A New Equilibrium for Telemedicine & Evaluation of Concurrent Heart Failure Care

CORE Cyberseminar Series

January 25, 2024

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Virtual Care CORE

Announcements

1. Special Supplement on Virtual Care in the Veterans Health Administration: Evidence to Advance Access, Engagement, and Outcomes – expected February 15
2. VC CORE is seeking a GS 9 or 11 Project Coordinator

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A New Equilibrium for Telemedicine :

Prevalence of In-person, Video-based, and Telephone-based Care in the VHA

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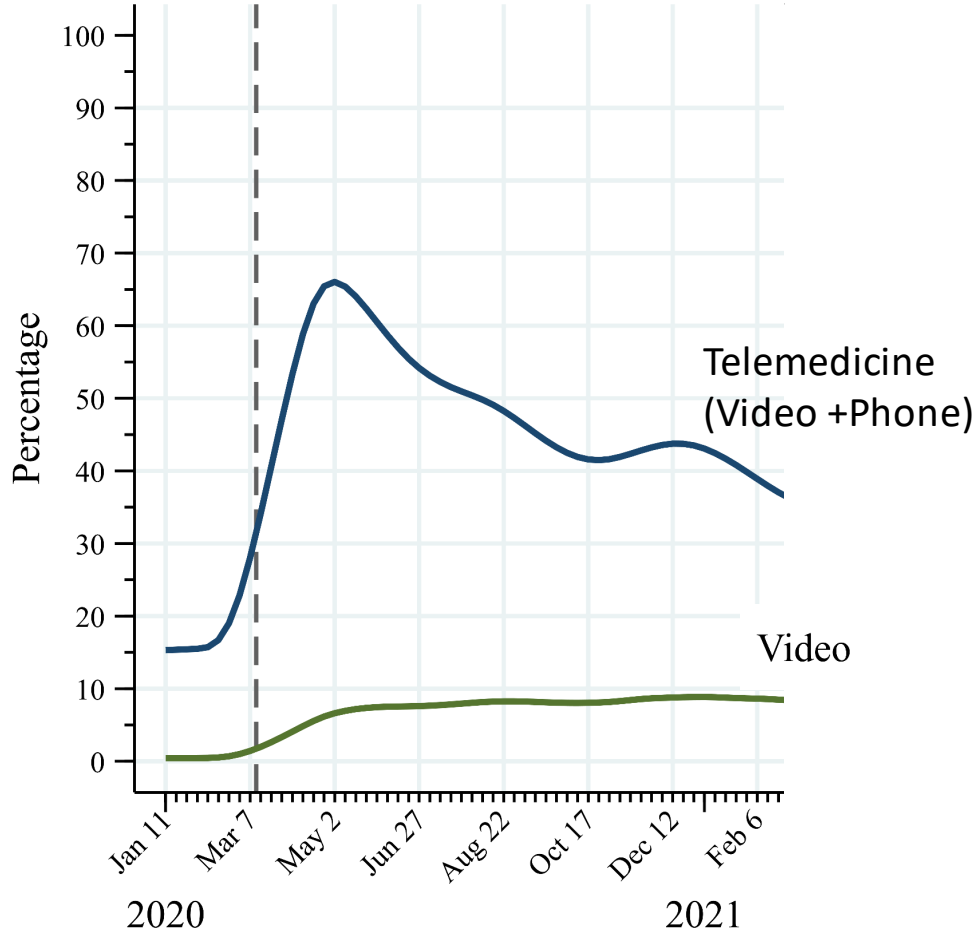
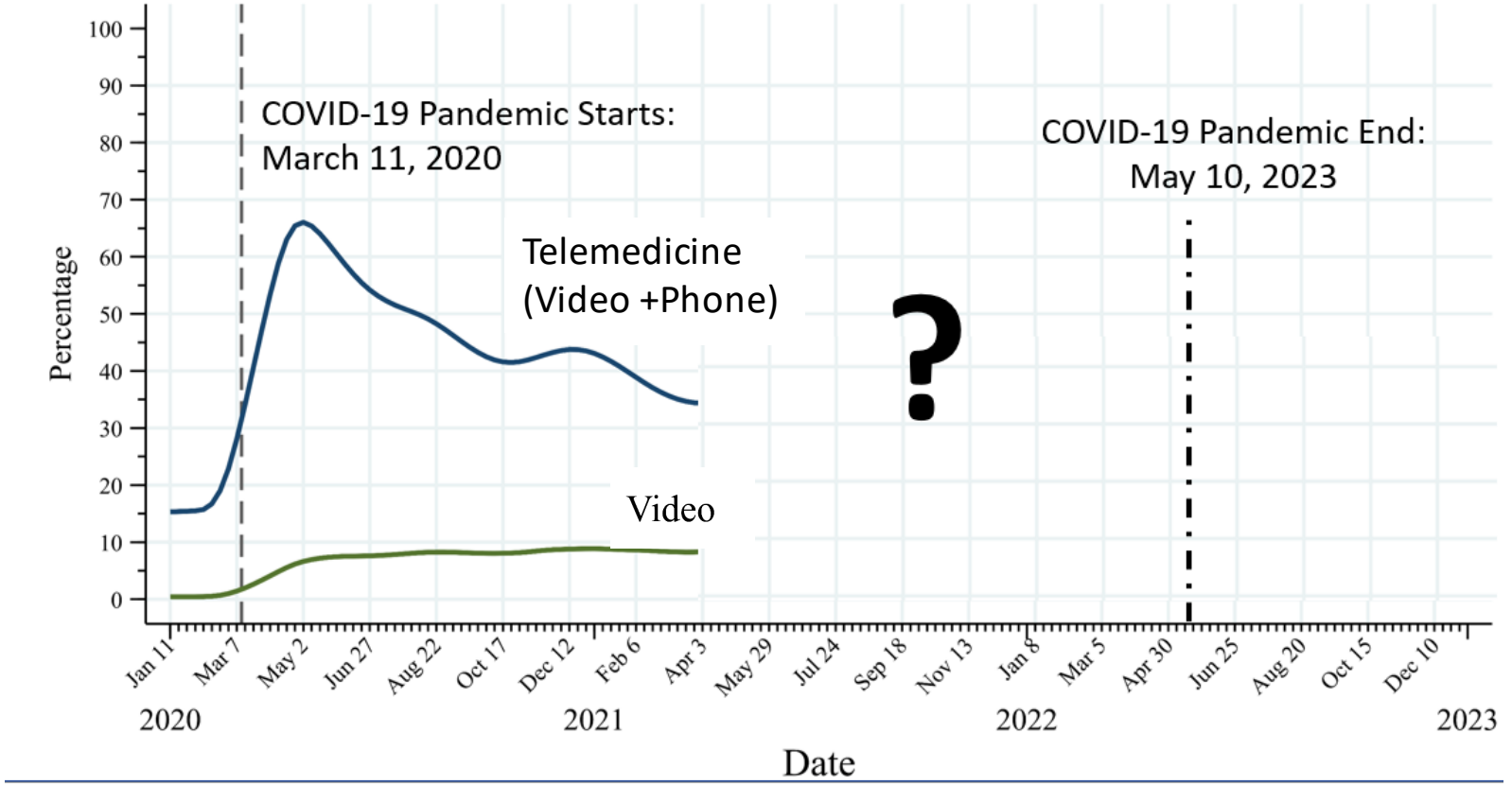
Background

- The VA experienced a rapid uptake of telemedicine (video + telephone) encounters
- This increase in the early phases of the pandemic are well documented
- We know little about the redistribution of in-person and telemedicine encounters as U.S health care systems enter a post pandemic phase

Percentage of VHA outpatient visits that are telemedicine Visits



Where are we now?



Percentage of VHA outpatient Visits that are virtual

Objective

- ✓ Describe trends in clinical outpatient encounters at VA occurring between January 1, 2019 and August 31, 2023

277,348,286 outpatient encounters between January 1, 2019 and August 31, 2023

Classified each encounter by modality:

