

Background¹⁻³

- Opioid-related overdose deaths among U.S. adolescents aged 12 to 17 increased by 280% from 2018 to 2023, compared with 65% among adults
- Buprenorphine is effective for opioid use disorder (OUD) but remains underutilized among adolescents and young adults (AYA)
- Recent policy shifts, including Medicaid unwinding (end of continuous enrollment protections) and X-waiver elimination, may have altered dispensing patterns across insurance types
- Insurance-level differences in buprenorphine access among AYA remain poorly characterized

Objectives

- Describe annual buprenorphine dispensing patterns among Medicaid-enrolled and commercially insured AYA with OUD from 2020 to 2023
- Examine differences in dispensing rates by insurance type and sex across this period

Methods

- Data Source:** Merative MarketScan CCAE and Multi-State Medicaid (MDCD) databases, 2020–2023
- Eligibility Criteria:** Individuals aged 12–25 with OUD (ICD-10-CM F11.xx) and ≥90 days of continuous enrollment within each calendar year
- Index Date:** First observed buprenorphine fill in each calendar year (pain formulations excluded)
- Study Cohort:** Eligible individuals were identified from Commercial (CAE; N = 3,227) and Medicaid (MDCD; N = 9,688) insurance types, yielding a final analytic cohort of 12,915 AYA with ≥1 buprenorphine fill
- Outcome & Statistical Analysis:** The primary outcome was the annual buprenorphine dispensing rate per person-year (PPY), stratified by insurance type and sex. Between-group comparisons used risk ratios (RRs) with 95% CIs estimated via the exact Poisson method (SAS 9.4 and R)

Results

Table 1. Demographic characteristics of adolescents and young adults with buprenorphine dispensing, stratified by insurance type

Variable	All Subjects N = 12,915	CAE N = 3,227	MDCD N = 9,688	p-value‡
Age (y), mean (SD)	22.7 (2.1)	22.3 (2.2)	22.8 (2.1)	<0.001
Age group, n (%)				0.82
Adolescents (12–17 y)	230 (1.8)	59 (1.8)	171 (1.8)	
Young Adults (18–25 y)	12,685 (98.2)	3,168 (98.2)	9,517 (98.2)	
Detailed age group, n (%)				<0.001
12–15 y	27 (0.2)	7 (0.2)	20 (0.2)	
16–17 y	203 (1.6)	52 (1.6)	151 (1.6)	
18–19 y	1,039 (8.0)	337 (10.4)	702 (7.2)	
20–25 y	11,646 (90.2)	2,831 (87.7)	8,815 (91.0)	
Sex, n (%)				<0.001
Male	6,225 (48.2)	2,059 (63.8)	4,166 (43.0)	
Female	6,690 (51.8)	1,168 (36.2)	5,522 (57.0)	
Race/ethnicity,† n (%)				
White	NA	NA	6,835 (70.6)	
Black	NA	NA	749 (7.7)	
Hispanic	NA	NA	988 (10.2)	
Other	NA	NA	498 (5.1)	
Missing	NA	NA	618 (6.4)	
Out-of-pocket cost (\$),‡ median (Q1–Q3)	0.0 (0.0–10.0)	40.0 (8.9–140.0)	0.0 (0.0–0.0)	<0.001
Total payment (\$),‡ median (Q1–Q3)	139.7 (0.0–845.5)	389.0 (95.3–1,345.6)	73.9 (0.0–655.2)	<0.001

Abbreviations: CCAE, Commercial Claims and Encounters; MDCD, Medicaid.

Data presentation: Values are mean (SD) for age, median (Q1–Q3) for cost variables, and n (%) for categorical variables.

† Race/ethnicity data were unavailable for the CCAE database.

‡ P values for continuous variables were calculated using the Wilcoxon rank-sum test for cost variables (presented as median [Q1–Q3]) and the Welch 2-sample t test for age (presented as mean [SD]); categorical variables were compared using Pearson χ^2 or Fisher exact tests, as appropriate.

