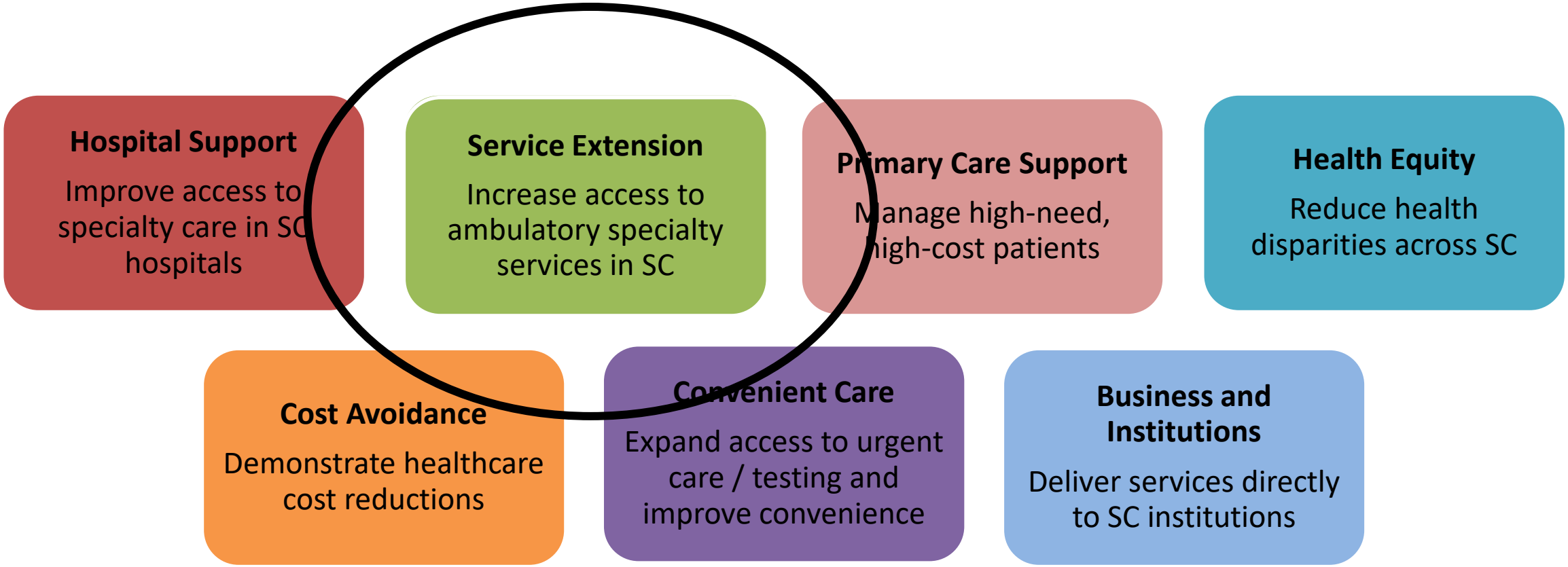
2019
Awarded ATA's 2019 President's Award for Transformation of Health Care Delivery (SCTA)

2020
Explosive growth of telehealth in ambulatory space due to COVID-19



Health Resources & Services Administration

Telehealth Value-based Strategies: Serving the State



https://sctelehealth.org/about/strategic-plan

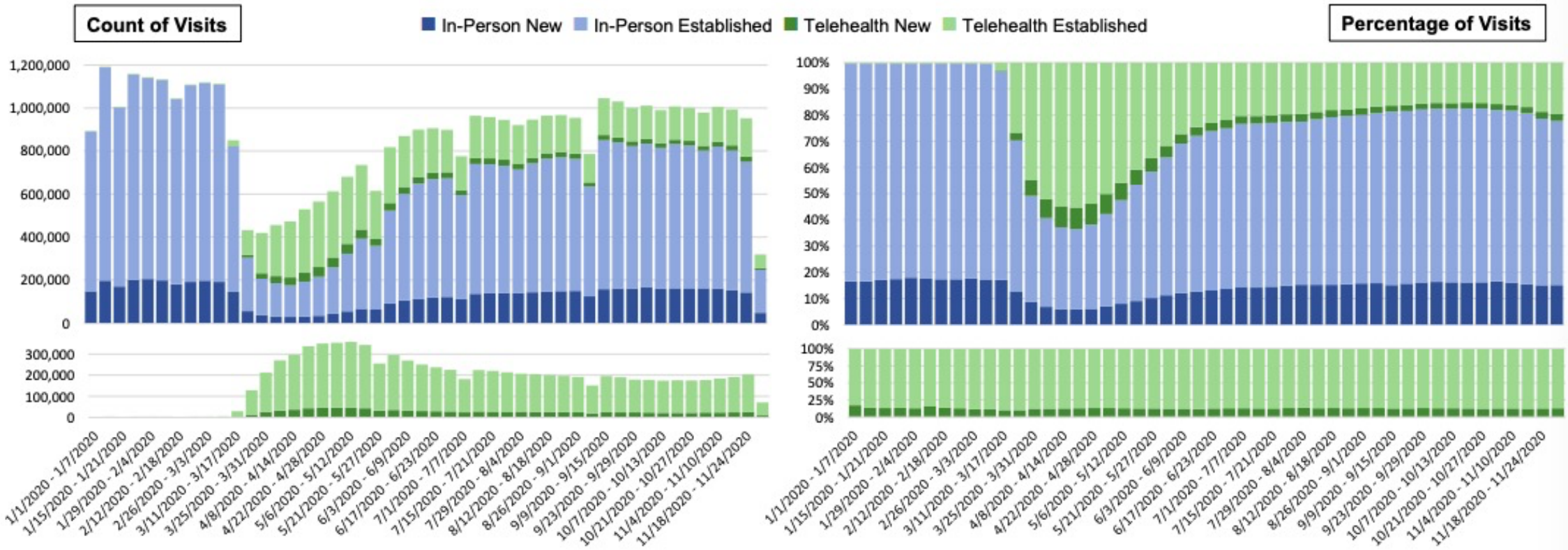
Ambulatory Telehealth Background

Integrated Telehealth

Telehealth Integration into the Care Continuum

- Optimize Resources
- Leverage Access
- Redesign Continuum of Care
- Embrace the Biopsychosocial Context

Faculty Practice Plan Weekly In-Person and Telehealth E/M Utilization



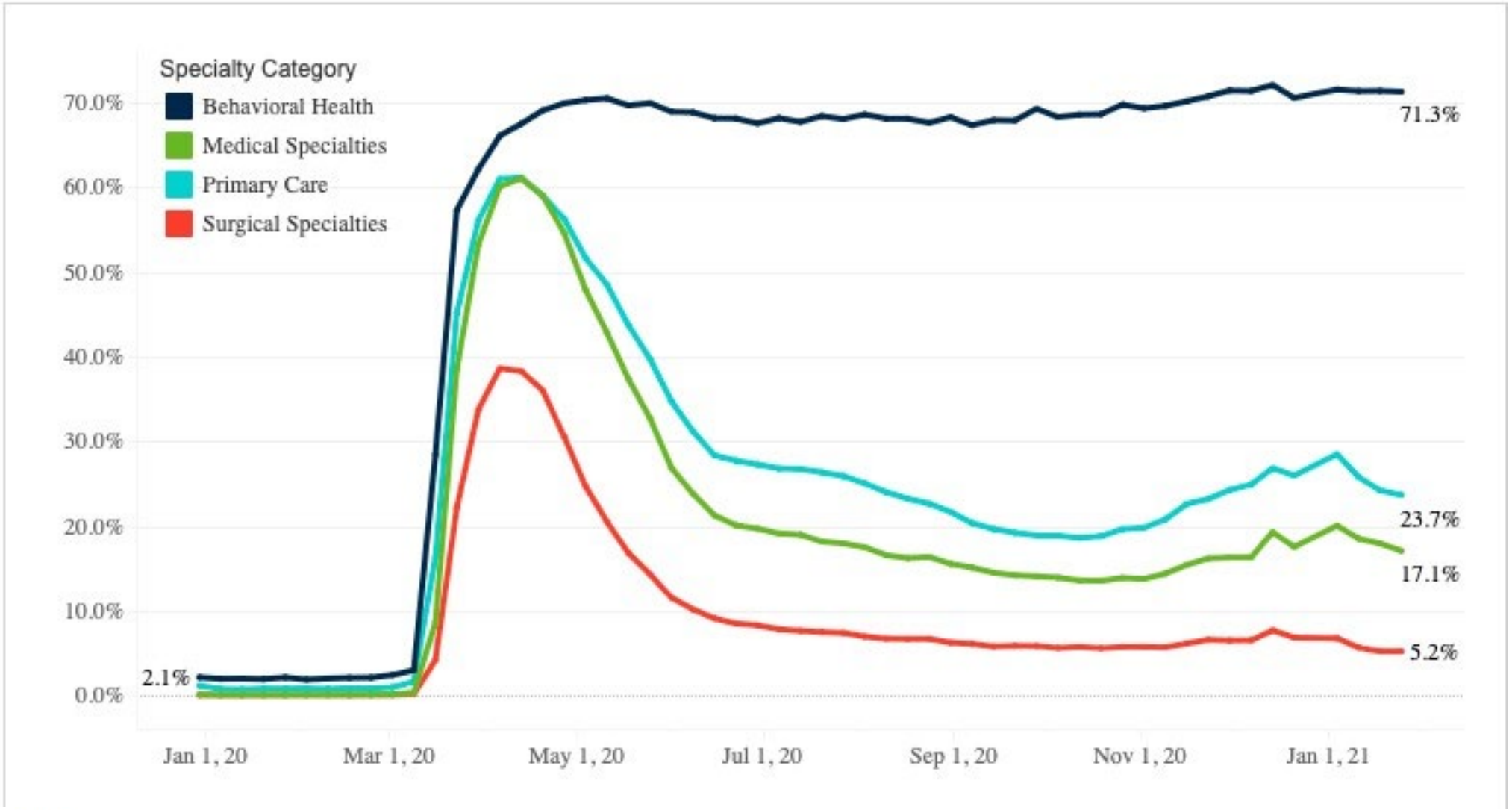
The COVID-19 pandemic has shifted the telehealth landscape for faculty practice plans. Prior to the pandemic, telehealth uptake was negligible. At the peak of the pandemic, telehealth accounted for 64% of all evaluation and management (E/M) visits. As in-person visits returned over the course of 2020, telehealth has remained steadily present, leveling off at an average of 20% of all E/M visits. Further, new patient visits have steadily accounted for roughly 13% of telehealth visits throughout the year. This demonstrates the clear importance of telehealth in providing patients, both new and established, access to care during the pandemic.

Source: AAMC analysis of physician and non-physician claims billed by Faculty Practice Plan members of the Clinical Practice Solutions Center. The Clinical Practice Solutions Center (CPSC) is a jointly owned product of the Association of American Medical Colleges (AAMC) and Vizient that collects billing data from member practice plans to provide benchmarks and help them improve performance.

Note: 70 CPSC members had shared their claims data through November at the time of this analysis (March 2021). "E/M Utilization" includes all in-person and telehealth claims with CPT codes 99201-5 (new) and 99211-5 (established) across all applicable places of service, specialties, and payers. Telehealth visits identified based on place of service = 02 and/or modifiers 95, GT, GQ, G0 on the claim.

AAMC

Primary and Specialty Care: Divergence in Sustained Adoption



THE CHARTIS GROUP

https://www.chartis.com/resources/files/WP_Telehealth-Trend-Analysis_2021-04-28.pdf

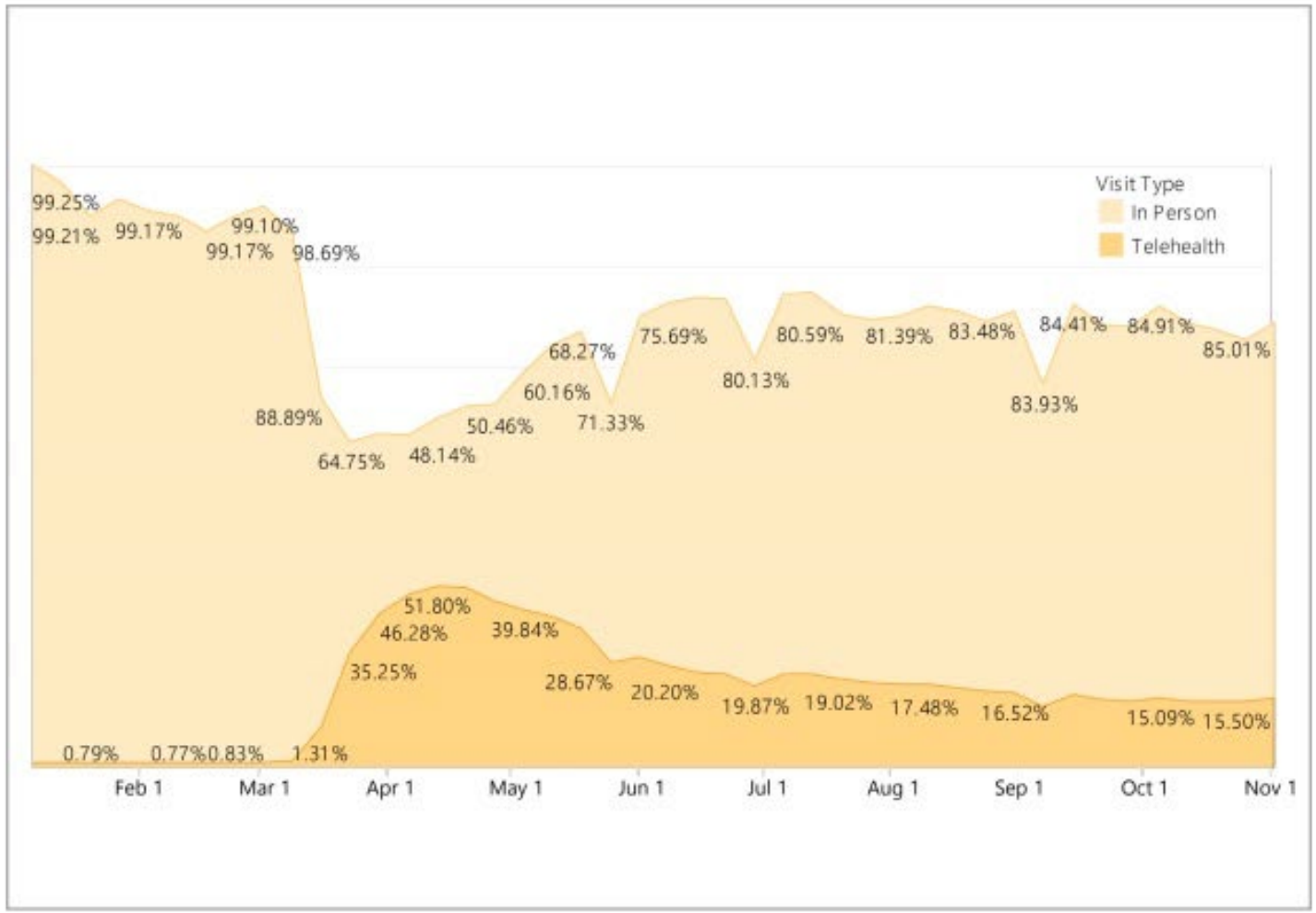
Key Observations

1. There seems to be a strong substitution effect between in-person and telehealth visits during the early pandemic months.
2. The "new normal" taking shape exhibits a smaller gap between in-person and telehealth visits as a percentage of total visits.
3. A brief period of greater telehealth than in-person visits reflects the initial shutdown period of the pandemic that is unlikely to be replicated again soon.

