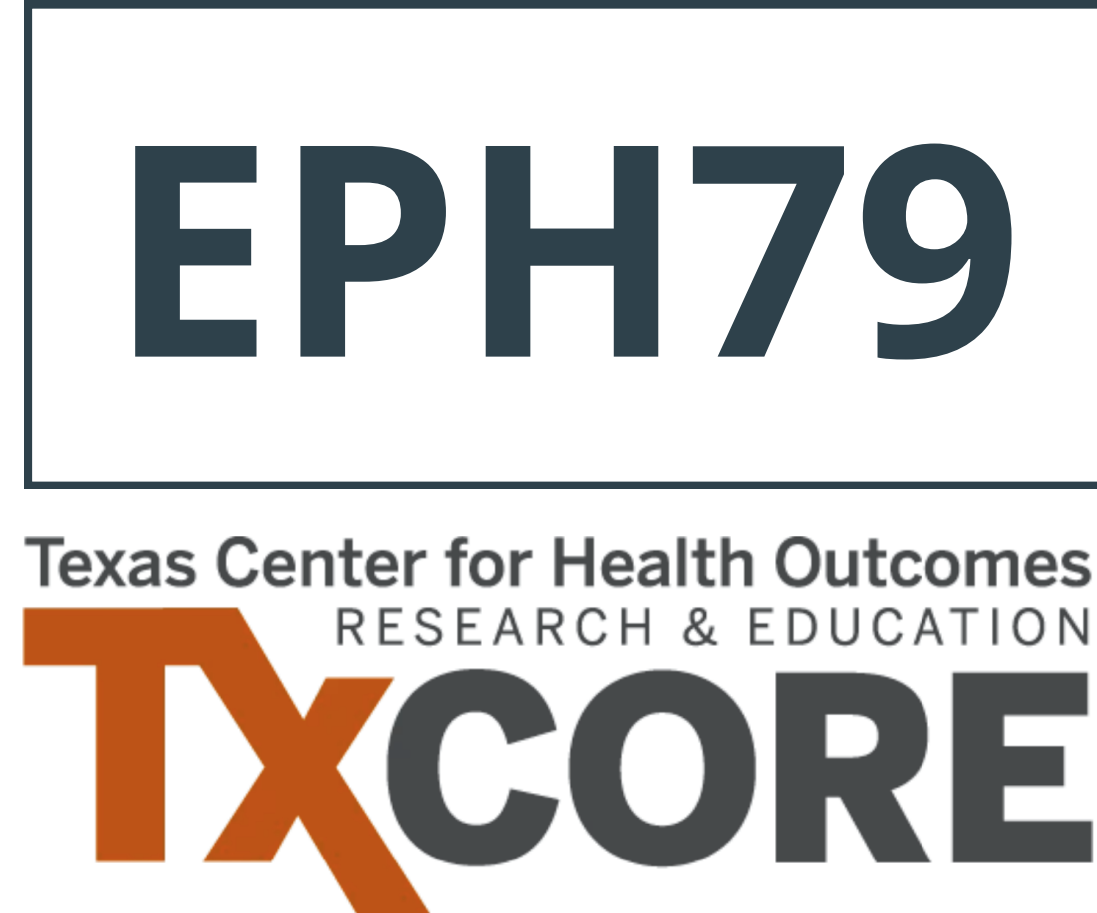# Assessing Adolescent Mental Health Prevalence and Incidence Pre- and Post-COVID-19 Among Texas Medicaid Recipients

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INTRODUCTION

- Adolescence (ages 10–19) is a critical developmental period marked by neurobiological and psychosocial transitions that increase vulnerability to mental health (MH) disorders, including anxiety, depression, and behavioral conditions. Nearly half of all lifetime mental illnesses begin by age 14, underscoring the importance of early detection.[1]
- The COVID-19 pandemic exacerbated these vulnerabilities, introducing social isolation, academic disruption, and economic instability, which disproportionately impacted adolescent mental health. National survey data in 2021 revealed that 44.2% of high school students reported persistent sadness or hopelessness, with sharp increases in suicidal ideation and behavior.[2]
- Existing studies mostly rely on self-reported surveys, limiting insight into real-world MH service utilization. Medicaid-enrolled adolescents, who account for 73% of low-income youth, are particularly vulnerable due to limited access to psychiatric care and systemic barriers.[3,4]
- Texas, with a longstanding shortage of child and adolescent psychiatrists, faces additional challenges. This study leverages Texas Medicaid claims data to assess MH incidence and prevalence trends pre- and post-COVID-19 and explores associated demographic and geographic disparities in MH diagnoses and access.

OBJECTIVES

- Examine annual trends in mental health prevalence and incidence among Medicaid-enrolled adolescents before and after the COVID-19 public health emergency.
- Assess demographic and geographic disparities in MH new diagnoses and existing conditions.
- Identify factors associated with MH diagnosis trends, including age, sex, race/ethnicity, Medicaid eligibility, and geographic access.

