

# Data and Information Sources for the MDH Telehealth Study

## Claims and EHR Data

- Minnesota All Payer Claims Database (MN APCD)
  - Access, quality, and outcomes
  - Impact on premiums
- Minnesota EHR Consortium
  - Quality and outcomes

## MDH Survey Data

- Minnesota Health Access (MNHA) Survey
- Health Information Technology (HIT) Survey of Ambulatory Clinics
- Health Care Workforce Survey
- Hospital Inventory Survey (Telestroke)

## Interviews and Questionnaires

- Minnesota residents (and organizations that represent them)
- Health care provider organizations
- Payer organizations

## Environmental Scan and Literature Searches

- Focused review of audio-only telehealth

# Minnesota Study of Telehealth Expansion and Payment Parity

**Technical Advisory Group meeting**

November 3, 2023

State's Authorized Representative: Pamela Mink

SWIFT Contract Number: 229341



# Agenda

- / Introductions**
- / Project background and objectives**
- / Findings**
- / Conclusions and policy implications**
- / Next steps and discussion**



# Introductions





# Introductions



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## **Project background and objectives**





# Project motivation and context

## / **Minnesota Telehealth Act of 2021**

- Expanded telehealth and required payment parity for telehealth and in-person care
- Required Minnesota Department of Health (MDH) to deliver report to Minnesota Legislature by early 2024 on impact of telehealth expansion and payment parity on patients with private insurance coverage

## / **MDH contracted with Mathematica to conduct analysis of claims data in support of report to Legislature**



# Research questions

- 1. What is the impact of telehealth expansion and payment parity on**
  - Access, quality of care, and health outcomes?
  - Health care disparities and equitable access to care?
  - Access to and availability of in-person care, especially in rural areas?
- 2. Does audio-only communication support equitable access and eliminate barriers to care without worsening outcomes?**





# Research questions

3. **Does increased access to telehealth affect outcomes (e.g., inpatient hospitalizations, emergency department visits) for specific services and populations?**
4. **To what extent are telehealth services:**
  - Substitutes for an in-person visit?
  - Services that were previously not billed or reimbursed?
  - Services that are in addition to or duplicative of in-person services?