Conclusion/Implications

Whereas in-person outpatient clinic visits accounted for more than 99% of volumes pre-pandemic, the new normal emerging is closer to an 80/20% split between in-person and virtual clinic visits, with an overall lower level of total visits. Consumer-friendly telehealth solutions are a critical modality to support demand recapture and patient access. Going forward, telehealth may soon be a prerequisite for digitally forward care models of the future that offer a more efficient and convenient delivery option.

Sustained Telehealth Adoption Despite Lower Aggregate Demand for OP Services



THE CHARTIS GROUP

https://www.chartis.com/resources/files/WP_Telehealth-Trend-Analysis_2021-04-28.pdf

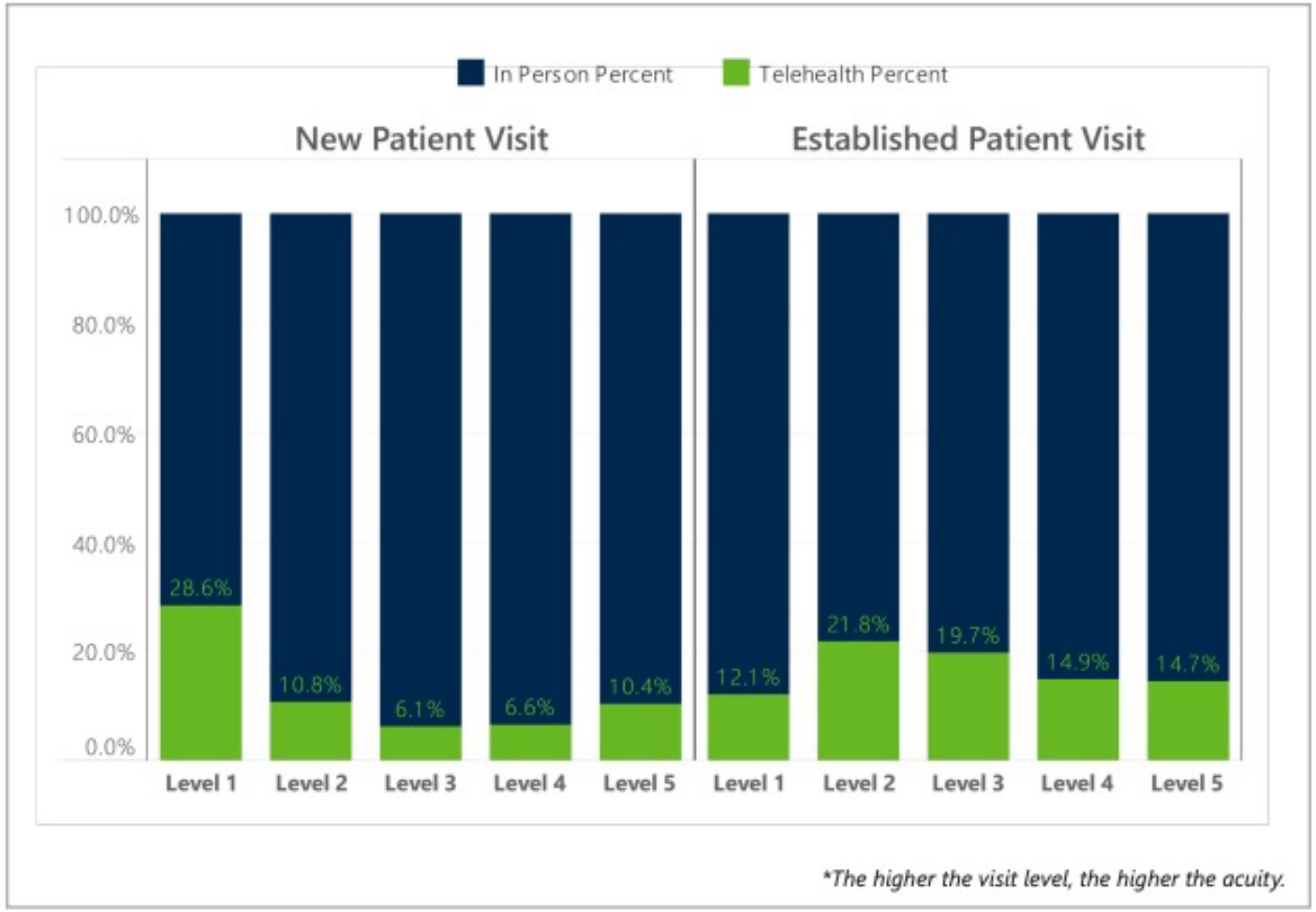
Key Observations

1. A greater range of patient acuity is managed among established visits.
2. Telehealth is a significant new patient onboarding tool. New patients generally present as low acuity, with telehealth serving as a screening tool for triage.
3. However, providers may have a reluctance to onboard higher acuity new patients via telehealth than an in-person clinic visit.

Conclusion/Implications

A clear pattern is emerging that suggests higher acuity care needs can be managed via telehealth, but only after a patient-provider relationship has already been established. Recent policy changes permitting those relationships to be established virtually has enabled a significant number of new patient virtual visits.

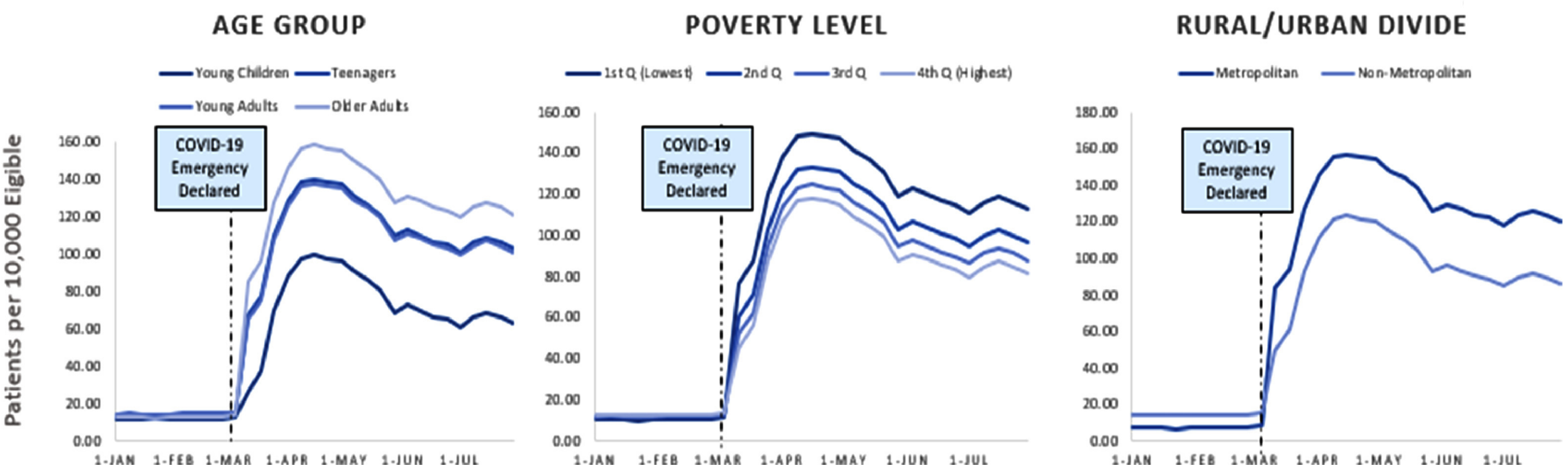
Another key adoption trend for telehealth has been the onboarding of low-acuity new patients. Virtual triage has been a necessity through the pandemic and will continue to be an important access point for new patients seeking care.



THE CHARTIS GROUP

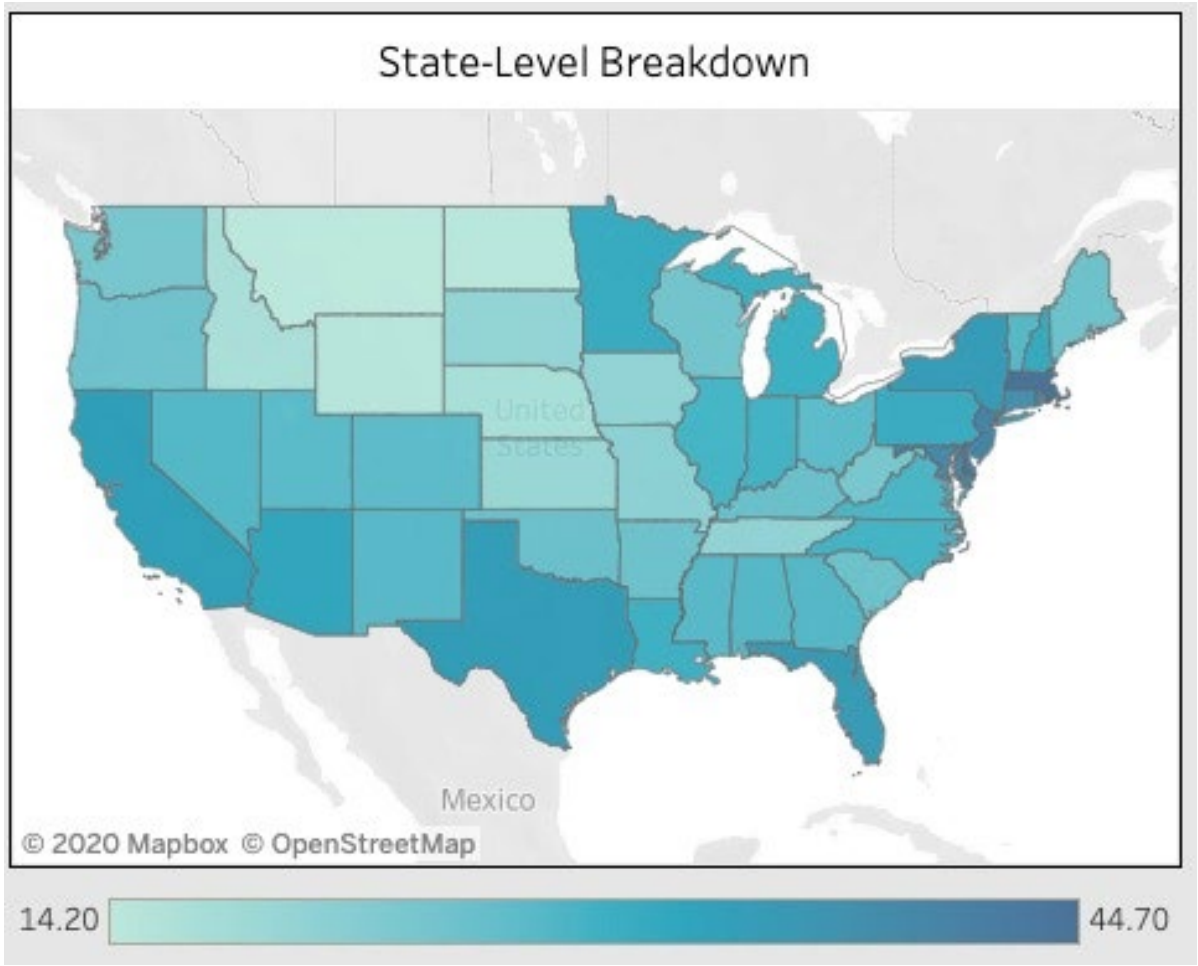
https://www.chartis.com/resources/files/WP_Telehealth-Trend-Analysis_2021-04-28.pdf