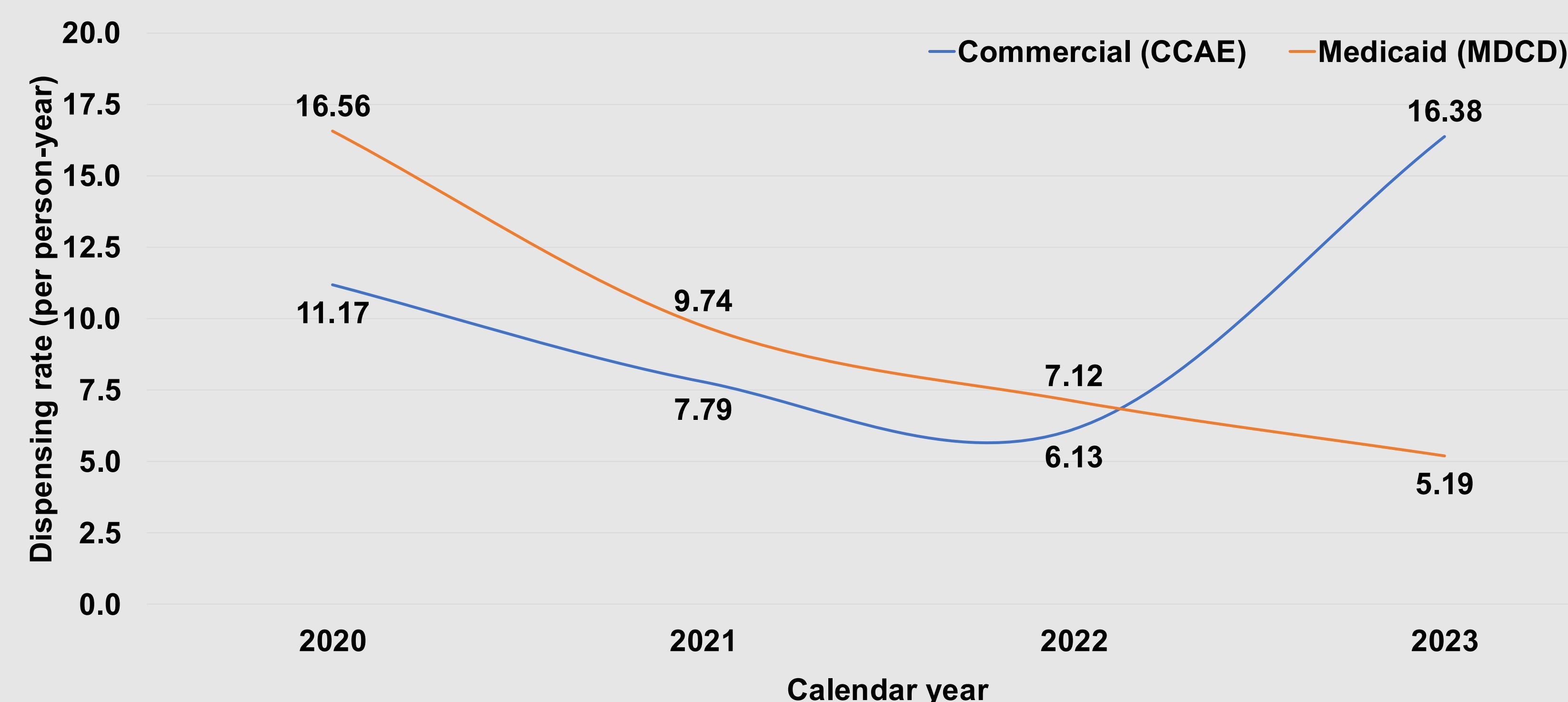


Figure 1: Annual buprenorphine dispensing rates per person-year (PPY) by insurance type (Commercial [CAE] vs. Medicaid [MDCD]), 2020–2023

- A total of 12,915 AYA filled ≥1 buprenorphine prescription; 75.0% Medicaid, 25.0% commercial
- Majority were young adults aged 18–25 years (98.2%), while adolescents aged 12–17 years represented only 1.8% of AYAs receiving buprenorphine.
- Medicaid enrollees: had a median out-of-pocket cost of \$0 (IQR \$0–\$0) vs. \$40 (IQR \$8.90–\$140.00) among commercially insured AYAs ($p < 0.001$)
- Overall dispensing rates were 10.34 PPY for CAE vs. 9.27 PPY for MDCD enrollees
- Among MDCD enrollees (the only group with available race/ethnicity data): 70.6% were White, 10.2% Hispanic, and 7.7% Black