In-person

Telephone

Video

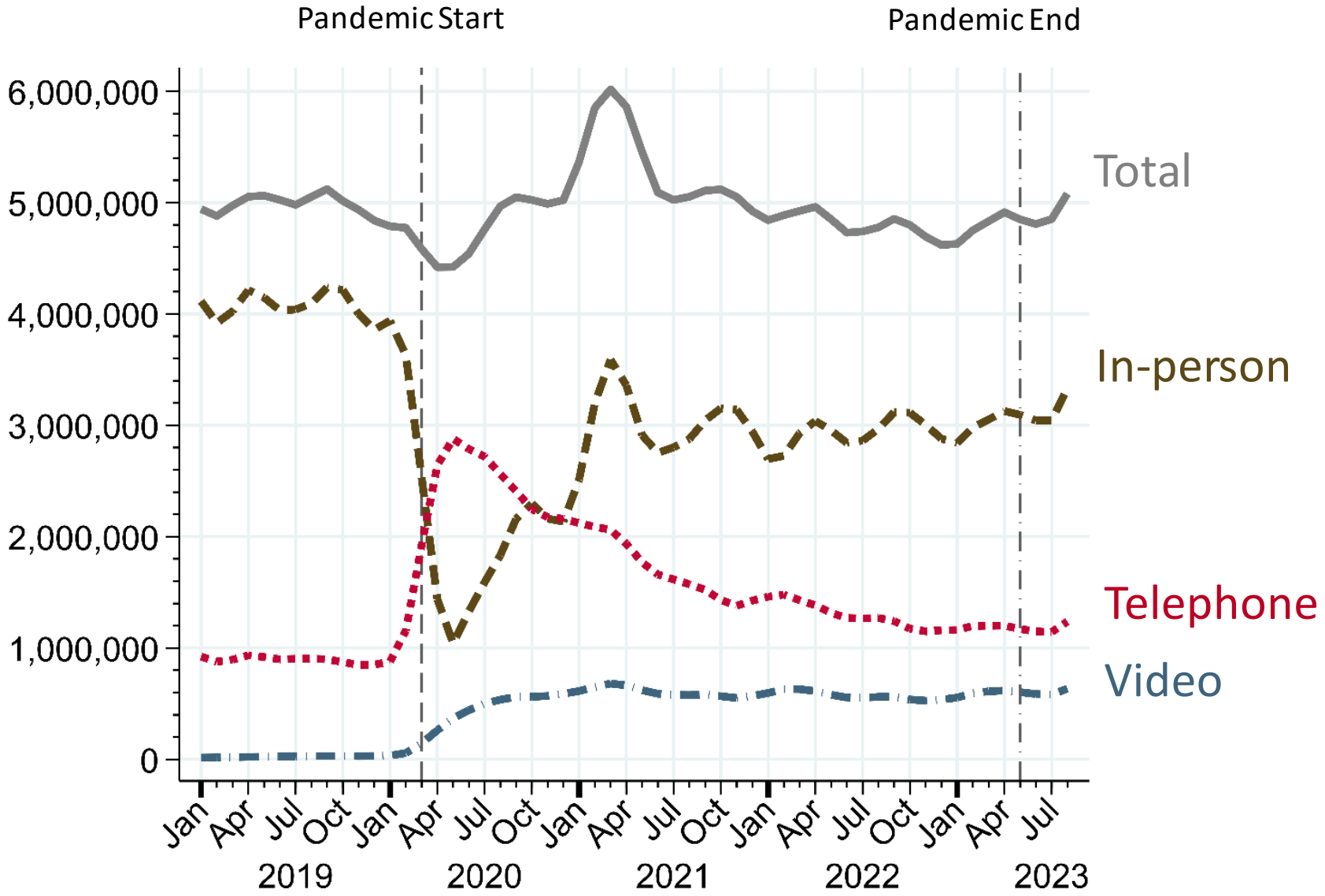
Classified each encounter by care service:

Primary Care

Specialty Care

Mental Health

Monthly count of outpatient VA encounters between January 1, 2019 and August 31, 2023 by care modality (N=277,348,286)



Pandemic start:
March 11, 2020 (WHO declares COVID-19 a pandemic).

Pandemic end:
May 11, 2023, end of Federal COVID-19 Public Health Emergency Declaration

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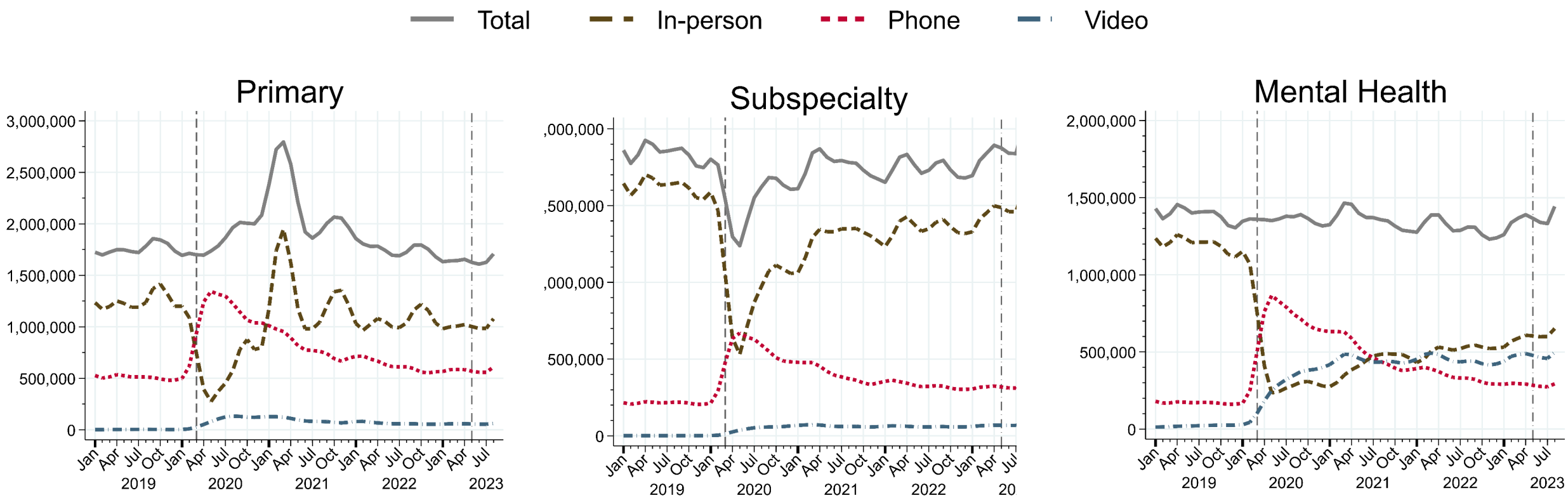
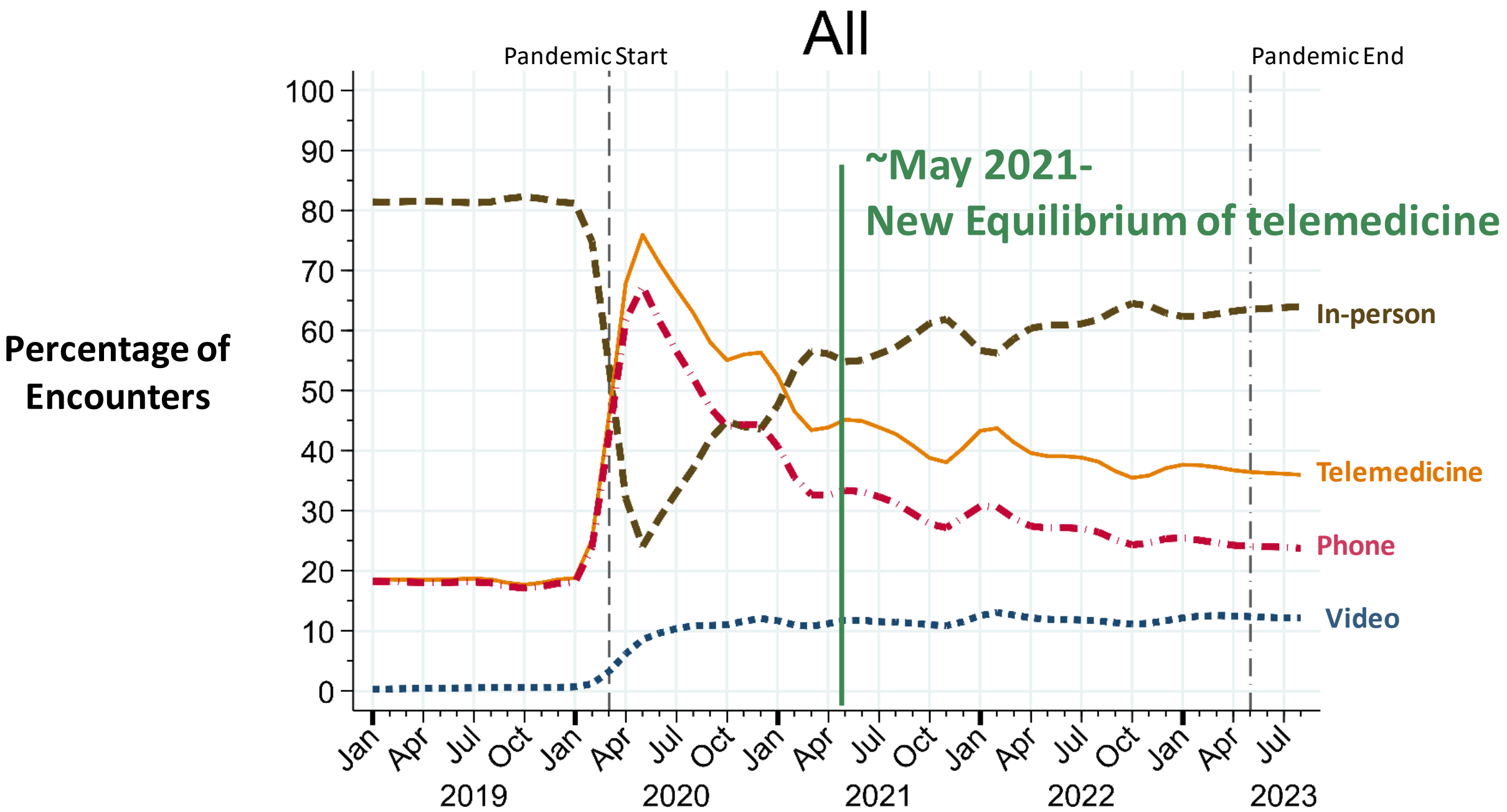
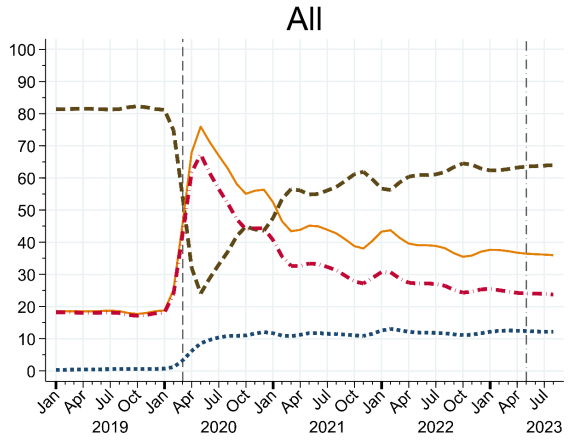
Monthly count of outpatient VA encounters between January 1, 2019 and August 31, 2023 by care type and care modality (N=277,348,286)



- Total encounter volume among Primary care and mental health was maintained by a compensatory increase in telephone- and video-based encounters.
- Telephone encounters were the most common modality for primary care during the first months of the pandemic.


