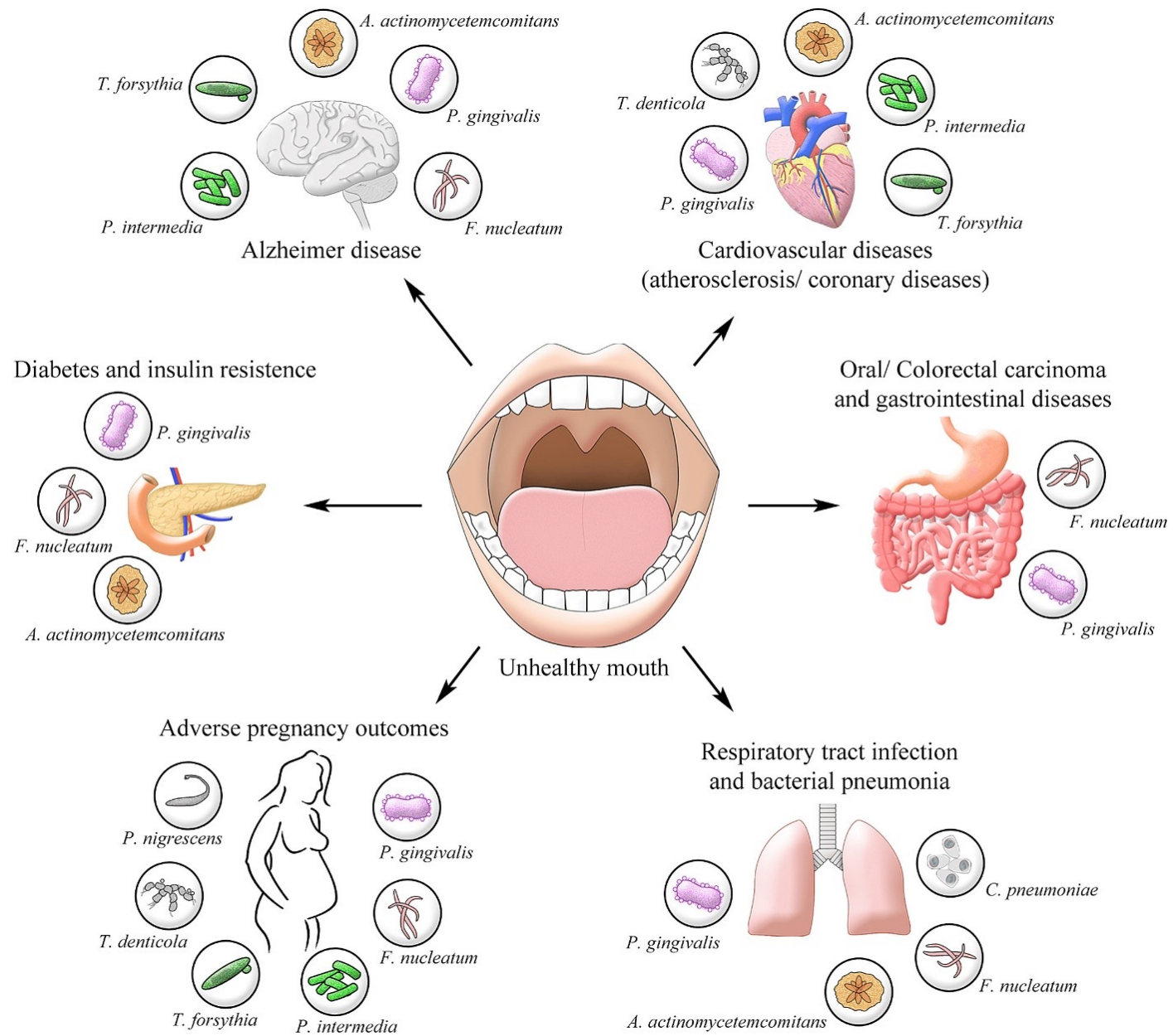


# Medicaid Adult Dental Benefit

Fotinos S. Panagakos, DMD. PhD

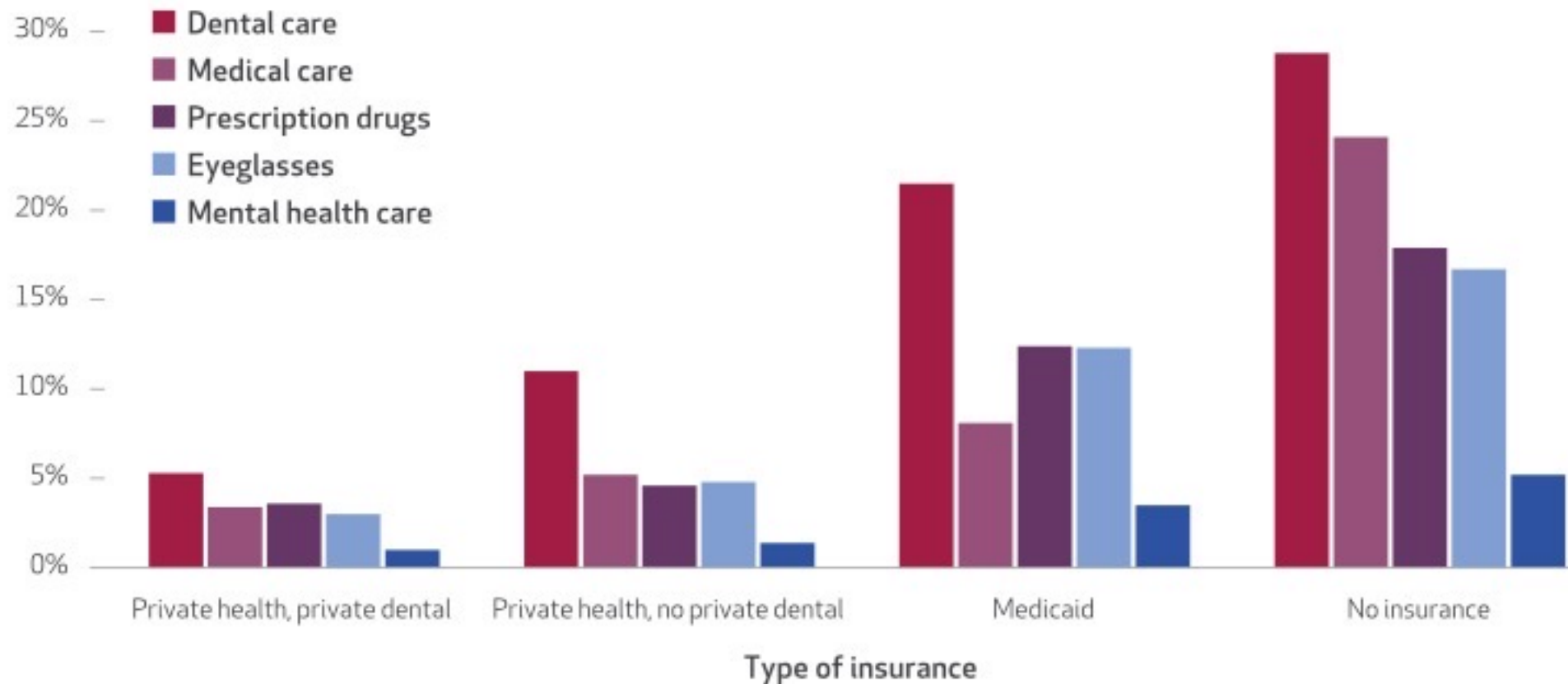
West Virginia University

School of Dentistry



**EXHIBIT 2**

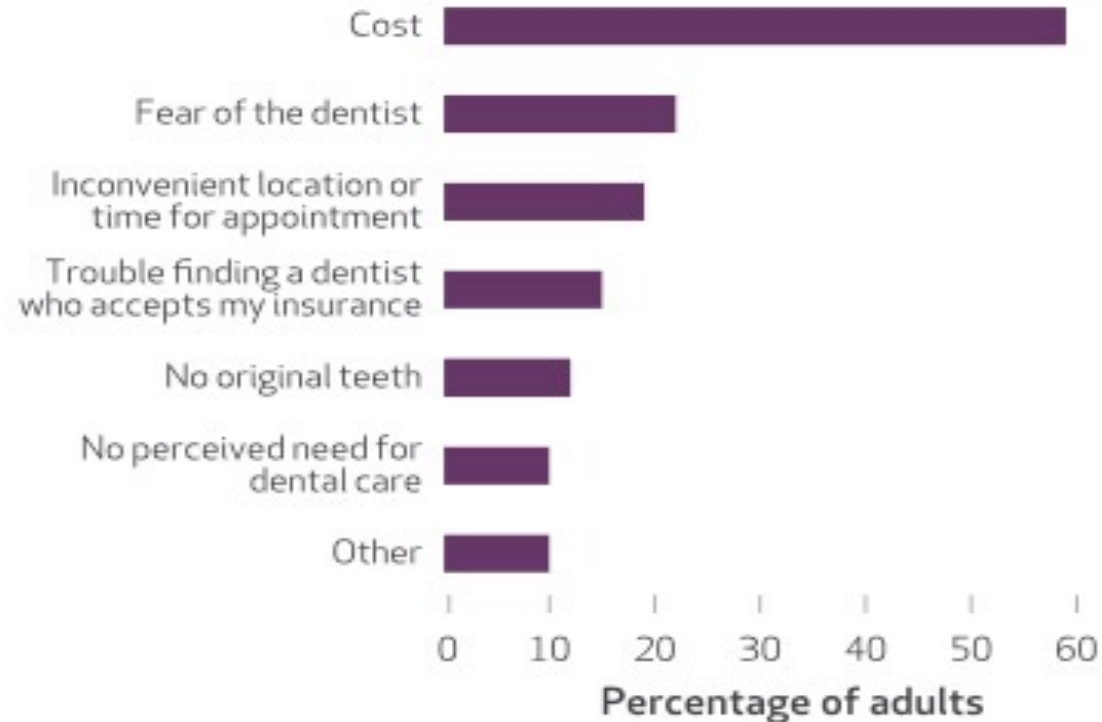
**Percentages of National Health Interview Survey respondents ages 19–64 who did not get selected health care services they needed in the past 12 months because of cost, by type of insurance, 2014**



**SOURCE** Authors' analysis of data for 2014 from the National Health Interview Survey. **NOTES** The sample consisted of 50,077 respondents. For all types of insurance, the difference between dental care and medical care was significant ( $p < 0.10$  for no insurance;  $p < 0.05$  for all other types of insurance).

#### EXHIBIT 4

### Top reasons given by 14,962 adults for not having visited the dentist in the past 12 months, 2015



**SOURCE** Authors' analysis of data for 2015 from the Oral Health and Well-Being Survey of the American Dental Association's Health Policy Institute.

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 Health Policy Institute

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SCHOOL OF DENTISTRY

Oral Health.  
Our Priority.



# Impact of Periodontal Therapy on General Health

## Evidence from Insurance Data for Five Systemic Conditions

Marjorie K. Jeffcoat, DMD, Robert L. Jeffcoat, PhD, Patricia A. Gladowski, RN, MSN,  
James B. Bramson, DDS, Jerome J. Blum, DDS

**Background:** Treatment of periodontal (gum) disease may lessen the adverse consequences of some chronic systemic conditions.

**Purpose:** To estimate the effects of periodontal therapy on medical costs and hospitalizations among individuals with diagnosed type 2 diabetes (T2D); coronary artery disease (CAD); cerebral vascular disease (CVD); rheumatoid arthritis (RA); and pregnancy in a retrospective observational cohort study.

**Methods:** Insurance claims data from 338,891 individuals with both medical and dental insurance coverage were analyzed in 2011–2013. Inclusion criteria were (1) a diagnosis of at least one of the five specified systemic conditions and (2) evidence of periodontal disease. Subjects were categorized according to whether they had completed treatment for periodontal disease in the baseline year, 2005. Outcomes were (1) total