CMS 2025 Quality Conference

Make America Healthy: Improving Health Outcomes Through Prevention, Quality, and Safety

Driving Quality Improvement Through Medical-Dental Integration

Natalia Chalmers, DDS, MHSc, PhD

Anubhuti Shukla, DDS, MHA

Jill Boylston Herndon, PhD

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Presenters

Natalia Chalmers, DDS, MHSc, PhD

Chief Dental Officer

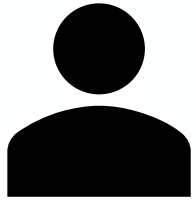
Centers for Medicare & Medicaid Services

Anubhuti Shukla, DDS, MHA

Assistant Professor

Indiana University School of Dentistry

2024-2025 CMS Oral Health Policy Fellow



Jill Boylston Herndon, PhD

Owner and Principal

Key Analytics and Consulting Founder and Principal

CMS 2025 Quality Conference

Make America Healthy: Improving Health Outcomes Through Prevention, Quality, and Safety

Dental Service Utilization Among Medicaid Beneficiaries During Pregnancy and The Impact of the COVID-19 PHE on Access to Care

Dr. Natalia Chalmers, Chief Dental Officer

Office of the Administrator

Centers for Medicare & Medicaid Services

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Authors

Natalia Chalmers, DDS, MHSc, PhD

Chief Dental Officer

Centers for Medicare & Medicaid Services

Astha Singhal, BDS, MPH, PhD

Associate Professor

University of Florida College of Dentistry

Carla Shoff, PhD

Senior Advisor

Centers for Medicare & Medicaid Services

Luping Qu, MD

Special Assistant

Centers for Medicare & Medicaid Services

Background

- Oral health during pregnancy has unique challenges and opportunities.
- Implications for both mother and child's health
- Barriers to dental care persist:
  - Dental care utilization during pregnancy
  - Misperceptions
  - Dental provider availability

Objectives

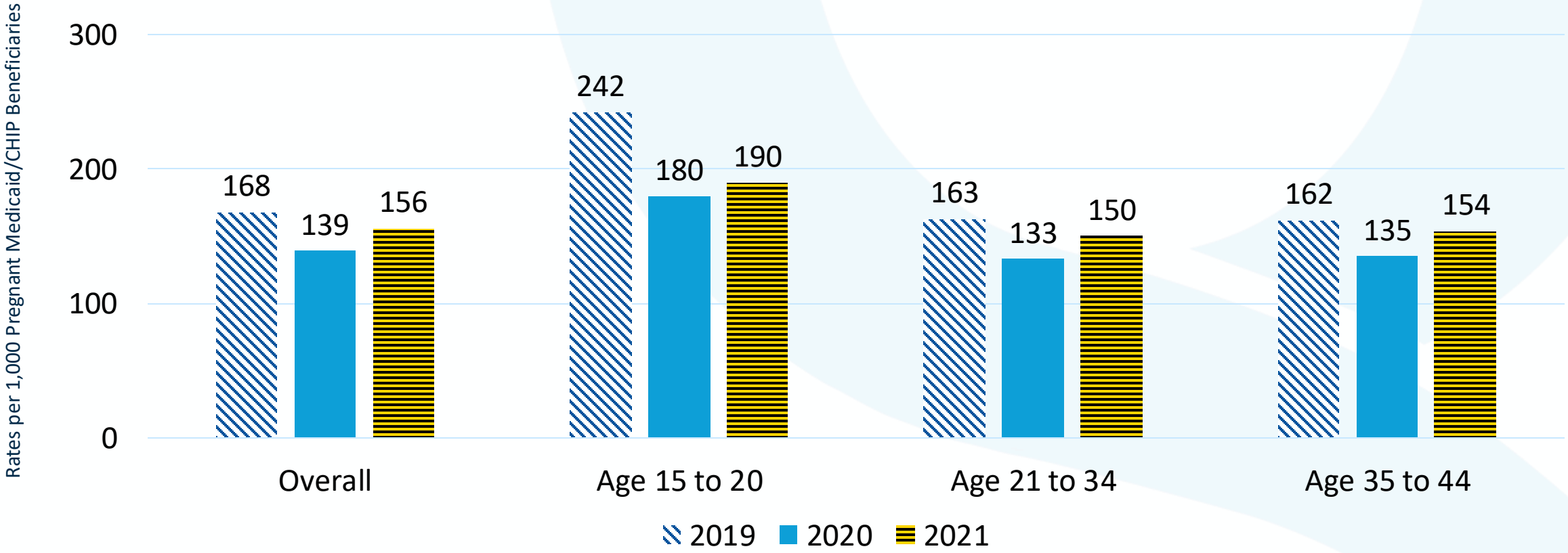
- To examine the utilization of health services by pregnant beneficiaries enrolled in Medicaid using administrative claims data, focusing on:
  - utilized any dental services during pregnancy, or
  - received an oral evaluation during pregnancy, or
  - experienced non-traumatic dental conditions (NTDC) emergency department (ED) visit during pregnancy.
- To examine the COVID-19 Public Health Emergency on access to oral healthcare utilization by pregnant beneficiaries enrolled in Medicaid
- To examine individual and state-level factors associated with dental care utilization by pregnant beneficiaries enrolled in Medicaid.

Data and Methodology

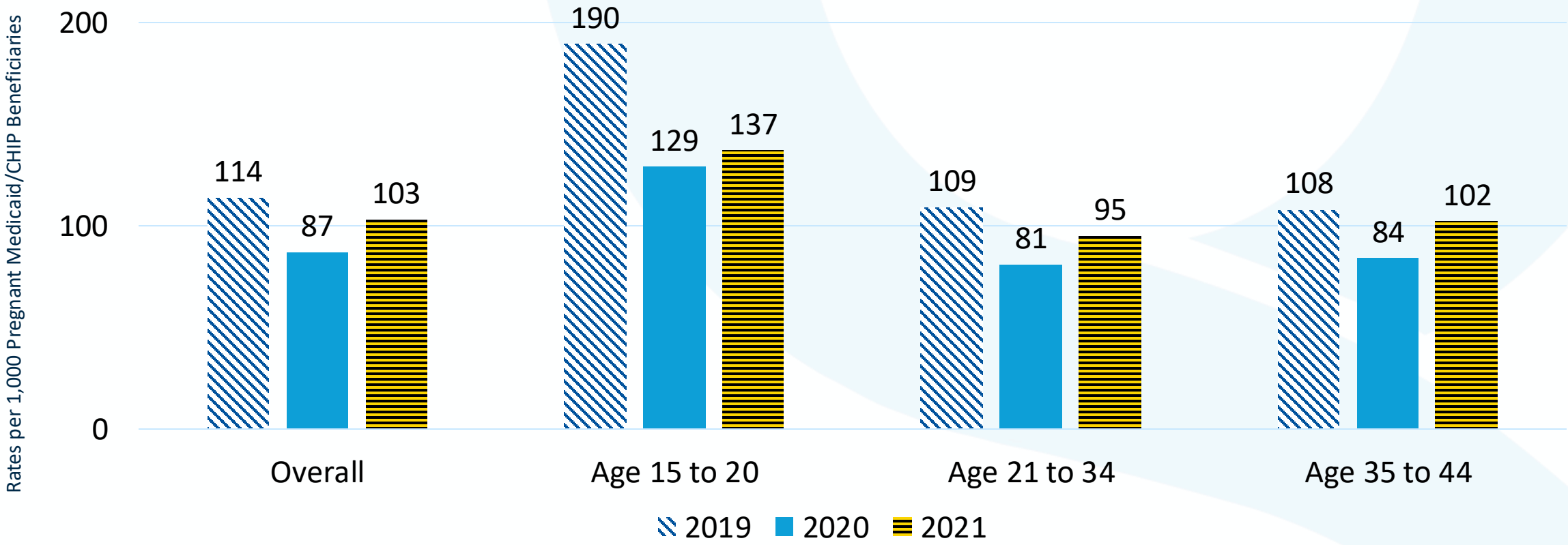
- CMS 2019 - 2021 Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF) Research Identifiable Files (RIF).
- Medicaid beneficiaries aged 15 to 44 years who are non-dually eligible for Medicare.
  - Beneficiaries from 15 states were excluded due to claims data quality concerns in one or more of the three study years. Beneficiaries from 17 states were excluded from analyses stratified by race/ethnicity due to race/ethnicity data quality concerns in one or more of the three study years. 2 of these 17 states were already excluded for claims data quality concerns. A total of 30 states were excluded from the analyses stratified by race and ethnicity due to either a claims data quality or race/ethnicity data quality concern in one or more of the three study years.
- Dental services and oral evaluations are defined and categorized by the ADA Code on Dental Procedures and Nomenclature (CDT Codes) [1].
- Procedure codes were used to identify deliveries, and diagnosis codes were used to identify live births according to the Dental Quality Alliance (DQA) [2].
- ED visits for NTDC are identified using the ASTDD classification and methodology [3].
- Chi-square tests and multilevel-logistic regression models.

1 ADA Code on Dental Procedures and Nomenclature https://www.ada.org/publications/cdt
2 DQA Utilization of Dental Services During Pregnancy https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/dqa/2022_utilization_of_services_during_pregnancy.pdf
3 ASTDD Emergency Department Data Collection Resources https://www.astdd.org/astdd-emergency-department-data-resources/

2019-2021 Any Dental Service Utilization per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Age Group



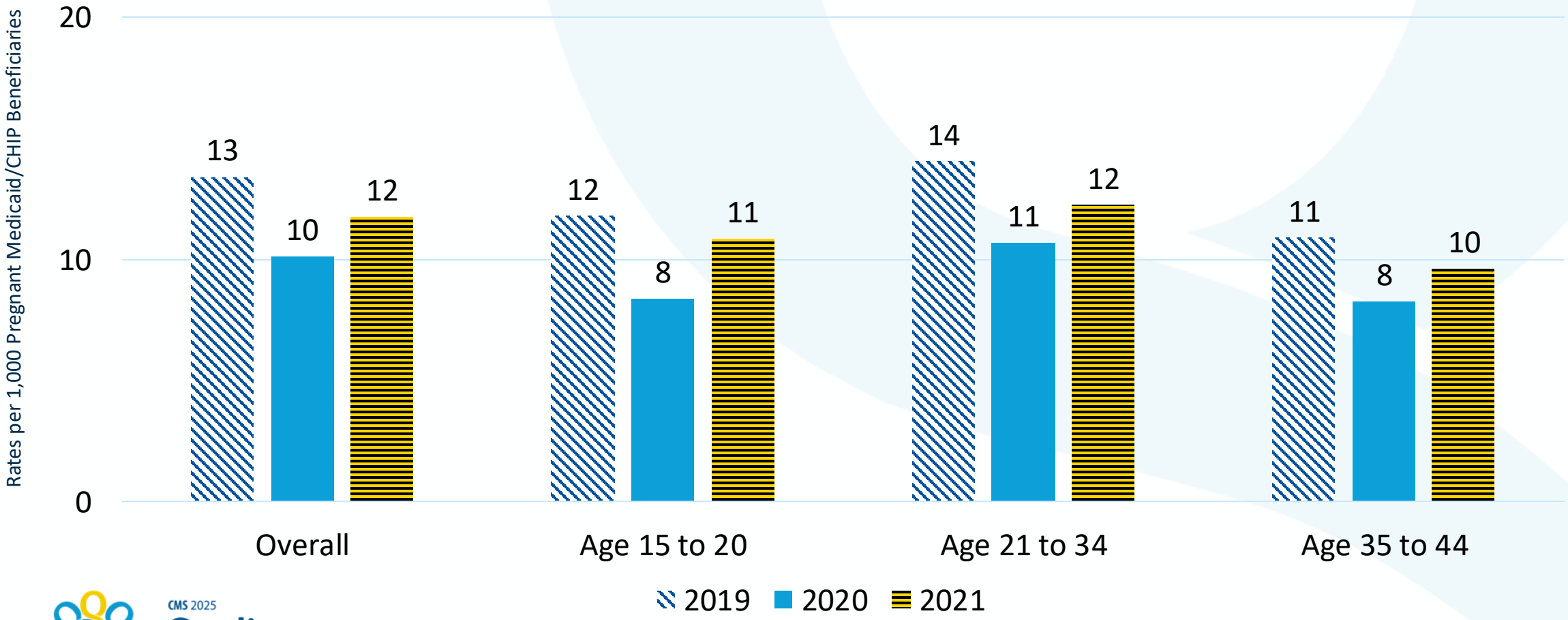
2019-2021 Oral Evaluation per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Age Group



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

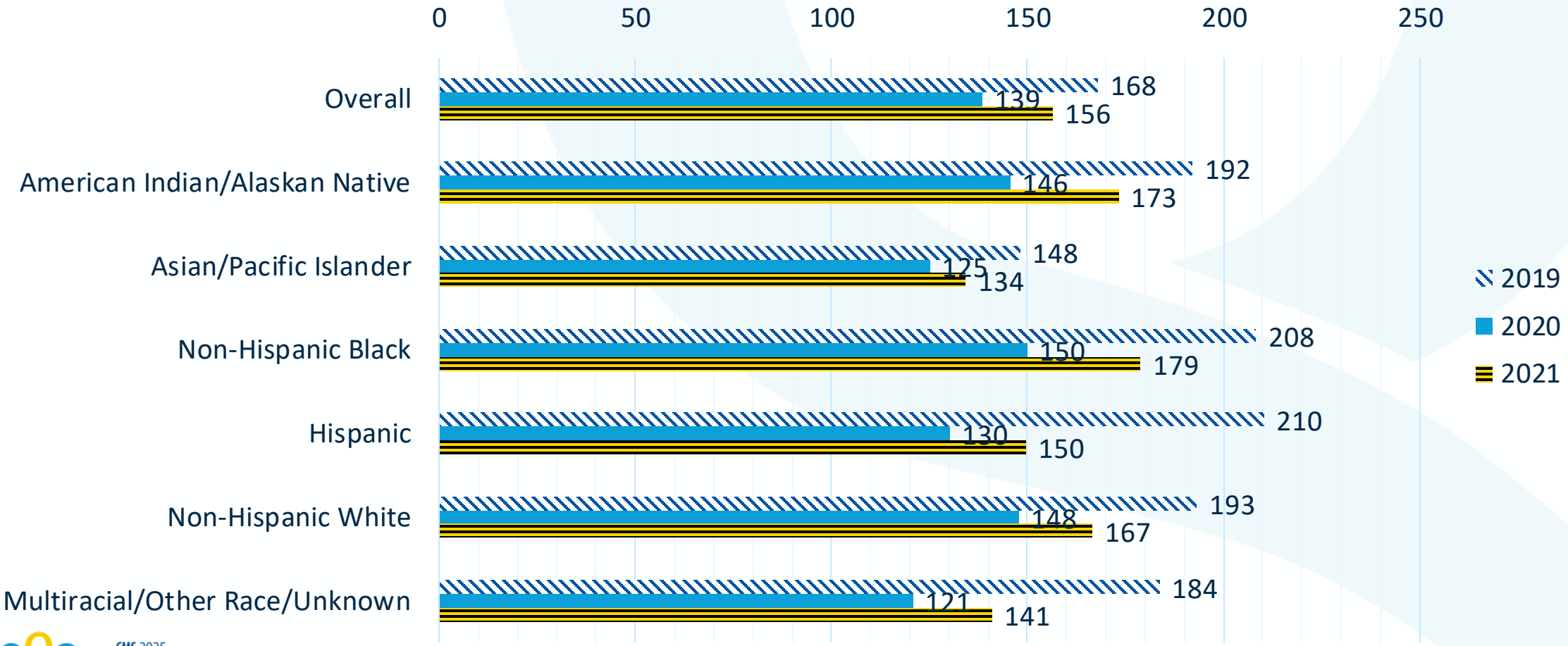
2019-2021 NTDC ED Visit per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Age Group



