National Trends in Medicare Reimbursement, Market Concentration, and Geographic Variation for Tracheostomy, 2013–2023

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Background and Objectives

Medicare reimbursement influences the sustainability and availability of procedural care. Tracheostomy is a resource intensive procedure, yet national reimbursement patterns remain poorly characterized.

Objective:
Characterize national trends in tracheostomy reimbursement, geographic variation, provider distribution, and economic alignment from 2013–2023.

Methods

Design:
Retrospective longitudinal database analysis

Data:
Medicare Provider Utilization and Payment Data, 2013–2023

Preprocessing:

- **Tracheostomy-related CPT codes** were identified and annual weighted mean payments were calculated.
- Payments were **inflation-adjusted** to 2023 USD using the Consumer Price Index.
- **Geographic variation** was quantified with the coefficient of variation (CV).
- Payments were stratified by **rural, suburban, and urban** classification.
- **Provider volume** distributions and high-volume outliers were evaluated longitudinally.
- State reimbursement was compared with **cost-of-living** using Spearman correlation.
- **Pre- and post–COVID-19** trends were examined using segmented analyses.

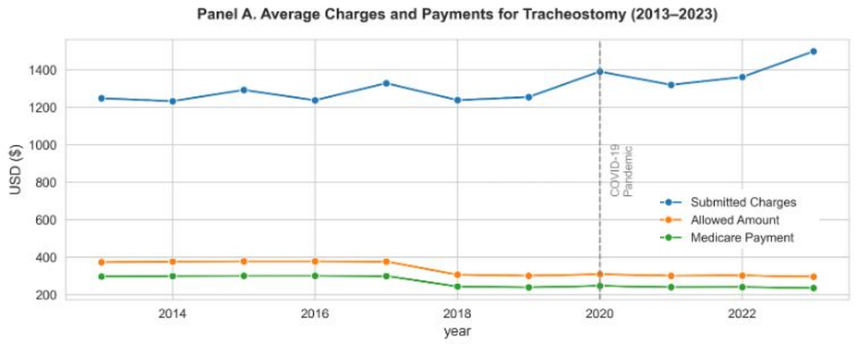
Key Findings

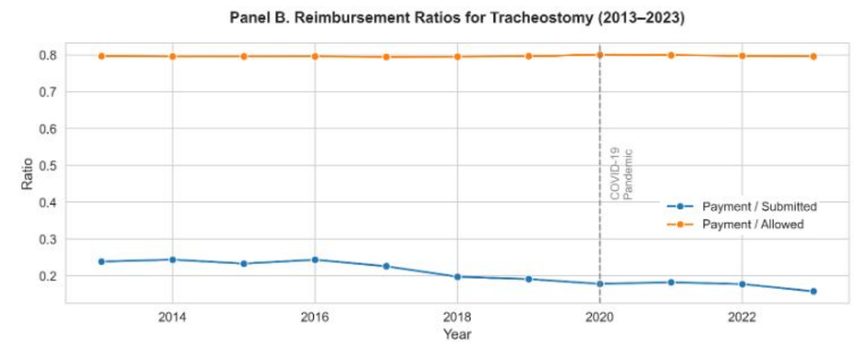
42% decline in inflation-adjusted mean reimbursement ($385 → $222)

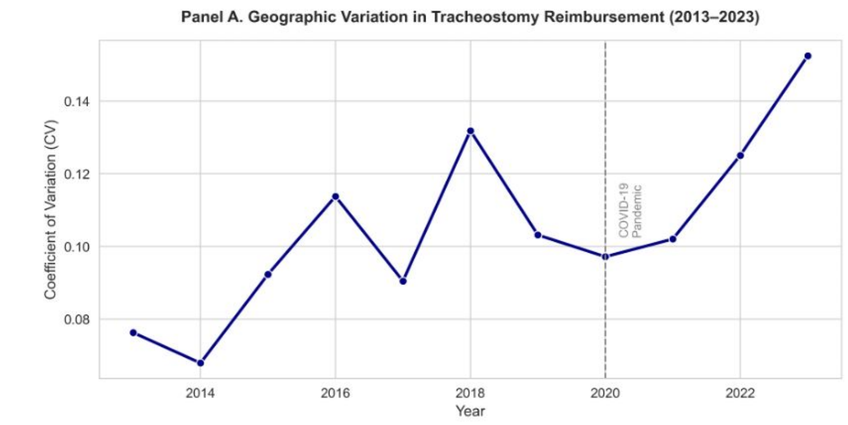
0.0056/yr increase in geographic variability (p = 0.007)