All
Pandemic Start
Pandemic End
~May 2021-
New Equilibrium of telemedicine
Percentage of Encounters
100
90
80
70
60
50
40
30
20
10
0
In-person
Telemedicine
Phone
Video
Jan
Apr
Jul
Oct
2019
2020
2021
2022
2023



Primary

Pandemic Start

Pandemic End

100
90
80
70
60
50
40
30
20
10
0

Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul Oct Jan Apr Jul
2019 2020 2021 2022 2023

In-person

Telemedicine

Phone

Video

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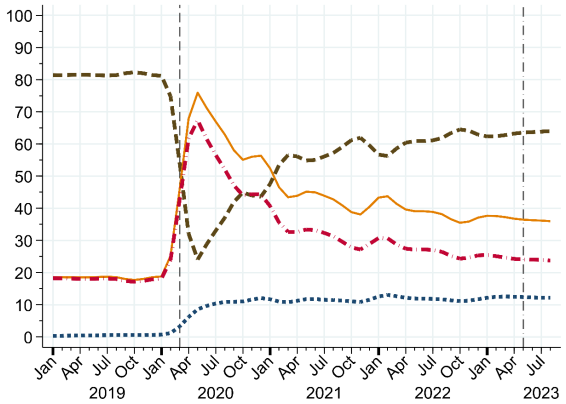
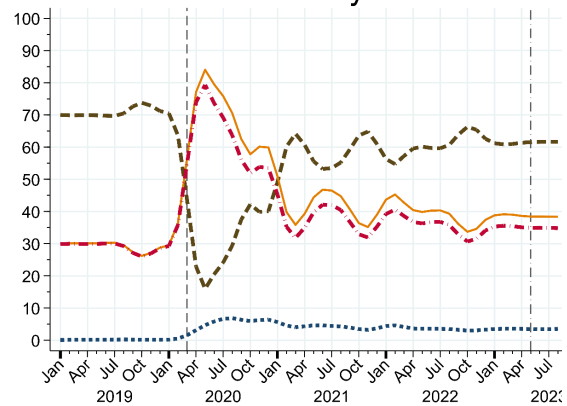
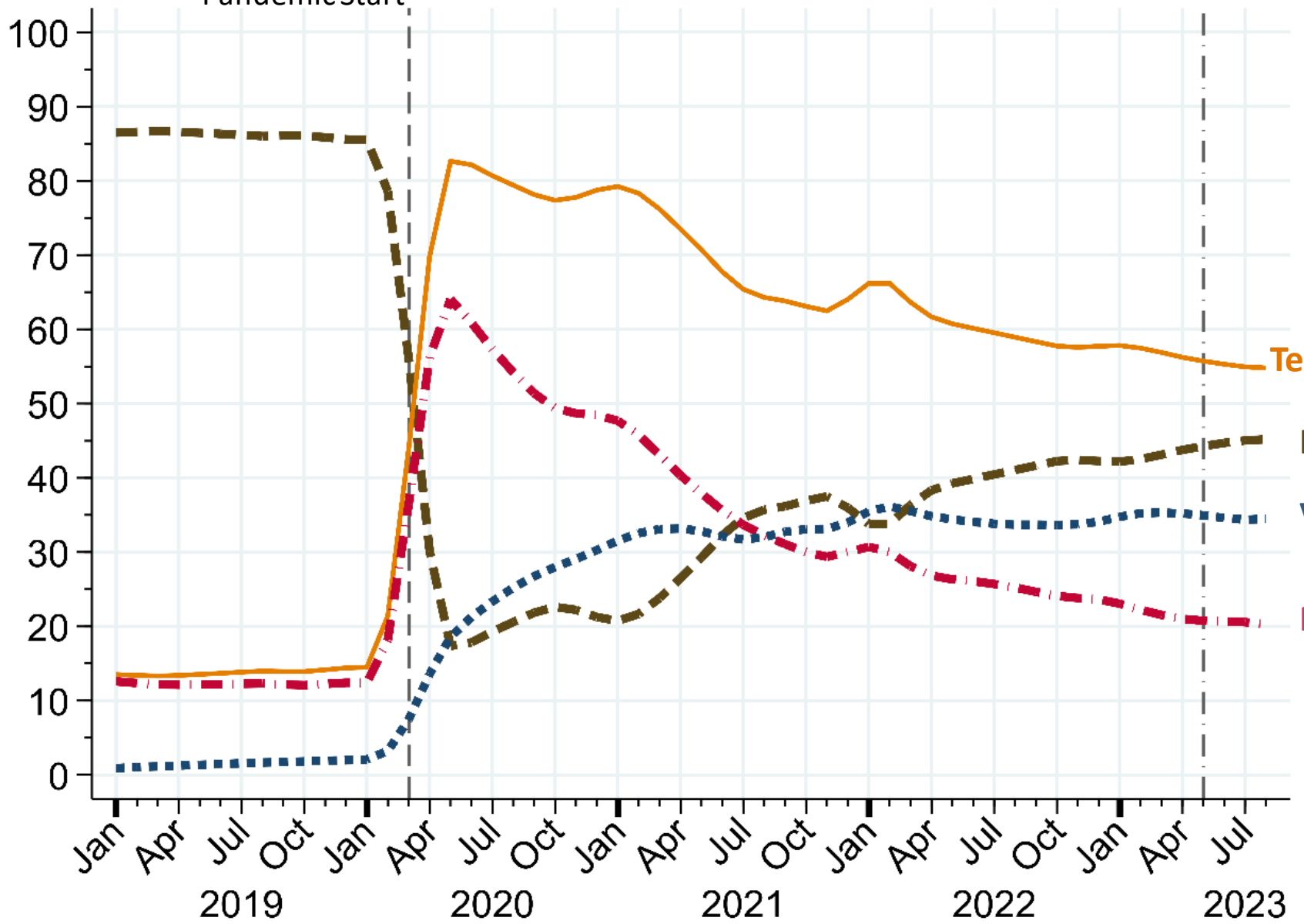
All