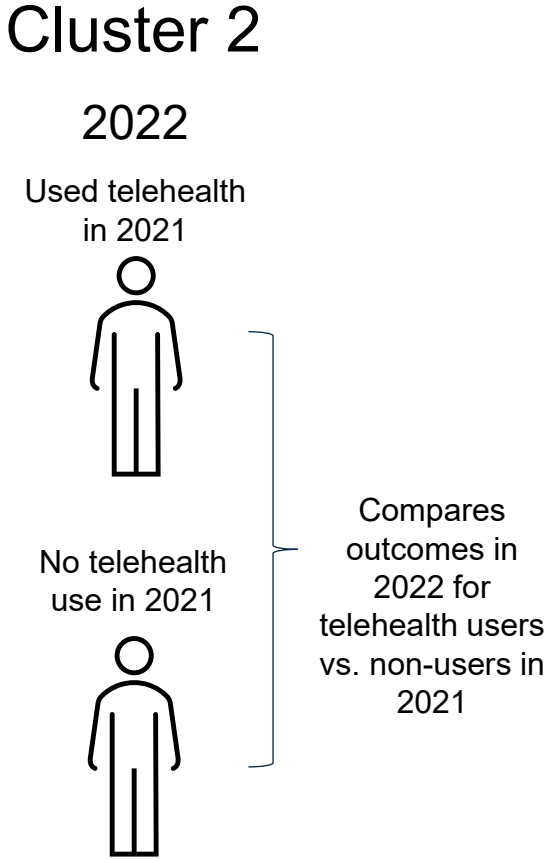
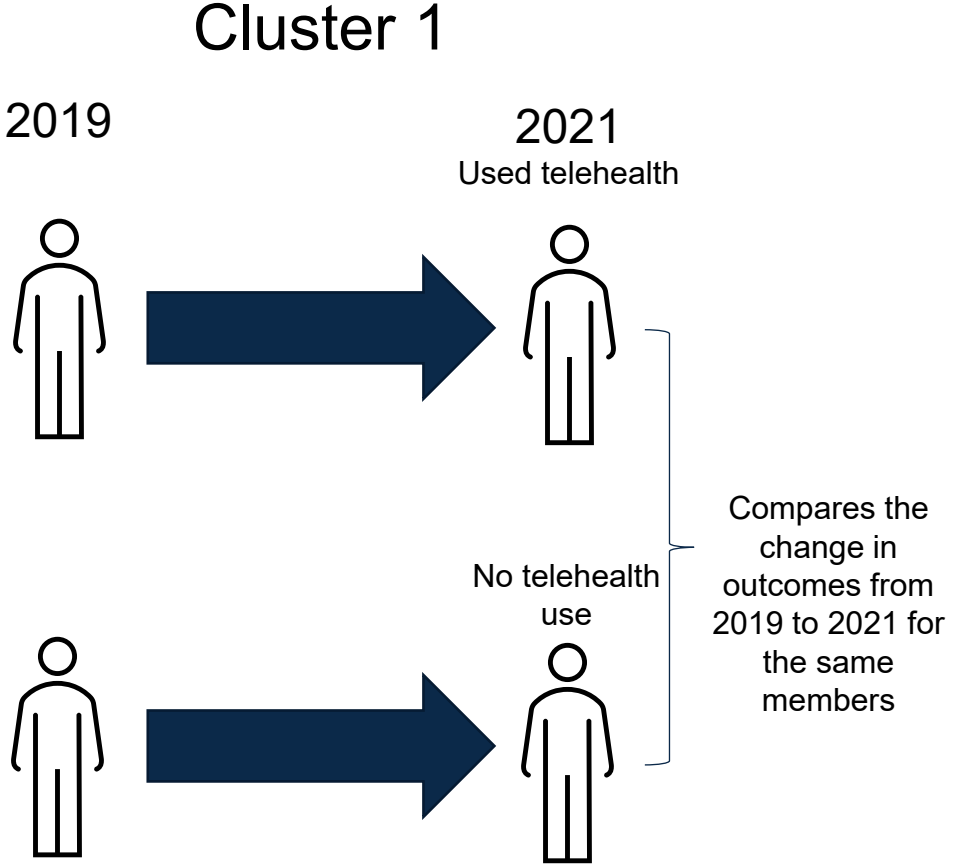


# Overview of analysis approach

- / Quantitative analyses examine differences in outcomes and differential changes in outcomes for telehealth users versus non-users**
- / Descriptive and regression-based analyses in 2 clusters:**
  - Compare the change in outcomes from 2019 to 2021 for the same members (users and non-users of telehealth in 2021)
  - Compare outcomes in 2022 for telehealth users vs. non-users in 2021
- / Separate analyses for commercial and Medicare Advantage (MA) populations**



# Two clusters of analyses





# Measures of telehealth use and outcomes

## / Telehealth use

- Audiovisual visits
- Audio-only visits
- Other telehealth services (e.g., e-visits through a patient portal, store-and-forward services)

## / Outcomes

- **Access to care:** Visits with primary care practitioners (PCPs), specialists, and behavioral health (BH) providers
- **Use of in-person care:** In-person visits with PCPs, specialists, and BH providers
- **Health outcomes and quality of care:** Inpatient stays and emergency department (ED) visits for ambulatory care sensitive conditions, continuity of care metrics (rBBI and UPC), follow-up after hospitalization/ED visit for mental illness