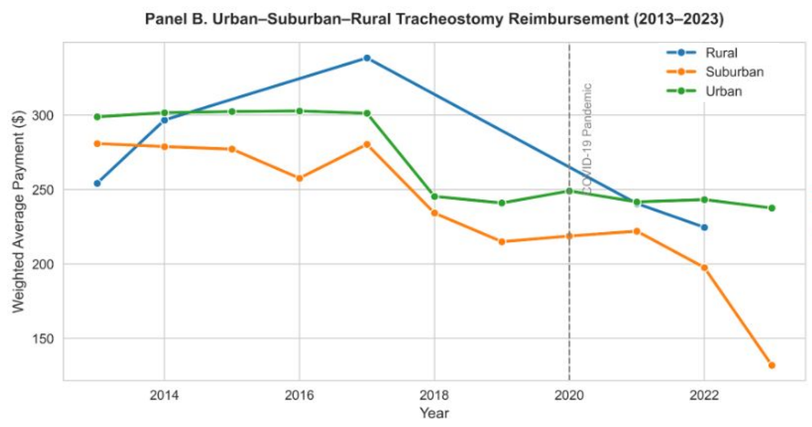
p = 0.95 no significant difference in urban vs rural provider mean payment

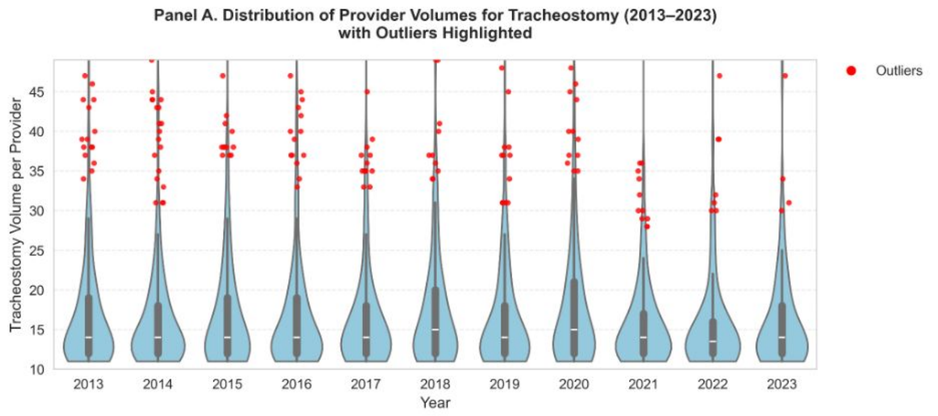
Results

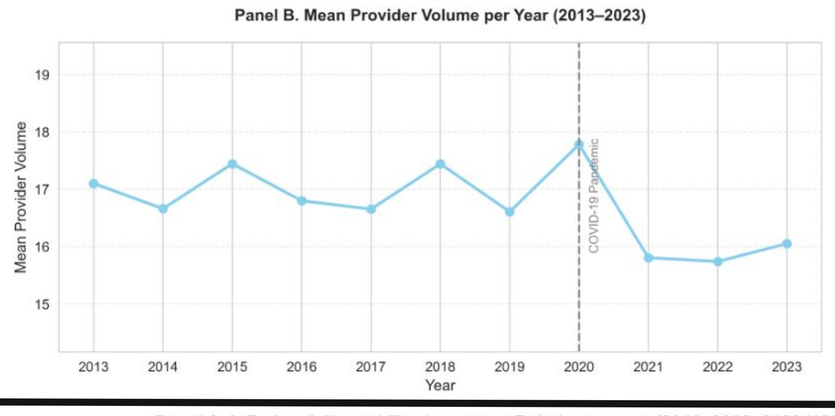


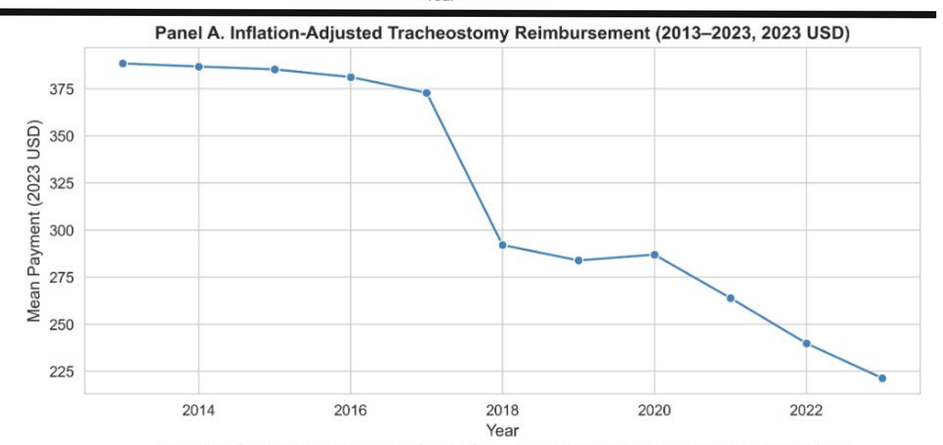


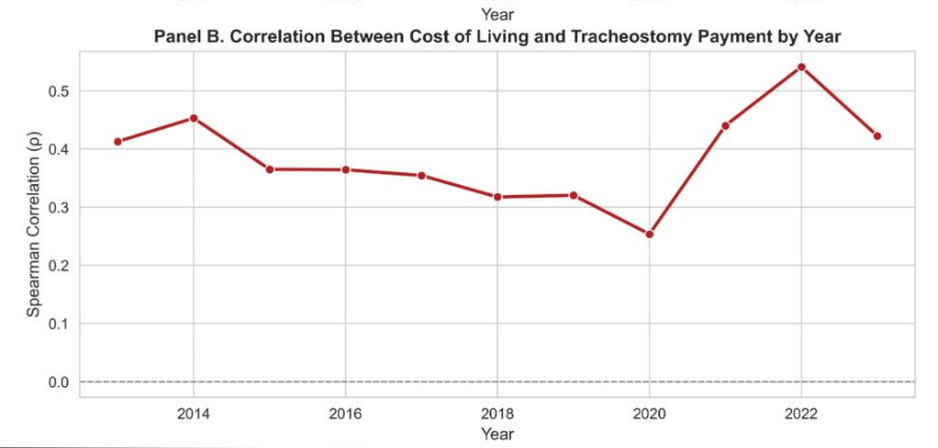


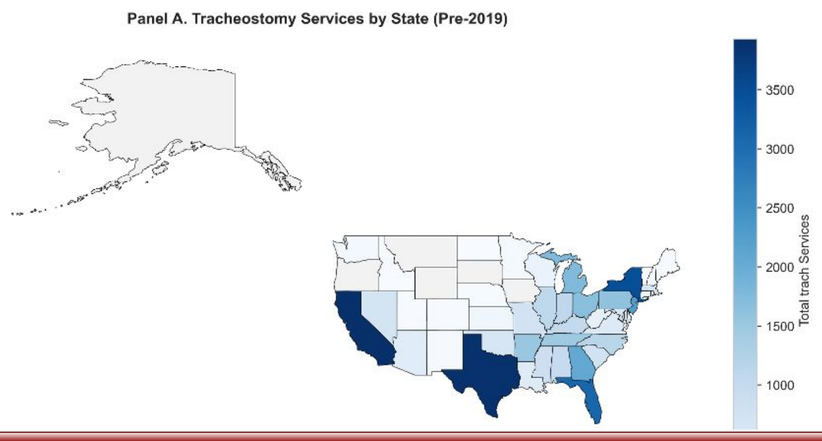


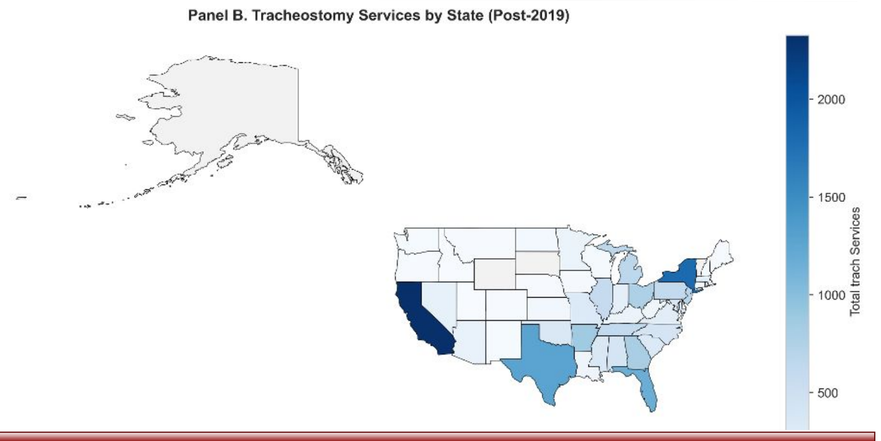












Discussion and Conclusion

1. Geographic payment dispersion increased despite broad declines in reimbursement.

2. Provider volume peaked in 2020 and declined thereafter, while high-volume outliers persisted.

3. Cost-of-living alignment was modest and inconsistent; 2023 correlation was approximately ρ = 0.42.

Conclusion: Medicare reimbursement for tracheostomy declined while geographic payment variability widened. The absence of urban–rural payment differentiation and persistent misalignment with cost of living suggest that reimbursement remains insufficiently responsive to regional economic pressures.

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References: