

INTRODUCTION

Motivation

The COVID-19 pandemic dramatically changed the way patients received healthcare:

- A sharp reduction in in-person healthcare visits.
- Increase in the use of telemedicine services.

Less is known about the extent telemedicine use can preserve access to care.

- Particularly for vulnerable patients in underserved populations.

Objective

Examine the role of **telemedicine** in providing access to **outpatient psychotherapy for children and young adults with incident major depressive disorder (MDD)**:

- Before and during the COVID-19 pandemic, overall and by **race and ethnicity**.

METHODS

Study Design Retrospective cohort study

Data Medical claims from a large, national insurer 2017-2021

Cohorts

- 1) Pre-COVID Cohort: March-December 2018
- 2) COVID Cohort: March-December 2020

Variables of Interest

- Health care utilization
- Utilization by site of care (e.g., emergency room)
- Modality of care (i.e., telehealth or in-person), and psychotherapy use

12 months before and after the index date of MDD diagnosis

Key Outcomes of Interest

- Receipt of any psychotherapy within 30 days of incident diagnosis
- Count of total psychotherapy visits within 12 months of the incident diagnosis

Outcome Measures

- 1) Unadjusted rates of psychotherapy visits per 1,000 patients
- 2) Regression-adjusted odds of receiving any psychotherapy within 30 days
- 3) Regression-adjusted percentage differences in total count of psychotherapy visits within 12 months
 - By race and ethnicity
 - Covariates: age, sex, census division, insurance type, pre-index comorbidities, family size, and any post-index telehealth visit (for any diagnosis)

RESULTS

Patient characteristics similar in both cohorts

- including relatively similar rates of pre-MDD diagnosis of behavioral health comorbidities.

- Inpatient and ED visits declined in the COVID cohort compared to the pre-COVID cohort.

- In-person outpatient visits declined during the pandemic, but with telemedicine included, the total number of outpatient and psychotherapy visits increased.

- Use of post-MDD diagnosis psychotherapy increased across all races and ethnicities during the pandemic (Exhibit 3).

- Dynamic varies by subgroup
- Asian: Increases large and persistent
- Black and White: smaller but more sustained
- Hispanic: Increases initially large but short-lived

Regression Results: (Exhibit 4)

- Confirmed relatively slow increase in the uptake of post-diagnosis psychotherapy for Black patients.
- No statistically significant differences in the total number of psychotherapy visits in the year following diagnosis.

Exhibit 1: Sample Description

	2018 Cohort	2020 Cohort
Patients	7,758	8,517
Health Care Encounters	580,991	549,842
Race or Ethnicity		
White	5817 (77.0)	5483 (64.4)
Black	487 (9.1)	494 (5.8)
Asian	222 (1.4)	223 (2.6)
Hispanic	850 (8.0)	762 (8.9)
Missing	382 (4.5)	1555 (18.3)
Sex		
Male	3084 (39.8)	2900 (34.0)
Female	4674 (60.2)	5617 (66.0)
Age (Mean, SD)	18.3 (4.4)	18.4 (4.3)
Household Members (Mean, SD)	4.0 (1.7)	3.4 (2.1)
Pre-Index Comorbidities		
Suicide	139 (1.8)	122 (1.4)
Substance-Related	403 (5.2)	336 (3.9)
Impulse Disorders	163 (1.6)	144 (1.7)
Trauma-Related	989 (16.7)	1147 (13.5)
Anxiety	2020 (29.3)	2375 (27.9)

Exhibit 2: Health Care Utilization per 1,000 Patients with Major Depressive Disorder by Site of Care, Modality, and Year of Incident Diagnosis