rBBI = Reversed Bice-Boxerman index; UPC = usual provider of care

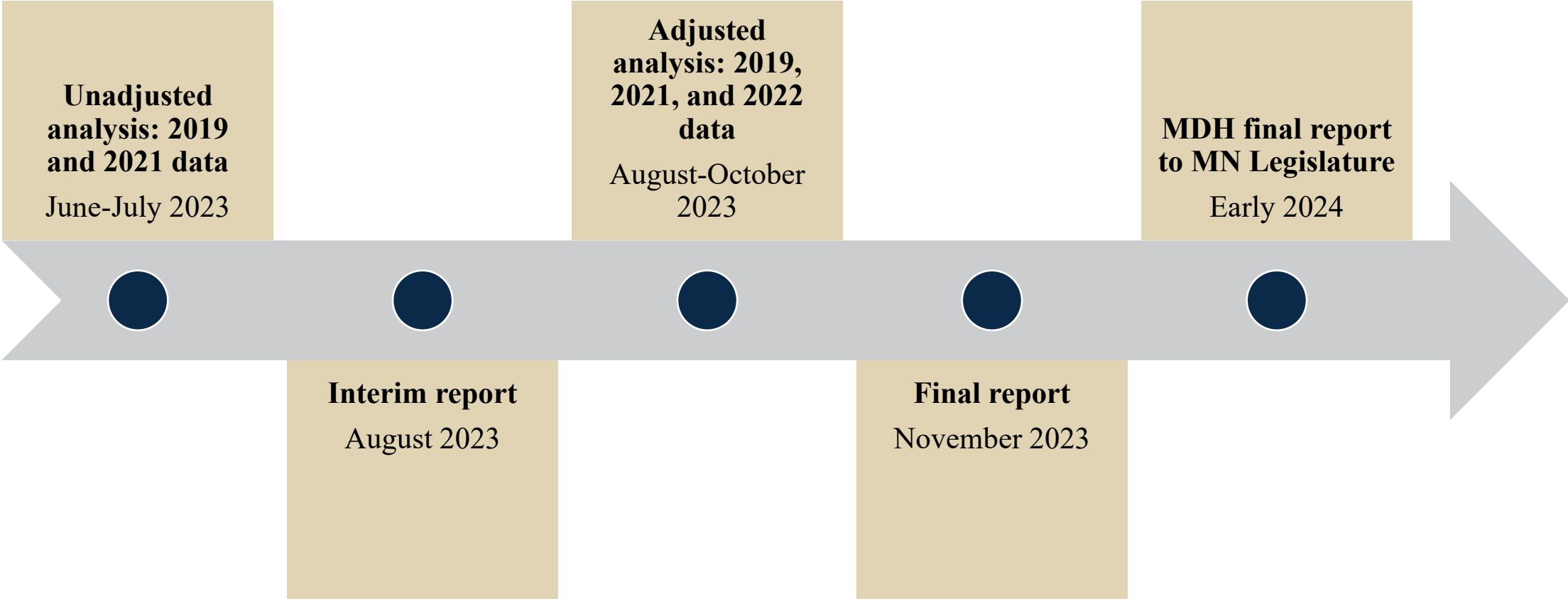


# Data sources

- / **Commercial and MA claims data from the Minnesota All Payer Claims Database (MN APCD) for 2019, 2021, and 2022**
  - Chronic conditions and risk scores from the Johns Hopkins Adjusted Clinical Group® in the MN APCD
- / **Publicly available data on community characteristics**
  - MDH
  - American Community Survey
  - US Department of Agriculture
- / **Physician specialty information**
  - National Plan and Provider Enumeration System (NPPES)
  - Provider Enrollment, Chain, and Ownership System (PECOS)



# Project Timeline





## **Findings: Characteristics of telehealth users**





# Characteristics of Minnesotans using telehealth services

- / Patients who were high-risk based on Adjusted Clinical Group risk scores and who had comorbidities were more likely to use telehealth in 2021 and 2022 than those who were low-risk or who did not have comorbidities (see next slide)**
- / Telehealth use was more common in:**
  - Metropolitan areas
  - Areas with high broadband access
  - Areas with a high percentage of non-white residents





# Use of telehealth in 2021 by comorbidity

Comorbidity	Commercially insured		Medicare Advantage	
	% with comorbidity using telehealth	% without comorbidity using telehealth	% with comorbidity using telehealth	% without comorbidity using telehealth
Depression	57%	28%	34%	19%
Diabetes	44%	33%	27%	21%
Hypertension	40%	33%	24%	20%
Hypothyroidism	43%	33%	26%	22%
Ischemic heart disease	42%	34%	27%	22%
Low back pain	43%	33%	28%	21%
Persistent asthma	48%	33%	31%	21%