allowed medical costs and (2) number of hospitalizations, per subscriber per year, in 2005–2009. Except in the case of pregnancy, outcomes were aggregated without regard to reported cause. Individuals who were treated and untreated for periodontal disease were compared independently for the two outcomes and five systemic conditions using ANCOVA; age, gender, and T2D status were covariates.

**Results:** Statistically significant reductions in both outcomes ( $p < 0.05$ ) were found for T2D, CVD, CAD, and pregnancy, for which costs were lower by 40.2%, 40.9%, 10.7%, and 73.7%, respectively; results for hospital admissions were comparable. No treatment effect was observed in the RA cohorts.

**Conclusions:** These cost-based results provide new, independent, and potentially valuable evidence that simple, noninvasive periodontal therapy may improve health outcomes in pregnancy and other systemic conditions.

(Am J Prev Med 2014;47(2):166–174) © 2014 American Journal of Preventive Medicine

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HEALTH ECONOMICS

Health Econ. (2016)

Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/hec.3316

## HEALTH ECONOMICS LETTER

### THE RELATIONSHIP BETWEEN PERIODONTAL INTERVENTIONS AND HEALTHCARE COSTS AND UTILIZATION. EVIDENCE FROM AN INTEGRATED DENTAL, MEDICAL, AND PHARMACY COMMERCIAL CLAIMS DATABASE

KAMYAR NASSEH<sup>a,\*</sup>, MARKO VUJICIC<sup>a</sup> and MICHAEL GLICK<sup>b</sup>

<sup>a</sup>American Dental Association, Health Policy Institute, Chicago, IL, USA

<sup>b</sup>University of Buffalo (The State University of New York), Buffalo, NY, USA

#### ABSTRACT

Periodontal disease has been linked to poor glycemic control among individuals with type 2 diabetes. Using integrated dental, medical, and pharmacy commercial claims from Truven MarketScan® Research Databases, we implement inverse probability weighting and doubly robust methods to estimate a relationship between a periodontal intervention and healthcare costs and utilization. Among individuals newly diagnosed with type 2 diabetes, we find that a periodontal intervention is associated with lower total healthcare costs (–\$1799), lower total medical costs excluding pharmacy costs (–\$1577), and lower total type 2 diabetes-related healthcare costs (–\$408). Copyright © 2016 John Wiley & Sons, Ltd.