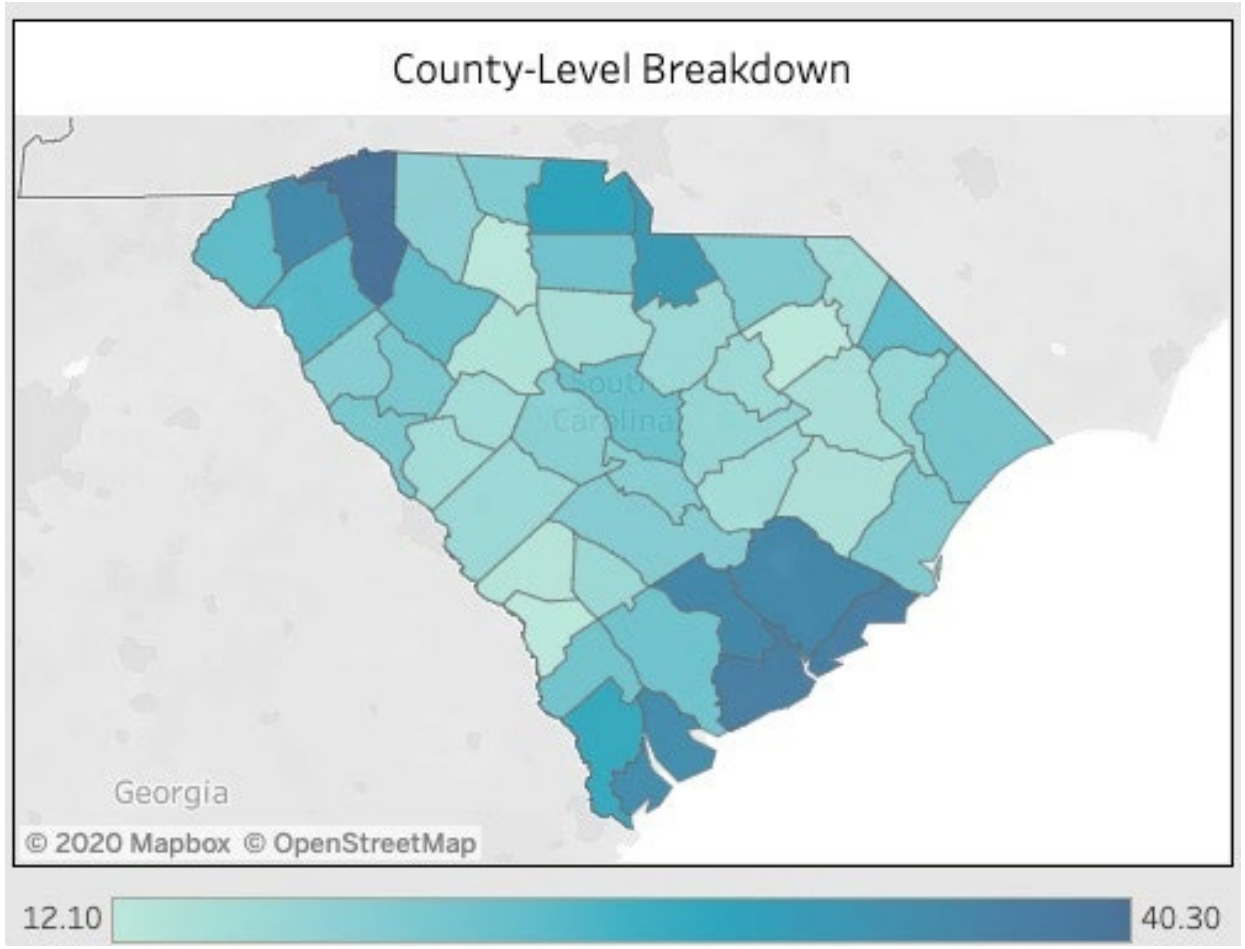
Telehealth Access Disparities



Cantor, J. H., McBain, R. K., Pera, M. F., Bravata, D. M., & Whaley, C. M. (2021). Who Is (and Is Not) Receiving Telemedicine Care During the COVID-19 Pandemic. *American journal of preventive medicine*, *61*(3), 434–438. https://doi.org/10.1016/j.amepre.2021.01.030

% Medicare Beneficiaries Utilizing Telehealth





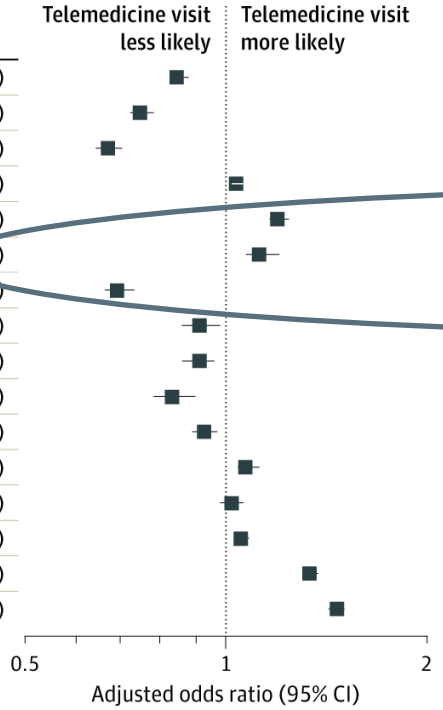
https://carejourney.com/telehealth-expansion-in-medicare-policy-changes-recent-trends-in-adoption-and-future-impact/

JAMA Network™

From: **Patient Characteristics Associated With Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 Pandemic**

JAMA Netw Open. 2020;3(12):e2031640. doi:10.1001/jamanetworkopen.2020.31640

Characteristic	Adjusted odds ratio (95% CI)
Aged 55-64 y vs <55 y	0.85 (0.83-0.88)
Aged 65-74 y vs <55 y	0.75 (0.72-0.78)
Aged >75 y vs <55 y	0.67 (0.64-0.70)
Female	1.04 (1.02-1.06)
Black vs White	1.20 (1.16-1.24)
Latinx vs White	1.13 (1.07-1.20)
Asian vs White	0.69 (0.66-0.73)
Other race/ethnicity vs White	0.92 (0.86-0.98)
Unknown race/ethnicity vs White	0.91 (0.86-0.96)
Non-English language	0.84 (0.78-0.90)
Medicaid vs commercial insurance	0.93 (0.89-0.97)
Medicare vs commercial insurance	1.08 (1.04-1.12)
Median household income <$50 000 vs >$100 000	1.02 (0.98-1.06)
Median household income $50 000-$100 000 vs >$100 000	1.05 (1.03-1.08)
Charlson Comorbidity Index score 1-2 vs 0	1.34 (1.31-1.37)
Charlson Comorbidity Index score ≥3 vs 0	1.46 (1.42-1.50)



Characteristic	Adjusted odds ratio (95% CI)
Aged 55-64 y vs <55 y	0.79 (0.76-0.82)
Aged 65-74 y vs <55 y	0.78 (0.74-0.83)
Aged >75 y vs <55 y	0.49 (0.46-0.53)
Female	0.92 (0.90-0.95)
Black vs White	0.65 (0.62-0.68)
Latinx vs White	0.90 (0.83-0.97)
Asian vs White	0.99 (0.91-1.08)
Other race/ethnicity vs White	0.95 (0.87-1.04)
Unknown race/ethnicity vs White	1.00 (0.93-1.08)
Non-English language	0.85 (0.76-0.95)
Medicaid vs commercial insurance	0.68 (0.64-0.72)
Medicare vs commercial insurance	0.75 (0.71-0.79)
Median household income <$50 000 vs >$100 000	0.57 (0.54-0.60)
Median household income $50 000-$100 000 vs >$100 000	0.89 (0.85-0.92)
Charlson Comorbidity Index score 1-2 vs 0	0.89 (0.86-0.92)
Charlson Comorbidity Index score ≥3 vs 0	0.80 (0.77-0.84)

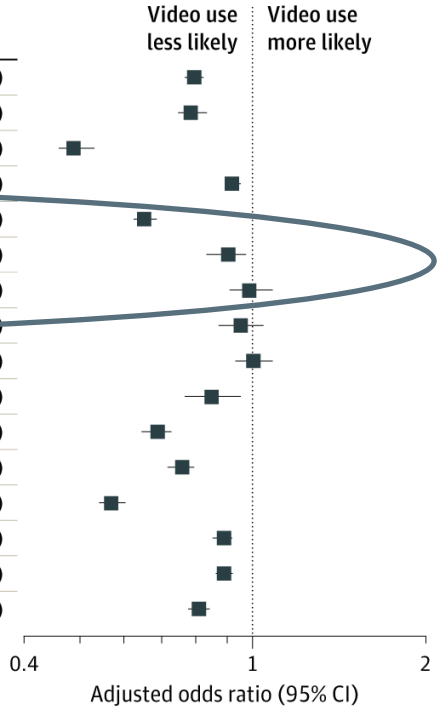


Figure Legend:
Forest Plots Showing Adjusted Odds Ratios for Telemedicine Visit Completion

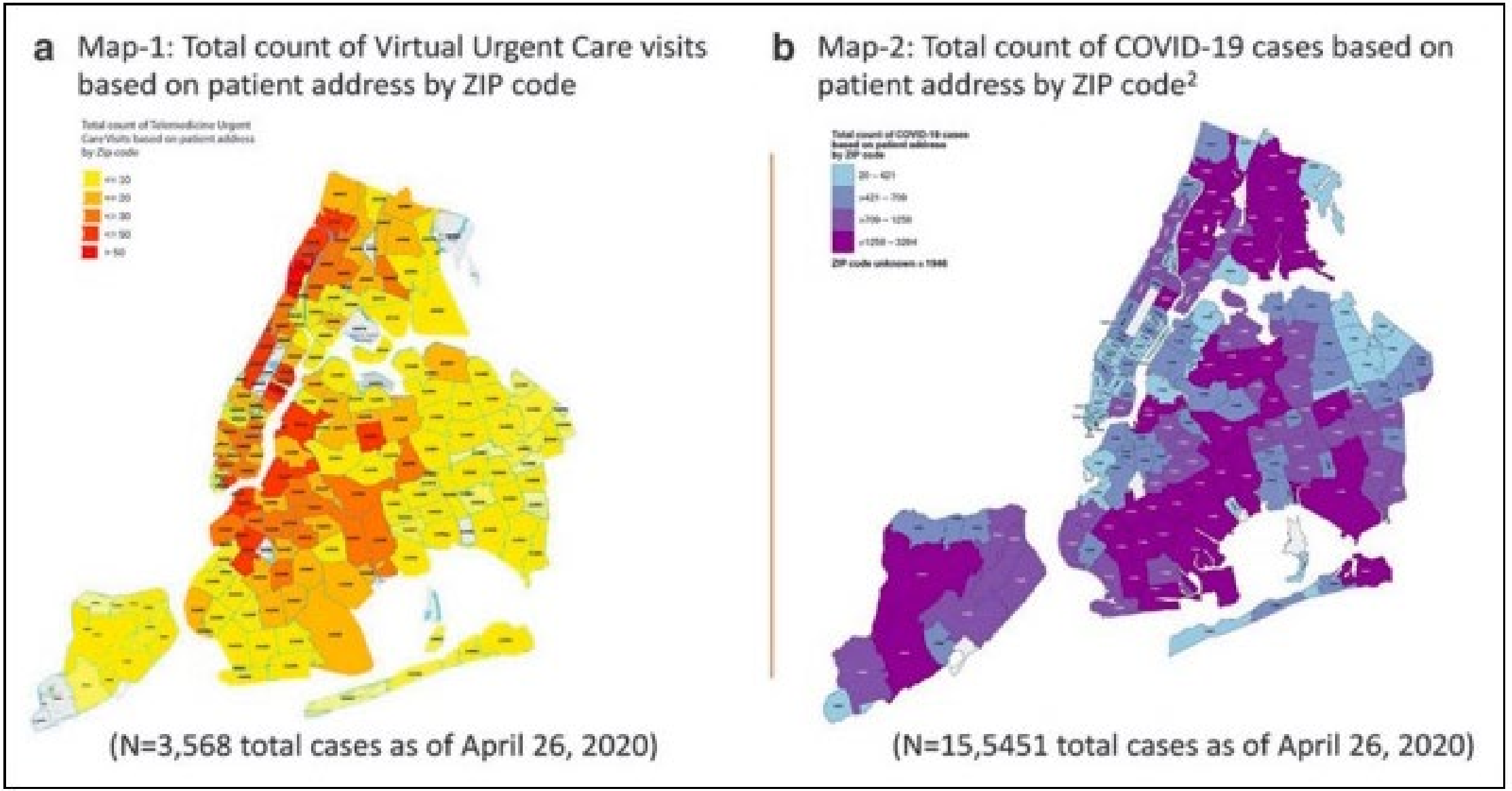


Fig. 1. Geocode maps comparing VUC visits and COVID-19 cases. VUC, virtual urgent care.

Lame, M., Leyden, D., & Platt, S. L. (2021). Geocode Maps Spotlight Disparities in Telehealth Utilization During the COVID-19 Pandemic in New York City. *Telemedicine journal and e-health : the official journal of the American Telemedicine Association*, *27*(3), 251–253. https://doi.org/10.1089/tmj.2020.0297