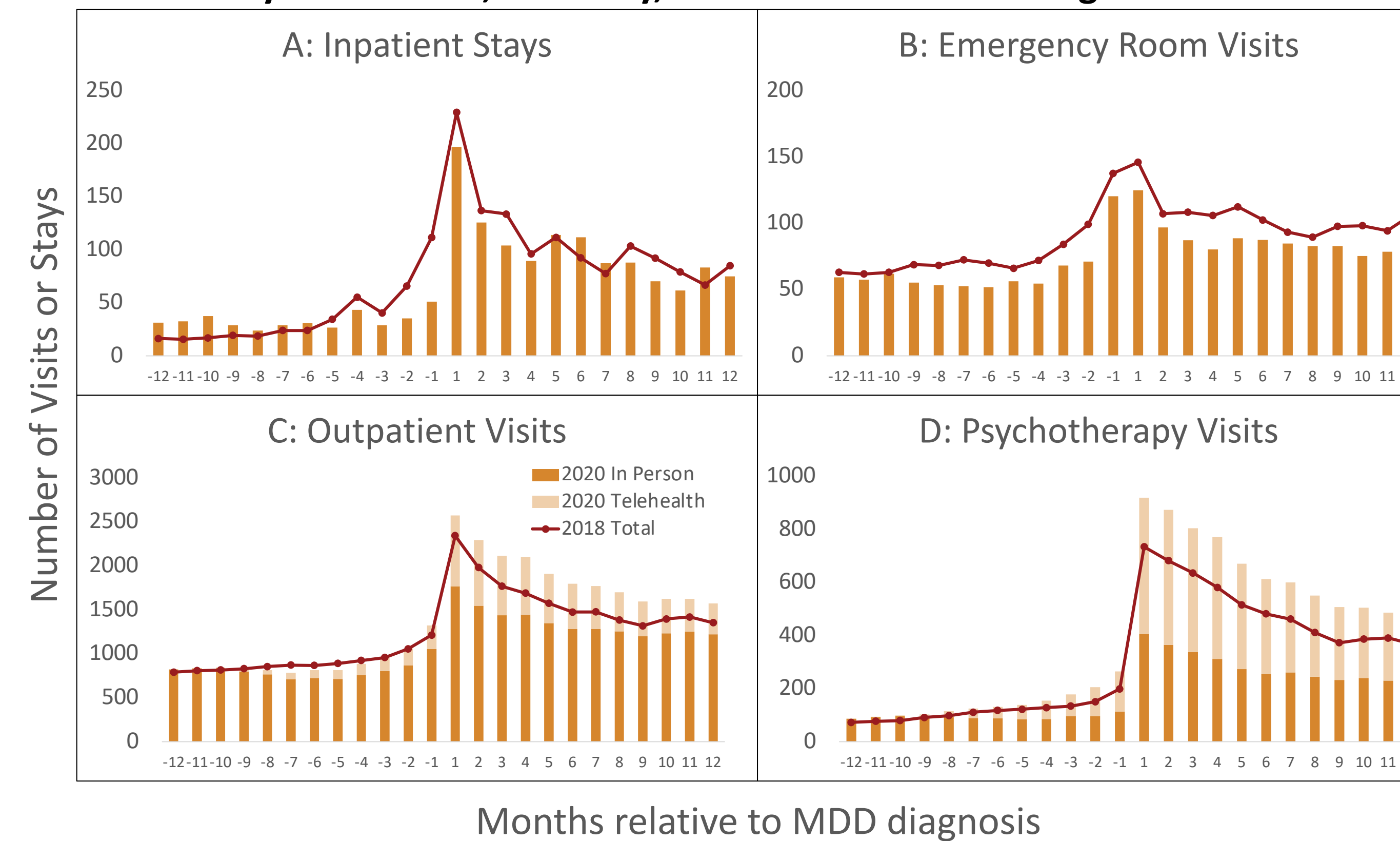


Exhibit 3. Change in Psychotherapy Visits per 1,000 Patients from 2018 to 2020 by Race and Ethnicity