Received 28 April 2014; Revised 3 August 2015; Accepted 10 December 2015

**KEY WORDS:** periodontal intervention; type 2 diabetes; healthcare costs and utilization; inverse probability weighting; doubly robust estimation

# NCDs Focus: Difference in Preventive Care vs No Dental

Rate reductions and cost savings among those with NCDs

**Year 3 outcomes  
based on utilization  
of services in years  
1 and 2**

## CVD

- ED (-13.1 per 100 ppl)
- Hosp (-7.6 per 100 ppl)
- Total Cost PP (-\$772)

## Diabetes

- ED (-16.9 per 100 ppl)
- Hosp (-10.3 per 100 ppl)
- Total Cost PP (-\$2,065)

## Respiratory

- ED (-25.5 per 100 ppl)
- Hosp (-13.1 per 100 ppl)
- Total Cost PP (-\$2,259)

## Cognitive Impairment

- ED (-66.6 per 100 ppl)
- Hosp (-30.9 per 100 ppl)
- Total Cost PP (-\$8,194)

Key:

ED = Emergency Department Visit Hosp = Hospitalization Total Cost PP = Total average cost per person, excluding cost of any dental care



# The Total Health Program



- 1 Member education** on the importance dental benefits has to overall health particularly those with a chronic condition.
- 2 Data integration** using diagnosis codes to identify eligible members based on condition for auto enrollment into program.
- 3 Personalized benefits** for qualifying members to improve overall health (e.g., specialized care programs, additional cleanings, periodontal scaling, etc.)
- 4 Targeted outreach** to identified members through direct mail, electronic communication and care coordination programs.







# Integration in action.

Ted is a 51-year-old who has medical and dental coverage with Blue Cross. We have access to more data, which has a positive impact on his health.



Ted participates in a biometric screening, and the results are shared with his physician.



A review of Ted's data raises concerns, and his physician schedules additional tests.



Ted's physician diagnoses Ted as a diabetic.




Because Ted also has Dental Blue coverage, we send him a letter telling him he's eligible for additional dental services to help control his diabetes, at no cost.




We monitor Ted's use of his dental benefits and reach out to him by mail, email, text or phone to educate and encourage him.



Ted's medical and dental care coordination is monitored by his nurse case manager, helping him stay in control of his condition, and maintain his health.


**Blue Cross MA**  
 12/18/18, 12:16 PM

**Good Oral Health  
Leads to Better  
Overall Health**



Seeing the dentist regularly is good for your health, especially for those with heart disease. That's because dental checkups are about more than just cleaning your teeth. Dentists can also reduce the amount of plaque and bacteria in your mouth that can make conditions, such as heart disease, worse. Give yourself a bigger reason to smile and schedule an appointment today—it's covered!\*

\*Check your plan for details.

[Learn How to Keep Your Teeth Healthy](#)

[Find a Dentist](#)


**MASSACHUSETTS**


**Good Oral Health  
Leads to Better Overall Health**


Regular visits with your dentist can improve your overall health.

In addition to no-cost\* regular dental checkups, members who qualify for Enhanced Dental Benefits can get additional preventive and periodontal dental care that can lead to improved overall health. This program also offers oral health support for members with chronic conditions, such as diabetes.

[Learn how to keep your teeth healthy](#)


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[Learn how to keep your teeth healthy](#)

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 12/18/18, 12:16 PM


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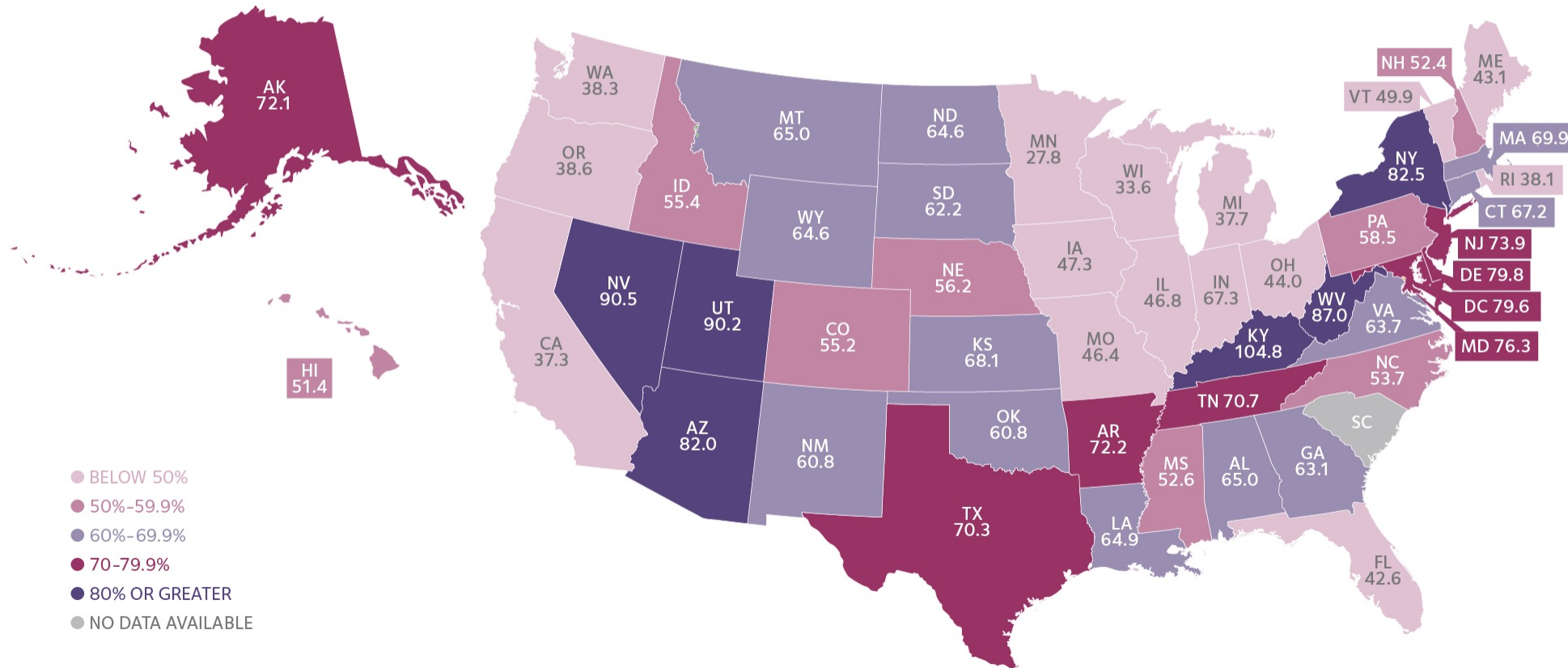
[Find a Dentist](#)