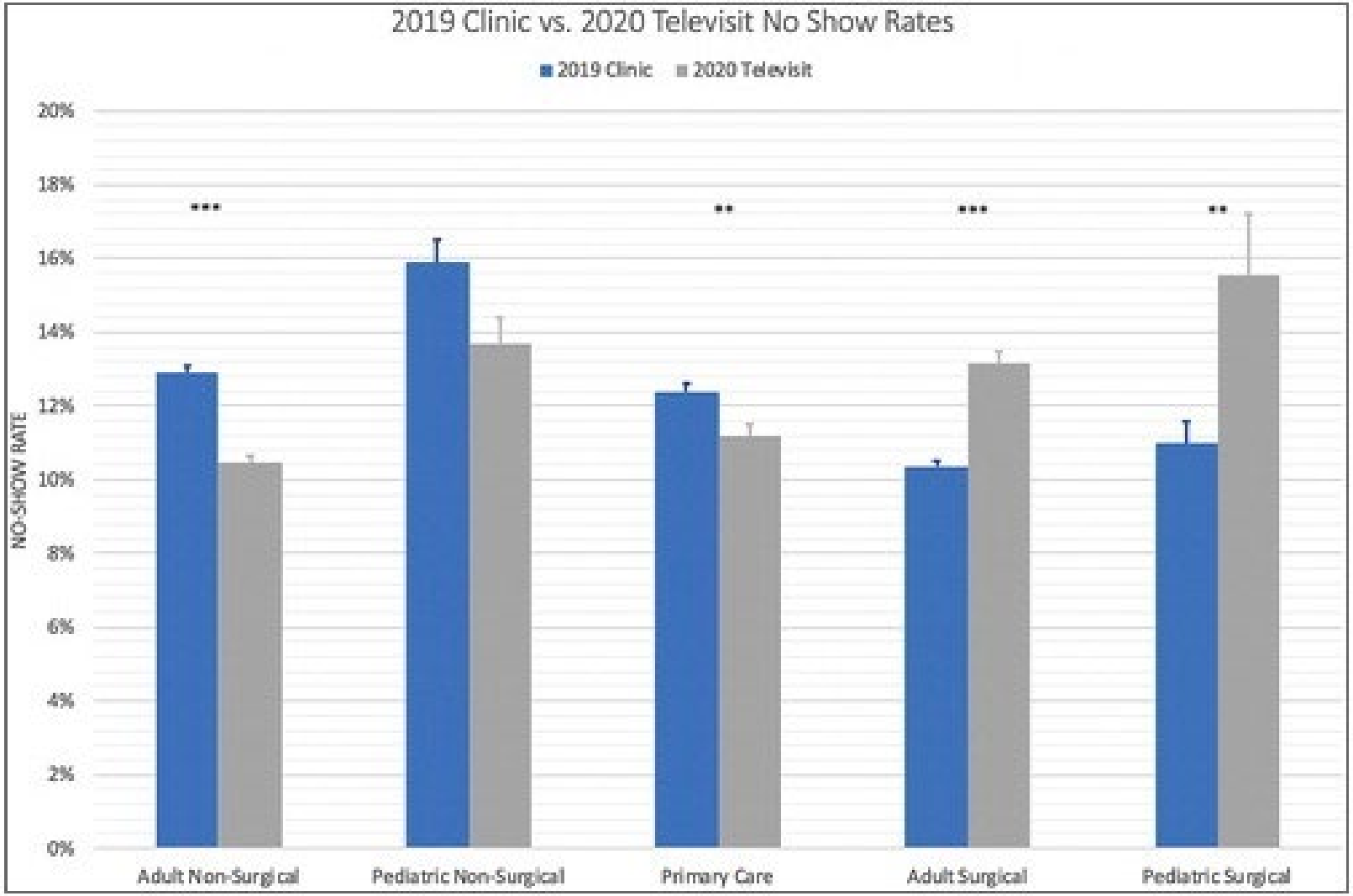


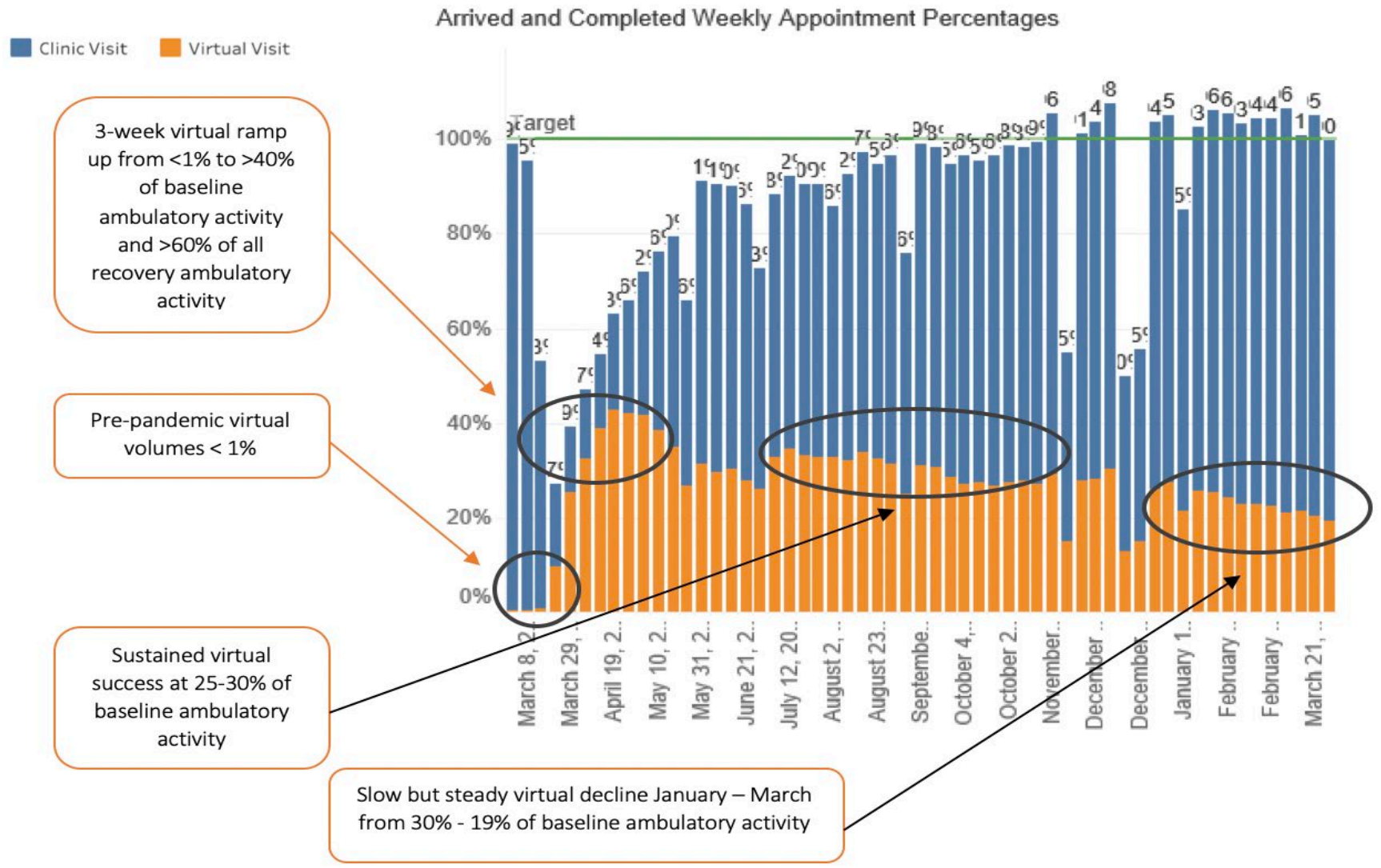
Fig. 2. No-show rates for 2019 clinic and 2020 televisits by specialty type. $^{**}p < 0.05$ $^{***}p < 0.01$.

Franciosi, E. B., Tan, A. J., Kassamali, B., Leonard, N., Zhou, G., Krueger, S., Rashighi, M., & LaChance, A. (2021). The Impact of Telehealth Implementation on Underserved Populations and No-Show Rates by Medical Specialty During the COVID-19 Pandemic. *Telemedicine journal and e-health : the official journal of the American Telemedicine Association*, *27*(8), 874–880. https://doi.org/10.1089/tmj.2020.0525

MUSC's Ambulatory Experience

2020: Ambulatory Virtual Visit Conversion

- After years of statewide telehealth collaborative successes, the call came to serve at home
- MUSC found early and speedy conversion success
- Sustained a virtual care delivery mechanism for months
- Now slowly reverting back to the pre-pandemic in-person model
- Important question: *Where do we go from here?*

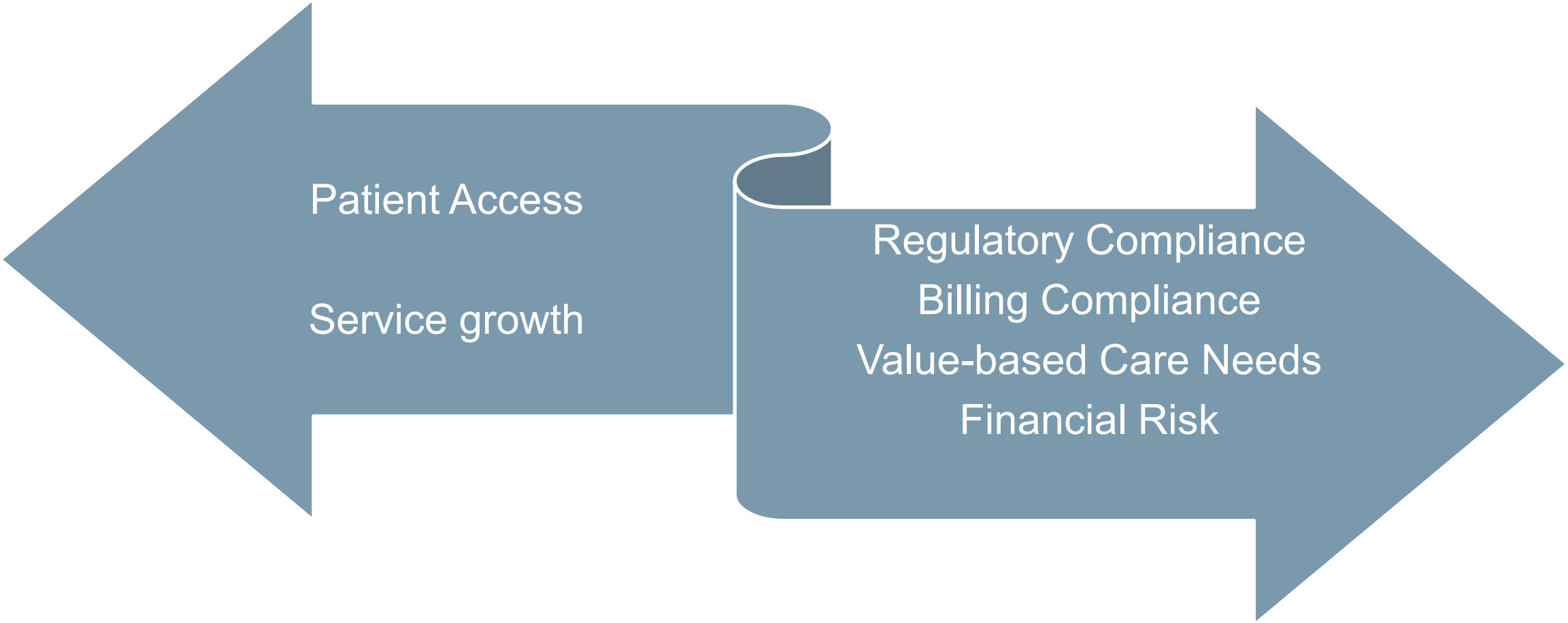


Responding to the Pandemic: Year 1

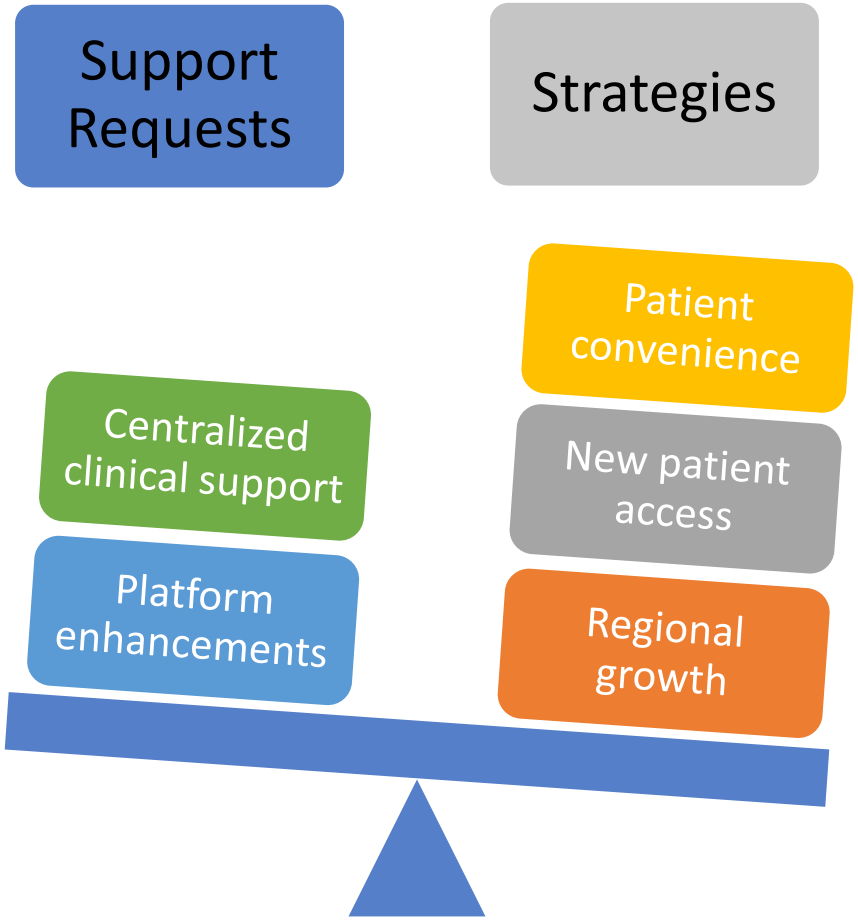
Pandemic Response Phase	Opportunity Identified	Enduring Impact
Rapid Response	Shared governance needed across telehealth, ambulatory, and information solutions teams	Formal committee structure established
	Existing telehealth platforms would require extensive expansion to accommodate scale of use	Low cost, internet browser-based telehealth clients introduced and rapidly adopted
	Early impact of large-scale telehealth use on ambulatory operations is uncertain	Dashboard data reporting established at enterprise level for utilization, visit show rates, payment charge returns and patient satisfaction
	Ease of use of stand-alone telehealth platforms accelerated adoption over health record integrated solutions	Standard workflows established with flexibility allowed for type of video platform
	Multidisciplinary and educational teams find innovative ways to adjust workflow with video technologies	Highly accessible telehealth platforms with flexible virtual room sharing or multi-party calling see wide adoption among academic center providers with minimal training
Stabilization	Care team coordination and telehealth technical success drive patient willingness to recommend the service	Perception of how well team worked together, video quality and audio quality established as core metrics for improvement
	Technical success improvements hindered by multiple platforms use with variable reporting capabilities	Telehealth platform goals redefined, and available platforms reviewed for retention
	Combined goals of ease of patient entry into virtual visit and integration with patient portal functionality highlight a technical deficit in available platforms	Virtual visit triage technologies exploration as potential differentiator for consistent successful patient encounters
	Scheduling changes between in-person and virtual visits are a source of patient dissatisfaction	Process improvement team formed to leverage best-practices of high performing clinics
Strategy Development	As provider comfort with telehealth increases, desire for stable video technologies and integrations is balanced against ease of use	Short- and long-term strategies on telehealth platforms emerge
	Providers begin to appreciate the virtual and in-person visit types as distinct opportunities in a care continuum	Protocols for use of telehealth in the care continuum begin to emerge
	As long-term reimbursement uncertainty persist, variability exists between how clinical units perceive their telehealth strategies	Enterprise telehealth principles established to facilitate consistent telehealth goals and strategies across clinical units
	Care access disparities can be exacerbated with use of telehealth	Connectivity improvements and patient digital literacy actions needed throughout populations served

https://muschealth.org/-/sm/sctelehealth/f/reports/ambulatory-telehealth-journey-summary.ashx?la=en