METHODS

- Retrospective cohort study using Texas Medicaid claims and enrollment data (2017–2023).
- MH conditions identified via ICD-10 codes; categories included mood, behavioral, substance use, psychosis, and suicide-related.[5]
- Covariates: age group, sex, race/ethnicity, Medicaid eligibility, metro/rural area, border area, and distance to the Local Mental Health Authority (LMHA).
- Prevalence: ≥1 MH diagnosis; Incidence: new diagnosis after 12-month MH-free period.
- Logistic regression assessed association between covariates and MH diagnoses and trends.
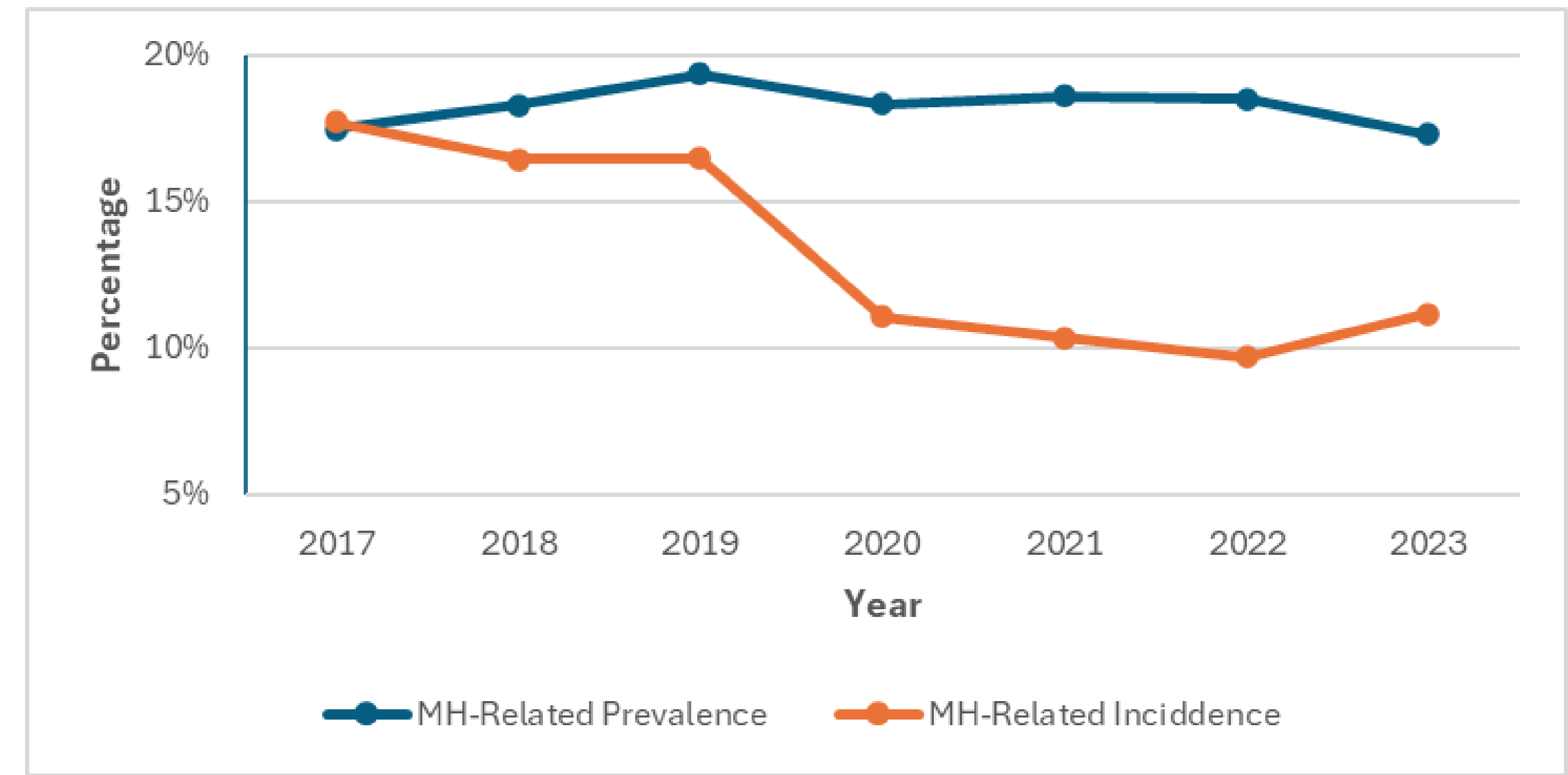
RESULTS

Figure 1. 12-month Prevalence and Incidence of All Mental Health-Related Diagnoses among Texas Medicaid Adolescent Beneficiaries.

RESULTS

Figure 2. (A) 12-month prevalence of behavioral and mood mental health diagnoses, (B) psychosis, substance use, and suicidal related mental health diagnoses, (C) 12-month incidence of behavioral and mood mental health diagnoses, (D) psychosis, substance use, and suicidal related mental health diagnoses in adolescents among Texas Medicaid beneficiaries.