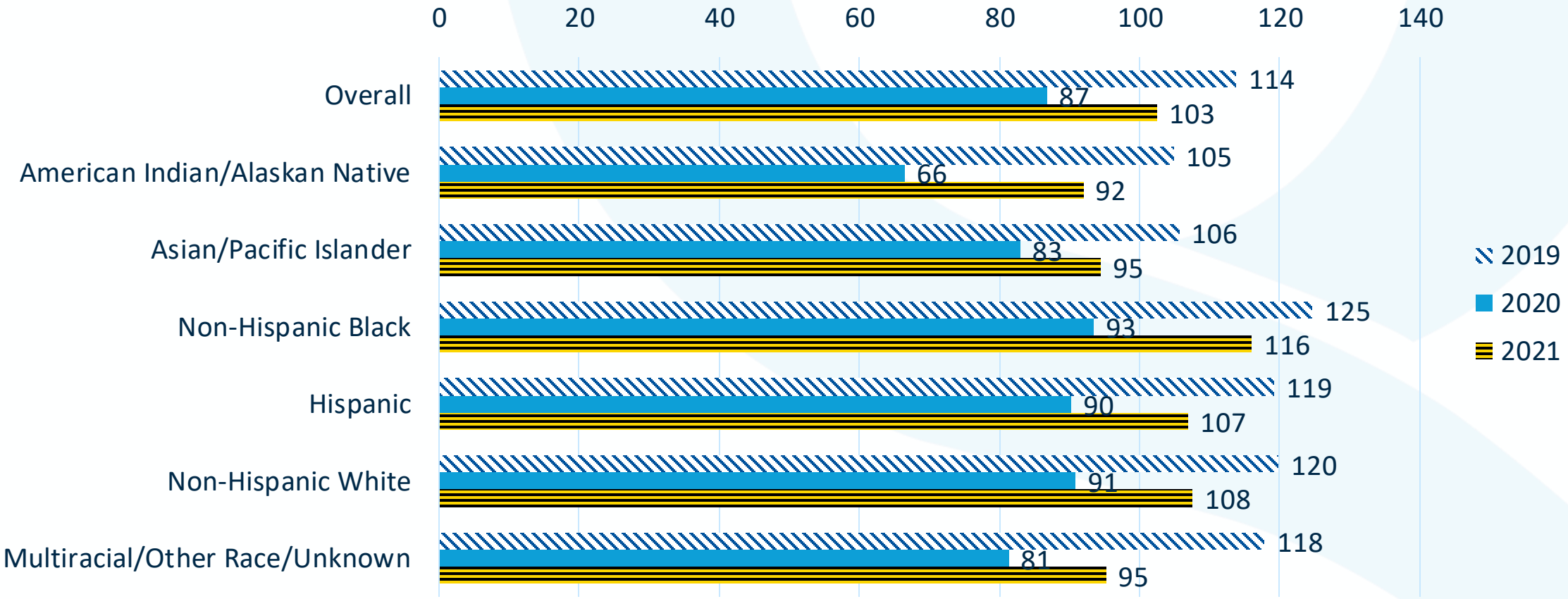
CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

2019-2021 Any Dental Service Utilization per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Race and Ethnicity



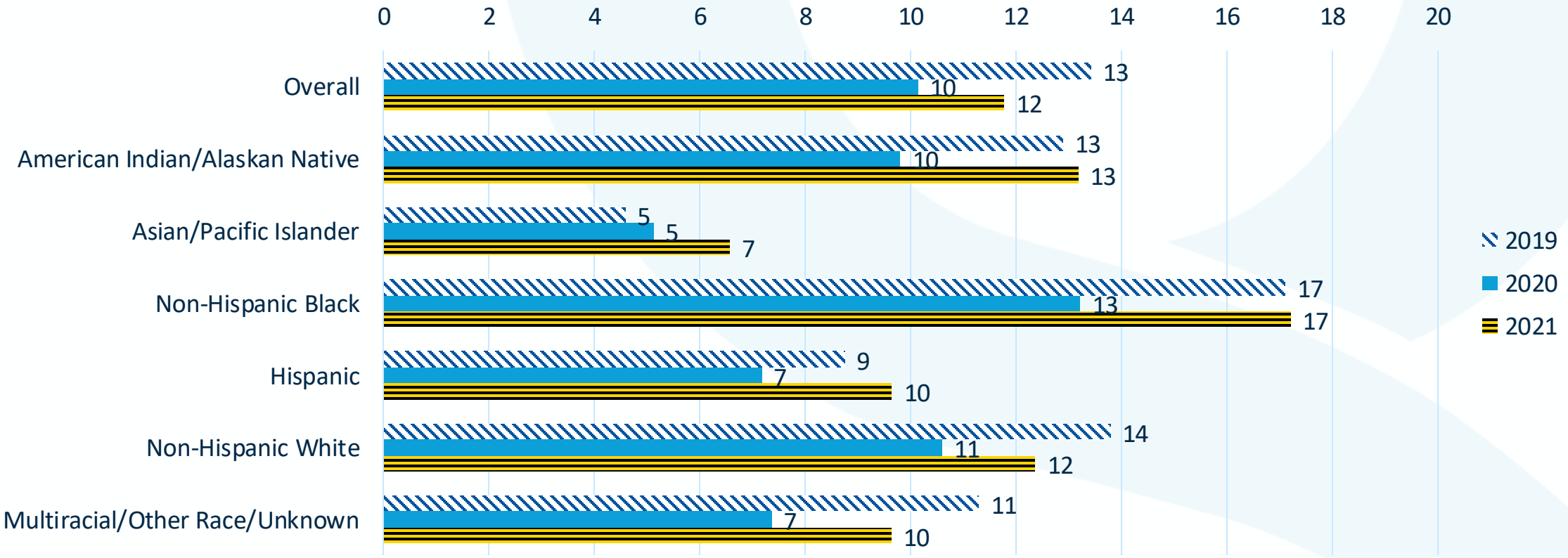
2019-2021 Oral Evaluation per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Race and Ethnicity



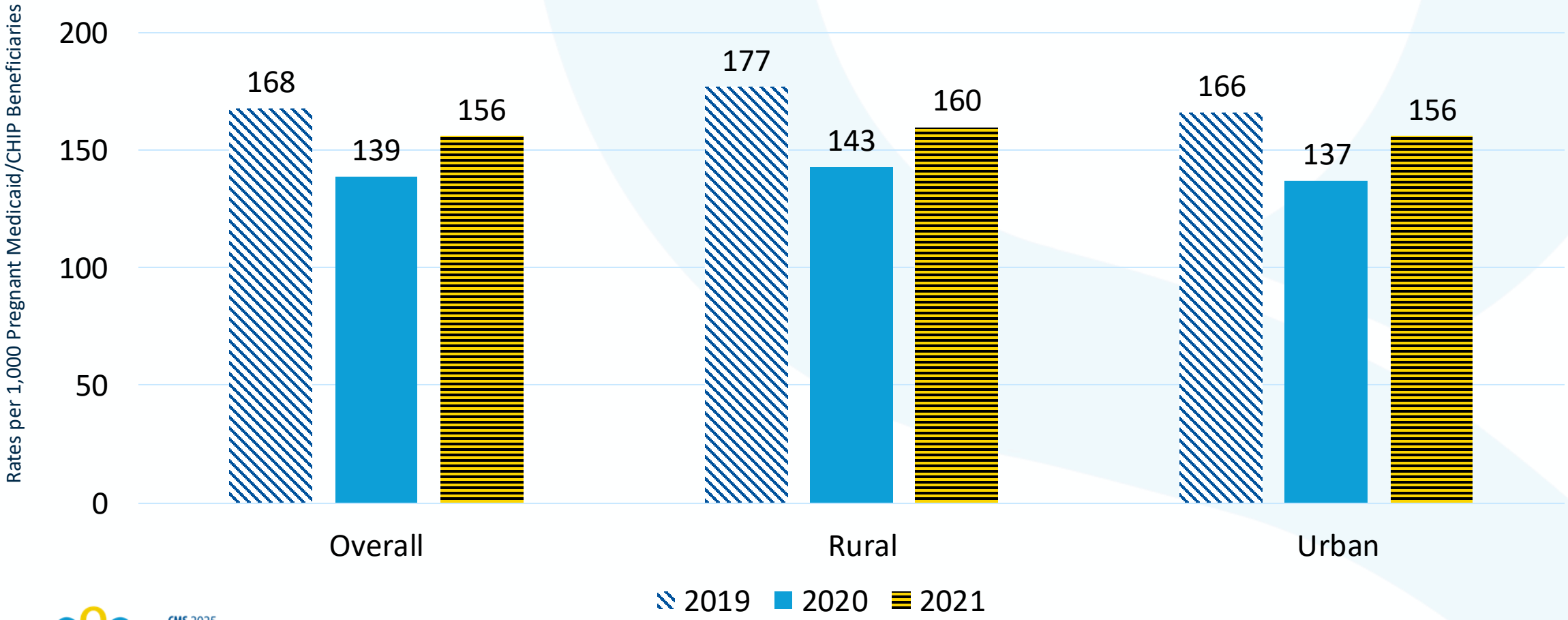
CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

2019-2021 NTDC ED per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Race and Ethnicity



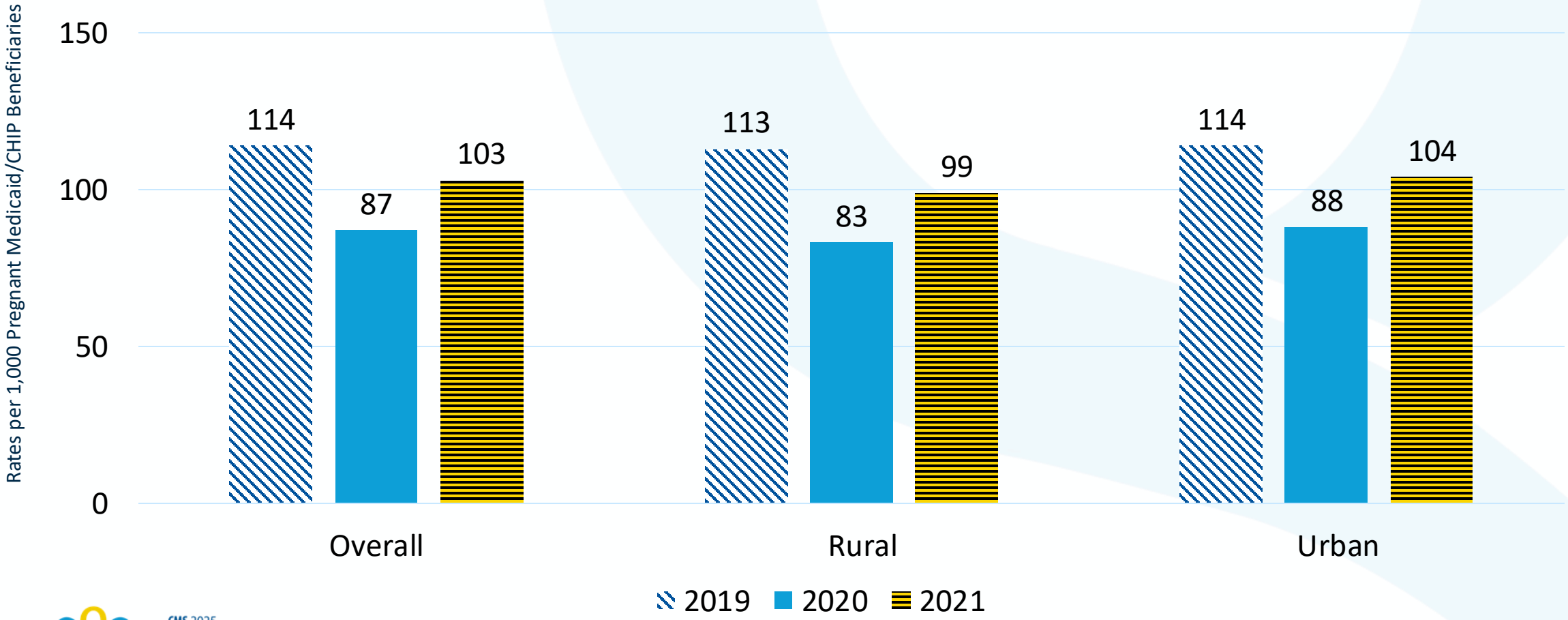
2019-2021 Any Dental Service Utilization per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Residence Designation



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

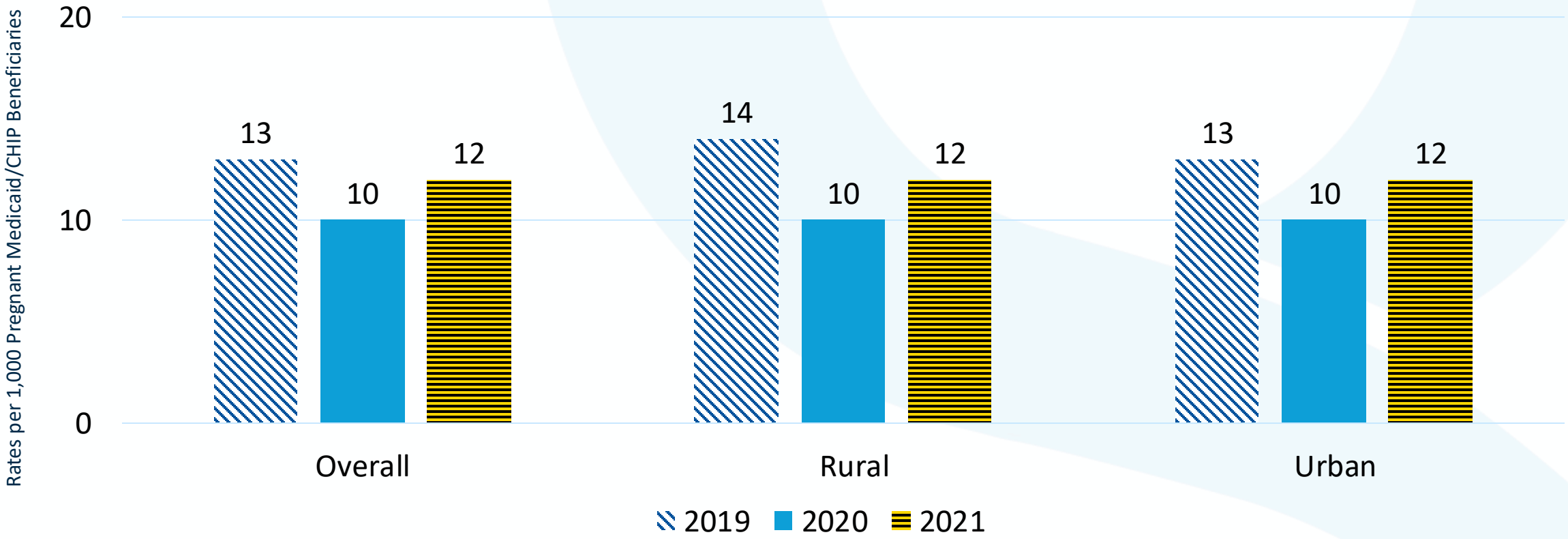
2019-2021 Oral Evaluation per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Residence Designation