Responding to the Pandemic: Year 2



Ambulatory Telehealth Enhancements

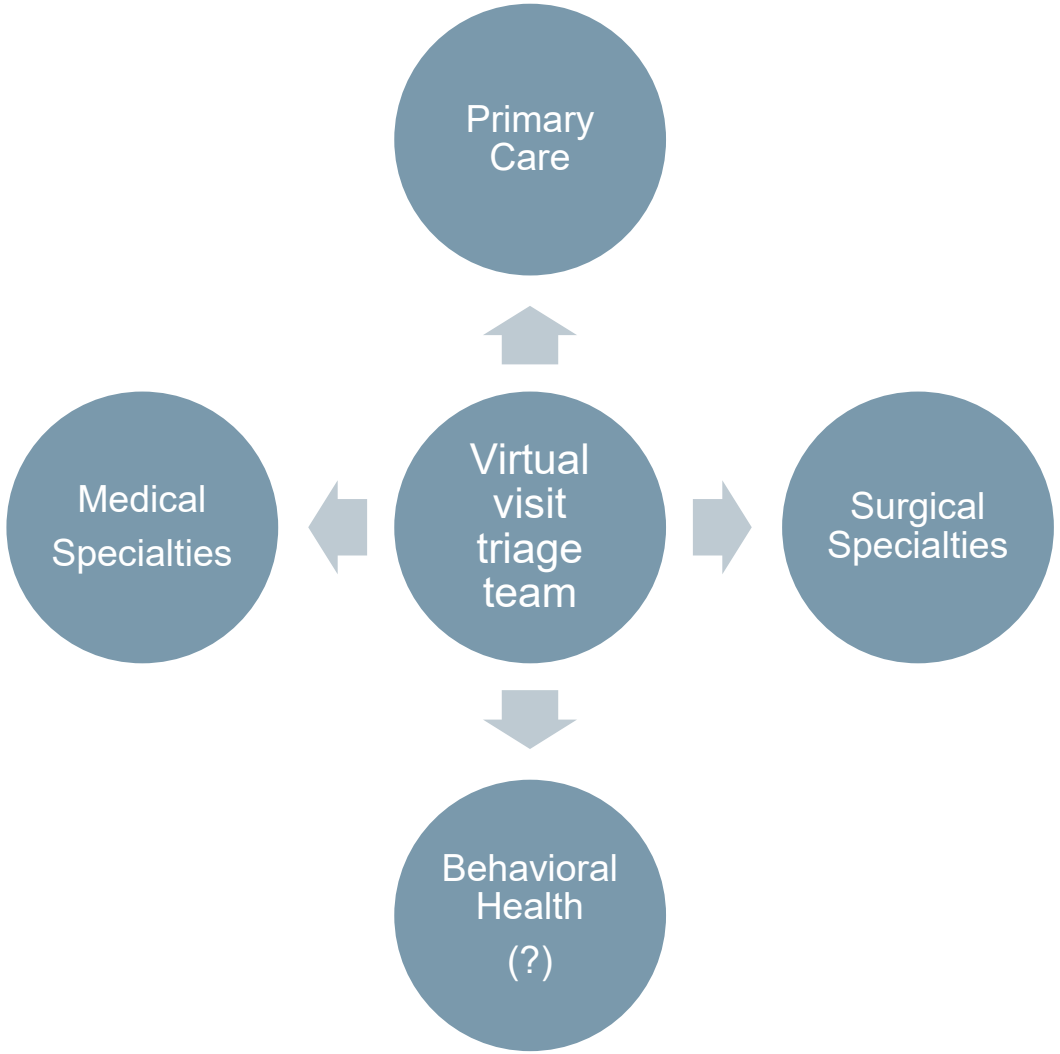


1. Centralized virtual clinic triage support
2. New technology / platform enhancements
3. Departmental goal setting aided by virtual visit analytics dashboard

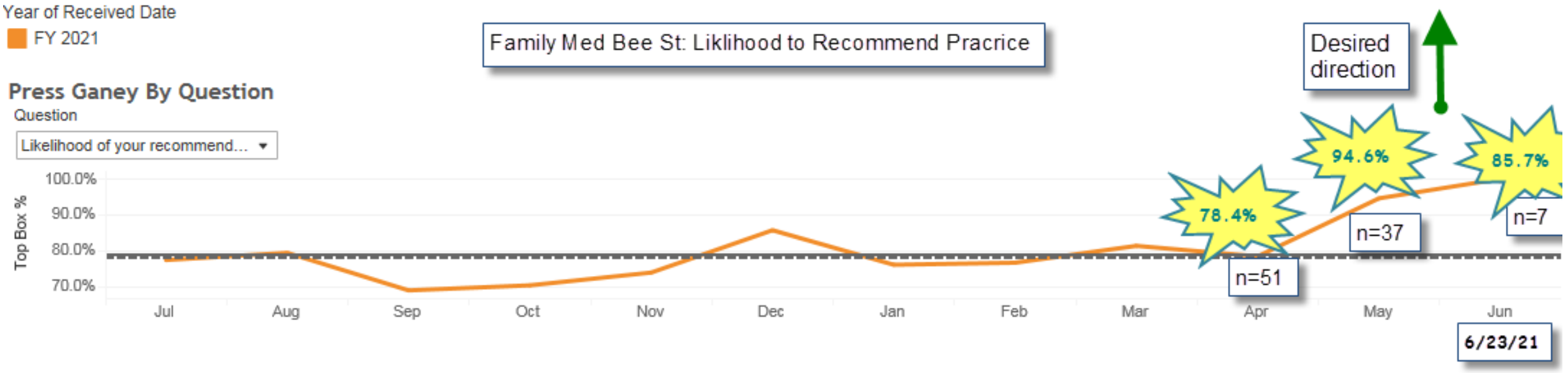
Telehealth Enhancements

Centralized Support Model

Centralized Support Model



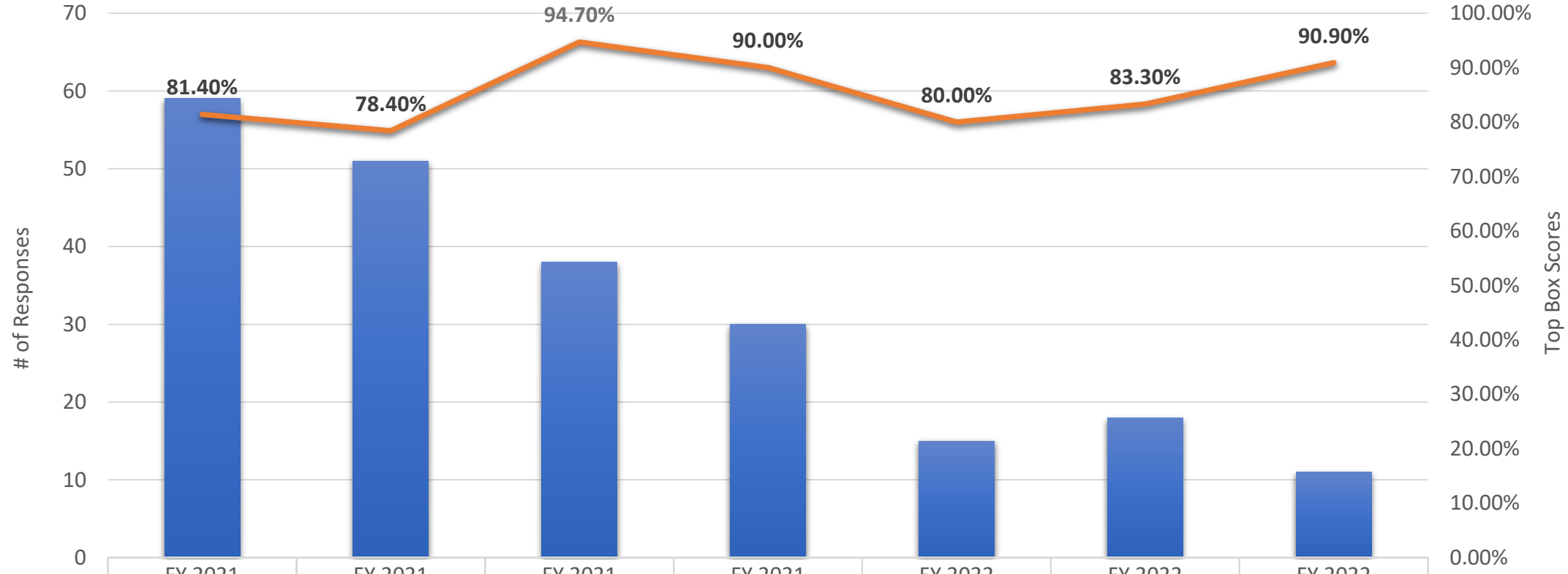
Early Results from Centralized Support



*Intervention began April 5th

Telehealth Ambulatory Nurse Pilot: Patient Experience
Family Med Bee St

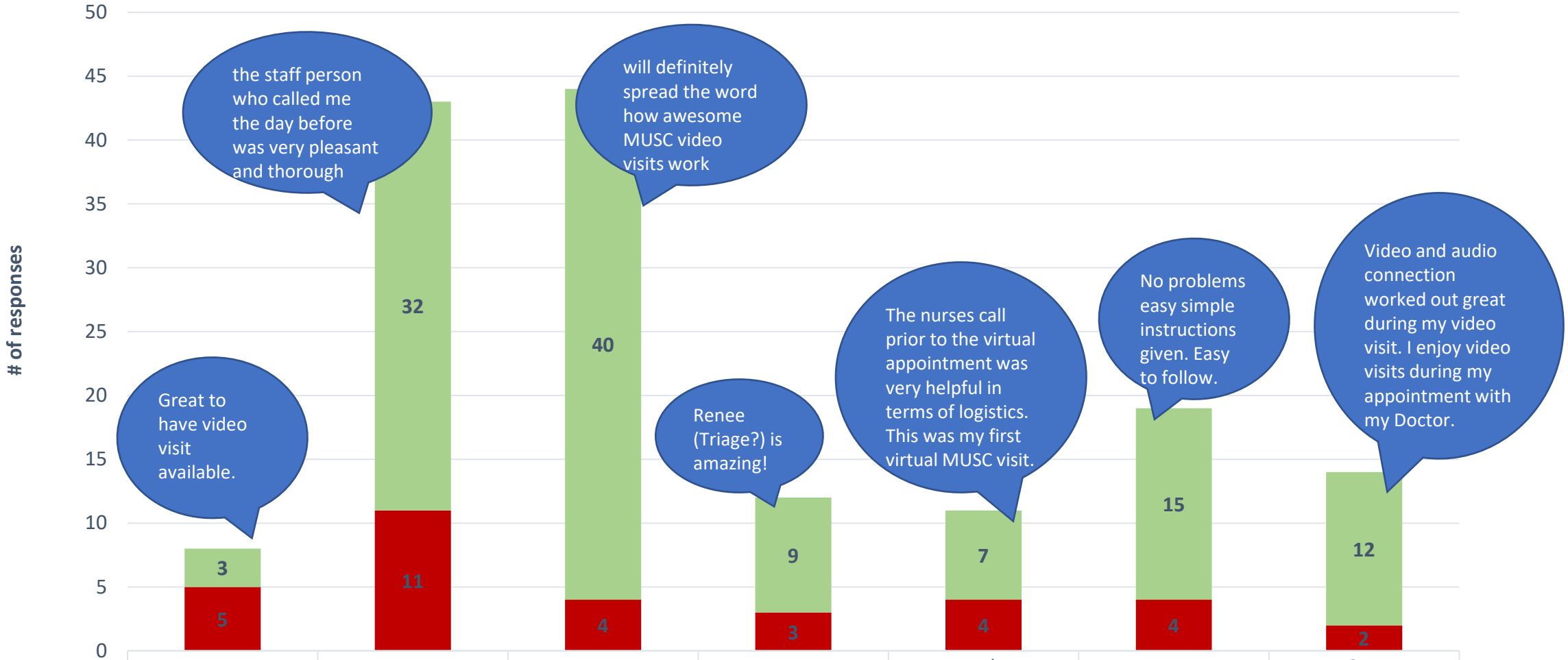
Desired Direction



	FY 2021 March Likelihood of your recommending our practice to others	FY 2021 April Likelihood of your recommending our practice to others	FY 2021 May Likelihood of your recommending our practice to others	FY 2021 June Likelihood of your recommending our practice to others	FY 2022 July Likelihood of your recommending our practice to others	FY 2022 August Likelihood of your recommending our practice to others	FY 2022 September Likelihood of your recommending our practice to others
Responses	59	51	38	30	15	18	11
Top Box Percent (Rpt Grp)	81.40%	78.40%	94.70%	90.00%	80.00%	83.30%	90.90%

Responses Top Box Percent (Rpt Grp)

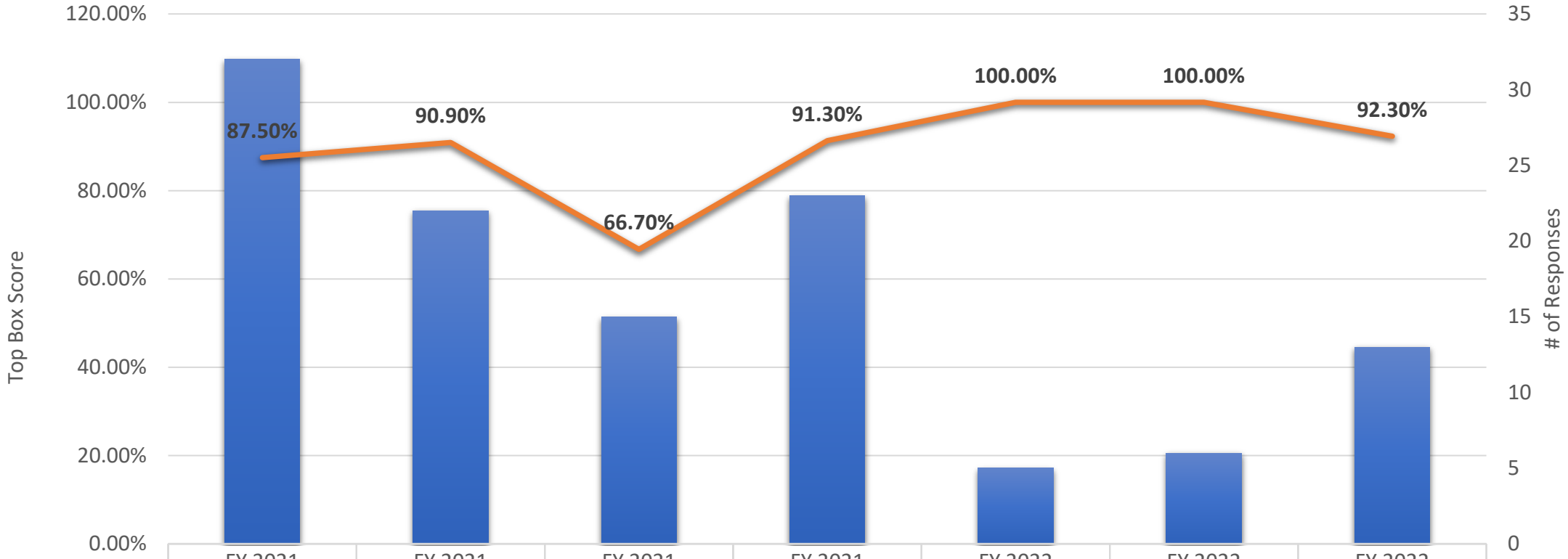
Telehealth Ambulatory Nurse Pilot: Patient Experience Comments
Family Med Bee St