# Reimbursement Rates



MEDICAID REIMBURSEMENT AS A PERCENTAGE OF PRIVATE INSURANCE REIMBURSEMENT  
FOR **CHILD DENTAL SERVICES**, 2020

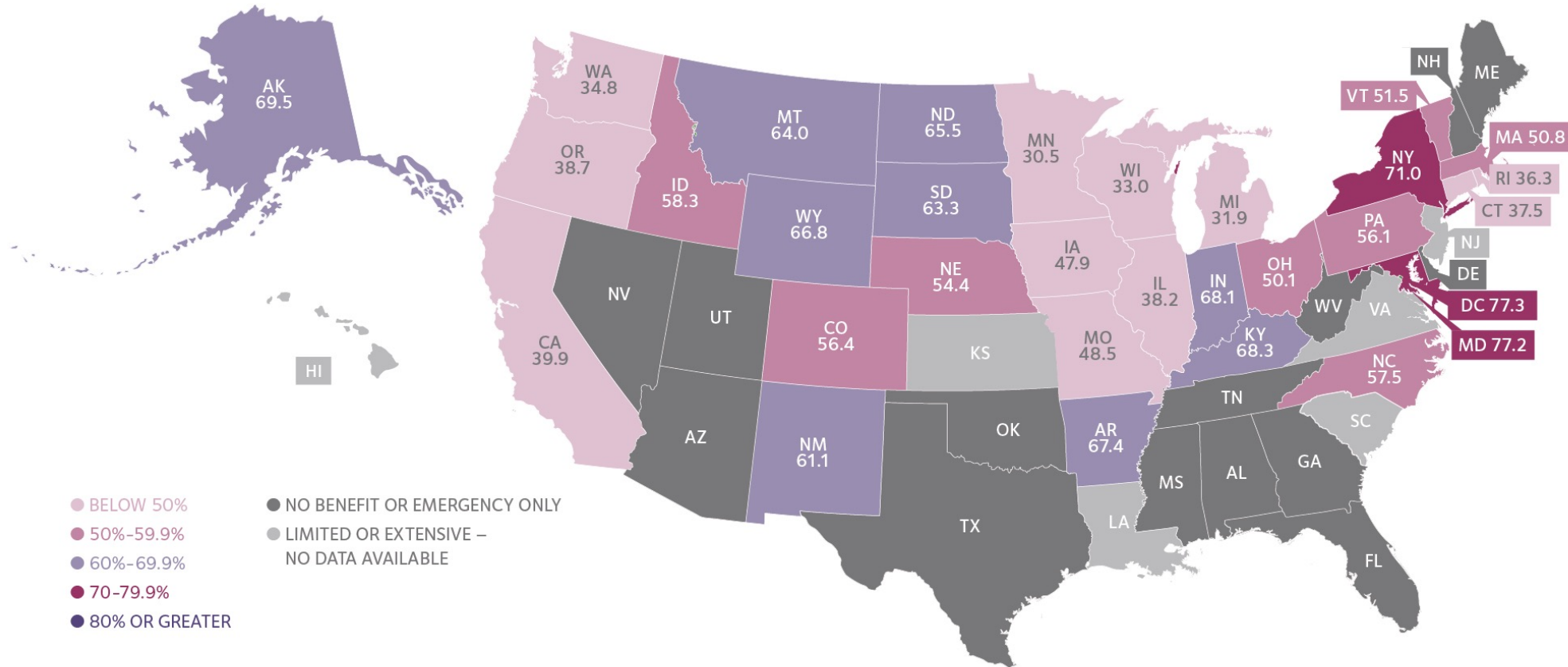




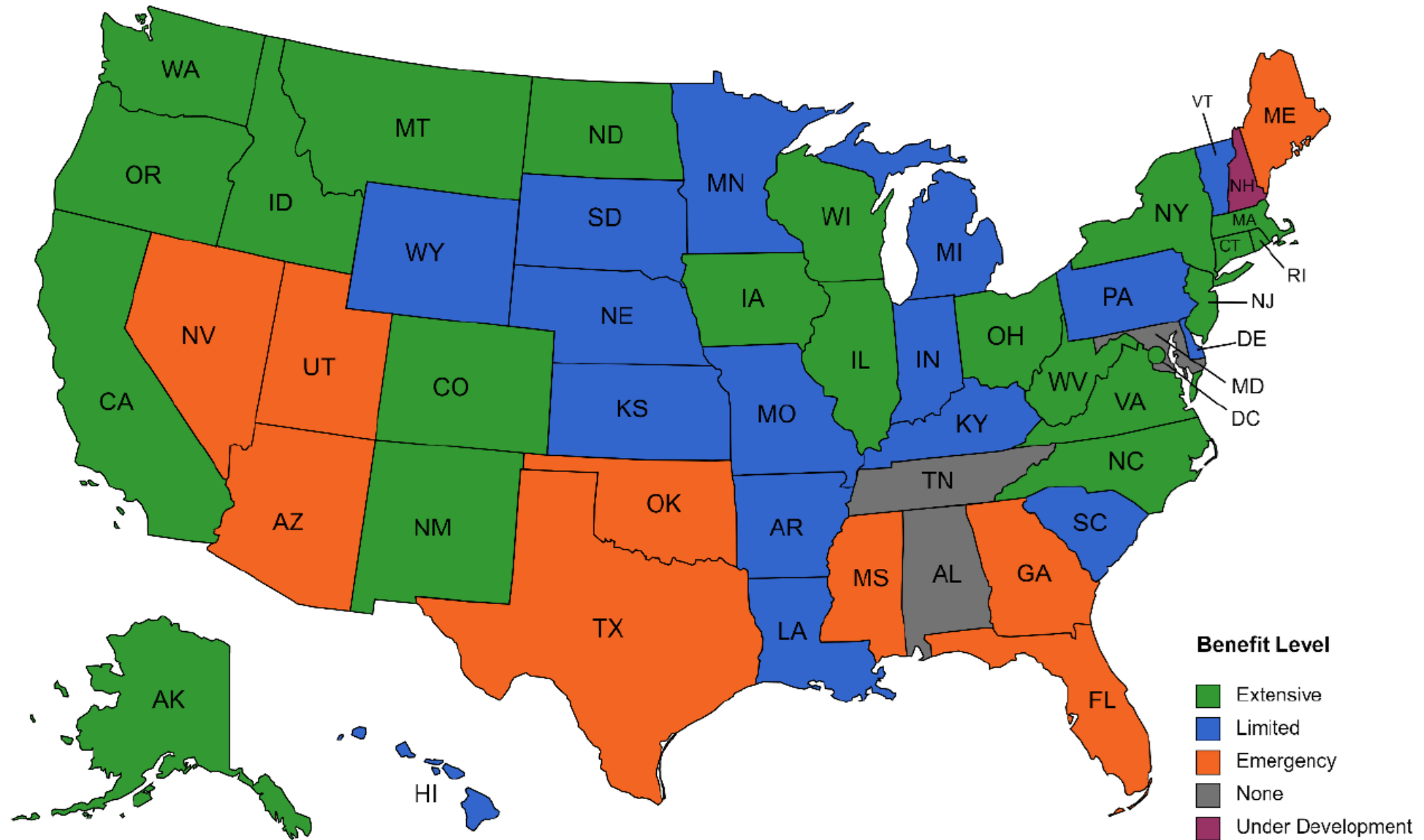
# Reimbursement Rates



MEDICAID REIMBURSEMENT AS A PERCENTAGE OF PRIVATE INSURANCE REIMBURSEMENT  
FOR **ADULT** DENTAL SERVICES, 2020



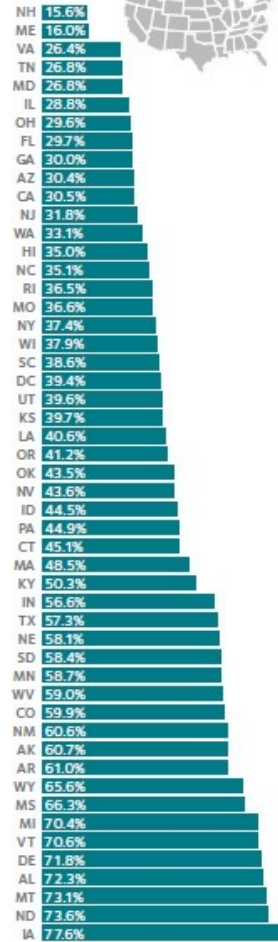




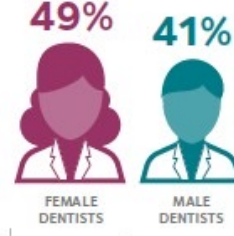
# Dentist Participation in Medicaid or CHIP