Primary



Mental Health



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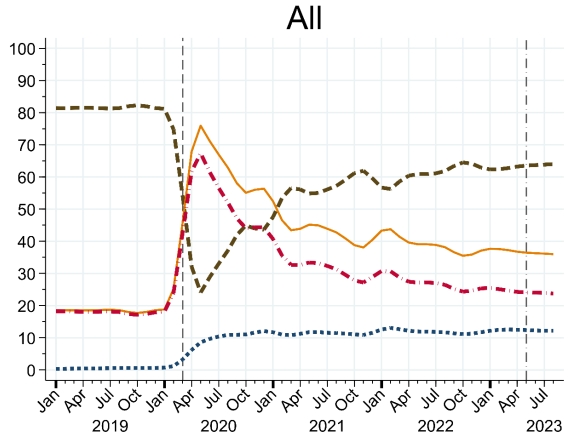
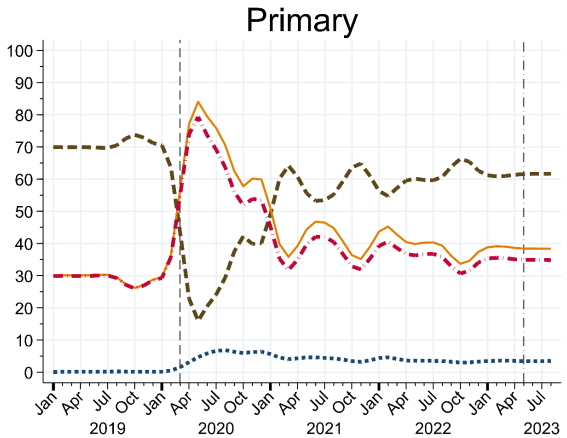
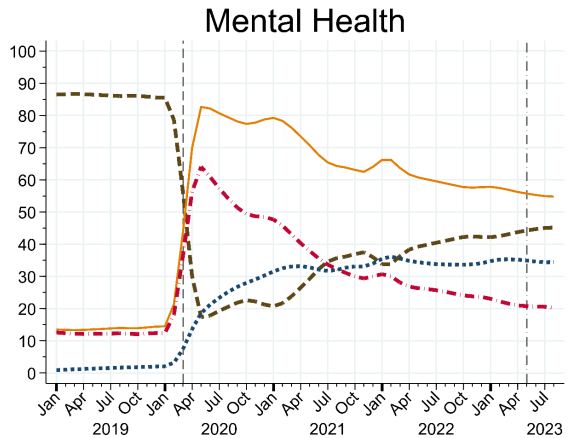
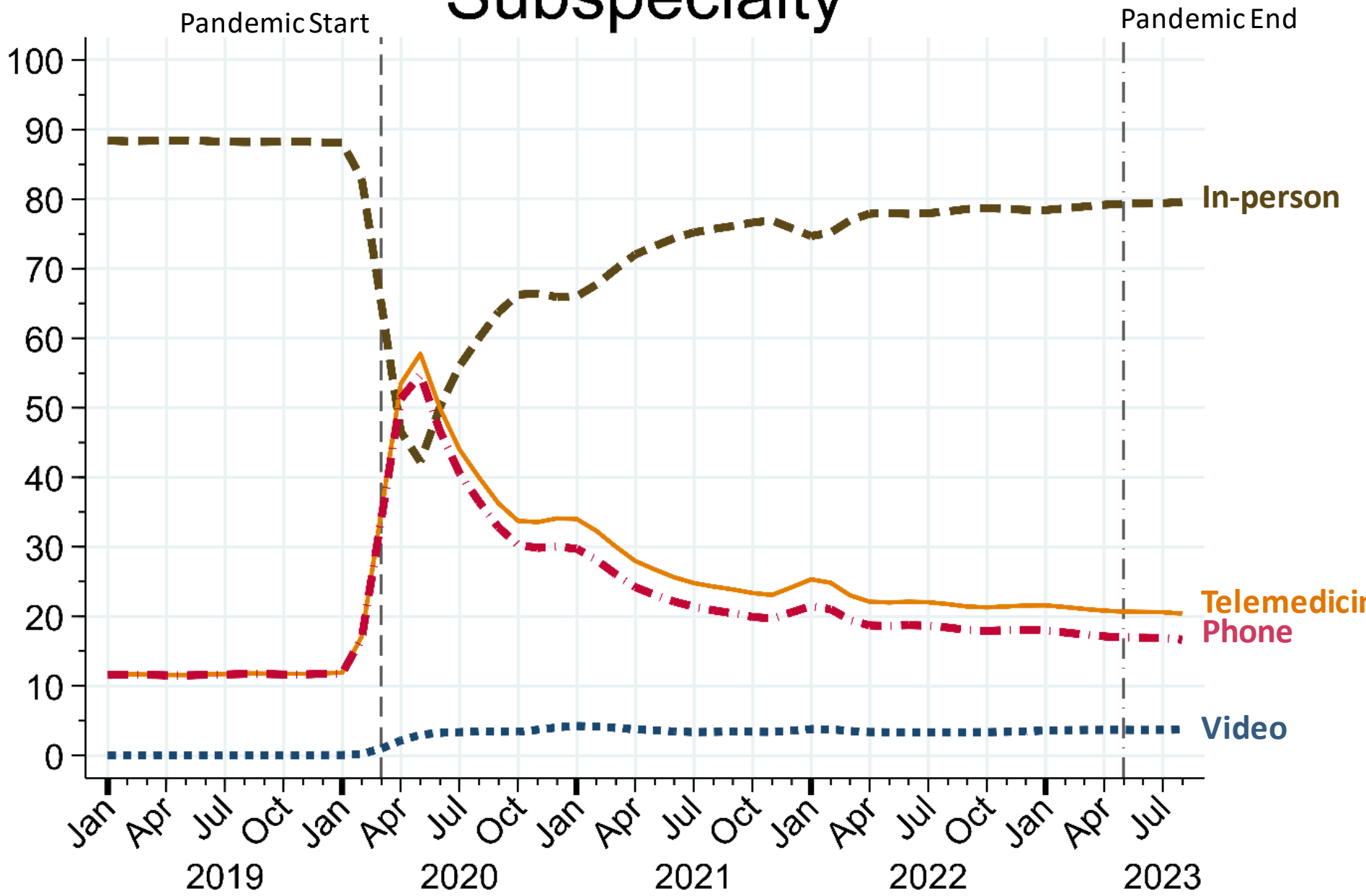






Subspecialty



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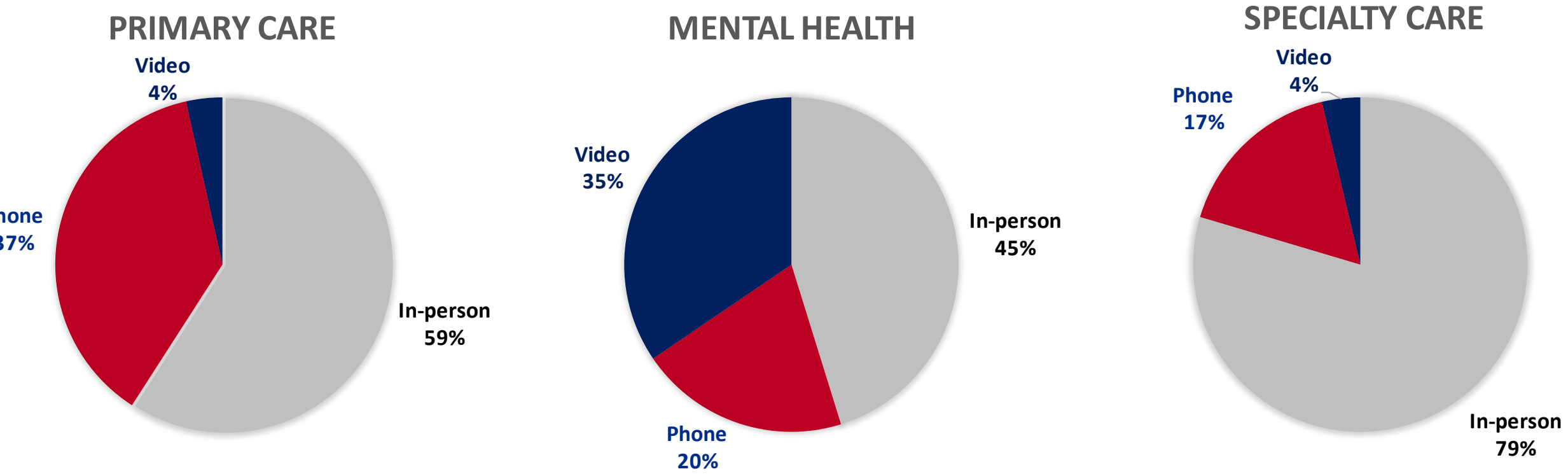
VA outpatient care as of August 2023



Key Take aways

- A new equilibrium has emerged in which telephone-based care has largely returned to pre-pandemic levels, but video care accounts for 11-12% of all outpatient care.
- The observed patterns suggest that telemedicine care rates stabilized around May 2021 (two-years prior to the end of the Federal COVID-19 Public Health Emergency Declaration)
- Telephone visits continue to decrease across all services and mental health video visits increase.
- Future research should consider evaluating quality, safety, and health outcomes of telemedicine in this new equilibrium.

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Annals of Internal Medicine

OBSERVATIONS: BRIEF RESEARCH REPORTS

A New Equilibrium for Telemedicine: Prevalence of In-Person, Video-Based, and Telephone-Based Care in the Veterans Health Administration, 2019–2023

Background: The rapid uptake of telemedicine (that is, encounters via telephone or video) in the early phases of the COVID-19 pandemic is well documented (1–3), yet there is little published literature on the redistribution of in-person and telemedicine encounters as U.S. health care systems enter a postpandemic phase.