	Mar	Apr	May	Jun	Jul	Aug	Sep
Win	3	32	40	9	7	15	12
Opportunity	5	11	4	3	4	4	2

Telehealth Ambulatory Nurse Pilot
Family Med Ellis Oaks

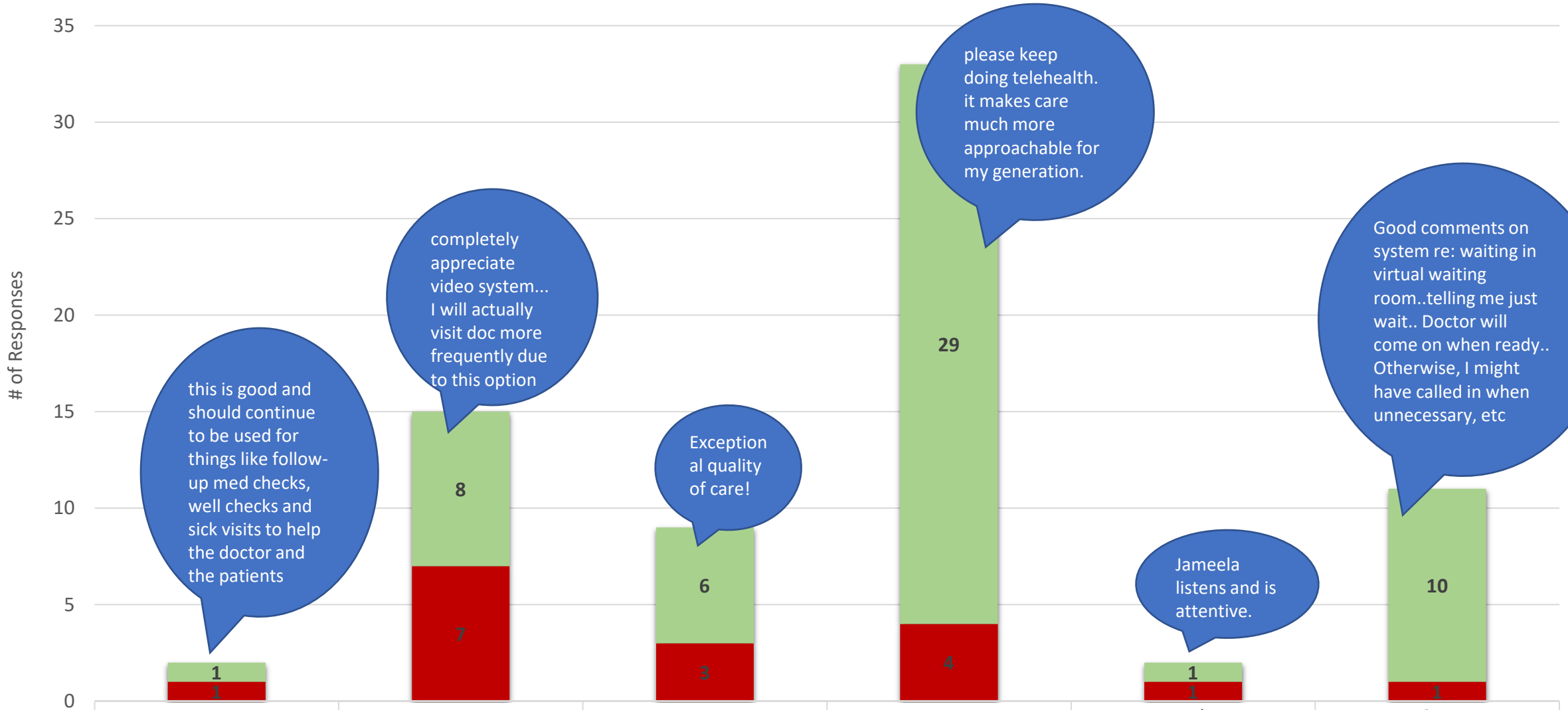
Desired Direction



	FY 2021 March Likelihood of your recommending our practice to others	FY 2021 April Likelihood of your recommending our practice to others	FY 2021 May Likelihood of your recommending our practice to others	FY 2021 June Likelihood of your recommending our practice to others	FY 2022 July Likelihood of your recommending our practice to others	FY 2022 August Likelihood of your recommending our practice to others	FY 2022 September Likelihood of your recommending our practice to others
Responses	32	22	15	23	5	6	13
Top Box Percent (Rpt Grp)	87.50%	90.90%	66.70%	91.30%	100.00%	100.00%	92.30%

Responses Top Box Percent (Rpt Grp)

Telehealth Ambulatory Nurse Pilot: Patient Experience Comments
Family Med Ellis Oaks



	Mar	Apr	May	Jun	Jul	Sep
Win	1	8	6	29	1	10
Opportunity	1	7	3	4	1	1

Telehealth Enhancements

Platform Enhancements

Post-pandemic Ambulatory Video Platform Considerations

Area of Focus	Item
Pre-visit patient assistance	Schedule integration
	Intelligent patient outreach with actionable responses
	Technology testing
Visit entry support	Clinic-level customizable visit intake forms
	Consent acquisition outside of MyChart
	Provider and patient notifications of status and running late notification
In-visit support	Smooth 3rd party connectivity
	In visit tools for medical record query and display
Post-visit support	Post visit order coordination and after visit materials

Telehealth Enhancements

Departmental Goal Setting

Departmental Goal Setting

For each clinical domain, evaluated

- Peak % of volume that was telehealth
- % telehealth spring/summer of 2021
- Clinical leader input on strategic intent

Established 5 tiers of achievement approved as Growth Pillar Goal

Goals ranged from 5% (anesthesia) to 75% (mental health)

Guiding Principles for Telehealth Visits in Ambulatory Clinics

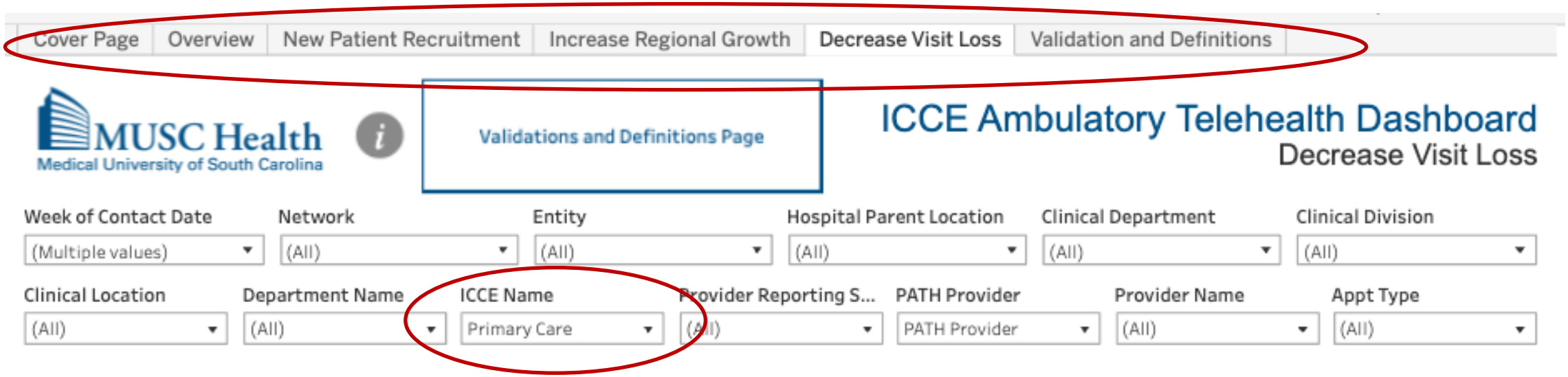
Intended for decision-support and consideration during strategy prioritization

1. Patient choice will be preserved and promoted in decisions for telehealth use
   - In-person options for care will always be available
   - Including a clear pathway to refer from telehealth to in-person care when clinically necessary
2. Telehealth practice adheres to the same standards of care and process/quality metrics as in-person care
3. Telehealth will be applied to improve care by increasing patient access points throughout the care continuum
   - New patient access enhancement strategies will be implemented in all specialty areas
   - These strategies will include initiatives to minimize health care access disparities
4. Scheduling will be optimized for patient access
   - Appointment type changes will be minimized
   - Scheduling protocols will enhance operational efficiencies, maximize space utilization, and minimize cost per encounter
   - Patients will be offered appointment type at the time of initial contact
5. Telehealth utilization rates will be similar for like providers in a specialty
6. Clinic space will be preserved and optimized for the provision of in-person care

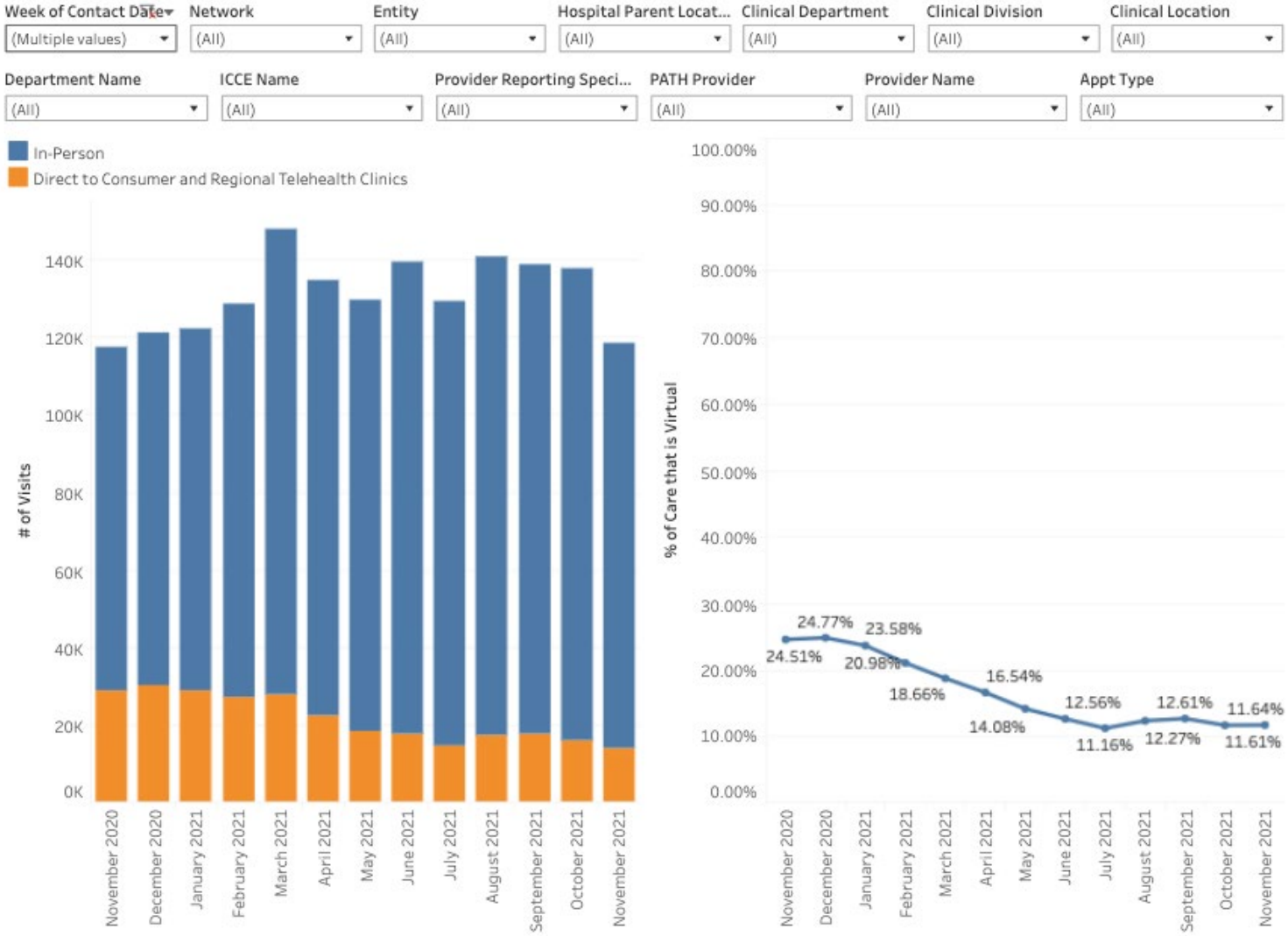
Virtual Visits Analytics Dashboard

Strategy	Metric	Notes
Leverage virtual care	% of ambulatory care completed virtually	# of direct-to-patient and regional clinic video visits/ # of total ambulatory visits (virtual and in-person)
New Patient Recruitment	% of new patients that are virtual visits	# of virtual visits for new patients / # of total new patient ambulatory visits
	Time from request to first appointment for new patient virtual visits relative to in-person care	Days from request to scheduled appointment time
Increase regional growth	% of care provided outside of Tricounty region area that is virtual	# virtual visits outside of Tricounty/ # total ambulatory care outside of the Tricounty (in-person and tele)
Increase patient satisfaction	Press Ganey likeliness to recommend (comparison virtual vs. in-person)	
	Press Ganey top box score – Care coordination	
	Press Ganey top box score – Video connect	
	Press Ganey top box score – Ease of talking over video	
Decrease visit loss	% visit loss for virtual care relative to in-person care	Visit loss = percent of appointments that are ”no show” or cancelled within 24 hours
Optimize telehealth contribution to revenue	Gross collection rate for virtual visits	
	Average cost/visit	
Increase provider productivity	Metric TBD to delineate provider time and involvement / encounter	
	% provider RVUs conducted via tele	