AUGUST 2020

## BY STATE



## BY GENDER



## BY AGE



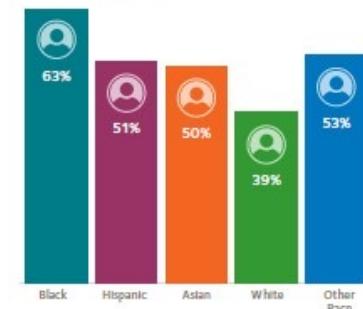
## BY SPECIALTY



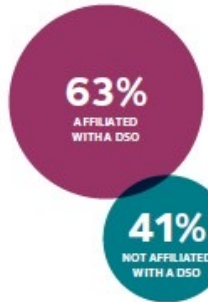
**43%**

OF U.S. DENTISTS  
participate in Medicaid  
or CHIP for child  
dental services

## BY RACE/ETHNICITY



## BY AFFILIATION WITH A DENTAL SERVICE ORGANIZATION (DSO)

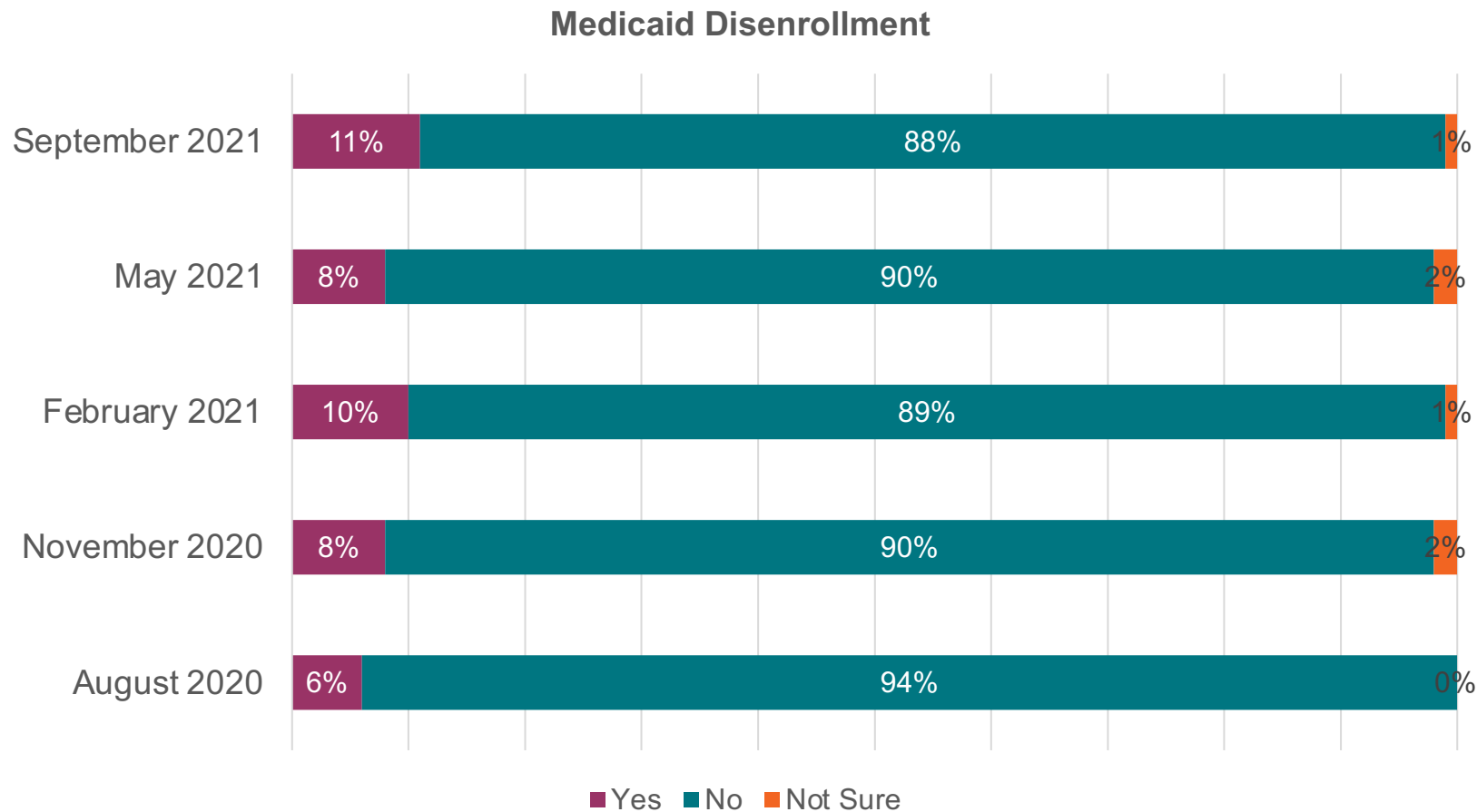


Sources: Analysis of the HPI's Office Database maintained by the American Dental Association (2019) and Insure Kids Now data (2019).  
Note: CHIP is Children's Health Insurance Program. For full methodology, please contact: [hpi@ada.org](mailto:hpi@ada.org).

For more information, visit [ADA.org/HPI](https://ada.org/HPI) or contact the Health Policy Institute at [hpi@ada.org](mailto:hpi@ada.org).

# Medicaid Disenrollment







Has your practice disenrolled from Medicaid since the onset of the COVID-19 pandemic?



*To date, COVID-19 has led to 11% of Medicaid providers disenrolling from their states' program.*

*This represents a small, gradual increase since August 2020, but there has not been a mass exodus of providers.*

### EXHIBIT 3: Dental-Related ED Visits by Service Type, 2011

Service Type		Percentage
	Dental caries	18.4%
	Unspecified disorder of teeth and supporting structure	53.0%
	Periapical abscess without sinus	18.5%
	Inflammatory conditions	0.4%
	Cellulitis and abscess	2.1%
	Other	7.6%



# Prevalence of Non-Traumatic Dental Problems in West Virginia Emergency Departments

Joshua Austin, MA, MSc; Steve Davis, Ph.D.; and Fotinos Panagakos, DMD, Ph.D.

## Abstract

**Objectives:** This study seeks to understand the prevalence and characteristics of the population who utilizes the emergency department (ED) for non-traumatic dental problems, as well as document the burden of oral health disease on the health care system when treatment is often palliative.

**Methods:** All patients presented during calendar year 2016 at three tertiary hospitals in West Virginia via the ED. These hospitals used the Epic electronic health record as part of an integrated health system. A list of primary diagnoses (ICD-10 codes) indicative of a non-traumatic dental complaint was developed as informed by the academic literature. Codes were provided to the health system to query patient primary/secondary diagnosis; payer; cost/charge data; demographics; and discharge/hospitalization status. Data were analyzed with JMP® Pro 14 (SAS Institute, Inc.) to generate descriptive statistics.

**Results:** Half of non-traumatic dental visits had Medicaid as the payer, and 1 in 5 visits were by the uninsured. Adults (19+) accounted for 86% of visits. Five diagnoses accounted for 82% of all visits; four of the diagnoses could have been better addressed in a dental setting. The fifth could have been prevented with appropriate preventive dental care.