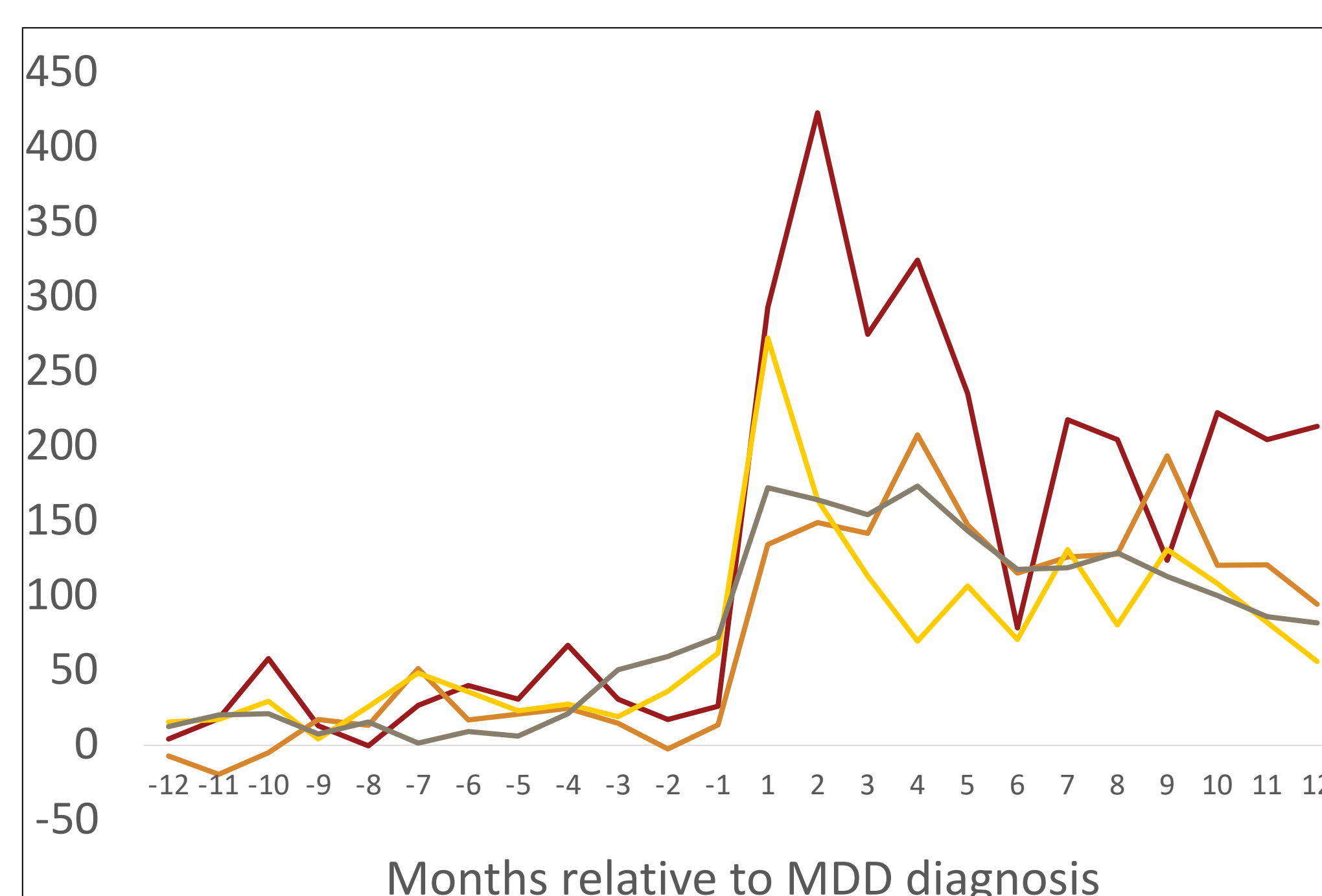


Exhibit 4. Change in Psychotherapy Visits per 1,000 Patients from 2018 to 2020 by Race and Ethnicity

	Odds of Any 30-day Psychotherapy Visit		Log (Count of 12-month Psychotherapy Visits)	
	2018	2020	2018	2020
Asian	1.06 [0.80, 1.40]	1.13 [0.85, 1.49]	0.07 [-0.11, 0.25]	0.15* [-0.02, 0.32]
Black	1.05 [0.86, 1.28]	0.82 [0.67, 0.99]	0.03 [-0.10, 0.15]	-0.11* [-0.23, 0.01]
Hispanic	0.96* [0.82, 1.12]	1.02 [0.87, 1.20]	-0.02 [-0.12, 0.08]	-0.06 [-0.17, 0.04]
Unknown	0.99 [0.80, 1.23]	0.94 [0.81, 1.10]	0.04 [-0.10, 0.17]	-0.04 [-0.13, 0.05]

CONCLUSIONS

Main Findings

- The COVID-19 pandemic led to a significant decrease in the use of in-person outpatient care for patients with incident MDD.
- Telemedicine use helped offset this effect, to the extent that total use of psychotherapy during the pandemic surpassed that of the pre-pandemic period.
- Increases in psychotherapy visits were observed across all races and ethnicities, but racial and ethnic disparities persisted.

Implications

- Access to **telemedicine** can be an important tool to increase access to mental health services in general, but other initiatives may be needed to close access gaps across **racial and ethnic subgroups**.
- Health systems should **capitalize on the telehealth infrastructure** developed during the pandemic to sustain this increased access to care while continuing work to reduce disparities.

Limitations

- Data based on claims from all 50 states but is not designed to be geographically representative of the US.
- Patients in the sample were privately insured and the results might not reflect the experiences of uninsured or publicly insured populations.
- The racial and ethnic disparities seen here are likely to be more pronounced in the full population.
- Our data only showed access to telemedicine and the total number of psychotherapy visits but did not indicate whether *quality of care* was comparable between the in-person and telemedicine settings.

REFERENCE LIST



CONFLICTS OF INTEREST

- The study received funding from the Innovation and Value Initiative (IVI) Foundation.
- Shihan Jin receives fellowship funding from AbbVie.

CONTACT

Please contact Sarah Axeen (axeen@usc.edu) or presenter Shihan Jin (shihan.jin@usc.edu) with any questions regarding this study. We are more than happy to discuss!