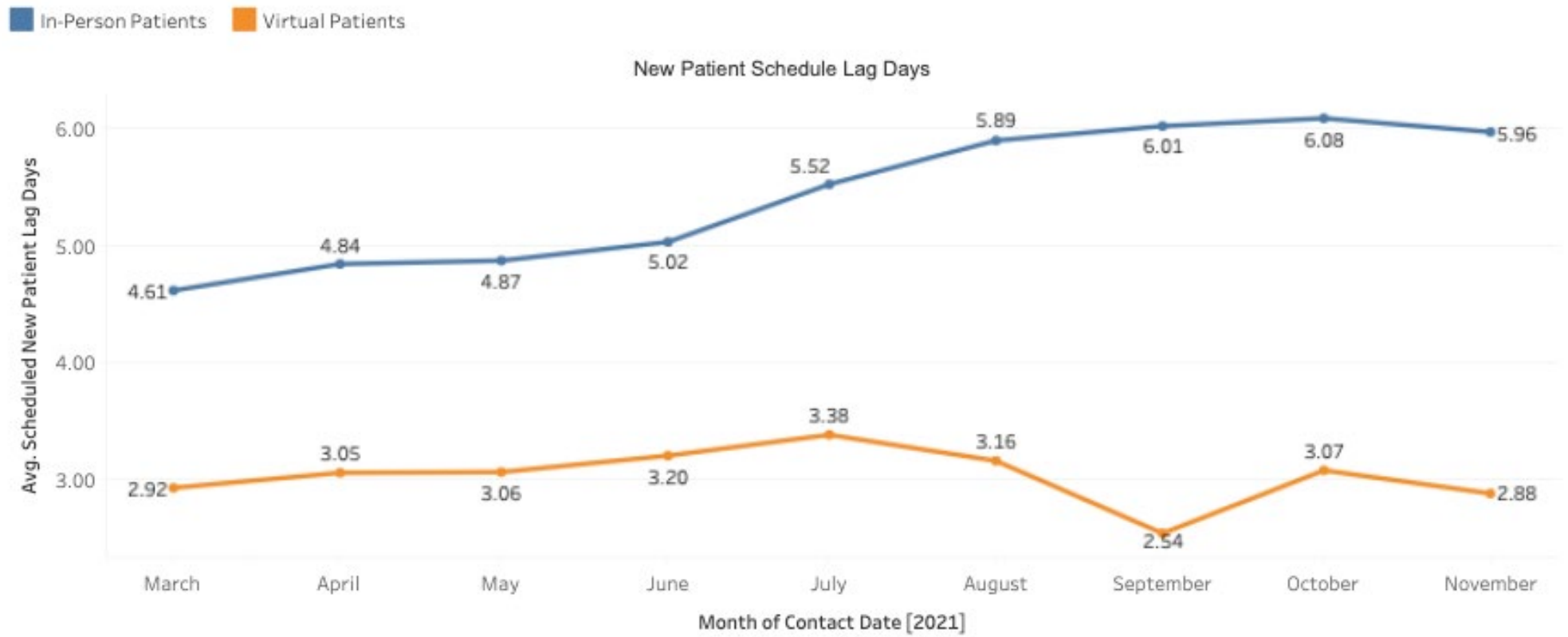
Virtual Visits Analytics Dashboard: Overview



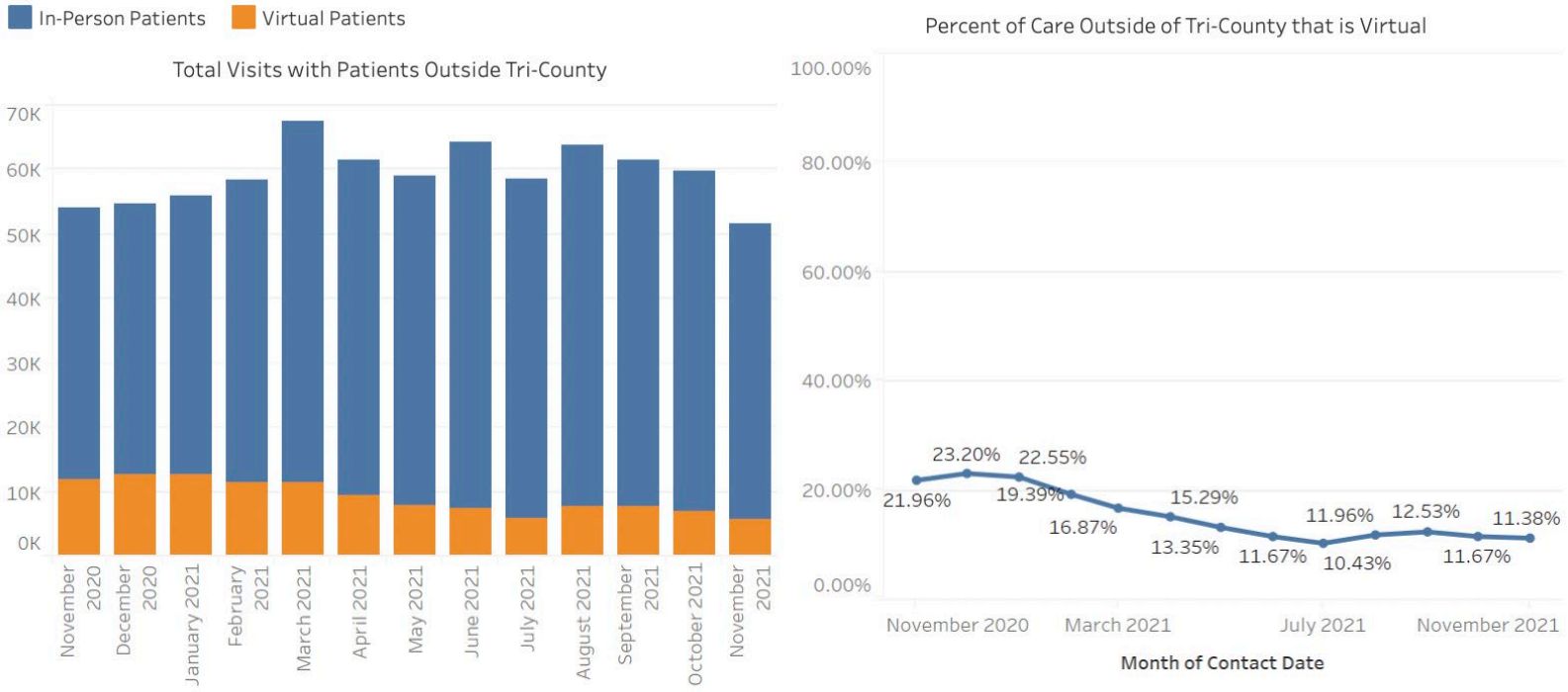
Virtual Visits Analytics Dashboard: Overview

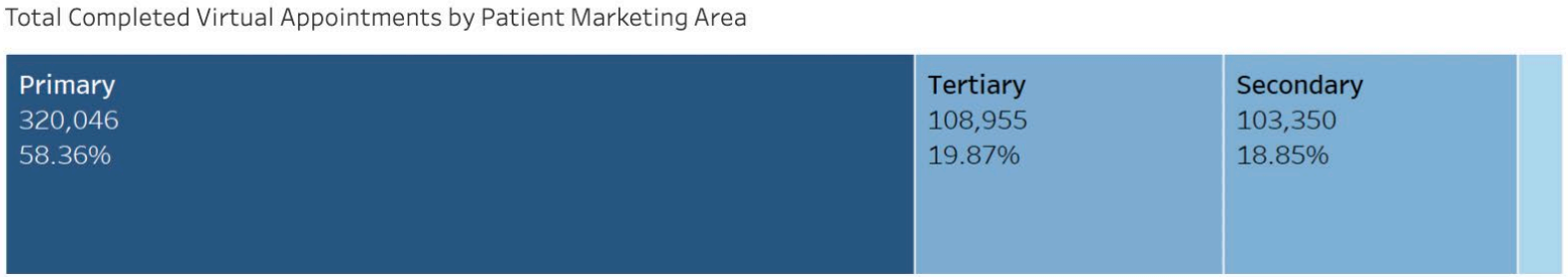


Virtual Visits Analytics Dashboard: New Patient Recruitment

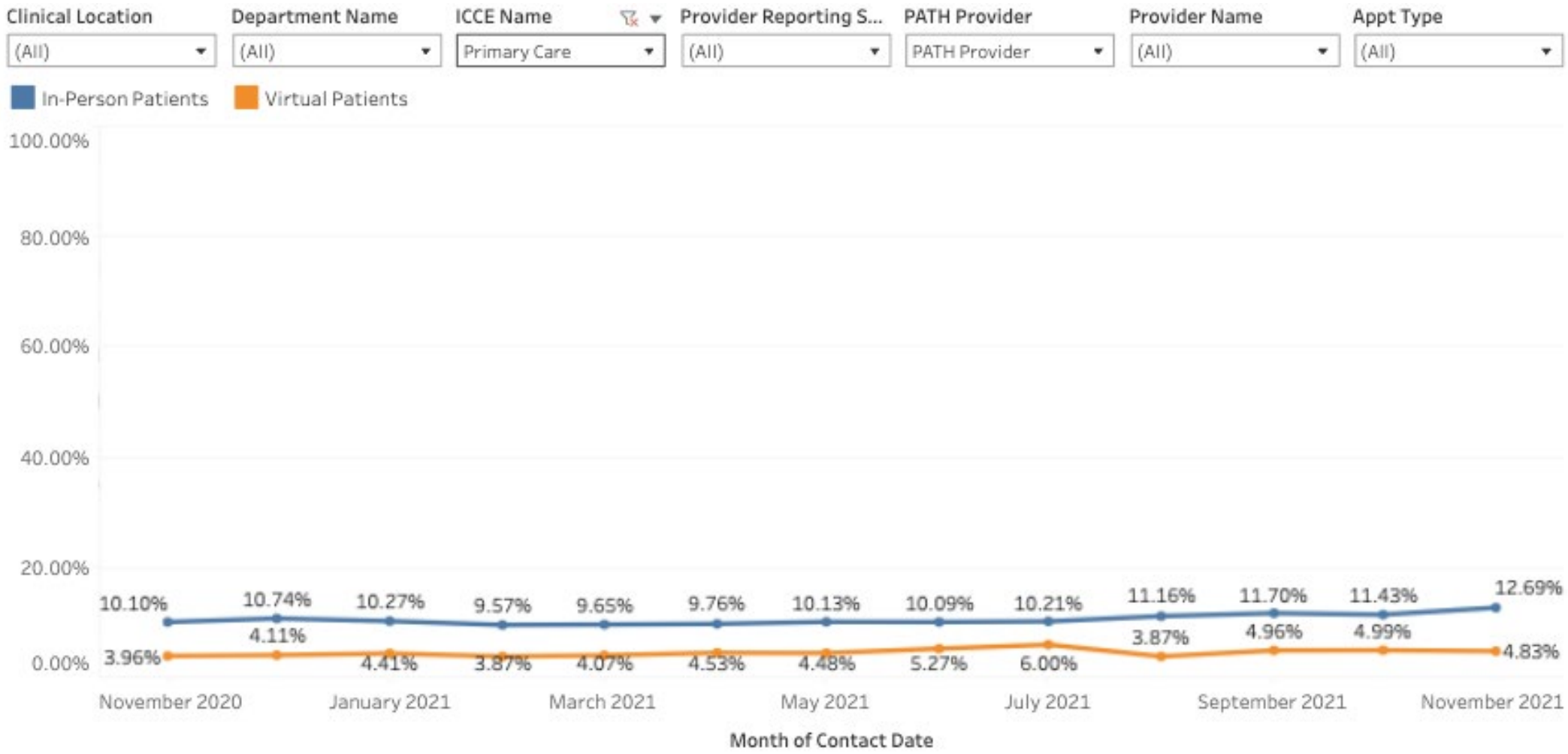


Virtual Visits Analytics Dashboard: Increase Regional Growth

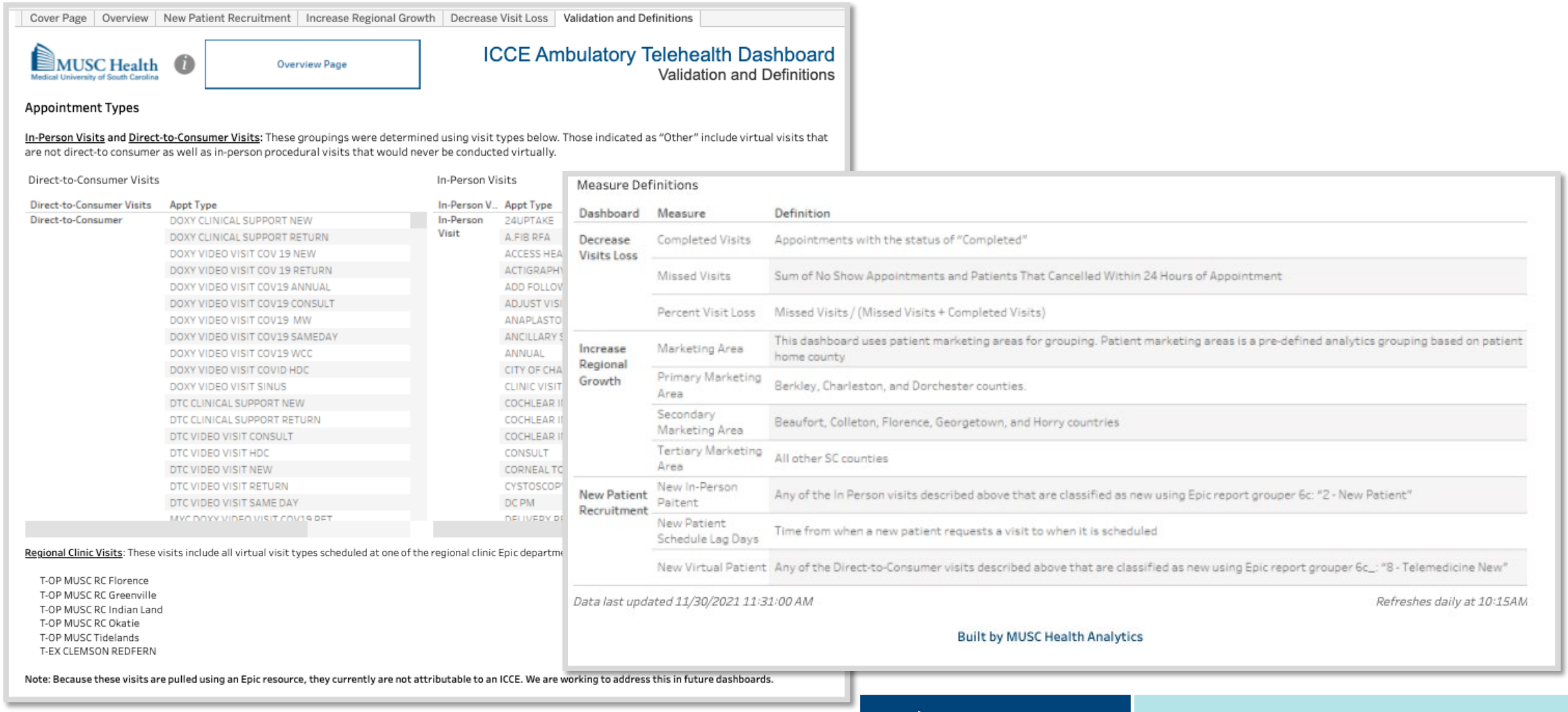




Virtual Visits Analytics Dashboard: Decrease Visit Loss



Virtual Visits Analytics Dashboard: Definitions & Validation



Cover Page | Overview | New Patient Recruitment | Increase Regional Growth | Decrease Visit Loss | Validation and Definitions