Variables	Prevalence		Incidence	
	Adjusted Odds Ratio (95% CI)	p-value	Adjusted Odds Ratio (95% CI)	p-value
Sex				
Female	-	-	-	-
Male	1.011 (1.008-1.015)	<0.001	0.731 (0.726-0.736)	<0.001
Adolescent Stage				
Early Adolescent	-	-	-	-
Middle Adolescent	1.213 (1.205-1.221)		1.080 (1.065-1.096)	
Late Adolescent	1.259 (1.252-1.267)	<0.001	1.153 (1.137-1.169)	<0.001
Race				
Non-Hispanic White	-	-	-	-
Non-Hispanic Black	0.529 (0.526-0.532)	<0.001	0.607 (0.600-0.614)	<0.001
Hispanic	0.536 (0.534-0.539)	<0.001	0.648 (0.642-0.653)	<0.001
Asian/Pacific Islander	0.201 (0.196-0.205)	<0.001	0.327 (0.316-0.338)	<0.001
Enrollment Status				
Income Based	-	-	-	-
Disability	5.569 (5.534-5.604)	<0.001	1.913 (1.891-1.936)	<0.001
Foster Care	13.321 (13.112-13.533)	<0.001	4.794 (4.692-4.898)	<0.001
Pregnancy	1.028 (1.012-1.044)	0.0005	1.345 (1.309-1.381)	0.0005
Metro/Rural				
Metro	-	-	-	-
Micro	1.024 (1.016-1.031)	<0.001	0.964 (0.951-0.977)	<0.001
Rural	1.064 (1.056-1.071)	<0.001	0.970 (0.958-0.982)	<0.001
Border				
Non-Border	-	-	-	-
Border	1.435 (1.428-1.442)	<0.001	1.240 (1.230-1.250)	<0.001

Table 1. Mental Health-Related 12-Month Prevalence (n=11,516,553) and Incidence (n=7,149,712) Trend Analysis for Pre- and Post- COVID-19 PHE among Adolescents in Texas.

RESULTS

- **Prevalence**: Between 2017 and 2019, the prevalence of mental health (MH) diagnoses among Medicaid-enrolled adolescents increased from 17.5% to 19.3%, before declining in 2020 (18.3%) with the onset of the COVID-19 pandemic. While prevalence rebounded slightly in 2021 and 2022, it declined again in 2023 (17.3%). Mood disorders consistently rose and surpassed behavioral disorders post-2020. Substance use and suicide-related condition prevalence increased after 2020, while behavioral disorders declined steadily from 2020 to 2023.
- **Incidence**: New MH diagnoses declined sharply from 16.5% in 2019 to 11.0% in 2020, and persisted through 2022 (9.7%), followed by a slight increase in 2023 (11.2%). Suicide-related and substance use conditions showed a post-pandemic rebound, while mood and behavioral disorder incidence declined or remained low. The decline in new diagnoses likely reflects reduced healthcare access during the early pandemic, with ongoing barriers limiting full recovery in detection rates.
- **Factors Associated with Diagnosis**: Regression analyses showed significant associations between MH diagnoses and demographic, geographic, and eligibility factors. Older adolescents, females (for incidence), and those in foster care or pregnancy-related eligibility had higher odds of MH diagnoses. Racial/ethnic minorities and rural residents had lower diagnosis rates, with border region residents showing higher prevalence and incidence.

DISCUSSION

- The COVID-19 pandemic significantly disrupted mental health care access for adolescents enrolled in Texas Medicaid, resulting in a sharp decline in newly diagnosed mental health conditions in 2020. While some diagnostic rates partially rebounded, overall incidence remained below pre-pandemic levels, highlighting persistent gaps in detection and service delivery. Mood disorders showed rising prevalence, whereas behavioral disorder diagnoses declined, potentially reflecting altered clinical practices or pandemic-related behavioral shifts.
- Disparities by sex, race/ethnicity, geography, and Medicaid eligibility status persisted or widened, with particularly vulnerable groups—such as foster youth, rural residents, and racial/ethnic minorities—experiencing inconsistent trends and access barriers.
- These findings underscore the importance of enhancing targeted, equitable interventions to address mental health needs, particularly in underserved populations. Continued monitoring is essential to understand the long-term effects of pandemic-related disruptions on adolescent mental health outcomes.

CONCLUSIONS

- The COVID-19 pandemic significantly disrupted MH diagnosis patterns among Medicaid-enrolled adolescents in Texas. While overall prevalence remained stable, incidence declined, particularly in 2020, with only partial recovery by 2023.
- Subgroups such as rural adolescents, racial/ethnic minorities, and foster care enrollees experienced disproportionate changes, highlighting critical gaps in MH access. Targeted policy and service interventions are urgently needed to address these disparities and strengthen adolescent MH care infrastructure and accessibility in Texas.

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