

A Model for Oral Health Claims Analysis:

Understanding Correlations Between Oral Health and Overall Health Through Analysis of Dental and Medical Claims

from the New Hampshire All Payer Claims Database

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The project authors acknowledge the NH Oral Health Stakeholder Community for their input, dedication, and expertise



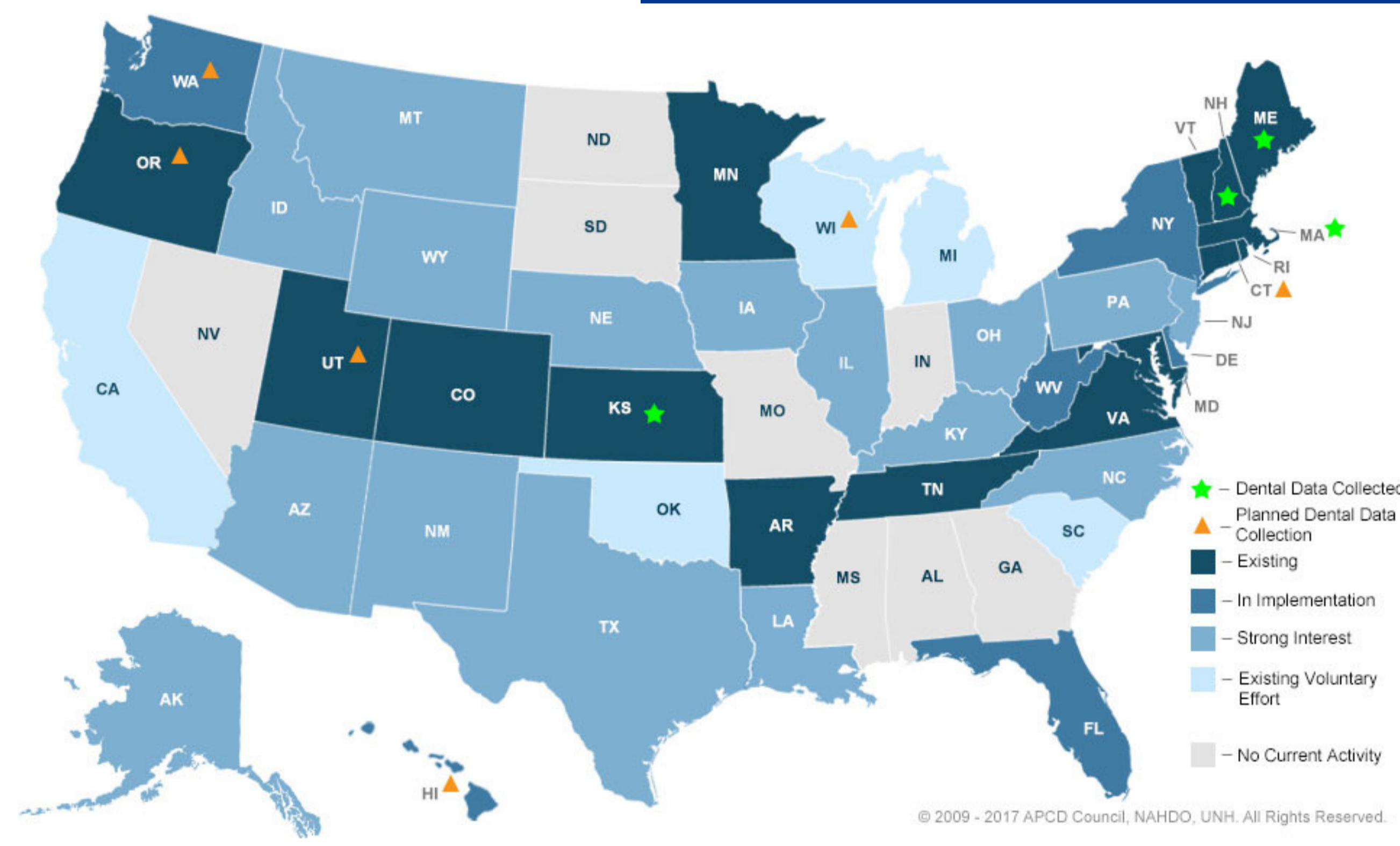
This project highlights the advantages of using the New Hampshire All Payer Claims Database called the Comprehensive Healthcare Information System (NH CHIS) in exploration of oral health and overall health statewide and across all payers.

The objective of this analysis is to utilize NH CHIS dental claims data to build complex analysis particularly with respect to oral health care among people with chronic medical conditions and comorbidities.

Methods include analysis of medical and dental claims data (private payers and Medicaid) with specific focus on cost and utilization for preventive oral health services, such as oral evaluation, periodontal maintenance, dental sealants, and fluoride varnish among people with chronic medical conditions, such as diabetes, asthma, and congestive heart failure.