**Conclusions:** For less than the average charge of an ED visit for a non-traumatic dental problem, which does not permanently address the underlying issue, a patient could receive preventive dental care in West Virginia for one year. Findings lend credence to the creation of a Medicaid adult dental benefit in West Virginia, as this population is disproportionately utilizing the ED for dental care.

## References

Lee HH, Lewis CW, Saltzman B, Starks H. Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008. *Am J Public Health.* 2012;102(11):e77-83.

Milbrett P, Halm M. Characteristics and predictors of frequent utilization of emergency services. *J Emerg Nurs.* 2009;35(3):191-8.

Ruger JP, Richter CJ, Spitznagel EL, Lewis LM. Analysis of costs, length of stay, and utilization of emergency department services by frequent users: Implications for health policy. *Acad Emerg Med.* 2004;11(12):1311-7.

Quinonez C, Gibson D, Jokovic A, Locker D. Emergency department visits for dental care of nontraumatic origin. *Community Dent Oral Epidemiol.* 2009; 37(4):366-71.

## Introduction

A significant trend has been associated with uninsured adults ages 18-44 using the ED at local hospitals for non-traumatic dental conditions, and this trend is on the rise. It is estimated that 30% of ED visits are not an emergency, affecting both staff and patients by decreasing quality of care. Visiting the ED for non-traumatic dental conditions (NTDCs) is considered improper use of the ED, and the most common cause for a visit is a toothache. Patients with low socio-economic status have no access to proper dental care and seek treatment for dental pain in EDs. Typically, EDs do not have the staff, training, or resources to address dental problems. Moreover, the physician approach is usually limited to pharmacologic therapy.

### Objectives:

1. Understand the prevalence and characteristics of the population who utilizes the emergency department for NTDCs
2. Characterize the burden of oral health disease on the health care system when treatment is sought via an emergency department and is often palliative
3. Evaluate potential policy and clinical reforms to address the needs of the population who utilizes the emergency department for NTDCs

Dental Care for ED Diagnoses*	
Periapical abscess w/o sinus	
• Almost always the patient elects for an extraction, which West Virginia Medicaid covers for adults (\$85 to \$100 per extraction).	
Root canal by severity & tooth location	
• \$199.48 – D3220	
• \$768.59 – D3310	
• \$884.23 – D3320	
• \$1069.61 – D3330	
Dental caries unspecified	
• \$118.84 – D2940	

\*Source: The regional average charges were established by consulting the *Data Trends in Dentistry Dental Fees* survey published by the American Dental Association. West Virginia is located in the South Atlantic Region, per the survey.

Preventive Dental Care*	
New Patient	
Cleaning (D1110), \$89.77 x 2 =	\$179.54
New Evaluation (D0150)	\$85.67
Ongoing Evaluation (D0120)	\$48.95
X-Rays (D0210)	\$134.63
<b>ANNUAL TOTAL</b>	<b>\$448.79</b>
Established Patient	
Cleaning, \$89.77 x 2 =	\$179.54
Ongoing Evaluation, \$48.95 x 2 =	\$97.90
<b>ANNUAL TOTAL</b>	<b>\$277.44</b>

\*Source: The regional average charges were established by consulting the *Data Trends in Dentistry Dental Fees* survey published by the American Dental Association. West Virginia is located in the South Atlantic Region, per the survey.

## Materials and Methods

This cross-sectional study analyzed data from patients presenting to three EDs in West Virginia during calendar year 2016. These hospitals used the Epic® electronic health record as part of an integrated health system. Patient visits were identified if one or more ICD-10 codes were indicative of non-traumatic dental complaints (K00-K14, M26-M27, Z01.2, Z46.3, Z46.4). The year 2016 was selected for analysis because it was the first full year that ICD-10 codes were used. These codes were based on previously published research and a list of Code on Dental Procedures (CDT) codes created by researchers based in South Carolina. ICD-9 and CDT codes were translated into their corresponding ICD-10 code prior to case selection.

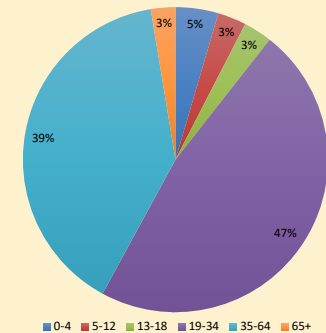
We calculated frequencies and descriptive statistics on all variables. Depending on the levels of measurement, statistical tests were employed to assess differences in types of dental complaints by demographic categories. Data were analyzed with JMP® Pro 14 (SAS Institute, Inc.).

### Cost and Prevalence

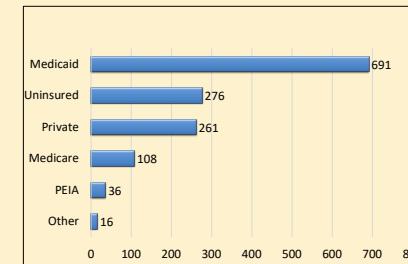
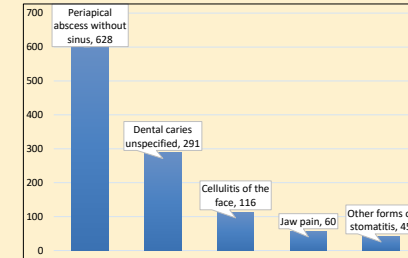
- 137,079 total visits in 2016 to the three emergency departments studied
  - 1% (n= 1,388) non-traumatic dental visits
  - 2.1% average for non-traumatic dental visits nationally<sup>1</sup>
  - Almost 1 in 5 visits by same patient (18% of patients; range 2-5 visits)
- **\$570 average charge per visit (\$790,682 total)**

\*Figure 107 of 107. Medicaid dental coverage alone may not lower rates of dental emergency department visits. Health Affairs. 2016;34(8):1346-1351. doi:10.1371/journal.pone.0151022

### Age



## Results



## Conclusions

For less than the average charge of an ED visit for a NTDC, which does not permanently address the underlying issue, a patient could receive preventive dental care in West Virginia for one year. Findings lend credence to the creation of a Medicaid adult dental benefit in West Virginia, as this population is disproportionately utilizing the ED for dental care.