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

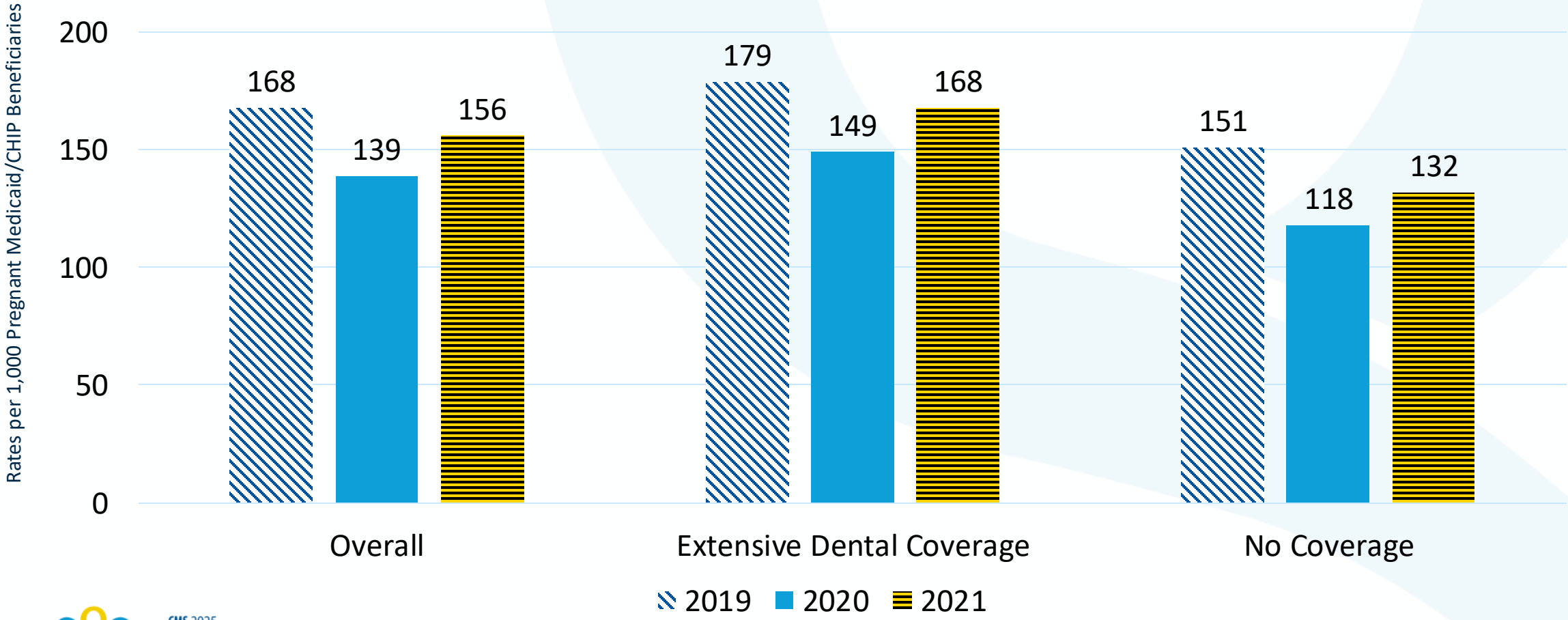
2019-2021 NTDC ED Visit per 1,000 Pregnant Medicaid/CHIP Beneficiaries by Residence Designation



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

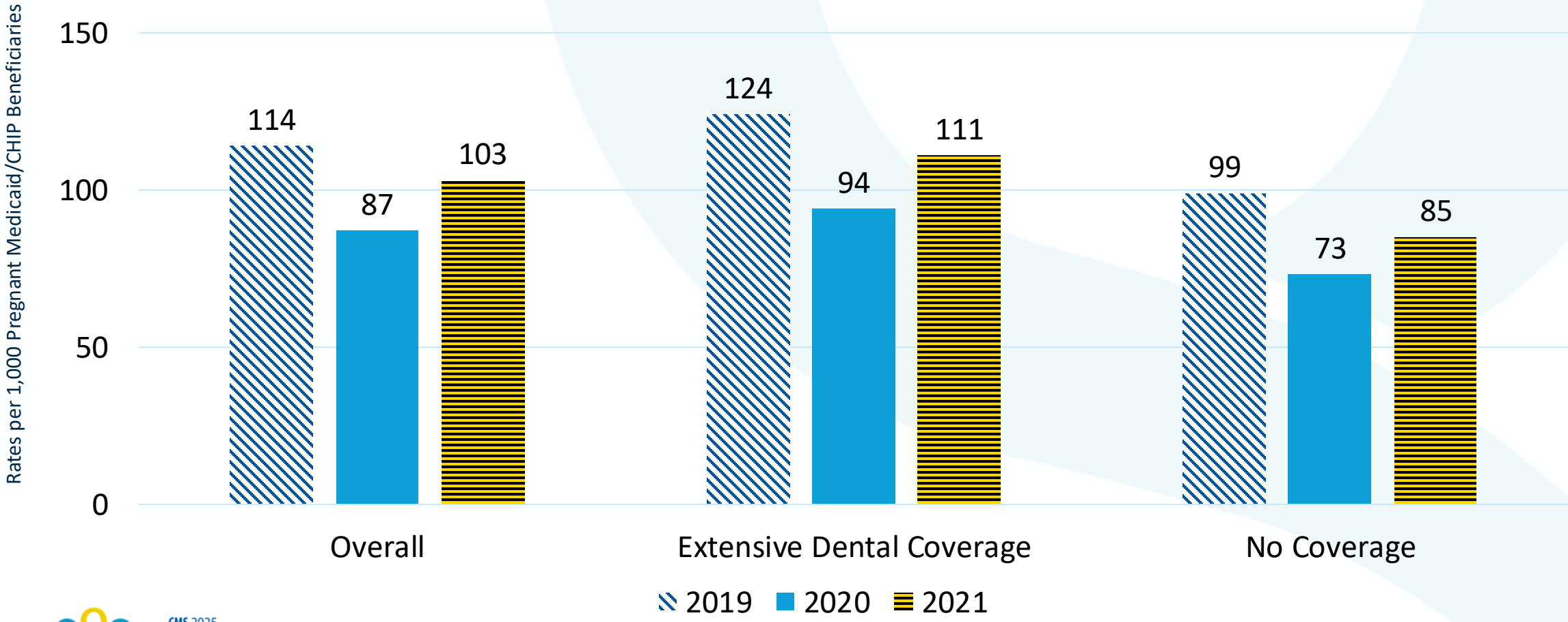
2019-2021 Any Dental Service Utilization per 1,000 Pregnant Medicaid/CHIP Beneficiaries by State Medicaid Coverage



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

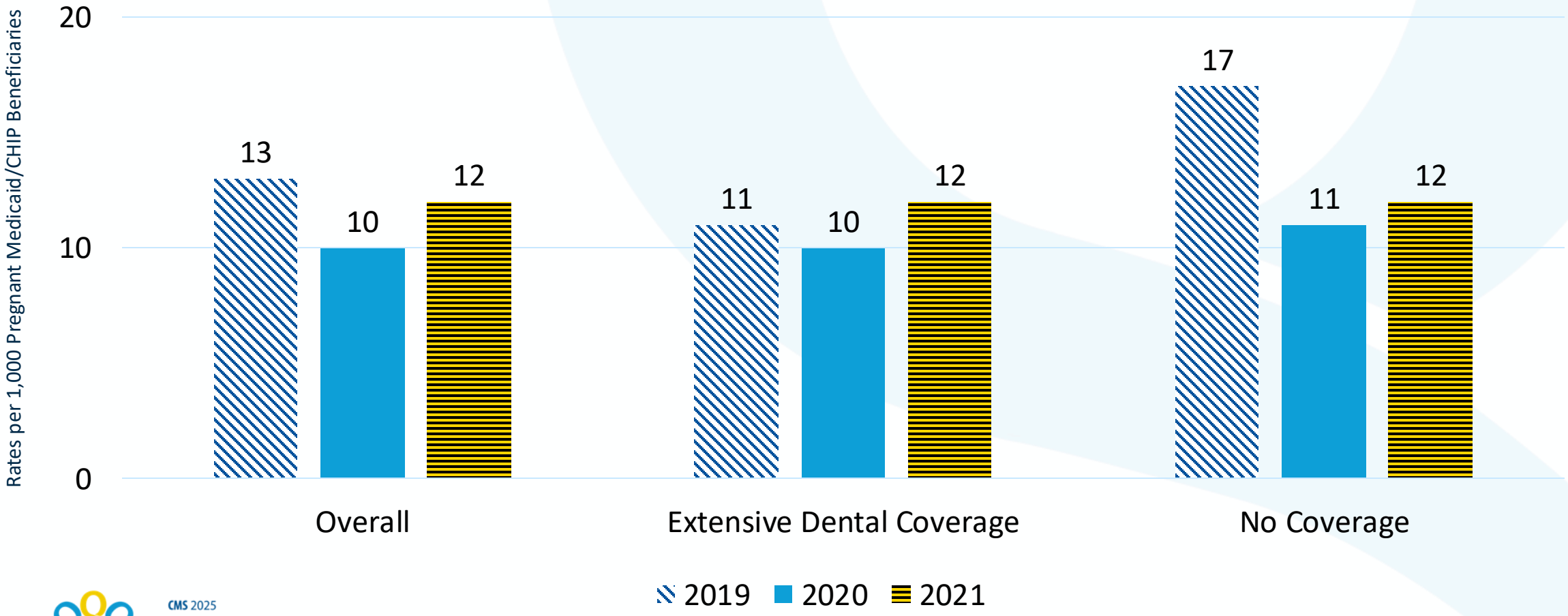
2019-2021 Oral Evaluation per 1,000 Pregnant Medicaid/CHIP Beneficiaries by State Medicaid Coverage



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

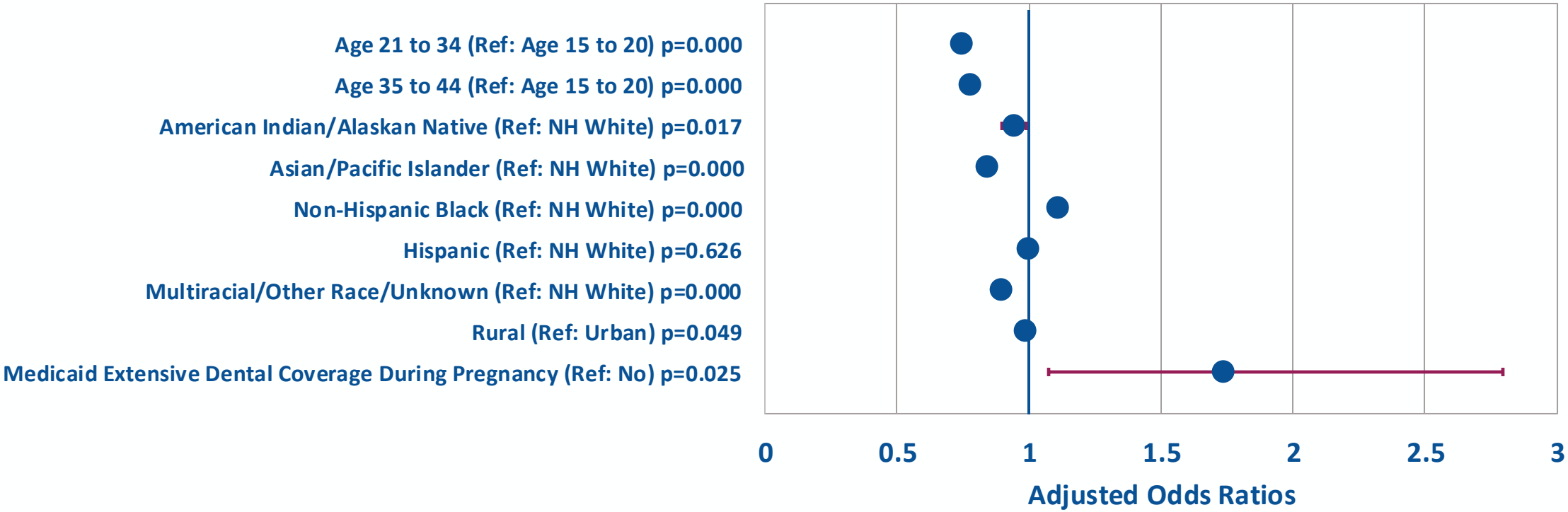
2019-2021 NTDC ED Visit per 1,000 Pregnant Medicaid/CHIP Beneficiaries by State Medicaid Coverage



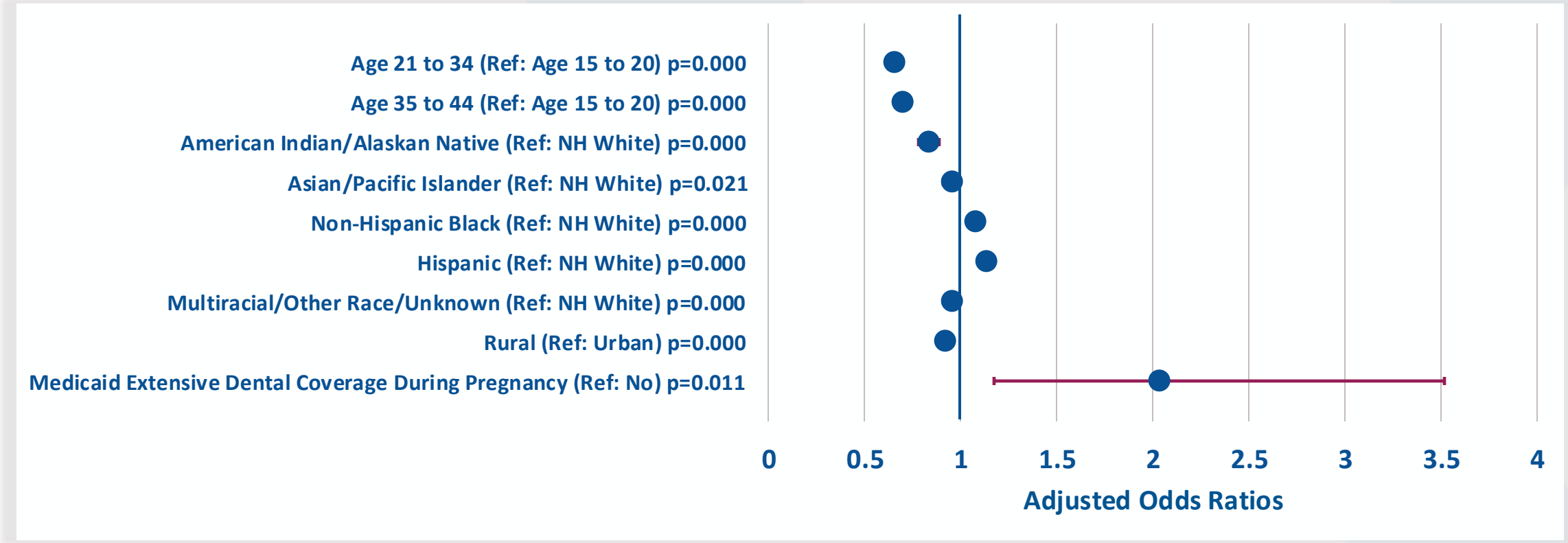
CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