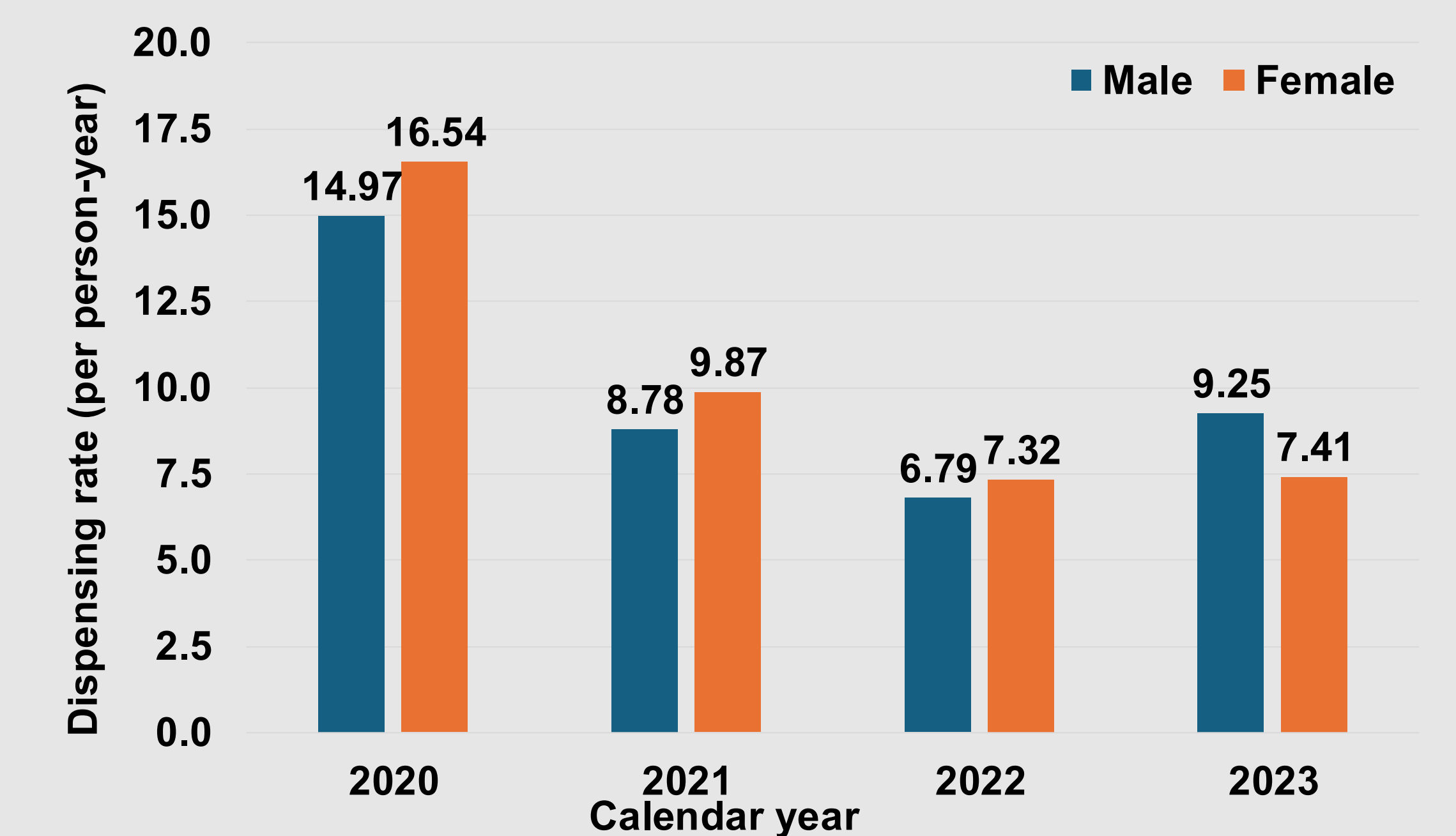


Figure 2: Annual buprenorphine dispensing rates per person-year (PPY) by sex, 2020–2023

Conclusion

- Buprenorphine dispensing differed by insurance type and sex among AYA with OUD from 2020 to 2023, including a reversal in 2023 in which commercially insured AYA had significantly higher dispensing rates than Medicaid enrollees
- Despite lower out-of-pocket costs among Medicaid enrollees, the temporal overlap with Medicaid unwinding suggests coverage-related factors may have influenced these patterns
- Future research should examine how insurance transitions and payer-level factors influence buprenorphine treatment continuity among AYAs.

References

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