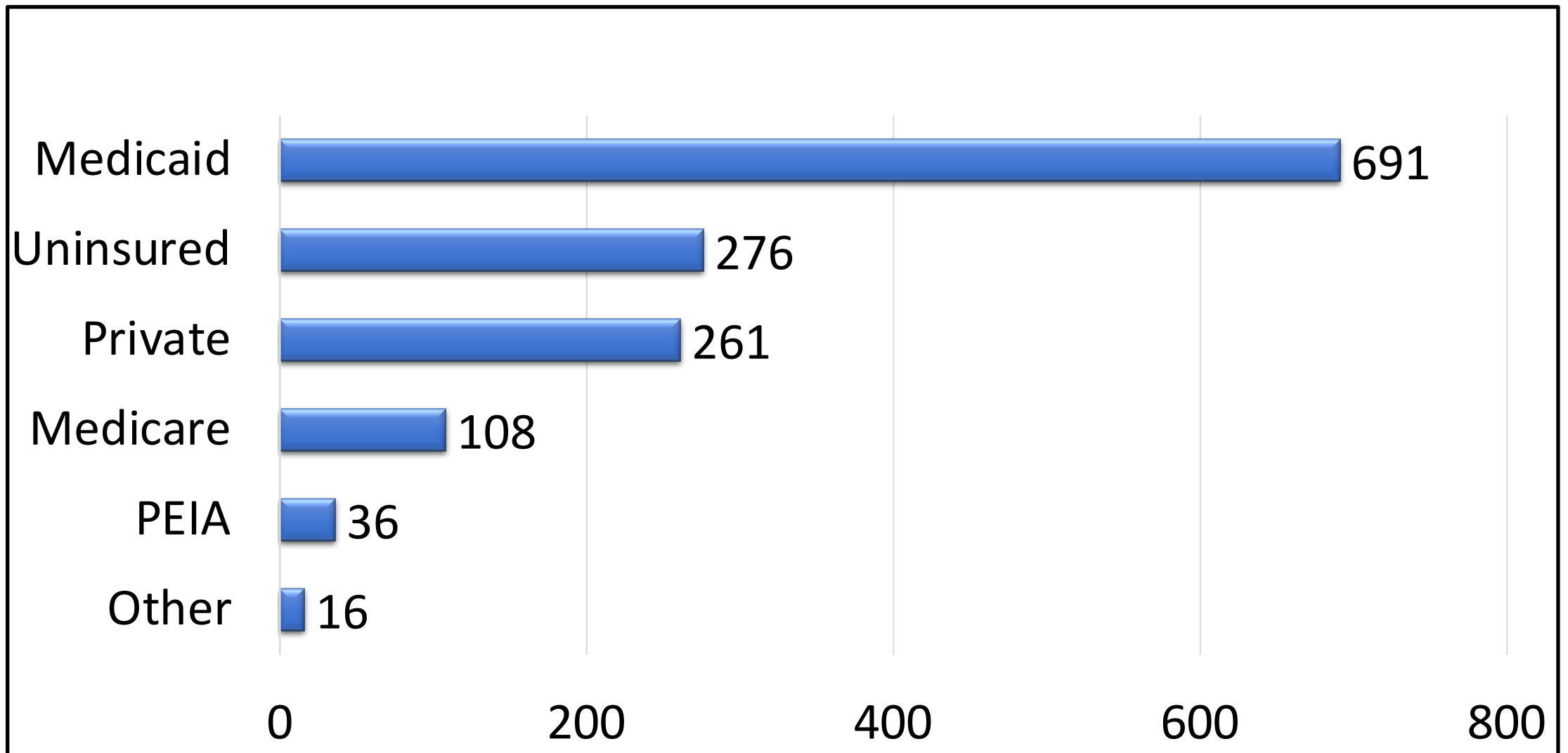
## Acknowledgements

### Funded By

**CLAUDE  
WORTHINGTON  
BENEDUM  
FOUNDATION**

### Special Thanks To

- Raj K. Khanna, DMD, MD, at Marshall Health and Marshall University
- Adam D. Baus, Ph.D., at WVU School of Public Health
- Nathan Pauly, Ph.D., at WVU School of Public Health



### Cost and Prevalence

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<sup>1</sup>Fingar KR et al. Medicaid dental coverage alone may not lower rates of dental emergency department visits. *Health Affairs*. 2015;34(8):1349-1357. doi:10.1377/hlthaff.2015.0223

### Preventive Dental Care\*

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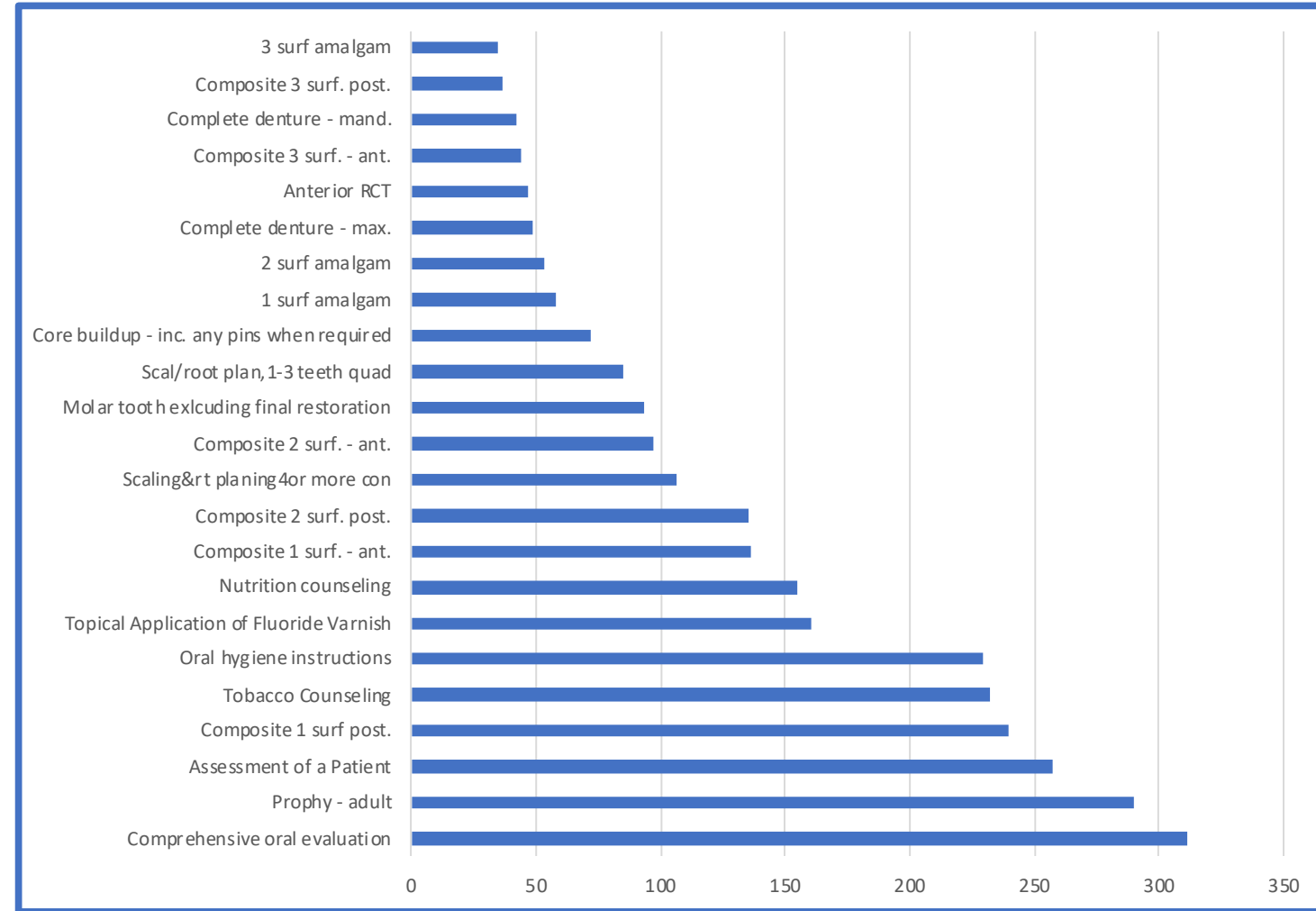
# WV Adult Dental Medicaid Benefit

- Passed March 2020
- Started January 1, 2021
- Provides \$1000 per year for:
  - Preventative
  - Restorative
  - Periodontal
  - Prosthodontics
- In addition to emergent care coverage
- Up to 310,000 adults over age 21 are eligible for the benefit
  - Over 460,000 are eligible for Medicaid in WV
- Over \$80 million in dental benefits
- Bill introduced in this session to increase benefit to \$1500 per year
- Over 47,000 members, received over 309,000 services for over \$25.8 million dollars in services