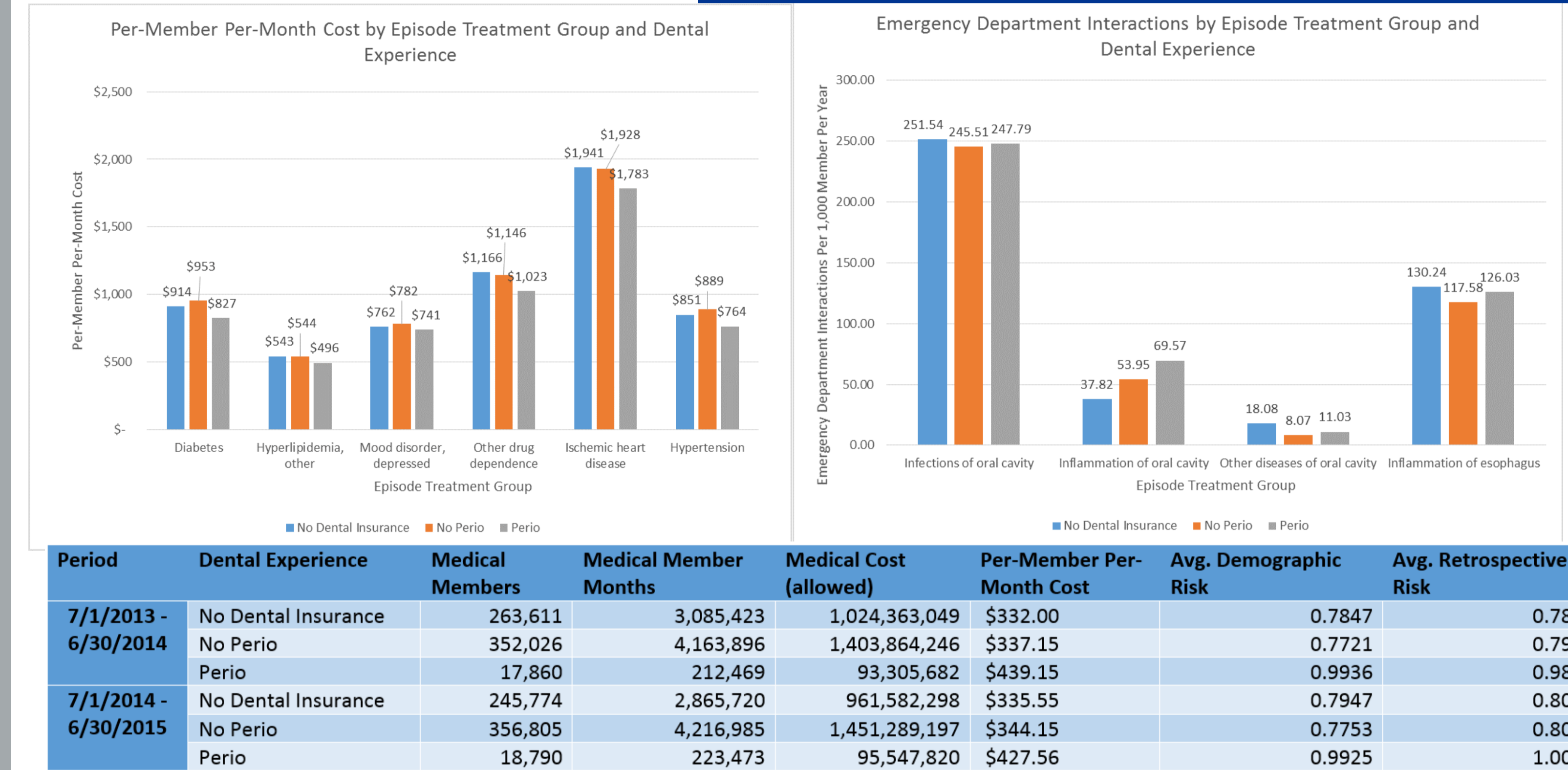
Results show per-member per-month cost and person-day-condition/procedure encounters for oral health services and chronic medical conditions described by member demographics including age, gender, and geography. This innovative approach provides value beyond looking at a particular medical-dental interaction or focusing on a single payer.