MUSC Health
Medical University of South Carolina

Overview Page

ICCE Ambulatory Telehealth Dashboard
Validation and Definitions

Appointment Types

In-Person Visits and **Direct-to-Consumer Visits**: These groupings were determined using visit types below. Those indicated as "Other" include virtual visits that are not direct-to consumer as well as in-person procedural visits that would never be conducted virtually.

Direct-to-Consumer Visits

Direct-to-Consumer Visits	Appt Type
Direct-to-Consumer	DOXY CLINICAL SUPPORT NEW
	DOXY CLINICAL SUPPORT RETURN
	DOXY VIDEO VISIT COV 19 NEW
	DOXY VIDEO VISIT COV 19 RETURN
	DOXY VIDEO VISIT COV19 ANNUAL
	DOXY VIDEO VISIT COV19 CONSULT
	DOXY VIDEO VISIT COV19 MW
	DOXY VIDEO VISIT COV19 SAMEDAY
	DOXY VIDEO VISIT COV19 WCC
	DOXY VIDEO VISIT COVID HDC
	DOXY VIDEO VISIT SINUS
	DTC CLINICAL SUPPORT NEW
	DTC CLINICAL SUPPORT RETURN
	DTC VIDEO VISIT CONSULT
	DTC VIDEO VISIT HDC
	DTC VIDEO VISIT NEW
	DTC VIDEO VISIT RETURN
	DTC VIDEO VISIT SAME DAY
	MYC DOXY VIDEO VISIT COV19 PET

In-Person Visits

In-Person V..	Appt Type
In-Person Visit	24UPTAKE
	A.FIB RFA
	ACCESS HEA
	ACTIGRAPH
	ADD FOLLOV
	ADJUST VIS
	ANAPLASTO
	ANCILLARY S
	ANNUAL
	CITY OF CHA
	CLINIC VISIT
	COCHLEAR I
	COCHLEAR I
	COCHLEAR I
	CONSULT
	CORNEAL TC
	CYSTOSCOP
	DC PM
	DELIVERY R

Regional Clinic Visits: These visits include all virtual visit types scheduled at one of the regional clinic Epic departme

- T-OP MUSC RC Florence
- T-OP MUSC RC Greenville
- T-OP MUSC RC Indian Land
- T-OP MUSC RC Okatie
- T-OP MUSC Tidelands
- T-EX CLEMSON REDFERN

Note: Because these visits are pulled using an Epic resource, they currently are not attributable to an ICCE. We are working to address this in future dashboards.

Measure Definitions

Dashboard	Measure	Definition
Decrease Visits Loss	Completed Visits	Appointments with the status of "Completed"
	Missed Visits	Sum of No Show Appointments and Patients That Cancelled Within 24 Hours of Appointment
	Percent Visit Loss	Missed Visits / (Missed Visits + Completed Visits)
Increase Regional Growth	Marketing Area	This dashboard uses patient marketing areas for grouping. Patient marketing areas is a pre-defined analytics grouping based on patient home county
	Primary Marketing Area	Berkley, Charleston, and Dorchester counties.
	Secondary Marketing Area	Beaufort, Colleton, Florence, Georgetown, and Horry countries
	Tertiary Marketing Area	All other SC counties
New Patient Recruitment	New In-Person Paitent	Any of the In Person visits described above that are classified as new using Epic report grouper 6c: "2 - New Patient"
	New Patient Schedule Lag Days	Time from when a new patient requests a visit to when it is scheduled
	New Virtual Patient	Any of the Direct-to-Consumer visits described above that are classified as new using Epic report grouper 6c_: "8 - Telemedicine New"

Data last updated 11/30/2021 11:31:00 AM

Refreshes daily at 10:15AM

Built by MUSC Health Analytics

Final Considerations

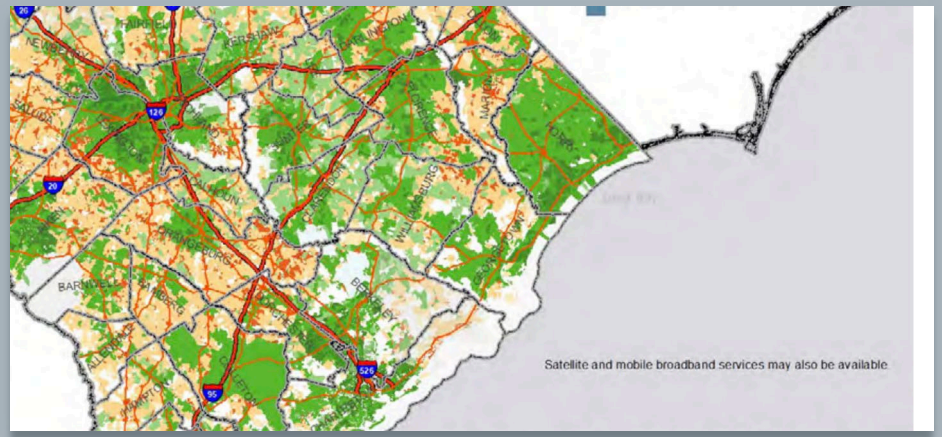
Broadband Access

18 million Americans without broadband access in the home

1/5th of rural residents

15% of households with children

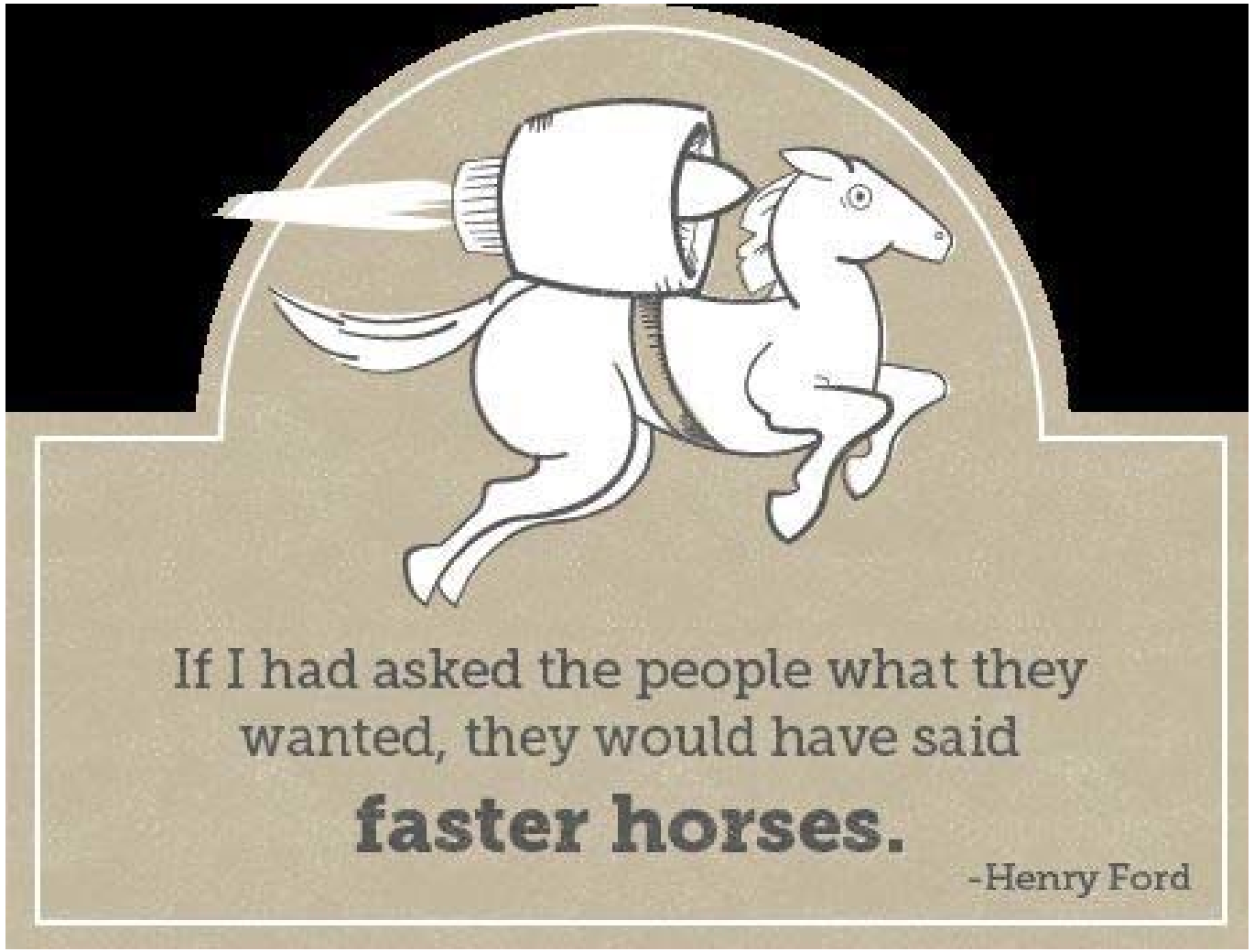
The mapping assessment showed that **434,725 SC residents**—about 12% of the SC population—**lack access to FCC-recommended broadband service levels**, with the majority of these residents living in our rural communities.



In conclusion…

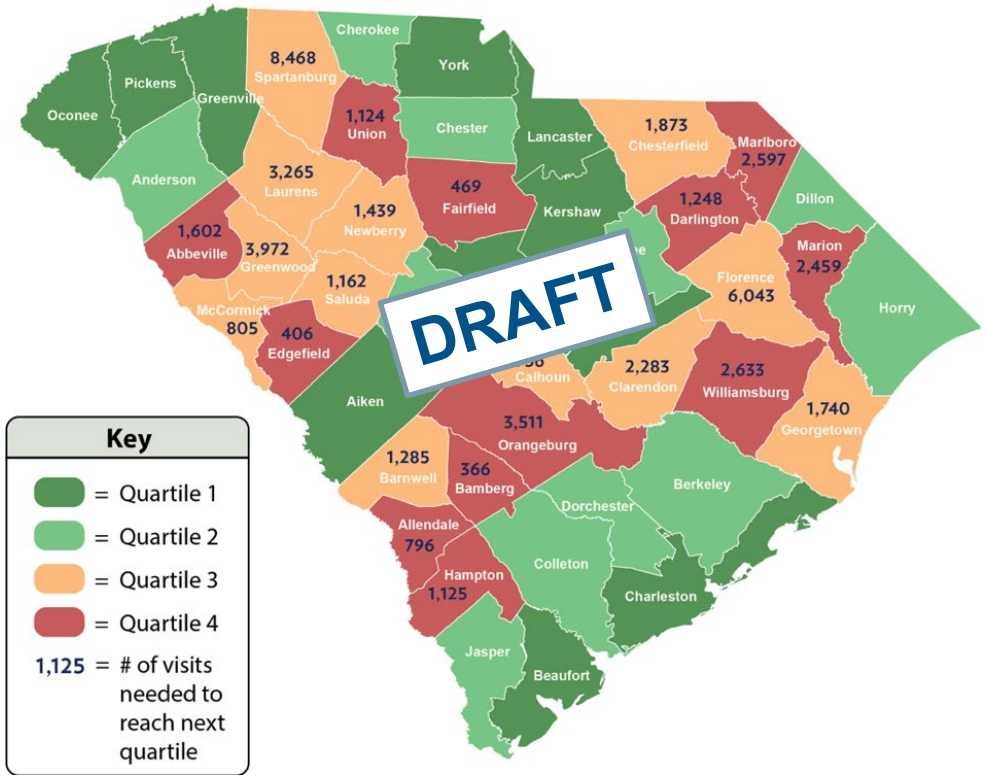
Telehealth ambulatory strategy can…

- Be applied across a health system
- Lower costs of delivering care



Future research & dissemination

- Evaluation of rollout of ambulatory telehealth with specific focus on social determinants of health
- Mixed methods program evaluation of three-pronged approach and impact on health system
- Mapping of access to specialty services using claims data to inform strategy
- Dissemination of key findings, lessons learned, and technical assistance resources
  - Future COE website in collaboration with University of Mississippi



Questions

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MUSC Center for Telehealth
https://muschealth.org/medical-services/telehealth

SC Telehealth Alliance
https://sctelehealth.org/