# Use of different forms of telehealth

Telehealth	Commercially insured				Medicare Advantage			
	2021		2022		2021		2022	
	N	%	N	%	N	%	N	%
Any telehealth	266,852	34%	265,978	30%	54,525	22%	84,487	24%
Any audio-visual telehealth	242,609	31%	232,281	27%	49,599	20%	76,712	22%
Any audio-only	11,585	2%	14,706	2%	11,362	5%	17,286	5%
Any other telehealth (e.g., e-visits, asynchronous)	44,103	6%	55,988	6%	1,566	1%	4,354	1%



# Use of audio-only telehealth

**/ The rate of audio-only telehealth use was much lower than for audio-visual telehealth, but certain populations used audio-only telehealth at higher rates, including**

- Medicare Advantage patients (compared to commercially insured)
- High-risk patients and those with comorbidities
- Patients residing in
  - Nonmetropolitan areas
  - High-poverty areas
  - Areas with low broadband access (commercially insured only)



## Findings: Regression-adjusted analyses



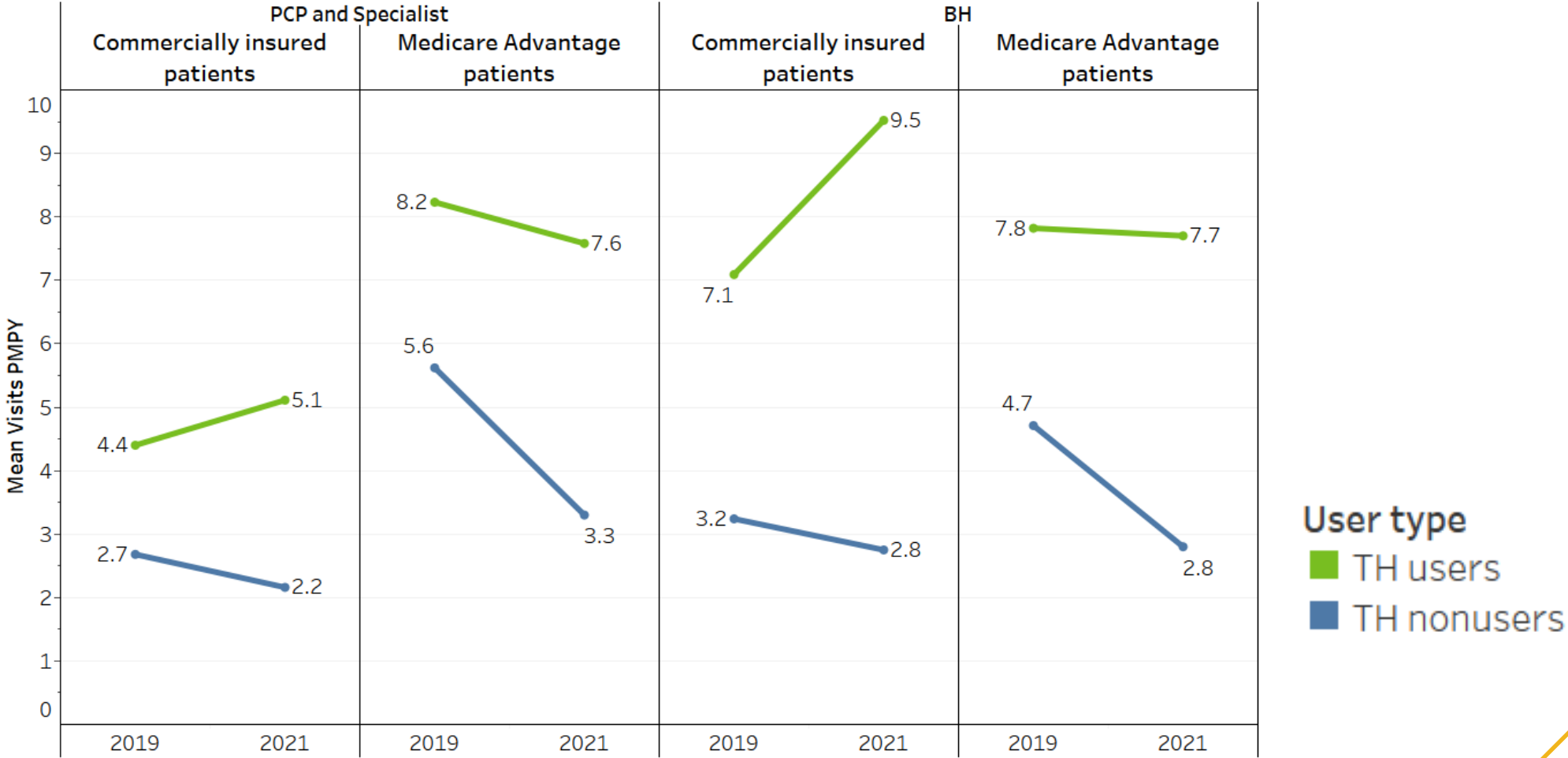


# Access to care

- / Telehealth use was associated with relative increases between 2019 and 2021 in overall use of primary care, specialty care, and behavioral health services among both commercially insured and Medicare Advantage patients**
  - Associated with largest increases for high-risk patients, those with diabetes, hypertension, and depression, patients in metropolitan areas, and those in areas with large populations of racial/ethnic minorities
- / Telehealth use was also associated with higher overall use of ambulatory services in 2022**



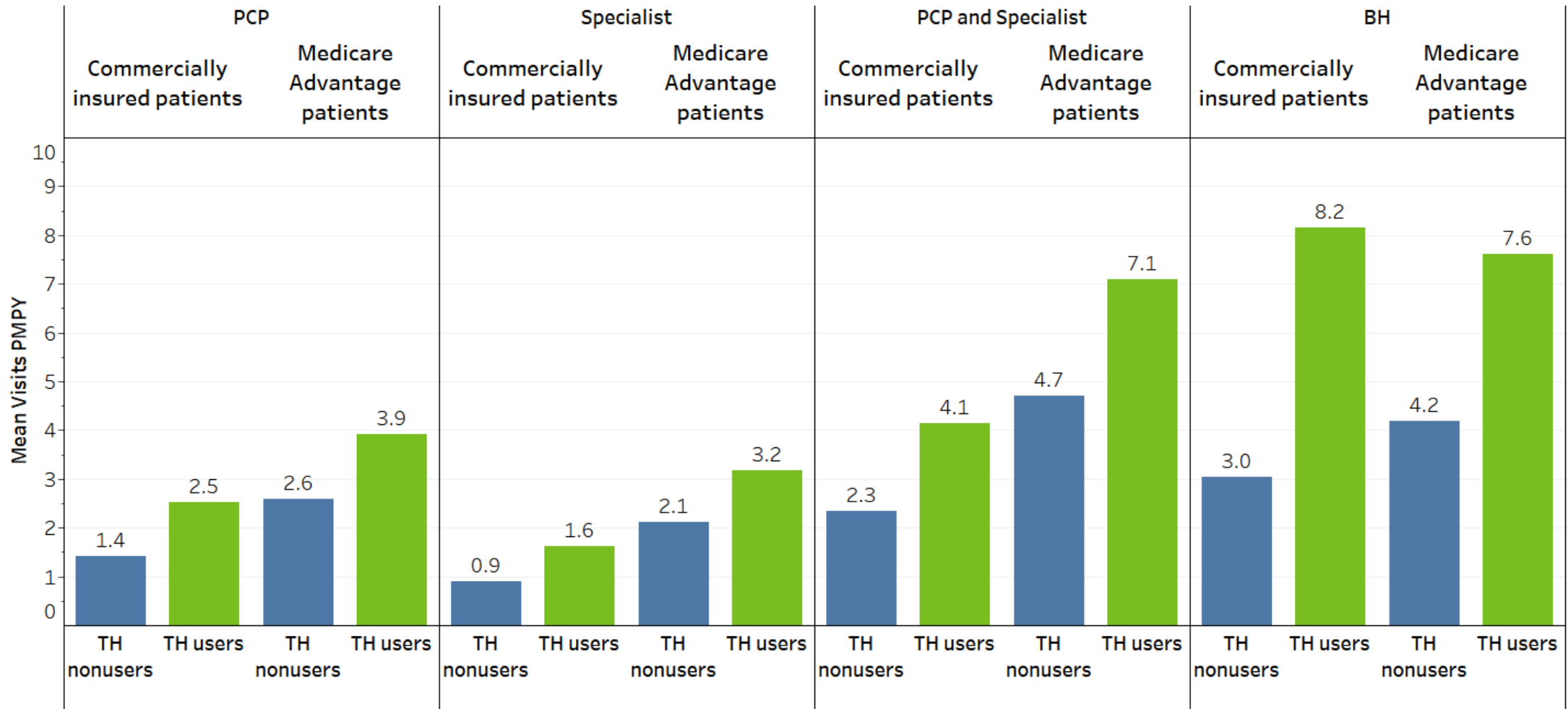
# Changes in ambulatory service use among telehealth users versus non-users, 2019-2021