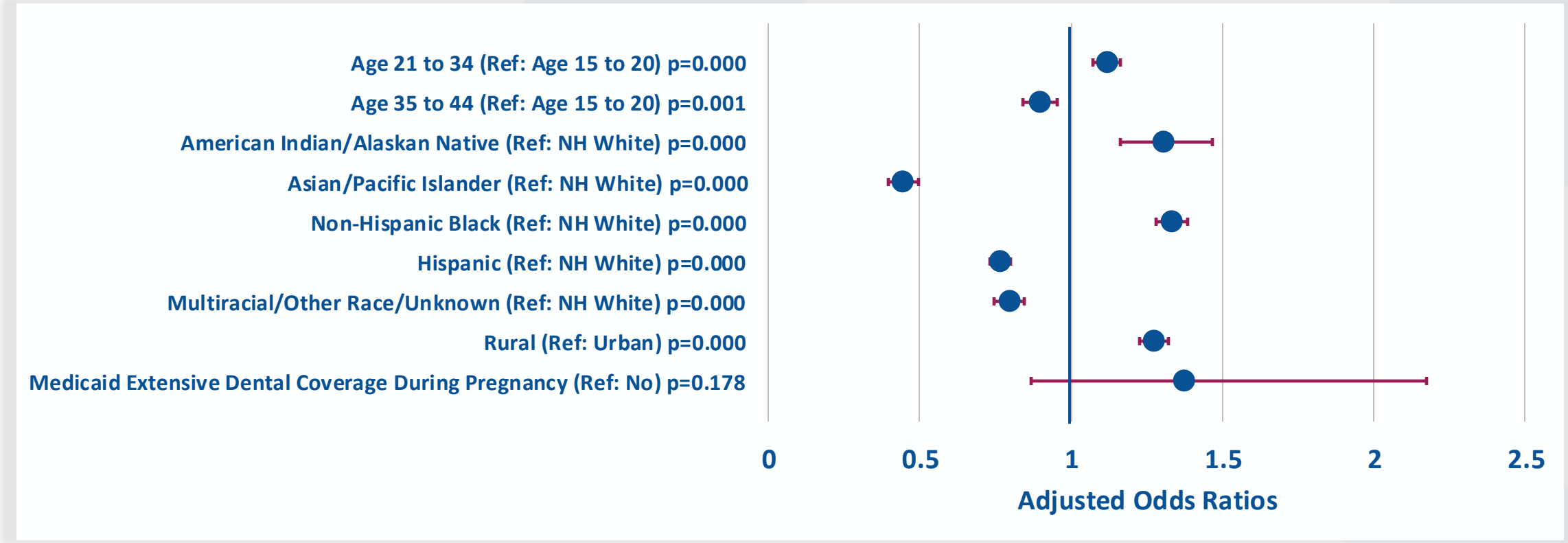
Multilevel Logistic Regression Model Predicting the Odds of Utilizing Any Dental Services During Pregnancy



Multilevel Logistic Regression Model Predicting the Odds of Receiving an Oral Evaluation During Pregnancy



Multilevel Logistic Regression Model Predicting the Odds of Experiencing a NTDC ED Visit During Pregnancy



Conclusions

- Dental care utilization during pregnancy remains considerably low among Medicaid beneficiaries.
- Certain beneficiaries face greater barriers to accessing dental care during pregnancy.
- The state's dental benefit design for pregnant beneficiaries is significantly associated with dental care utilization.
- The COVID-19 PHE disrupted access to routine and preventive dental services, leading to delayed or missed care for pregnant Medicaid beneficiaries.

CMS 2025 Quality Conference

Make America Healthy: Improving Health Outcomes Through Prevention, Quality, and Safety

Oral Health Disparities and Access to Dental Services for Medicaid-Enrolled Children and Adults with Intellectual and Developmental Disabilities

Anubhuti Shukla, DDS, MHA

Department of Dental Public Health and Dental Informatics

Indiana University School of Dentistry

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Authors:

Anubhuti Shukla, DDS, MHA

Assistant Professor

Indiana University School of Dentistry

2024-2025 CMS Oral Health Policy Fellow

Natalia Chalmers, DDS, MHSc, PhD

Chief Dental Officer

Centers for Medicare & Medicaid Services

Carla Shoff, PhD

Senior Advisor

Centers for Medicare & Medicaid Services

Luping Qu, MD

Special Assistant

Centers for Medicare & Medicaid Services

CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Background

- Approximately 63 million U.S. adults have a disability, with 7.3 million affected by intellectual and developmental disabilities (I/DD). Individuals with I/DD face a higher prevalence of co-morbid conditions, such as diabetes and cardiovascular disease, as well as increased rates of oral health issues, including periodontal disease and caries, compared to the general population. [1]
- This leads to a wide range of health disparities including decreased life expectancy and poor quality of life.
- Access to dental care for individuals with I/DD is limited by Medicaid gaps, low reimbursements, workforce shortages, anesthesia needs, poor transition support, and transportation barriers. [2]
- Limited oral health access contributes to an increased reliance on emergency departments for nontraumatic dental issues, raising healthcare costs. [3]

Source:

1. https://www.ncd.gov/report/medicaid-oral-health-coverage-for-adults-with-intellectual-developmental-disabilities-a-fiscal-analysis/
2. DeKosky, S. T.et al (2003). Looking backward to move forward: early detection of neurodegenerative disorders. *Science*, *302*(5646), 830-834.
3. https://modernod.com/articles/2023-jan-feb/disparities-in-care-for-patients-with-intellectual-and-developmental-disabilities?c4src=article:infinite-scroll

Lack of a Dental Home for I/DD Individuals

- The 1993 discontinuation of Medicaid reimbursement for adult dental emergencies in Maryland led to a 12% increase in Emergency Department (ED) visits for dental issues, with hospital admissions costing an average of $5,793.
- Medicaid-eligible people with disabilities constitute 32.8% of the total Medicaid expenditure, 2020 amounting to $218.7 billion.
- Approximately 2.1% of adults with I/DD seek ED services for Non-Traumatic Dental Conditions (NTDCs), leading to costly visits that often serve as temporary solutions rather than comprehensive care.
- The National Council on Disability found that states with limited/no Medicaid dental coverage had a significantly higher share of dental care provided in the ED. Consequently, while these states offer less dental care overall, more of it occurs in the costlier setting, like the emergency department.

1. Nakao, Sy et al. Non-traumatic Dental Condition-Related Emergency Department Visits and Associated Costs for Children and Adults with Autism Spectrum Disorders. Journal of autism and developmental disorders vol. 45,5 (2015): 1396-407. doi:10.1007/s10803-014-2298-0
2. Medicaid Oral Health Coverage for Adults with Intellectual & Developmental Disabilities – A Fiscal Analysis. https://ncd.gov/publications/2022/medicaid-oral-health-coverage-adults-IDD. Tran, V. (2021, October). Expanding accessibility and affordability of dental care for people with disabilities in Texas. Roosevelt Institute.

Objectives:

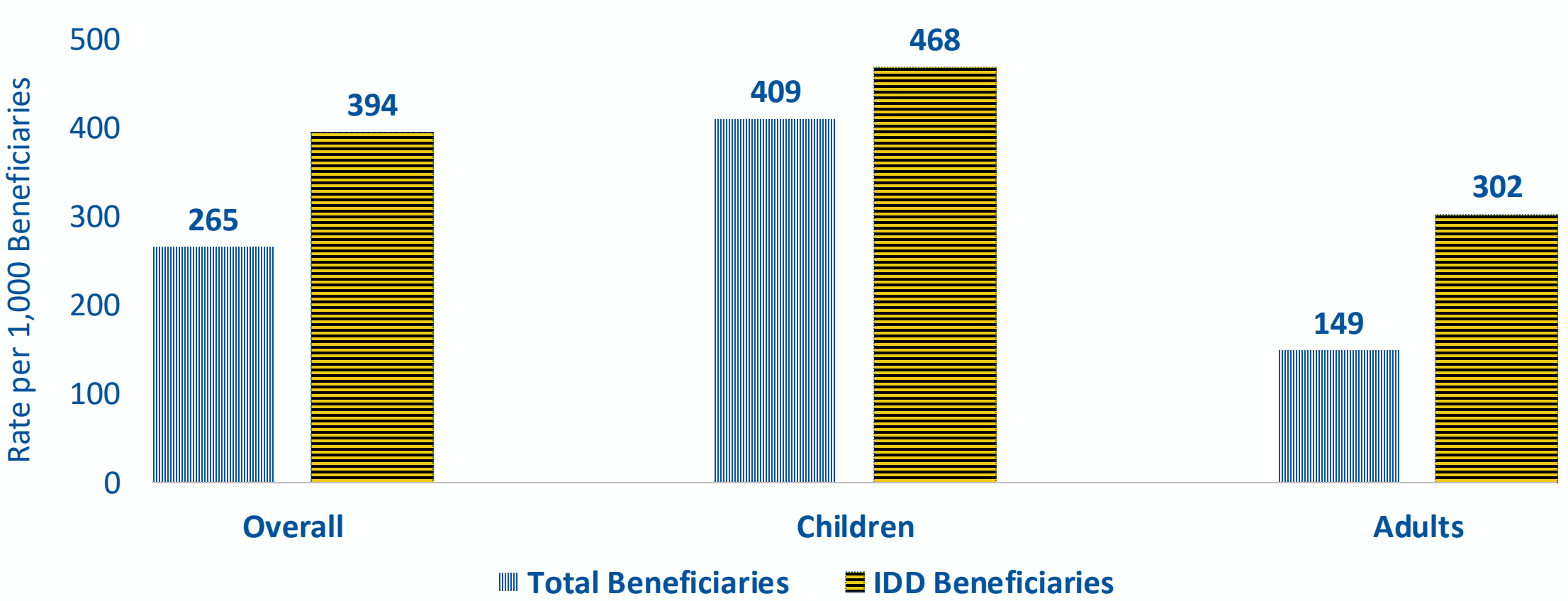
- Examine variations in dental services utilization among individuals with intellectual and developmental disabilities (I/DD)
- Describe the rate and patterns of dental service utilization among I/DD Medicaid beneficiaries.
- Describe the rate and patterns of Emergency Department (ED) utilization for non traumatic dental conditions (NTDC) among I/DD Medicaid beneficiaries.

Data and Methodology

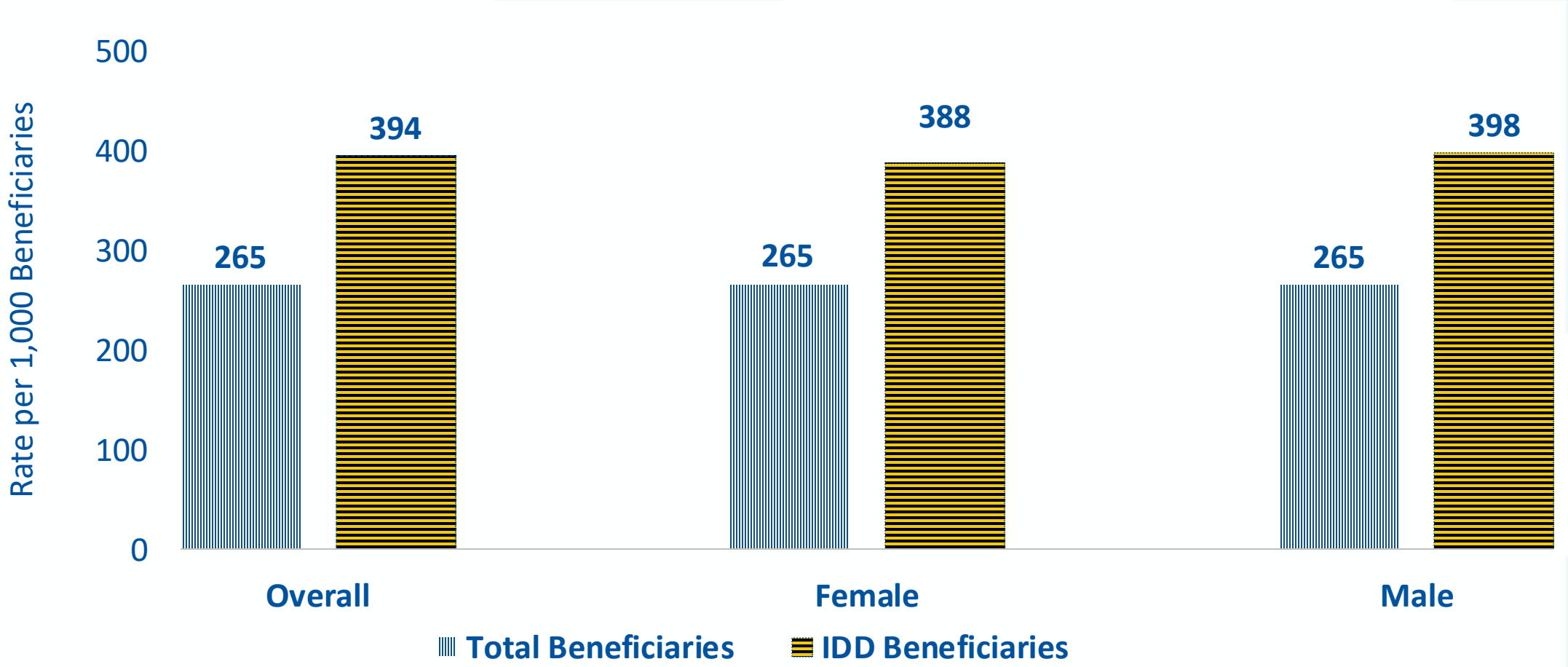
- Centers for Medicare & Medicaid Services (CMS) unredacted 2021 Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF) Research Identifiable Files (RIF)[1] and Economic Research Service Rural-Urban Commuting Area Codes[2]
- The data includes child and adult Medicaid/CHIP beneficiaries
- According to the CMS DQ Atlas, 10 states were excluded due to claims data quality concerns, resulting in 67,027,975 beneficiaries included in the analyses that were not stratified by race and ethnicity, and 19 states were excluded from the analyses due to race/ethnicity data quality concerns, resulting in a subset of 57,350,106 beneficiaries when stratified by race and ethnicity[3]
- IDD is defined using the Chronic Conditions Data Warehouse Other Chronic Health, Mental Health, and Potentially Disabling Conditions flags for Intellectual Disabilities and Related Conditions or Autism Spectrum Disorders[4]

1. Chronic Conditions Data Warehouse (CCW). CCW t-MSIS TAF FRIP. Available at: https://www2.ccwdata.org/documents/10280/19002246/ccw-taf-rif-user-guide.pdf.
2. Economic Research Service. *Rural-urban commuting area codes*. Washington, DC: (2003).
3. https://www.medicaid.gov/dq-atlas/welcome
4. https://www2.ccwdata.org/web/guest/condition-categories-other