1. All Payer Claims Data



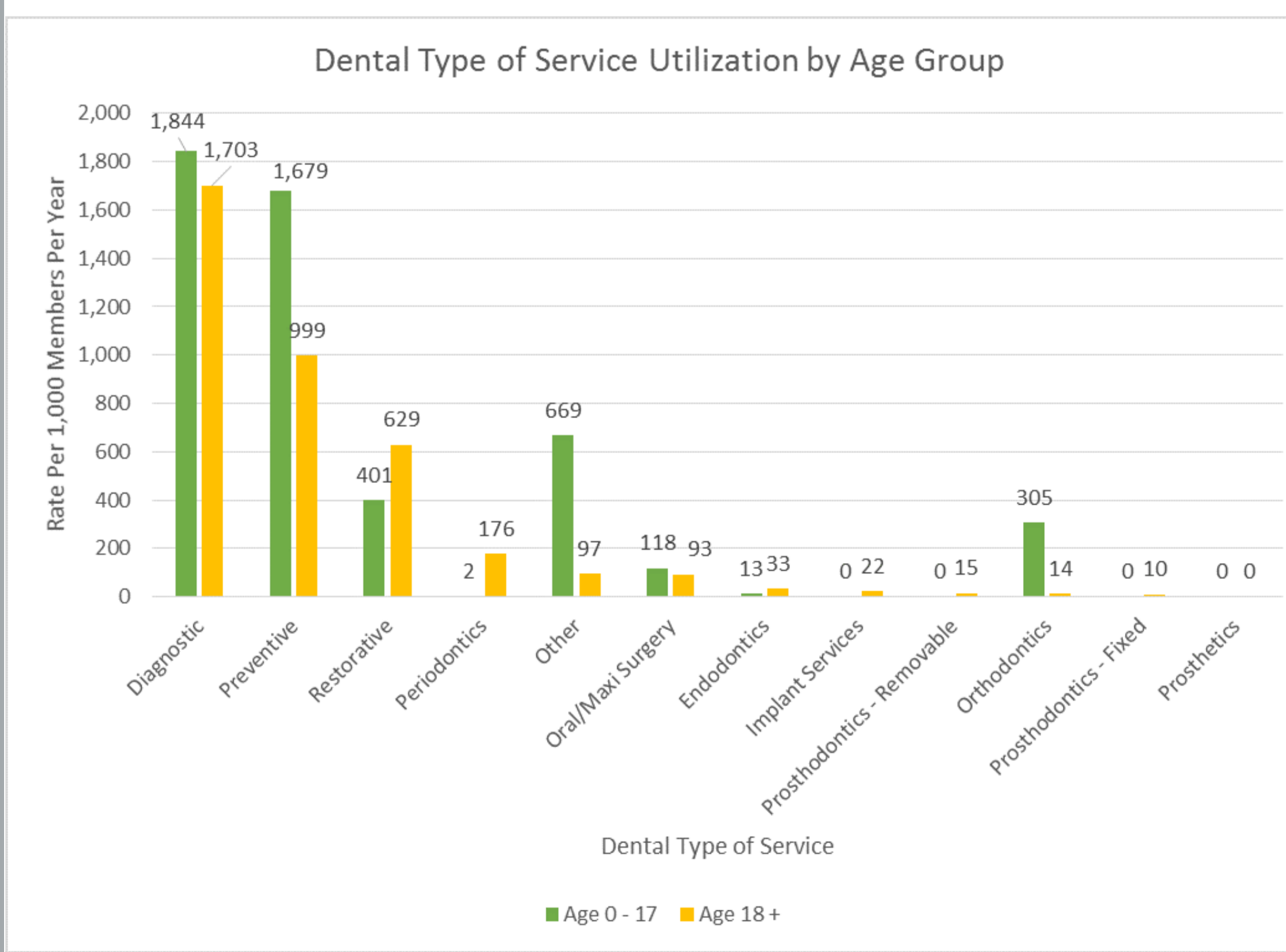
APCDs are large-scale databases that systematically collect medical claims, pharmacy claims, dental claims (typically, but not always), and eligibility and provider files from private and public payers. Analysis of dental claims in APCD's is uncommon nationally, which provided a specific motivation for this work.

3. Medical-Dental Claims Data



The medical claims report suite shows commercial Medical membership, utilization, and cost with a dental membership "layer". Users can select the medical experience for members with commercial dental insurance and encounters for Periodontal Care (CDT D4000 range).

2. Dental Claims Data



The dental claims report suite shows dental only commercial membership, utilization, and cost in New Hampshire. Users can investigate overviews by region, month, age/gender, and payer in addition to dental type of service. Payers are limited to the top eight by membership accounting for approximately 95% of the population.

Payer	Members	Member Months	% of Total MMs	Dental Cost (allowed)	Per-Member Per-Month Cost
The Guardian Life Insurance Company of America	29,934	264,473	4.0%	\$4,596,263	\$17
Principal Life Insurance Company	9,408	90,360	1.4%	\$1,786,038	\$20
Metropolitan Life Insurance Company-Dental	102,256	1,050,257	16.1%	\$84,182,117	\$80
Delta Dental Plan of New Hampshire	378,228	3,851,364	58.9%	\$184,707,737	\$48
Delta Dental Insurance Company	11,986	117,875	1.8%	\$5,894,247	\$50
CIGNA Health and Life Insurance Company - Cigna East Dental Eligibility	72,653	655,613	10.0%	\$23,775,527	\$36
American Life Insurance Corp.	9,083	85,516	1.3%	\$2,815,796	\$33
Aetna Life Insurance Company - ACAS All	42,361	426,596	6.5%	\$19,020,894	\$45
Total	655,909	6,543,064	100.0%	\$326,778,619	\$50

4. Conclusions



The claims analysis tool presented here empowers users to investigate oral health research questions answerable in dental and medical claims data.

The methodology used for this analysis can stand as a model for other APCD states examining the correlation between oral health and overall health.

Conclusions highlight the increased value of claims-based analytic approach to access, utilization, and cost pertaining to oral health and overall health.