Objective: To describe trends in clinical outpatient encounters between 1 January 2019 and 31 August 2023 that took place in person, by telephone, and by video

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Or email Jacqueline.Ferguson@va.gov for a copy

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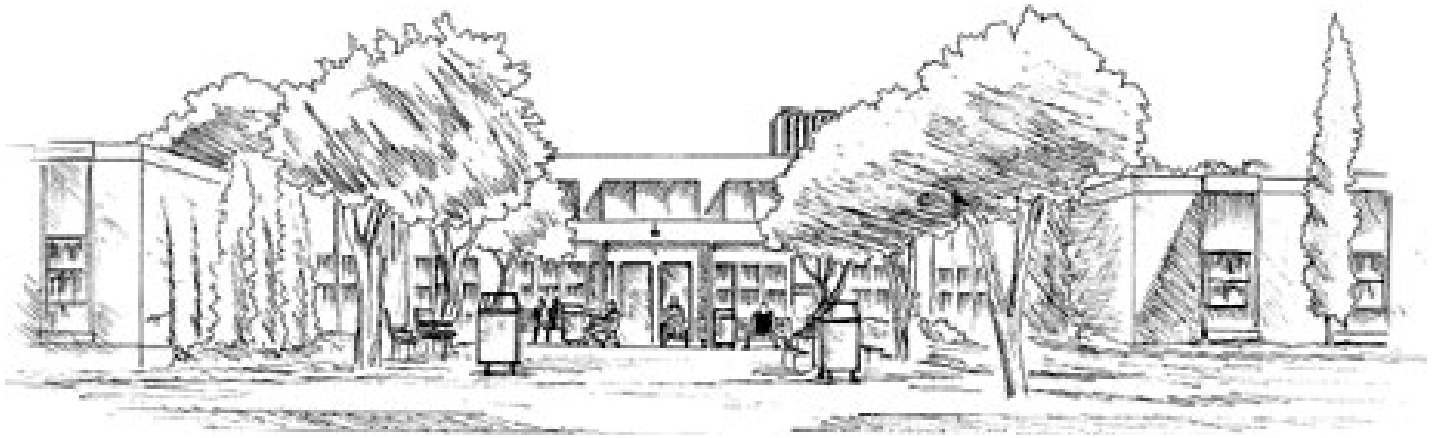

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CSHIIP
Center for the Study of Healthcare Innovation, Implementation & Policy

AN EVALUATION OF TELEMEDICINE AND HEART FAILURE CARE DURING THE COVID-19 PANDEMIC

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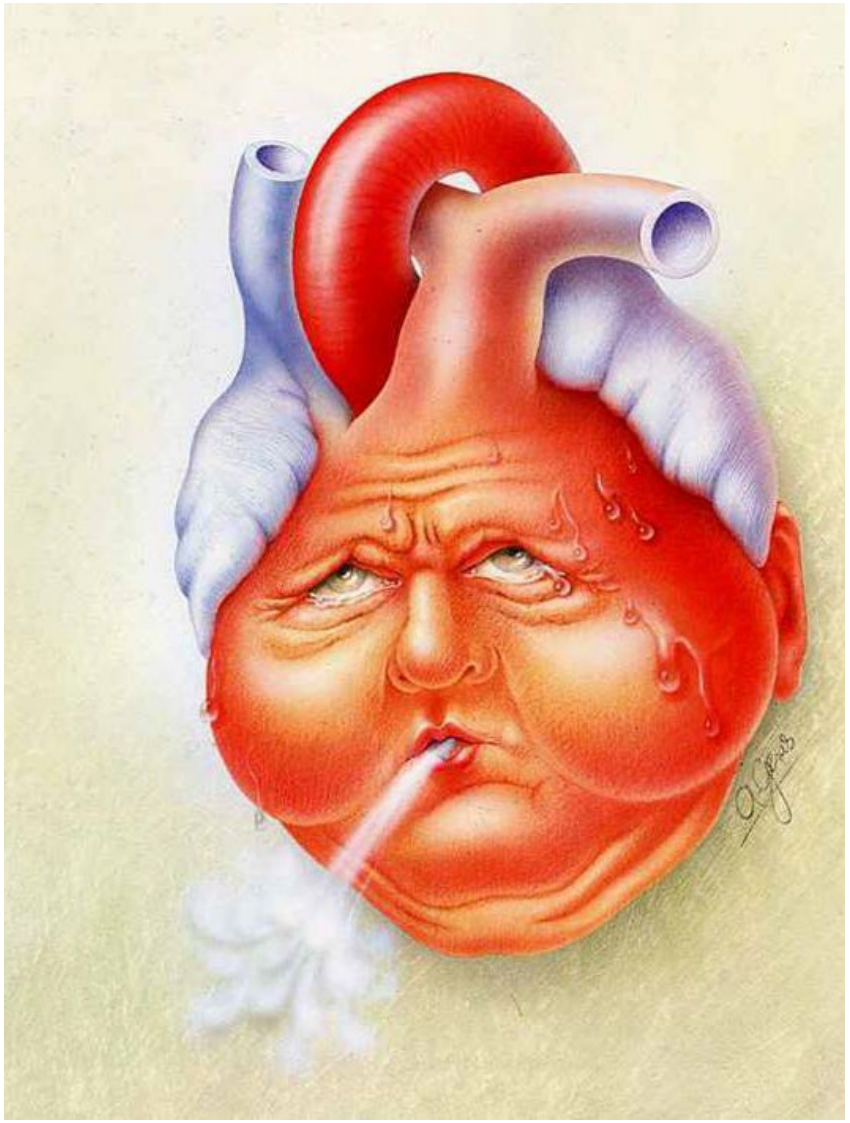
Disclosures

Employment:

- VA GLA
- David Geffen School of Medicine

Research

- VA CSHIIP – SWIFT
- VA Virtual Core – Early Investigator
- NIH



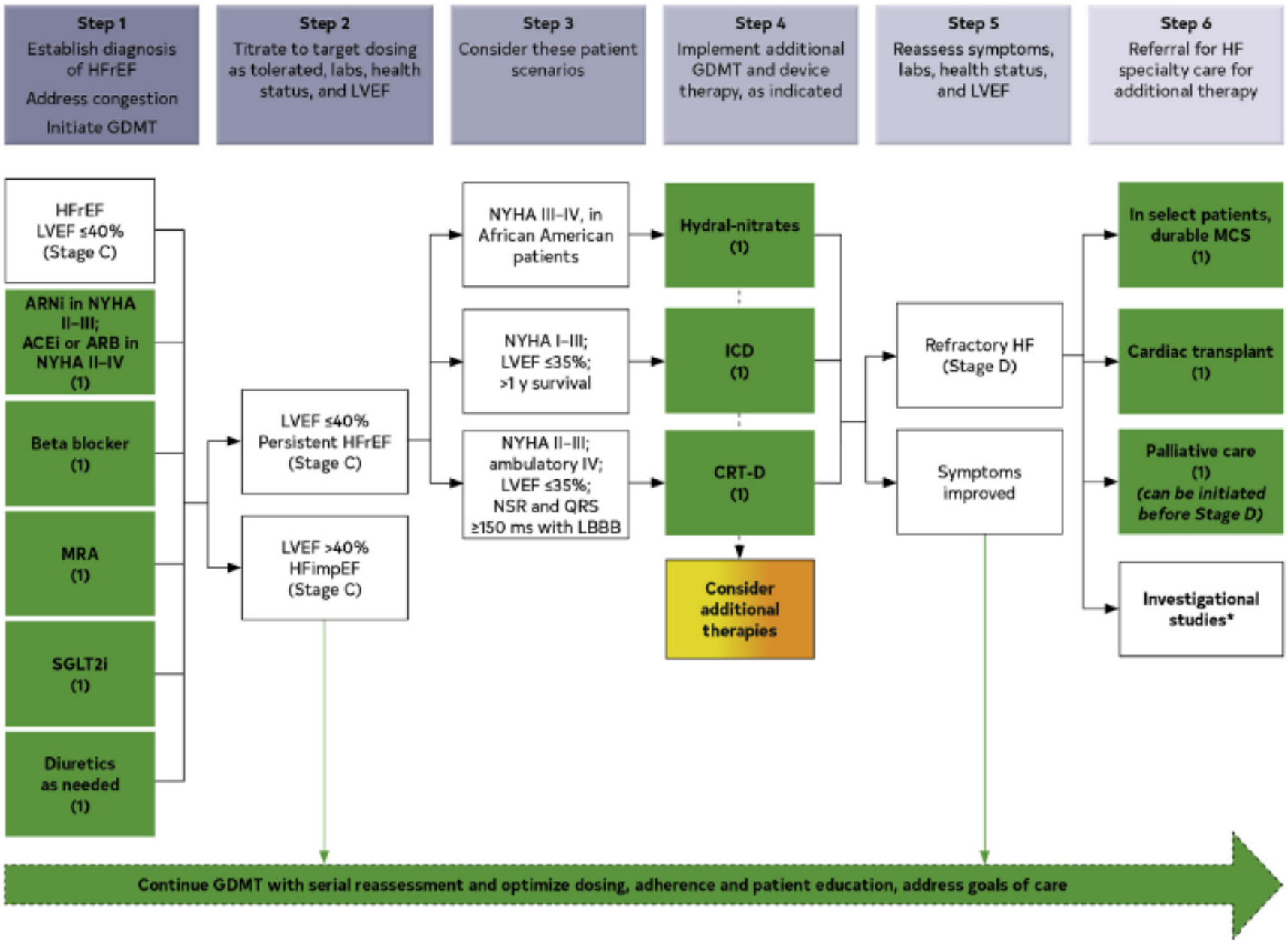
Background

Heart Failure is chronic, prevalent, dangerous, and costly condition.

For outpatient management, there's a growing class of evidence-based therapies that improve quality of life, reduce hospitalizations, and extend life.

During the COVID-19 pandemic, there was a tremendous disruption in outpatient and inpatient care.

FIGURE 6 Treatment of HFrEF Stages C and D



Prior Research

Randomized studies have evaluated if more intensive telehealth can improve HF outcomes.

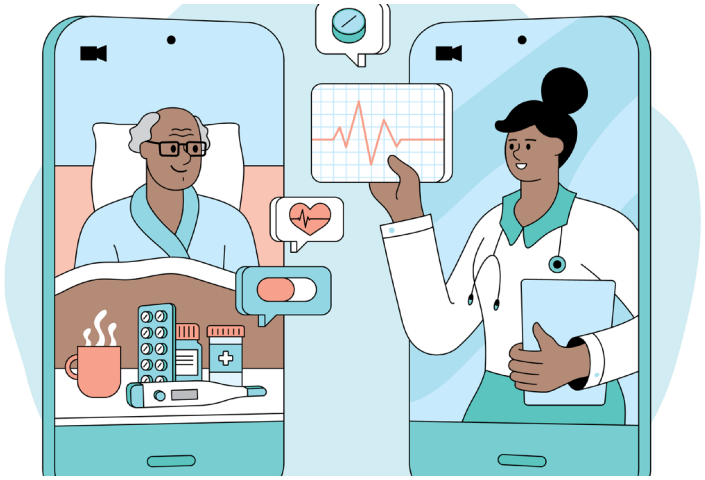
- Post-hospitalization (large trials)
  - TELE-HF, BEAT-HF, TIM-HF2
- Text Messaging
  - MESSAGE-HF
- Population Management
  - DASH-HF – VA-GLA

Research Questions

How did heart failure patients utilize telemedical services during the pandemic?

What was the quality of heart failure care pre and post pandemic? What types of risks were heart failure patients exposed to?

What outcomes adverse outcomes did patients with heart failure experience (i.e. all-cause hospitalizations, HF hospitalizations, and mortality)



Methods

We used the VA CDW to identify active Veterans with a primary diagnosis of heart failure with reduced ejection fraction.

Recent LVEF (NLP variable) ≤ 40%

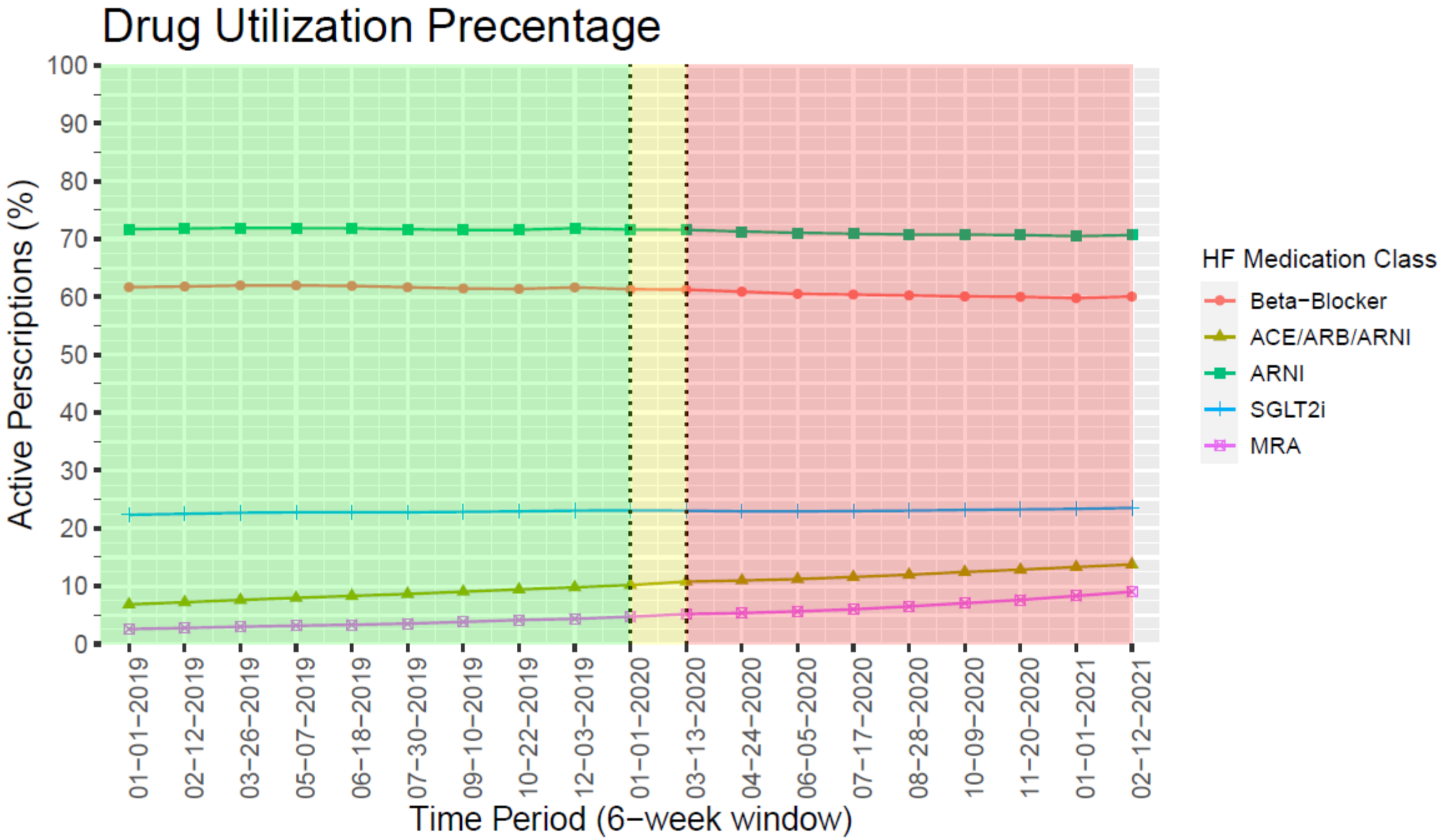
Calculate Class I indicated GDMT on 6-week intervals to calculate performance measures on regular intervals.

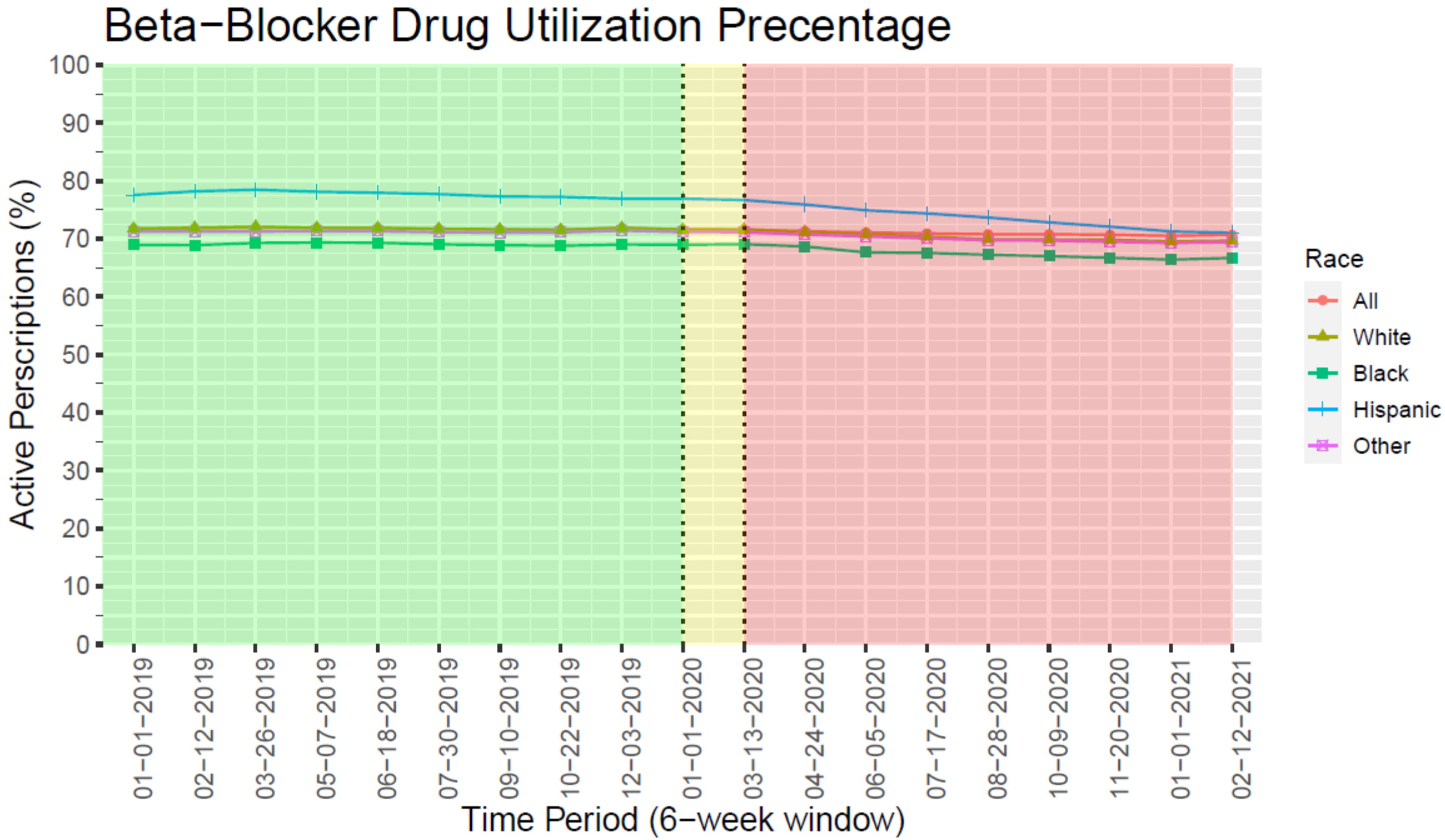
Gaps in medication possession ratios >6 weeks considered failures.

Linkage to CMS for mortality data.

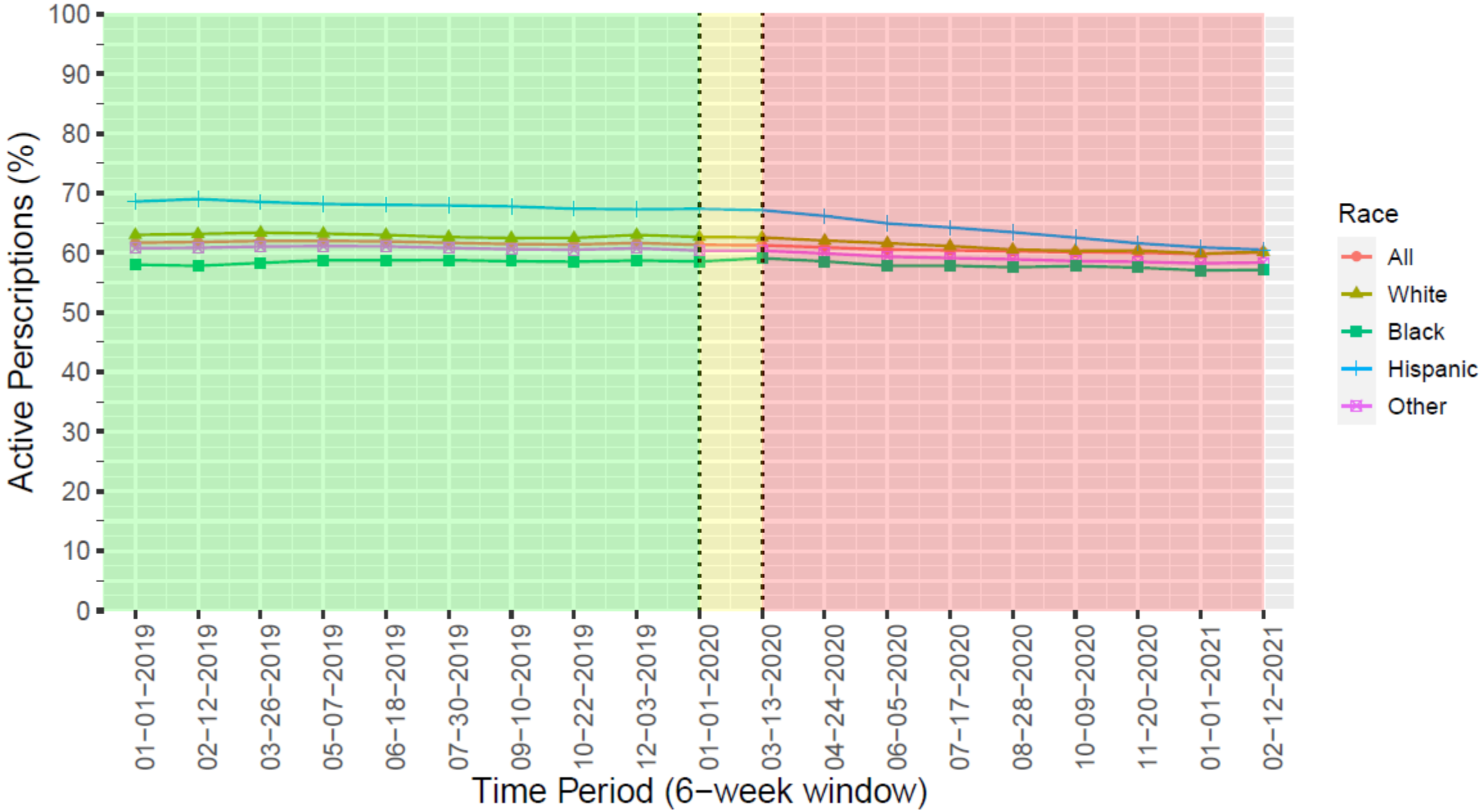
Results

Age	Characteristic
Median Age	72
Female	2%
White	71%
Black	19%
Hispanic	3%
Median LVEF	30%
Atrial Fibrillation	34.4%
Coronary Arter Disease	63.9%
Chronic Kidney Disease	48.3%
COPD	7.2%
Diabetes Mellitus	58.1%
Hyperlipidemia	74.1%
Hypertension	86.3%
Stroke	13.1%

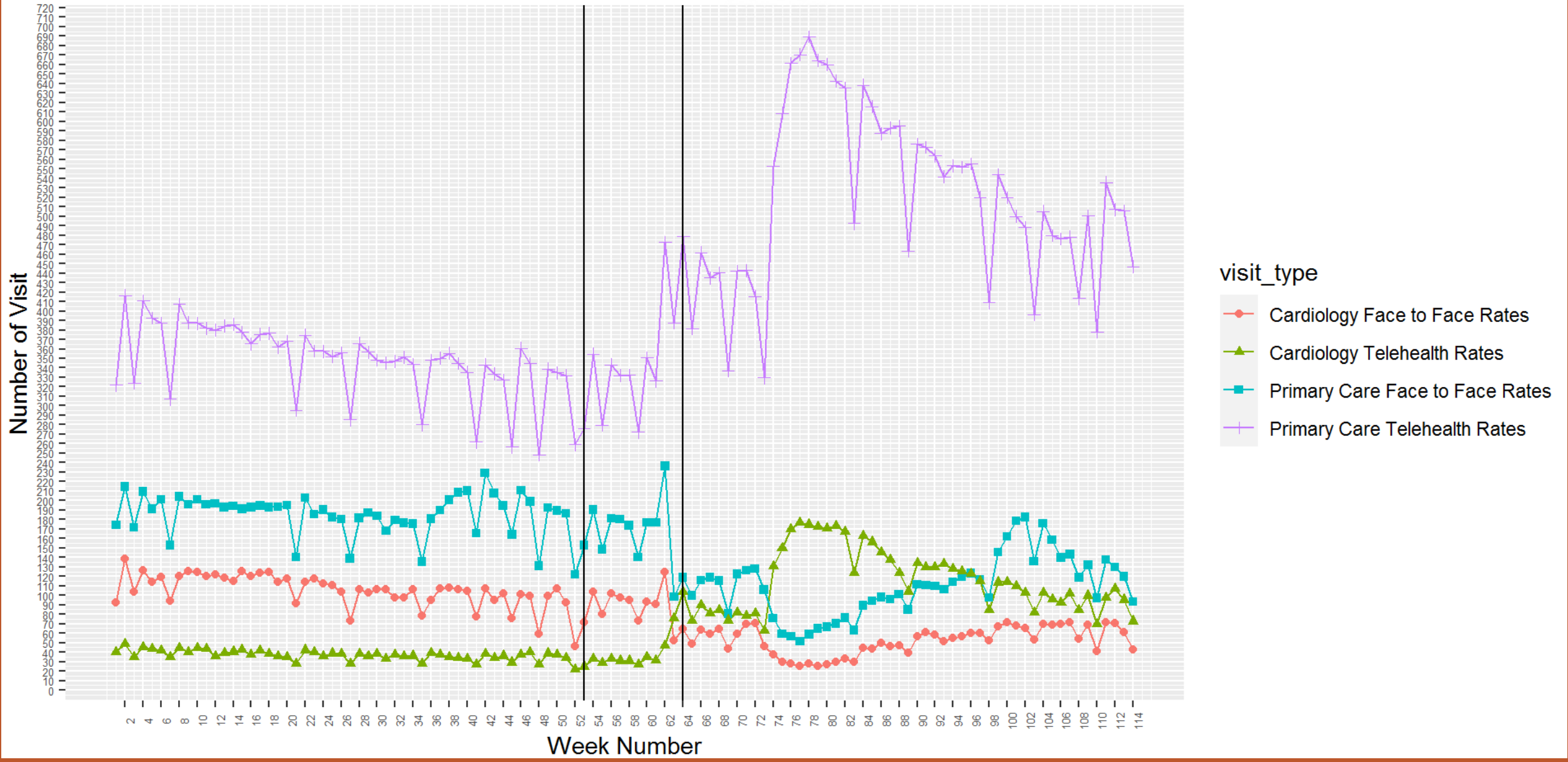

Drug Utilization Precentage
Active Perscriptions (%)
100
90
80
70
60
50
40
30
20
10
0
01−01−2019
02−12−2019
03−26−2019
05−07−2019
06−18−2019
07−30−2019
09−10−2019
10−22−2019
12−03−2019
01−01−2020
03−13−2020
04−24−2020
06−05−2020
07−17−2020
08−28−2020
10−09−2020
11−20−2020
01−01−2021
02−12−2021
Time Period (6−week window)
HF Medication Class
Beta−Blocker
ACE/ARB/ARNI
ARNI
SGLT2i
MRA