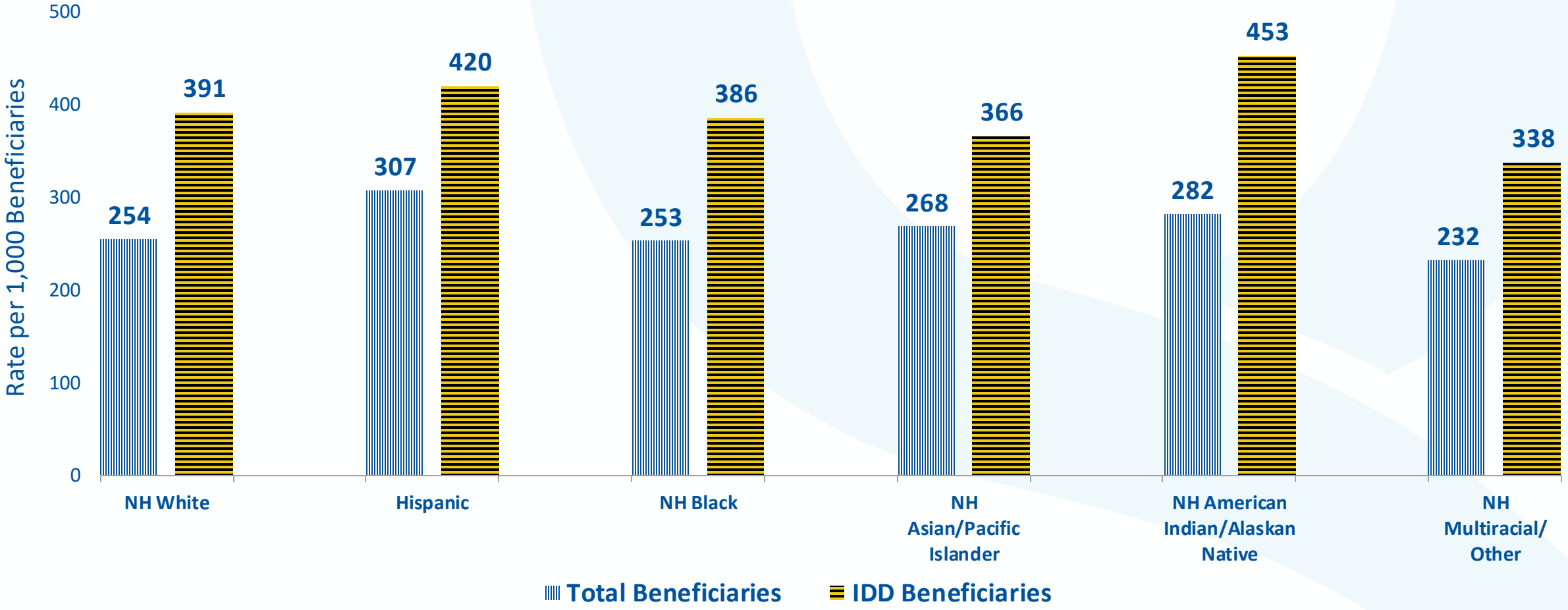
Dental Service Utilization Rates per 1,000 Beneficiaries by Age Group



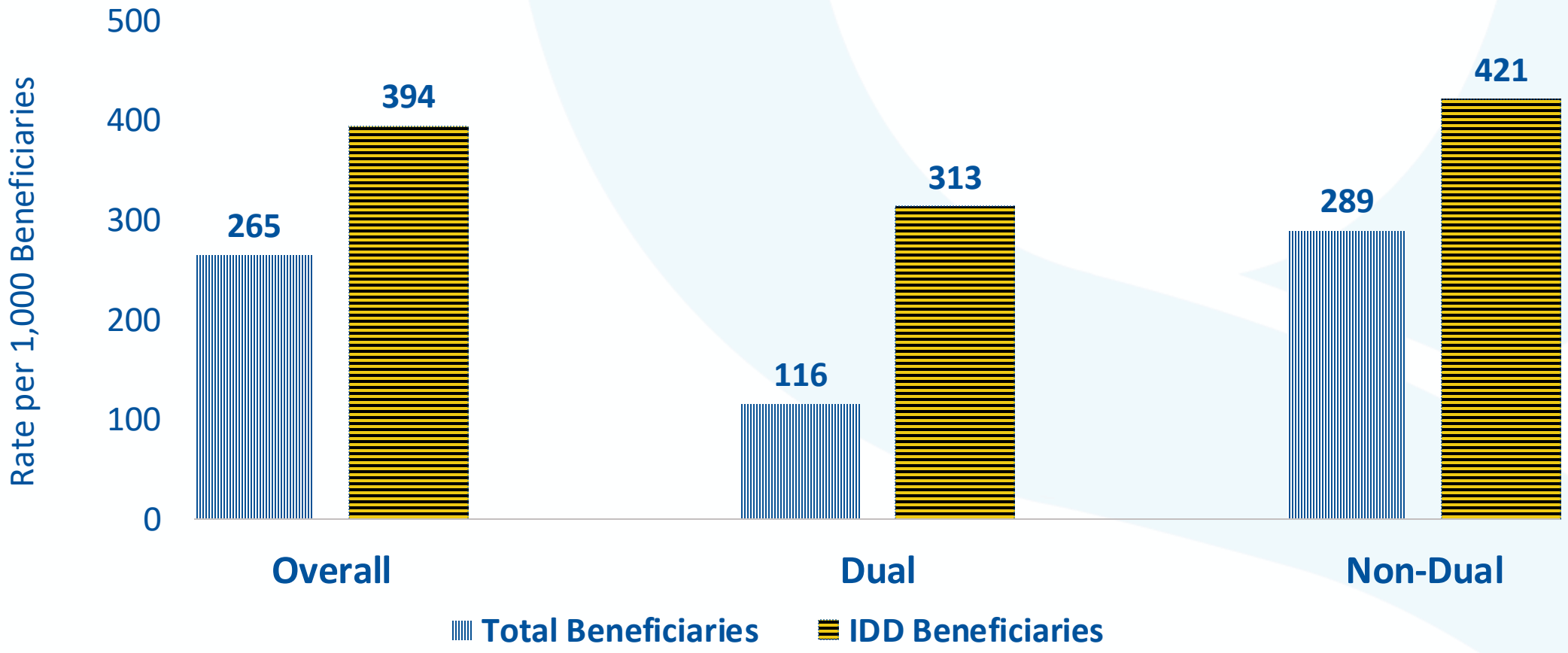
Dental Service Utilization Rates per 1,000 Beneficiaries by Gender



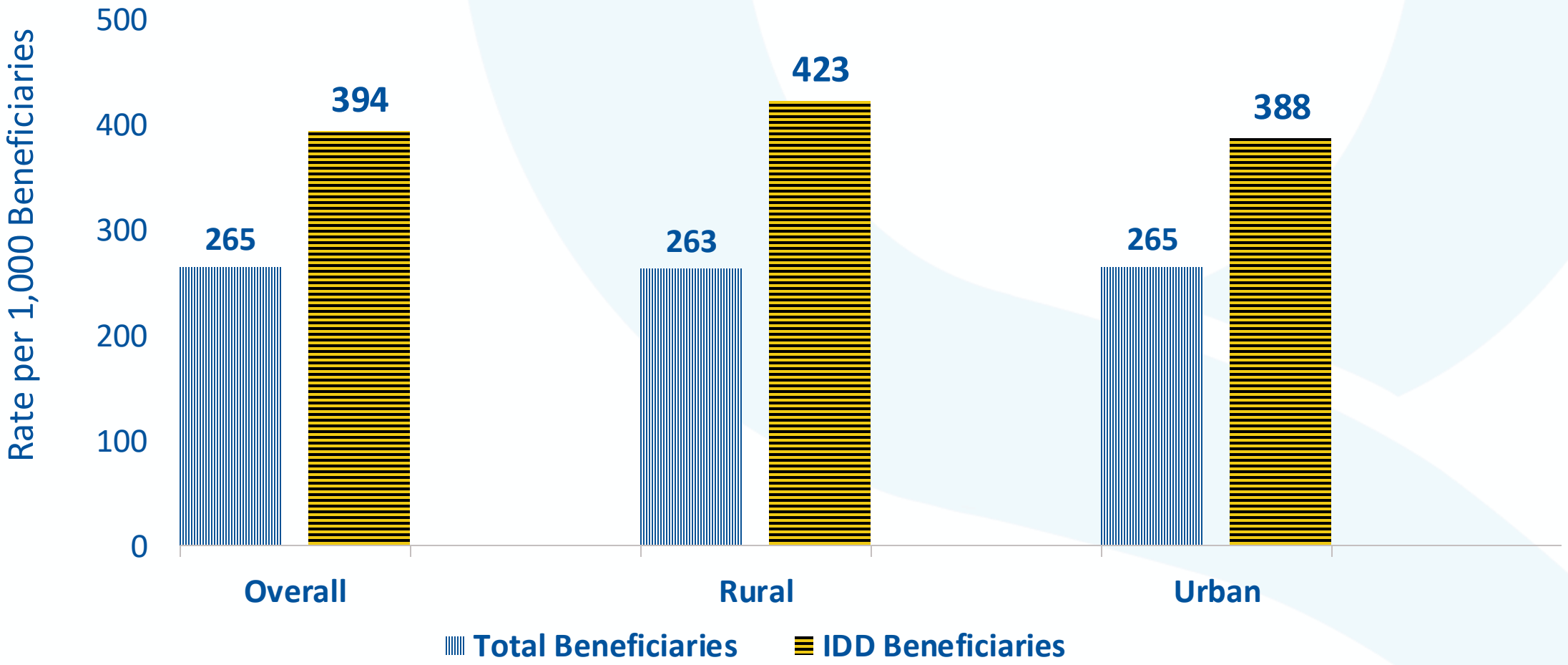
Dental Service Utilization Rates per 1,000 Beneficiaries by Race/Ethnicity



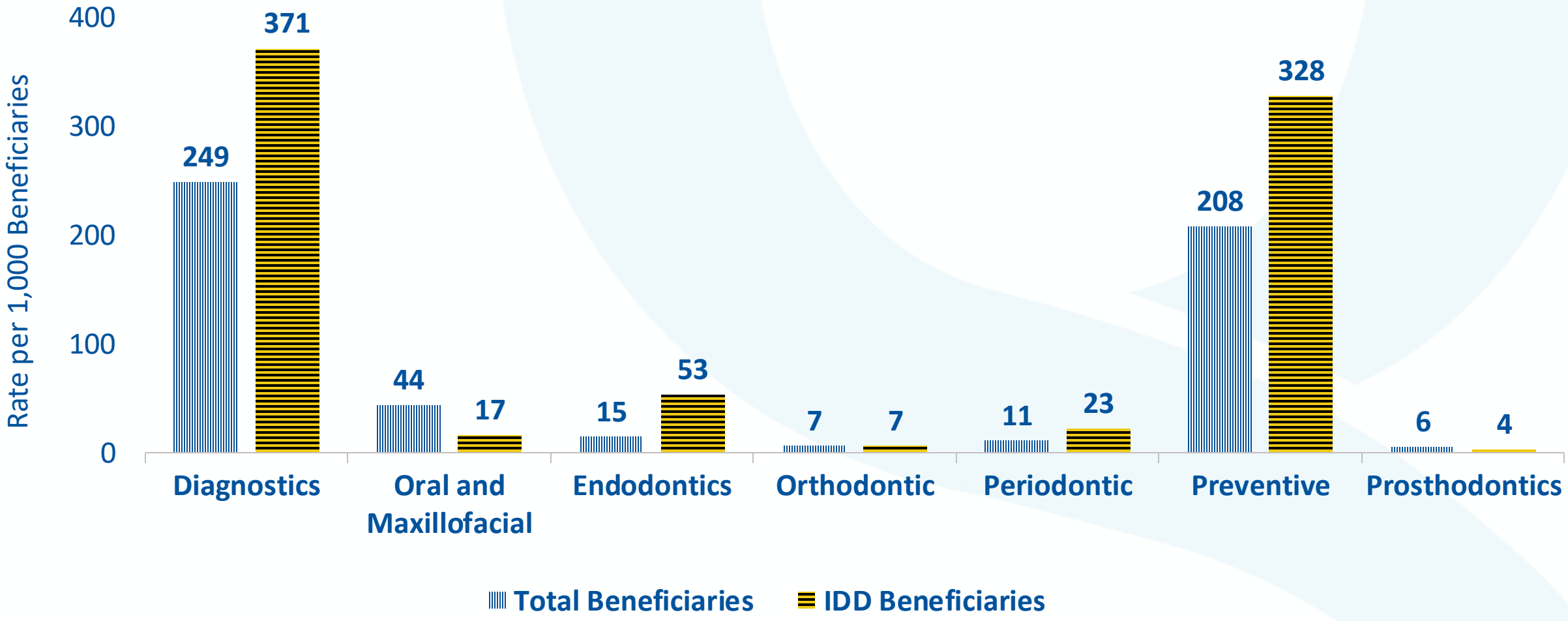
Dental Service Utilization Rates per 1,000 Beneficiaries by Medicaid-Medicare Eligibility Dual Status



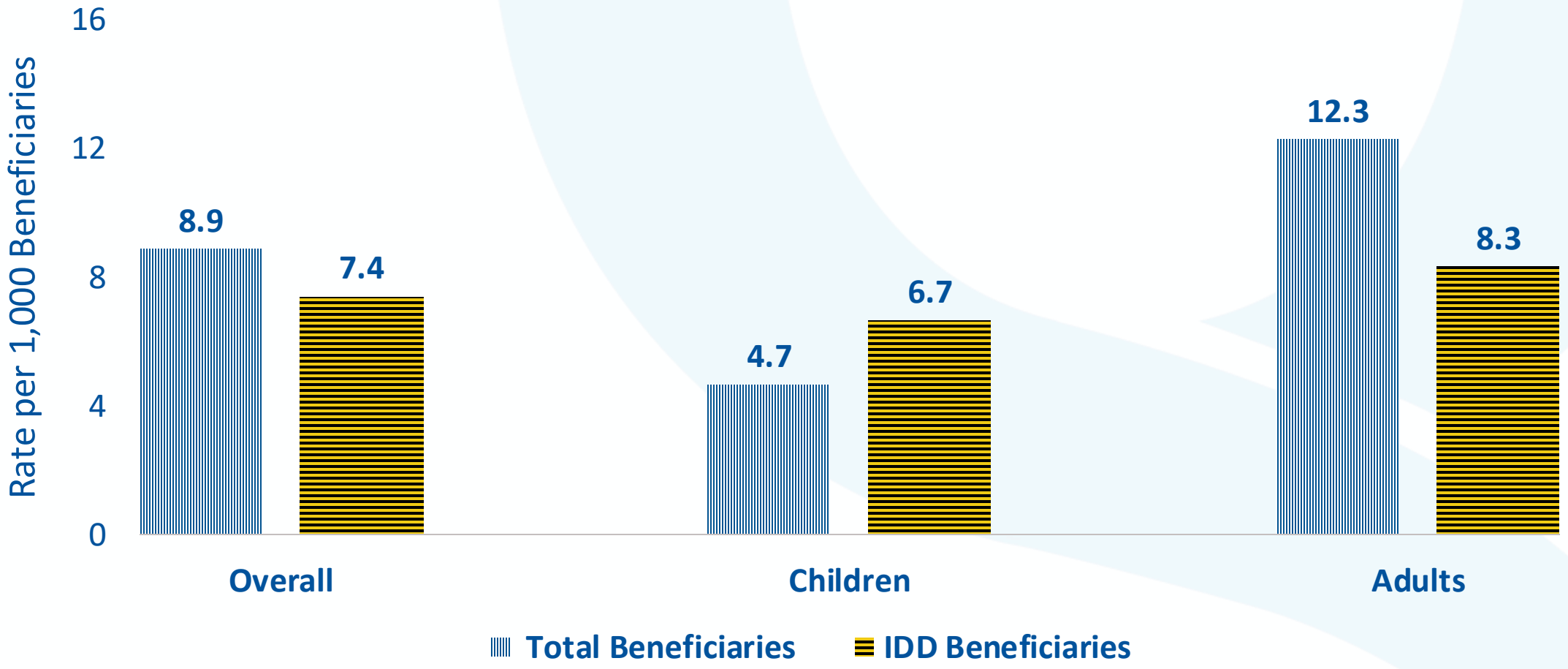
Dental Service Utilization Rates per 1,000 Beneficiaries by Residence Designation



Dental services Utilization Rate per 1,000 beneficiaries by Specialty



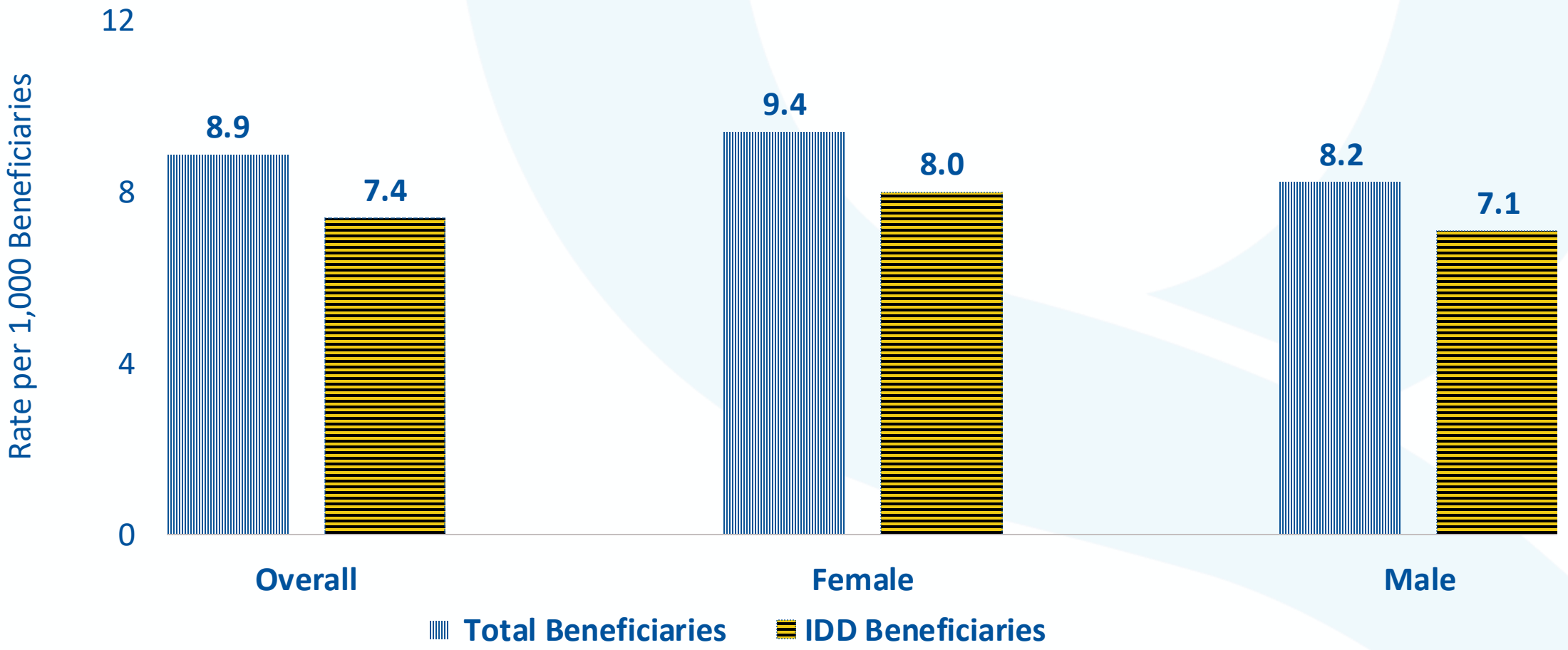
NTDC ED Visits Rate per 1,000 Beneficiaries By Age Group



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

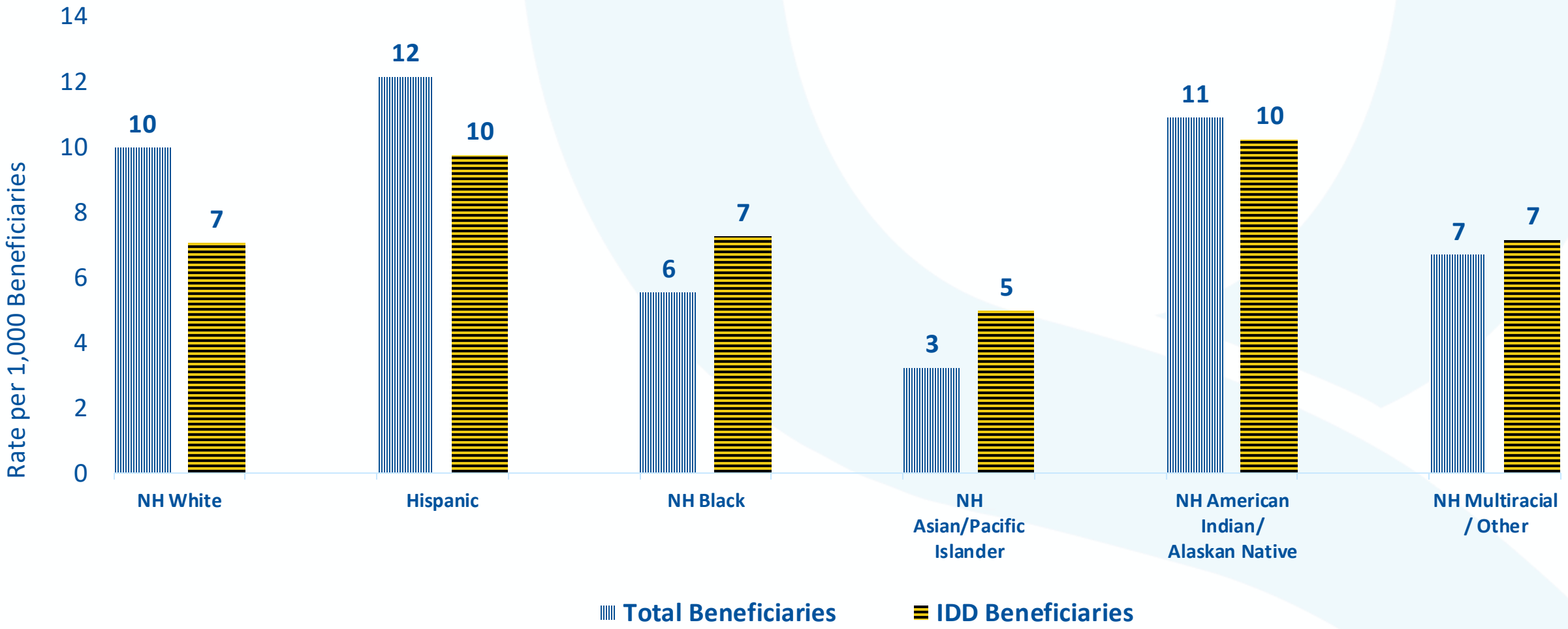
NTDC ED Visits Rate per 1,000 Beneficiaries By Gender



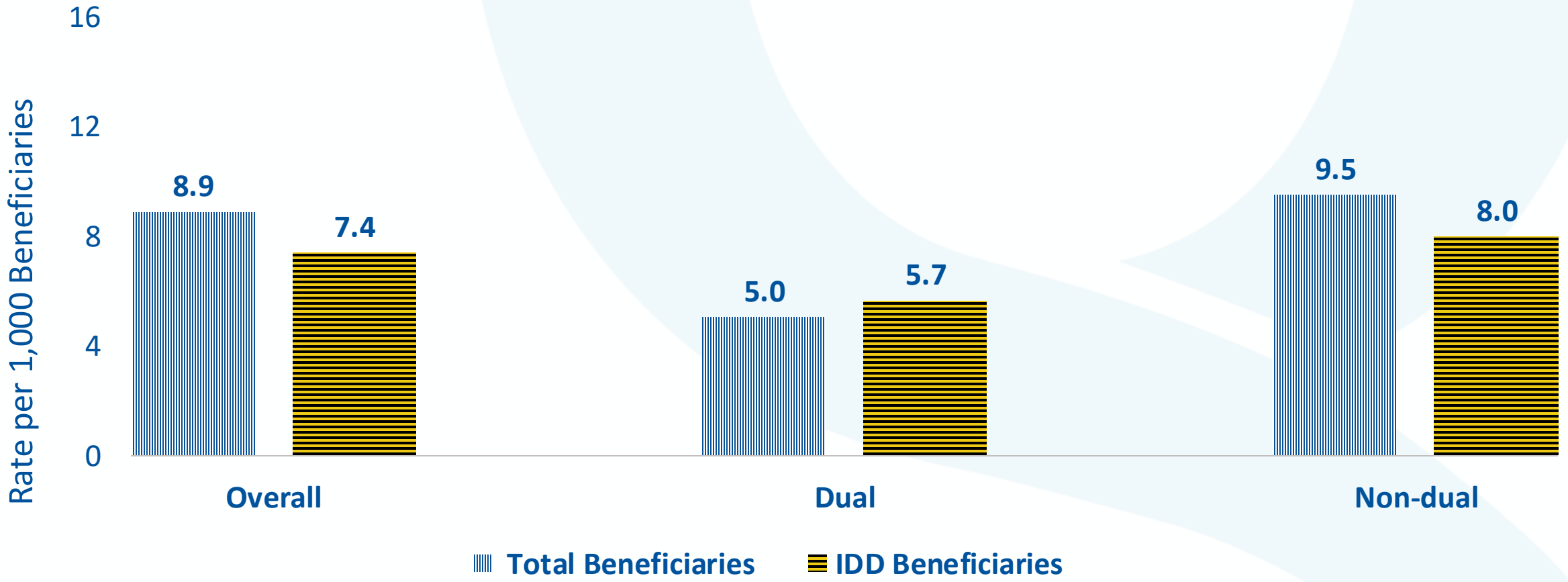
CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

NTDC ED Visits Rate per 1,000 Beneficiaries By Race/ Ethnicity



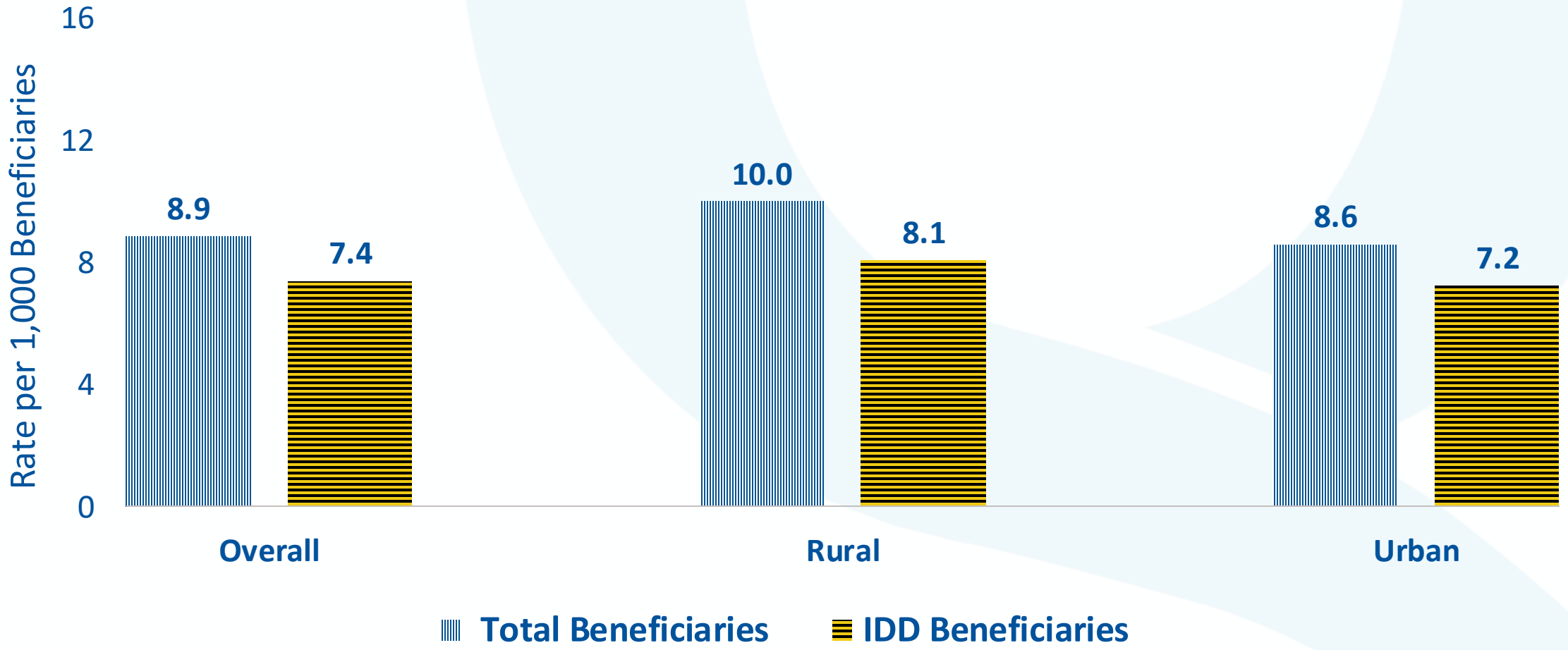
NTDC ED Visits Rate per 1,000 Beneficiaries By Medicaid-Medicare Eligibility Dual Status Status



CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

NTDC ED Visits Rate per 1,000 Beneficiaries by Residence Designation



Conclusions:

- **Utilization Rates:** IDD Medicaid beneficiaries consistently show higher utilization of dental services compared to the general Medicaid population across all demographics, including gender, age, race, ethnicity, and geography.
- **Service Priorities:** IDD beneficiaries prioritize routine dental care (e.g., diagnostic and preventive services) and show lower utilization for specialized services, such as oral surgery and prosthodontics.
- **NTDC ED Visits:** Overall, IDD beneficiaries have lower rates of non-traumatic dental condition (NTDC) emergency department visits compared to the general population across most demographic groups. However, exceptions exist, particularly among non-Hispanic Black and Asian/Pacific Islander adults and children, who demonstrate higher rates of NTDC ED visits.

CMS 2025 Quality Conference

Make America Healthy: Improving Health Outcomes Through Prevention, Quality, and Safety

Dental Quality Measures to Support Medical-Dental Integration

Jill Boylston Herndon, PhD

Key Analytics and Consulting, LLC

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Disclosures

- Dr. Herndon is presenting in her capacity as a methodology consultant to the Dental Quality Alliance.

Dental Quality Alliance: Program and Plan Measures[1]

Children	Pregnancy/Adults
Oral Evaluation*+	Oral Evaluation During Pregnancy^●❖
Topical Fluoride for Children*	Utilization of Services During Pregnancy
Sealant Receipt on Permanent 1st Molars*	Topical Fluoride for Adults at Elevated Caries Risk
Sealant Receipt on Permanent 2nd Molars	Oral Evaluation: Adults with Diabetes❖
Early Childhood Oral Evaluation by a Dental Provider Following a Medical Preventive Service Visit❖	Periodontal Evaluation: Adults with Periodontitis
Care Continuity	Non-Surgical Ongoing Care: Adults with Periodontitis
Ambulatory Care Sensitive ED Visits for Dental Caries❖	Ambulatory Care Sensitive ED Visits for Non-Traumatic Dental Conditions^❖
Follow-Up After ED Visits for Dental Caries❖	Follow-Up after ED Visits for Non-Traumatic Dental Conditions❖
Caries Risk Documentation	
Utilization of Services	
Preventive Services	
Treatment Services	
Usual Source of Services	
Per Member Per Month Cost of Clinical Services	

*CMS Child Core Set
+CMS 1945A Health Home Core Set
❖Dental-Medical Integration
^CMS 2025 Voluntary Adult Core Set
●CMS 2025 Provisional Child Core Set

CMS 2025 Quality Conference

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Dental Quality Alliance's State Oral Healthcare Quality Dashboard

- Dynamic, interactive dashboard of DQA dental quality measures
- **Population:** State Medicaid and CHIP beneficiaries (all states)
- **Data Source:** Transformed Medicaid Statistical Information System (T-MSIS)

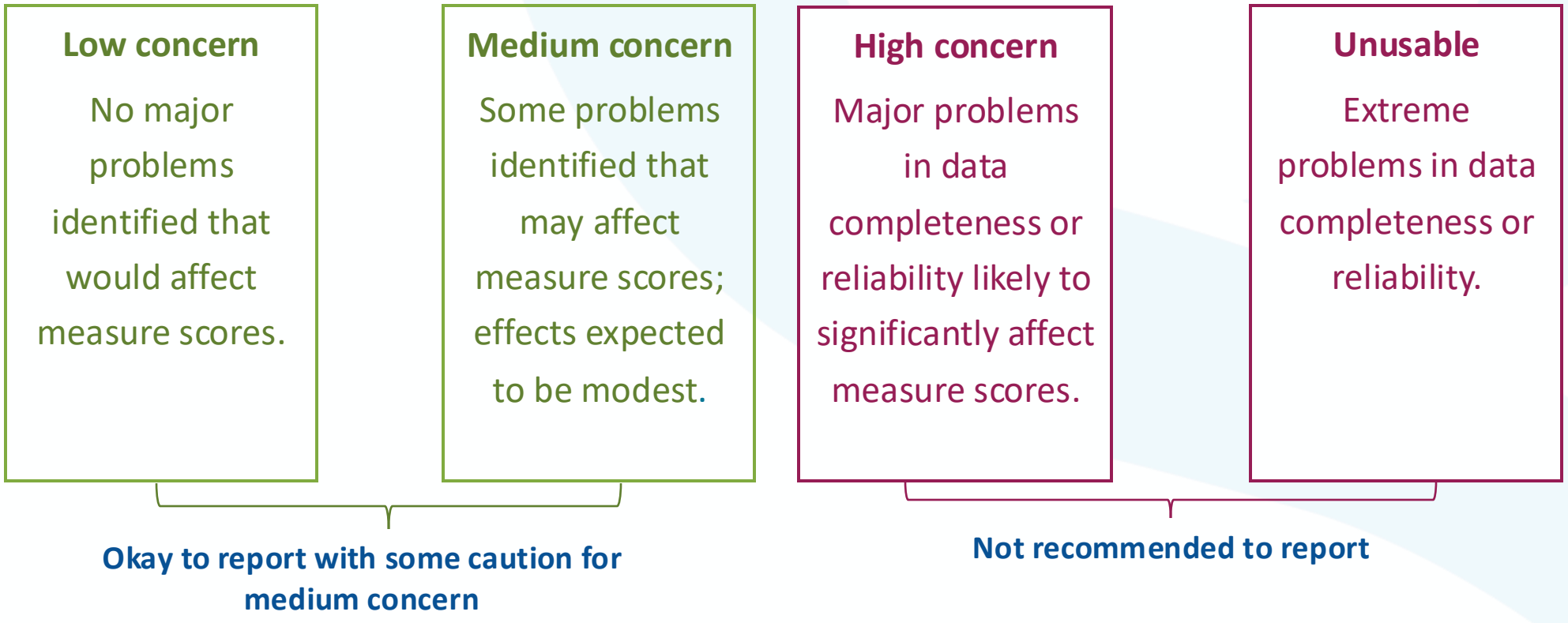
Data Quality Indicators Categories (Adapted from CMS Data Quality Atlas)

Detailed Quality Assessments

- Assessed data quality for each critical data element used to calculate the measure.
- Used CMS Data Quality Atlas quality evaluations for relevant topics.
- Conducted independent assessments for additional fields especially dental-specific fields.
- Aligned data quality categories with CMS Data Quality Atlas.
- Data quality assignment based on data element with greatest level of “concern”.

Data Quality Indicators Categories

- Quality assessments reflect such evaluations as data field completeness and legitimate codes.
- They do not reflect incomplete capture of codes in claims data at the care site due to such factors as benefit design and reimbursement.



DQA Measures Supporting Dental-Medical Integration

1. ED visits for non-traumatic dental conditions and subsequent follow-up with dental provider (adults and children)

2. Early Childhood Oral Evaluation by a Dental Provider Following a Medical Preventive Service Visit

3. Oral Evaluation during Pregnancy

4. Oral Evaluation for Adults with Diabetes

CMS 2025 Quality Conference

Advancing Optimal Health for Individuals, Families, Caregivers, Clinicians and Communities

1. ED visits for non-traumatic dental conditions and subsequent follow-up with dental provider (adults and children)

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Measures of Dental-Related ED Visits: Importance

- NTDC ED visits are an ongoing public health concern with significant costs in terms of both health and resource use.[2, 3]
- Medicaid is a primary payer. A systematic review confirmed that NTDC ED visits are disproportionately experienced by Medicaid beneficiaries and uninsured individuals.[2, 3, 4]
- NTDC ED visits are largely preventable through primary prevention, early identification of disease, and disease management in primary care outpatient settings.
- Care in the ED is not definitive, requiring follow-up with a dental provider.[5, 6]
- ED care focuses primarily on alleviating pain.[6, 7] Dental pain is a top diagnosis for opioid prescribing in the ED;[8] therefore, reducing NTDC ED use may also contribute to reducing opioid use.
- Medical professionals have also identified dental-related use as a significant concern and have called for action among the medical community.[9]

Measure Description: Children

Ambulatory Care Sensitive Emergency Department Visits for Dental Caries in Children

NUM: How many ED visits were there with a caries-related diagnosis code among children 0 through 20 years

DEN: Among all member months for children 0 through 20 years during the reporting year

*Reported as number of visits per 100,000 member months

Follow-Up after Emergency Department Visits for Dental Caries in Children

NUM: How many did the child have a visit with a dentist within (a) 7 days and (b) 30 days following the ED visit

DEN: Among all caries-related ED visits for children 0 through 20 years

*Reported as a percentage

Measure Description: Adults

Ambulatory Care Sensitive ED Visits for Non-Traumatic Dental Conditions in Adults

NUM: How many ED visits were there with an ambulatory care sensitive non-traumatic dental condition diagnosis among adults 18 years and older

DEN: Among all member months for adults 18 years and older during the reporting year

*Reported as number of visits per 100,000 member months

Follow-Up after ED Visits for Non-Traumatic Dental Conditions in Adults

NUM: How many did the adult have a visit with a dentist within (a) 7 days and (b) 30 days following the ED visit

DEN: Among all non-traumatic dental condition ED visits for adults 18 years and older

*Reported as a percentage

Measures of Dental-Related ED Visits: Performance Measurement, CY 2019

CHILDREN

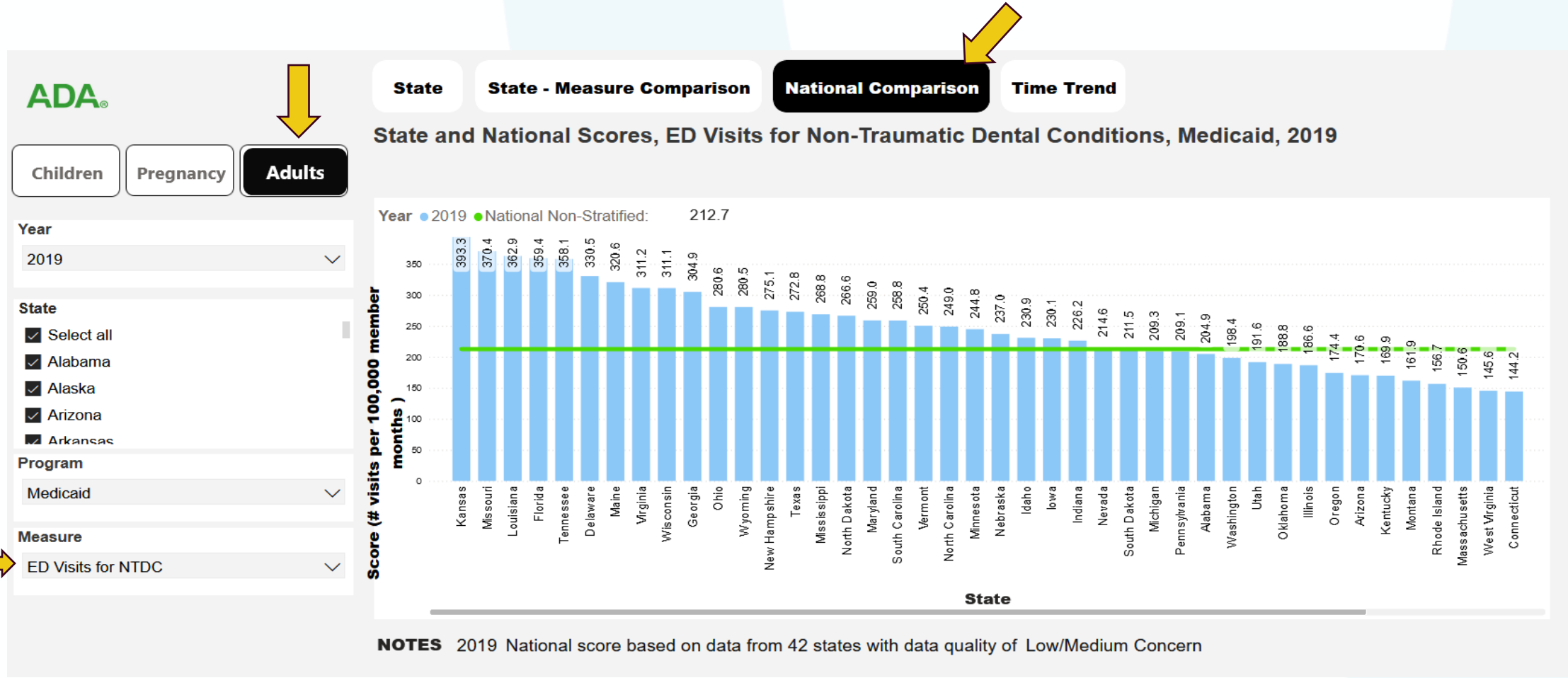
Caries-Related ED Visits	7-Day Follow-Up with Dentist	30-Day Follow-Up with Dentist
26 per 100,000 member months	41%	54%

ADULTS

NTDC ED Visits	7-Day Follow-Up with Dentist	30-Day Follow-Up with Dentist
213 per 100,000 member months	14%	21%

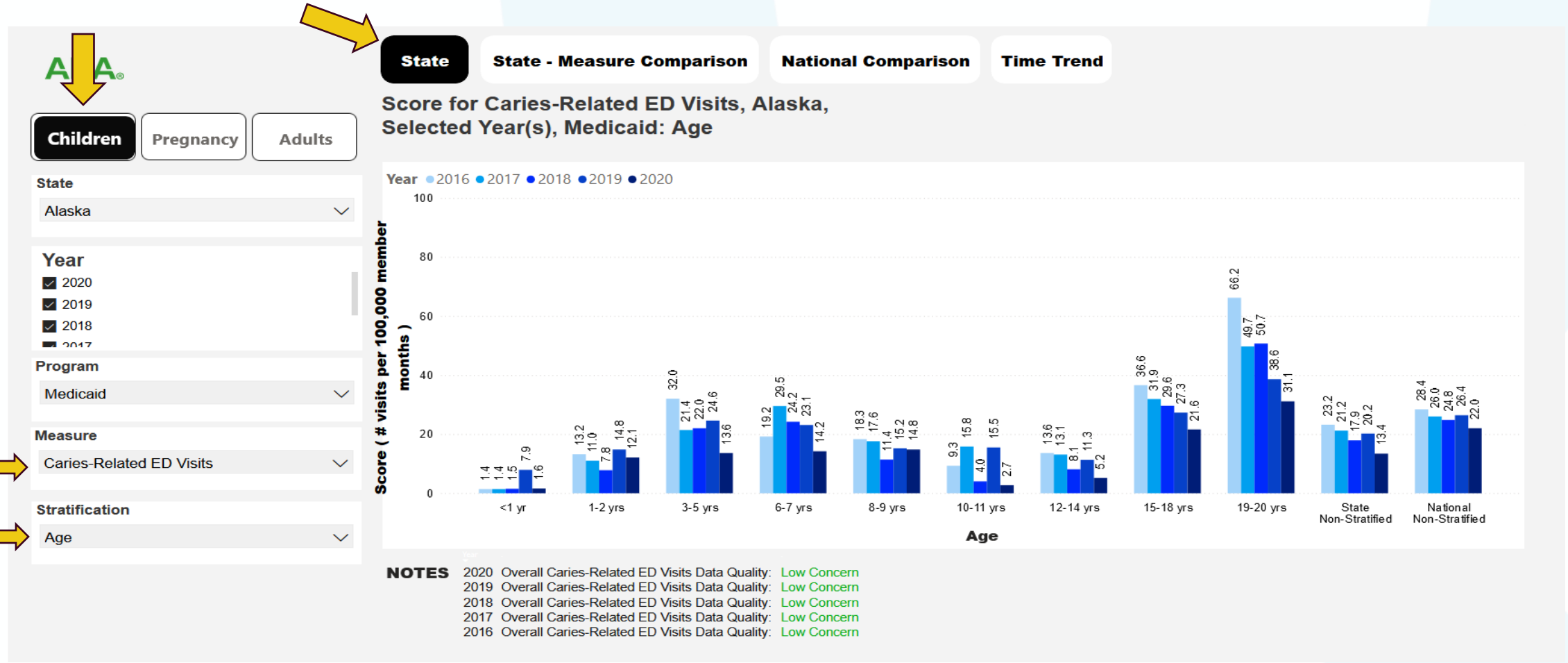
Source: DQA Oral Healthcare Quality Dashboard, calculated using T-MSIS Analytic Files