# WVU SOD Experience - 2021

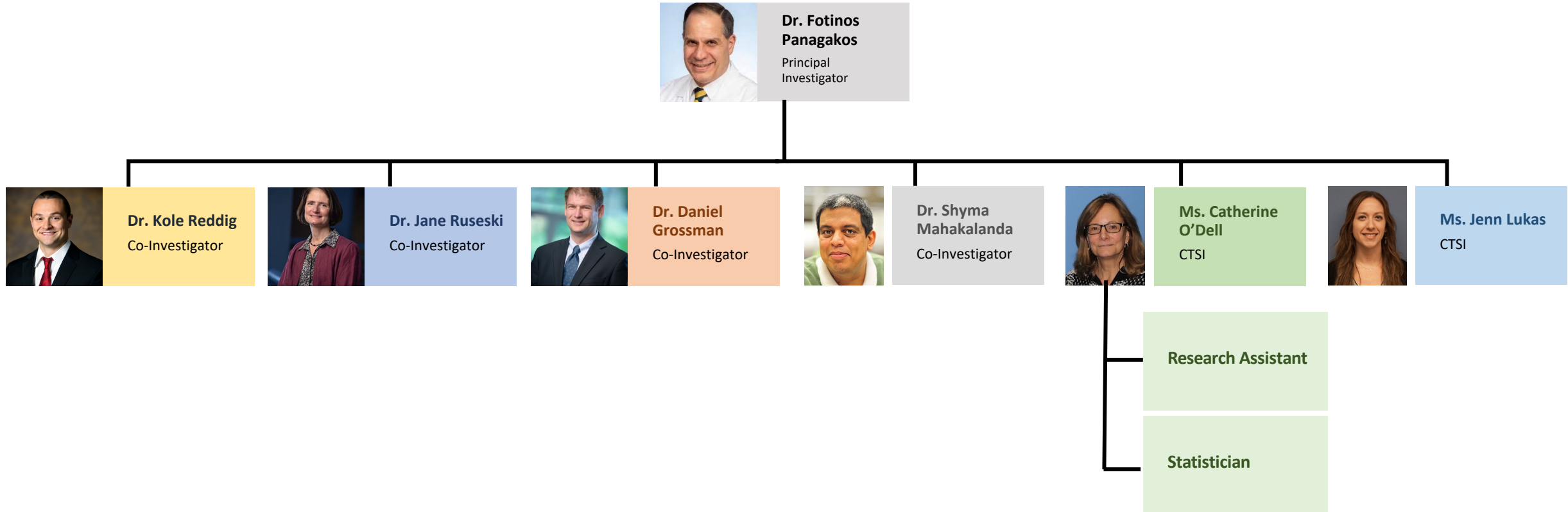
- 4779 adult Medicaid patients  
Extractions (D7140, D7210,  
D7240, D7250) = 5320



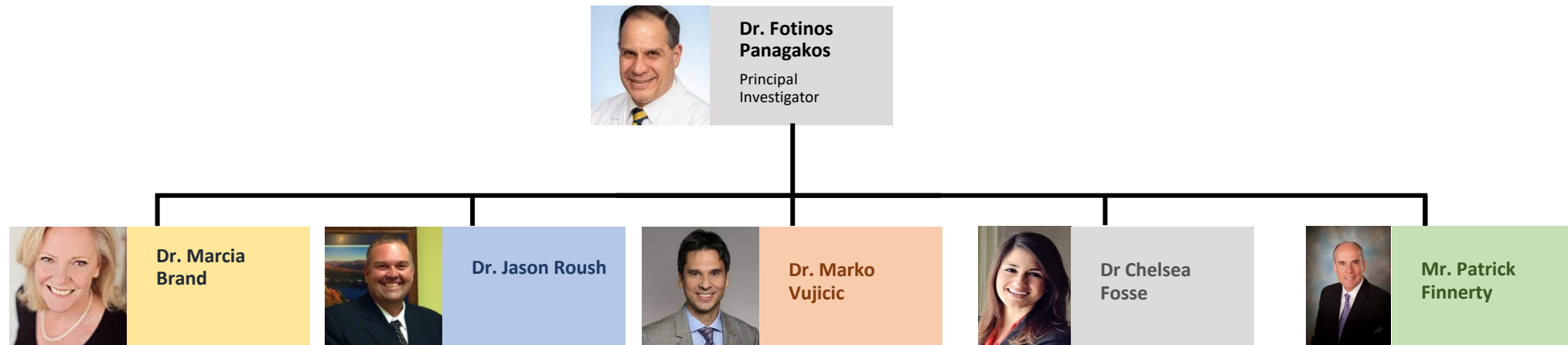
# CareQuest Study

- The goals for this multi-year and multi-phase project are:
  1. Assess the current need for dental care among adult Medicaid recipients to determine the level of potential use and pent-up demand for dental services. (Year 1)
  2. Characterize individuals using the dental benefit in the first plan year and the providers participating in the program. (Year 1)
  3. Evaluate the Adult Dental Program's impact on total (inpatient and outpatient) health care spending among dental care users and non-users and individuals with selected chronic conditions, including diabetes, respiratory illnesses, and cardiovascular diseases. (Year 3-5)
  4. Evaluate the impact of the Adult Dental Program on emergency room utilization for non-traumatic dental conditions (NTDC) by Medicaid recipients among dental care users vs. non-users. (Year 1-5)
  5. Evaluate the impact of the Adult Dental Program on chronic condition management among dental care users vs. non-users. (Year 3-5)
  6. Evaluate the impact of the Adult Dental Program on employment and other social safety net program utilization among dental care users vs. non-users. (Year 3-5)

# Grant Study Team



# Expert Advisory Board





# CareQuest Study – Year 1 Work Plan

Activity/Data Set	Outcome	Action
Develop Study Website	Establish online access to key data outcomes from the study to allow rapid dissemination to interested parties both within and outside of WV	Develop website and post data as it is prepared and approved by study team; need to keep in mind posting data that could be published in a peer-reviewed journal and need to protect data before publication
Beneficiary Data	Comprehensive descriptive data set on adults who are eligible for dental benefit: demographics, basic oral and overall health data	Develop a report that captures the findings of the beneficiary survey. Prepare a presentation/summary report to share with key WV constituencies – dental associations, public health advocates, WVOHC, legislators; Post findings on the study website

# CareQuest Study – Year 1 Work Plan

Pre-Benefit Data	Provide a baseline data set on emergency dental care provided to adult Medicaid beneficiaries before the limited benefit implementation	Develop report, share with key WV constituencies, and post to study website
NTDC ER Use Data	Provide a baseline data set on NTDC provided to adult Medicaid beneficiaries in hospital ERs before the limited benefit implementation	Develop report, share with key WV constituencies, and post to study website

# CareQuest Study – Year 1 Work Plan

Dentist Participation Data	Provide a baseline data set on dentist providers who provide care to adult Medicaid recipients before the limited benefit implementation and any changes to provider group following implementation	Develop report, share with key WV constituencies, and post to study website
WVU SOD Care Data	Prepare data set on care provided/planned for adult Medicaid recipients following implementation at WVU SOD	Develop report, share with key WV constituencies, and post to study website





**Oral Health.**  
**Our Priority.**