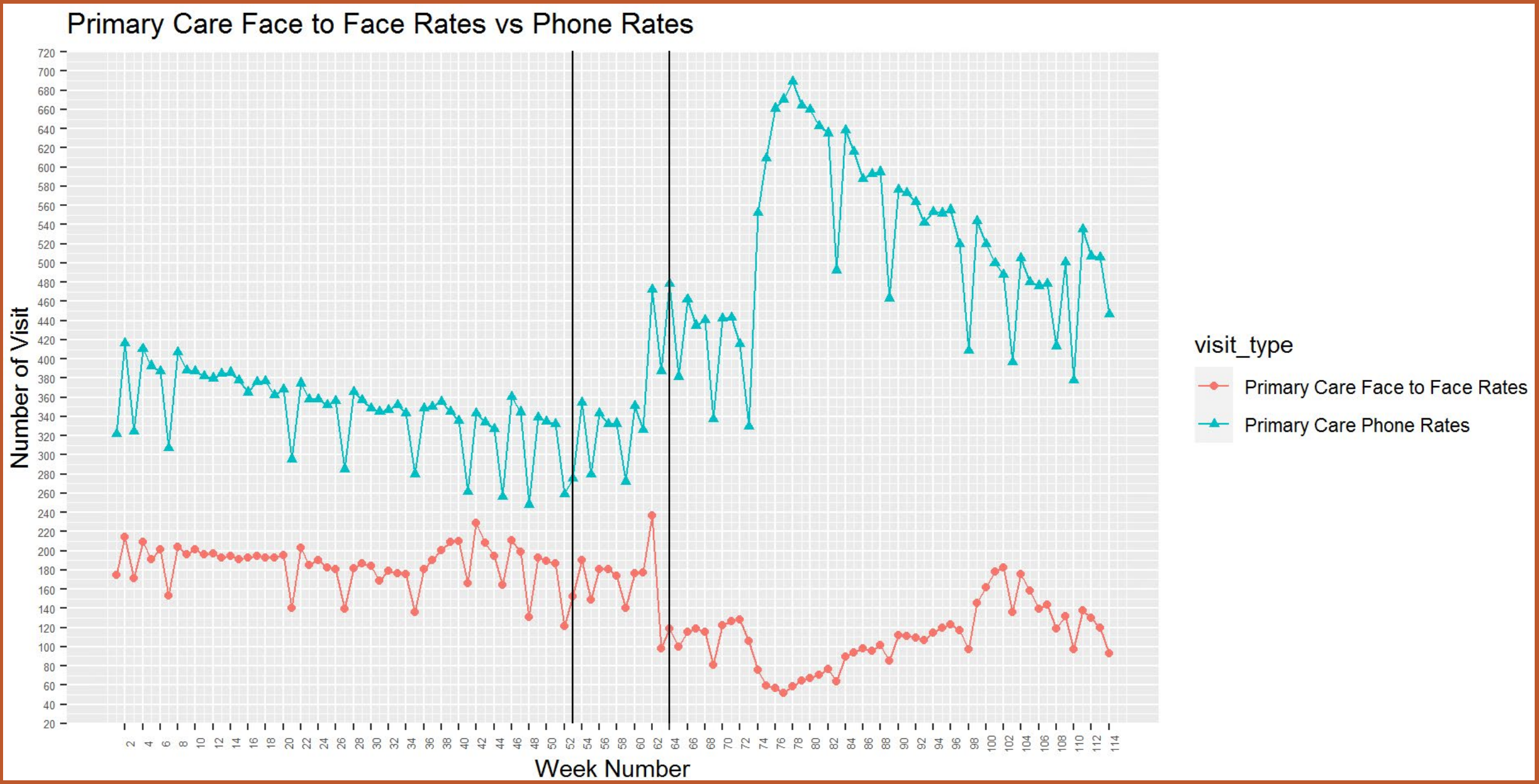

Beta−Blocker Drug Utilization Precentage
Active Perscriptions (%)
100
90
80
70
60
50
40
30
20
10
0
01−01−2019
02−12−2019
03−26−2019
05−07−2019
06−18−2019
07−30−2019
09−10−2019
10−22−2019
12−03−2019
01−01−2020
03−13−2020
04−24−2020
06−05−2020
07−17−2020
08−28−2020
10−09−2020
11−20−2020
01−01−2021
02−12−2021
Time Period (6−week window)
Race
All
White
Black
Hispanic
Other

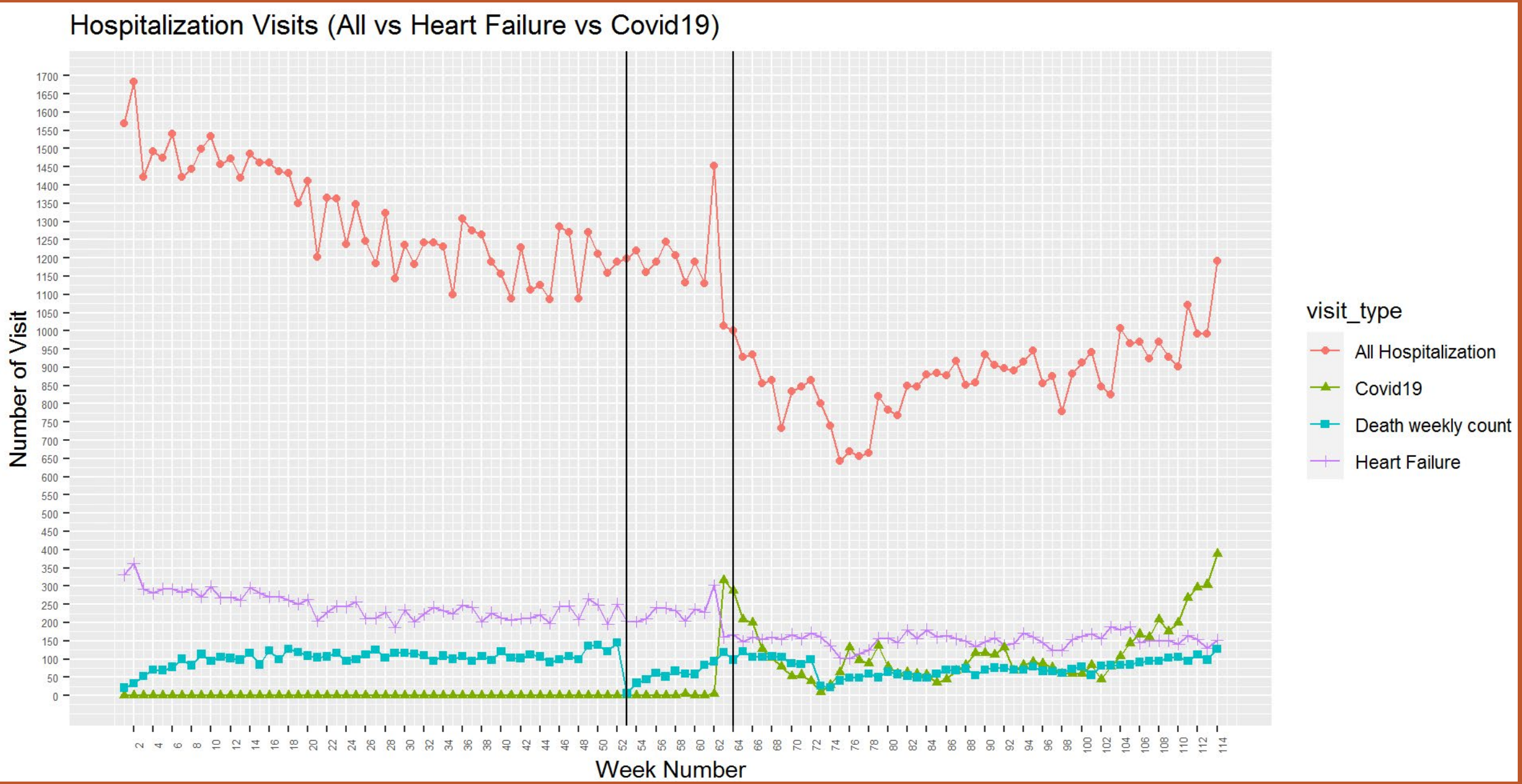
ACE/ARB/ARNI Drug Utilization Precentage



Primary Care Visits vs Cardiology Visits




Primary Care Face to Face Rates vs Phone Rates
Number of Visit
Week Number
visit_type
Primary Care Face to Face Rates
Primary Care Phone Rates


Hospitalization Visits (All vs Heart Failure vs Covid19)
Number of Visit
Week Number
visit_type
All Hospitalization
Covid19
Death weekly count
Heart Failure

Discussion

Quality of Care based on GDMT receipt rates were stable with small decreases noted over the course of the pandemic year.

New therapies and a slow and gradual uptake which may have been faster had care not been disrupted.

Sudden spike in phone-based care for both primary and cardiology visits. Unclear video visit volume with concern for coding accuracy.

A sudden drop in both HF hospitalizations and mortality the first few months of the pandemic.

Disparities present pre and post pandemic related to the receipt of GDMT.

Future Work

Evaluation of community hospitalizations (CMS data linkages)

Evaluation of CMS outpatient visits for primary and cardiology specialty care.

Inclusion of CMS medication data

Evaluate risk of events related to the receiving or not receiving telehealth visits.

Evaluate disparities in telehealth by race and ethnicity.

Comments and Questions