Telehealth users are identified based on telehealth visits in 2021



# Ambulatory service use among telehealth users versus non-users, 2022



Telehealth users are identified based on telehealth visits in 2021



# Use of in-person services

- / For commercially insured patients, telehealth use was associated with decreased use between 2019 and 2021 in in-person visits for primary care, specialty care, and behavioral health services**
  - Findings suggest these patients used telehealth to offset or replace in-person services
  - Telehealth use was not associated with decreased use of in-person services for Medicare Advantage patients
- / Telehealth use was associated with higher use of in-person visits for both commercially insured and Medicare Advantage patients in 2022**

Telehealth users are identified based on telehealth visits in 2021





# Continuity of care

- / Telehealth use was not associated with substantial differences in continuity of care between 2019 and 2021**
- / Telehealth use was associated with greater fragmentation of care among Medicare Advantage patients in 2022, but findings were mixed for commercial patients in the same year (next slide)**

Telehealth users are identified based on telehealth visits in 2021



# Continuity of care metrics, 2022

Metric	Commercially insured				Medicare Advantage			
	TH user mean	TH nonuser mean	Adjusted difference	95% CI	TH user mean	TH nonuser mean	Adjusted difference	95% CI
Reversed Bice-Boxerman index (rBBI)	0.85	0.857	-0.01***	(-0.01, -0.00)	0.861	0.844	0.01***	(0.01, 0.02)
Percentage of visits with usual provider of care (UPC)	0.373	0.379	-0.01***	(-0.01, -0.00)	0.346	0.379	-0.03***	(-0.03, -0.03)

\*: p < 0.05; \*\*: p < 0.01; \*\*\*: p < 0.001

CI = confidence interval

Telehealth users are identified based on usage of telehealth visits in 2021



# Conclusions and policy implications





# Conclusions and policy implications

## **/ Telehealth use was associated with overall increases and higher rates of use of ambulatory visits, especially behavioral health visits**

- Association was particularly strong for sicker patients, patients in metropolitan areas, and patients in areas with high concentrations of racial/ethnic minorities, suggesting telehealth use was associated with increased access to care for these populations
- There were smaller increases in ambulatory visits among Medicare Advantage patients in areas with low broadband access



# Conclusions and policy implications

- / Commercially insured patients may have relied on telehealth to substitute for some in-person services following telehealth expansion**
- / Medicare Advantage patients did not appear to use telehealth as a substitute for in-person visits, and telehealth use was associated with slightly greater fragmentation of care for Medicare Advantage patients**
  - Unclear whether increased fragmentation was due to duplicative services or receiving timely and necessary referrals to in-person visits with PCPs, specialists, and behavioral health providers that they would not otherwise access



# Conclusions and policy implications

- / While use of audio-only services was low, use was highest among potentially vulnerable populations (e.g., older patients, sicker patients, and patients in areas with low broadband connectivity)**
  - Findings suggest audio-only telehealth is an important resource for accessing care among patients who could otherwise find it challenging to access care in-person due to their age or illnesses or who face difficulties in using audio-visual telehealth due to limited internet connectivity



## Next steps and discussion





# Next steps and discussion

**/ Mathematica is working to calculate four additional outcome measures to be included in the report to the Legislature:**

- Inpatient stays and ED visits for ambulatory care sensitive conditions
- Follow-up after hospitalization/ED visit for mental illness

**/ Questions?**