Sample DQA Oral Healthcare Quality Dashboard Reports (1 of 10)



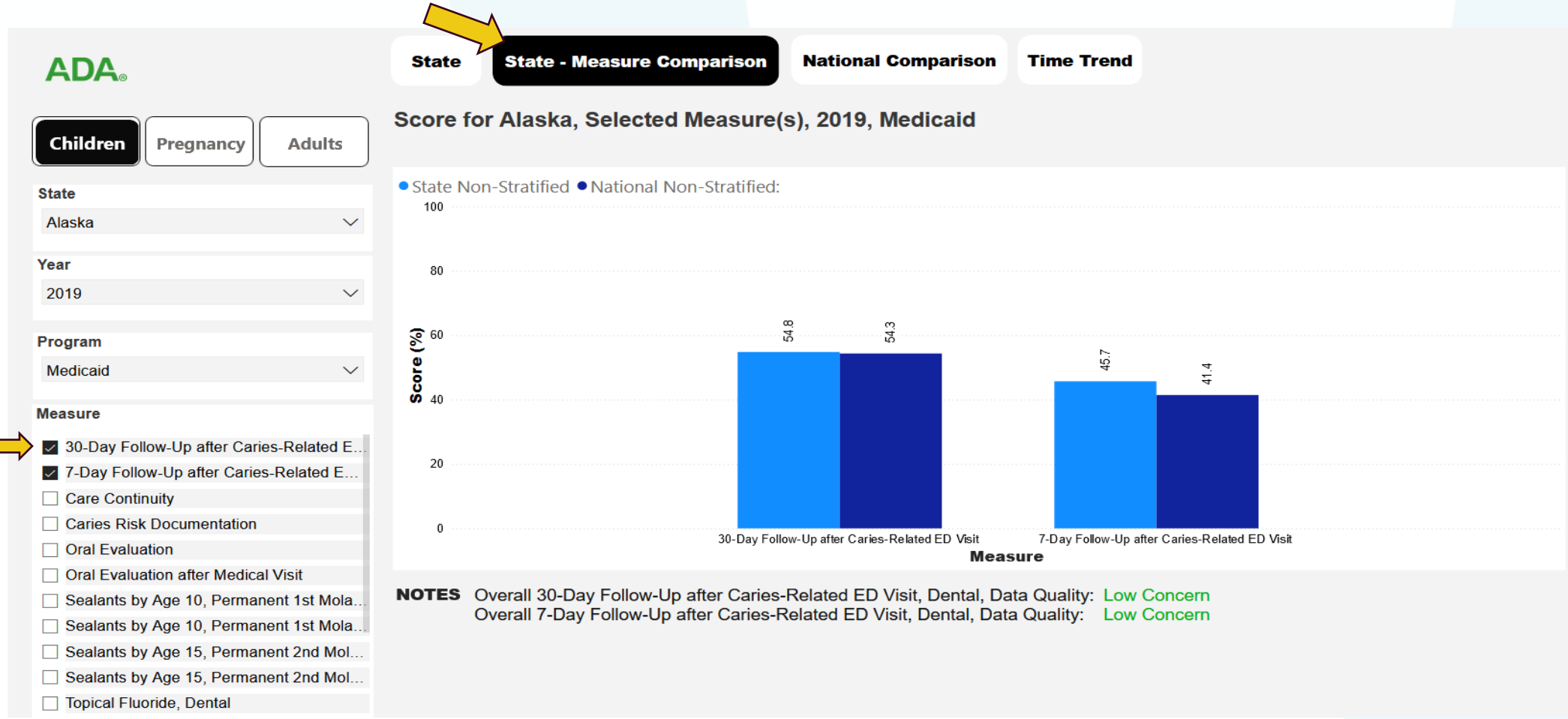
Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Sample DQA Oral Healthcare Quality Dashboard Reports (2 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Sample DQA Oral Healthcare Quality Dashboard Reports (3 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Dental-Related ED Visits: Improving Care

Community-based intervention in Michigan provided oral health education and dental services (including screenings, diagnostic services, and treatment) to uninsured adults[10]	→	Decreased the number of patients going to the local ED for dental pain by 70% over a 6-year period
Community dental access program in rural western Maryland[11]	→	Averted 670 ED visits over a four-year period
Maine hospital opened a dental clinic for low-income adults[12, 13]	→	Saw more than 500 patients per year

CMS 2025 Quality Conference

Advancing Optimal Health for Individuals, Families, Caregivers, Clinicians and Communities

2. Oral Evaluation During Pregnancy

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Oral Evaluation During Pregnancy - Importance

Evidence

Important connections between oral health and systemic health during pregnancy:

- Pregnancy is associated with increased risk of gingival inflammation and caries.[14, 15]
- Periodontal disease is associated with an increased risk of adverse pregnancy outcomes including preterm birth, low birthweight, and preeclampsia.[16]
- Maternal oral health is directly associated with child oral health.[17, 18]

Oral Evaluation During Pregnancy: Importance cont.

Clinical recommendations

- The American College of Obstetricians and Gynecologists and the American Public Health Association have emphasized the importance of access to oral health care during pregnancy.[14, 19]

Medicaid relevance

- Less than 50% of pregnant persons in the United States receive dental care, with lower rates among pregnant Medicaid beneficiaries.[20]
- Effective October 1, 2022, all states and DC offer dental coverage for pregnant and postpartum Medicaid beneficiaries through at least 60 days after pregnancy.[21]
- Medicaid covers 40 percent of births[21] and, therefore, is positioned to be a significant driver of quality improvement for oral healthcare during pregnancy.

Measure Description and Performance:

Oral Evaluation During Pregnancy

NUM: How many received a comprehensive or periodic oral evaluation during pregnancy

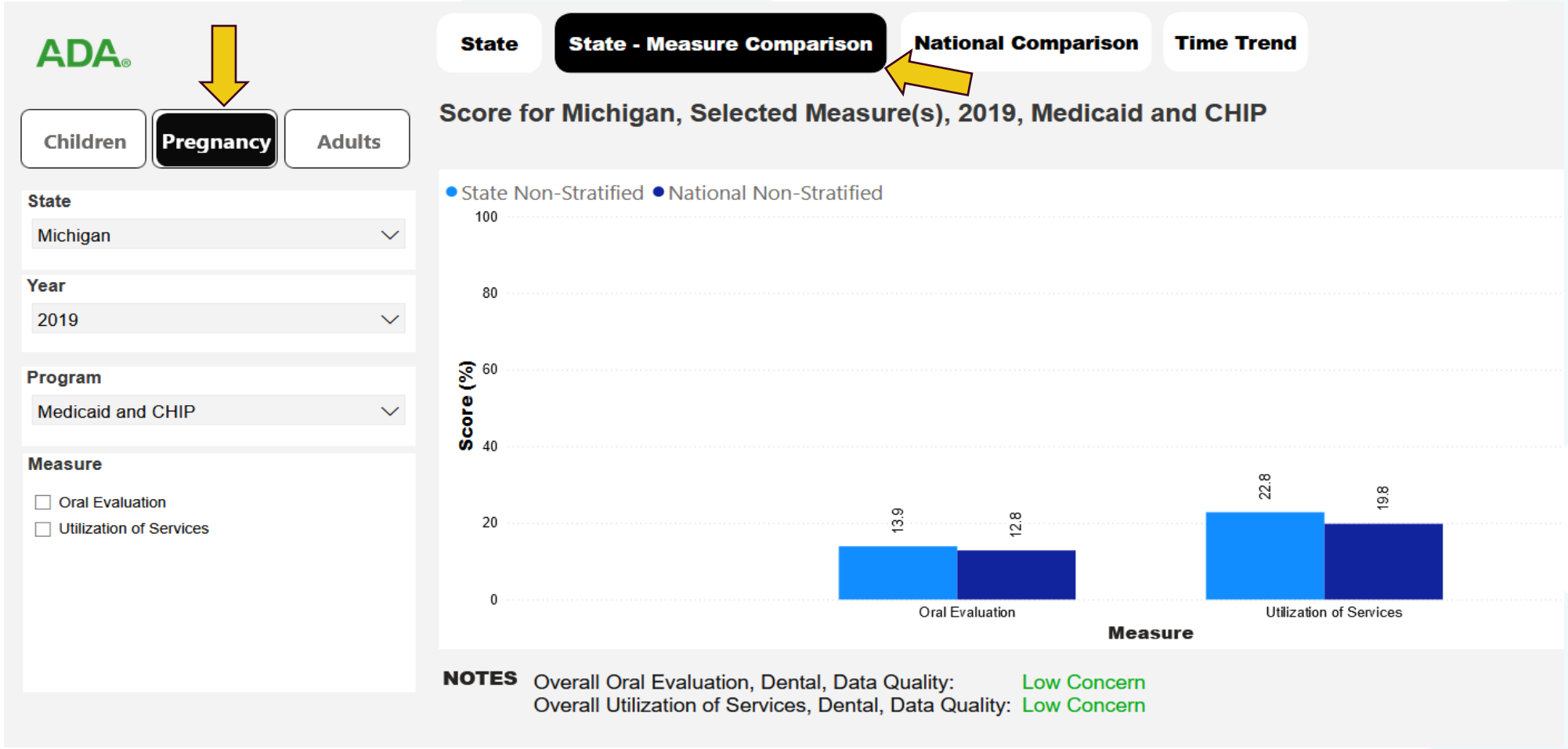
DEN: Among all enrolled persons 15 through 44 years with live-birth deliveries in the reporting year

*Reported as a percentage

13%
of pregnant Medicaid beneficiaries had a comprehensive or periodic oral evaluation in 2019

Data Source: DQA Oral Healthcare Quality Dashboard, calculated using T-MSIS Analytic Files

Sample DQA Oral Healthcare Quality Dashboard Reports (4 of 10)

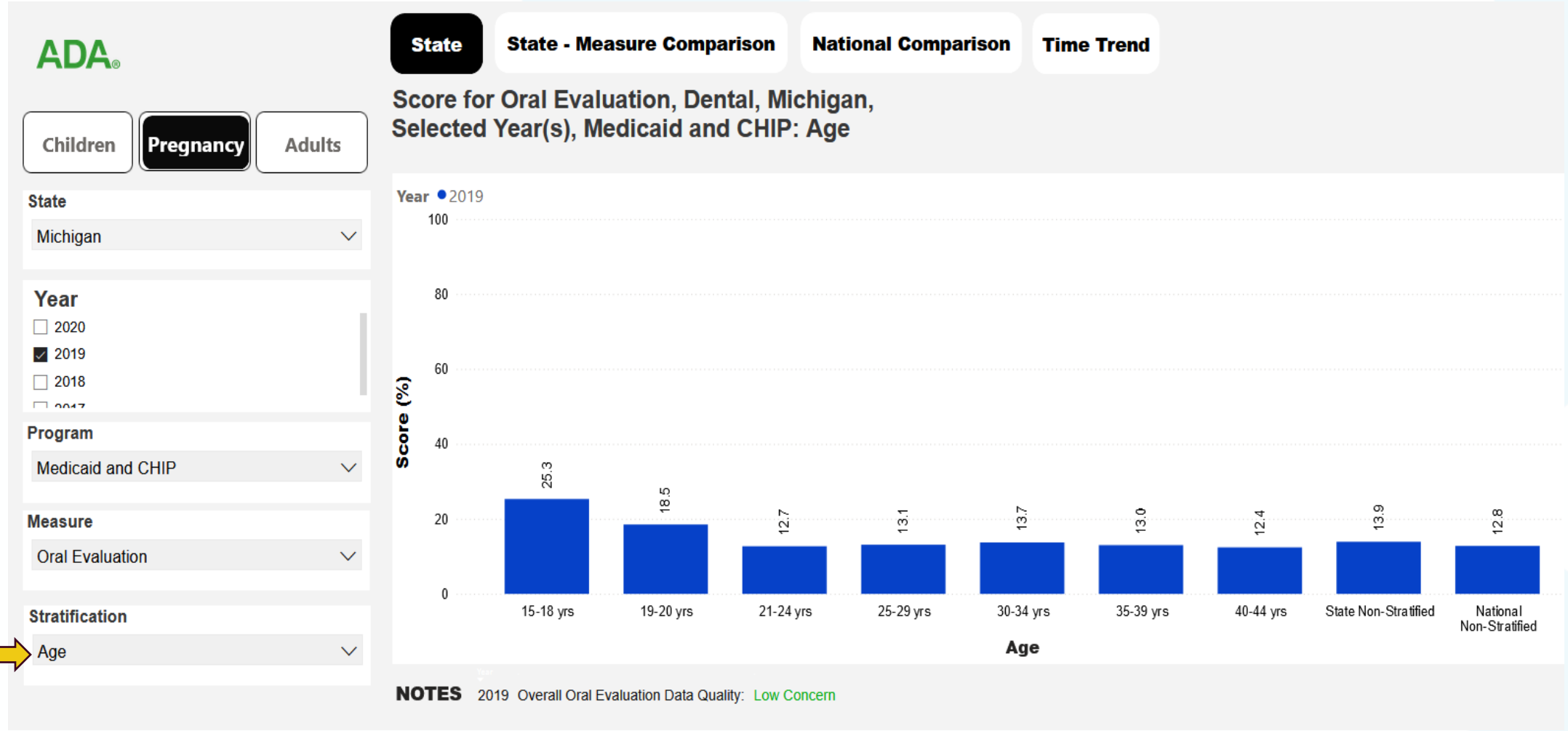


CMS 2025 Quality Conference

Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Sample DQA Oral Healthcare Quality Dashboard Reports (5 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Improving Oral Health Care during Pregnancy

Connecticut Medicaid: Conducted outreach to OB/GYN and dental offices to connect pregnant beneficiaries to dentists, distributed oral health kits and educational materials, and established collaborations[22]	Increased dental use during pregnancy from 29.8% in 2005 to 57.6% in 2017
Rhode Island Department of Health: Project to increase referrals at two FQHCs by training medical staff on oral health, sharing lists of pregnant women with dental staff, and including oral health in strategic and incentive plans[23]	Doubled dental use from 15% to 31% at one FQHC
Oregon Medicaid: Pregnant Medicaid beneficiaries assigned to a dental home; research study evaluated caries status of children aged 2 years with comparison group[24]	Children at age 2 years were 1.5 times more likely to be caries free than comparison

CMS 2025 Quality Conference

Advancing Optimal Health for Individuals, Families, Caregivers, Clinicians and Communities

3. Early Childhood Oral Evaluation by a Dental Provider Following a Medical Preventive Service Visit

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Early Childhood Oral Evaluation by a Dental Provider Following a Medical Preventive Service Visit

Evidence

Dental caries is the most common chronic disease of childhood with adverse impacts including difficulty eating, speaking, playing and learning as well as pain and infections that may lead to ED visits and hospitalizations.[25]

- Delays in the first dental visit are associated with an increase in dental caries, treatment needs, and number of dental procedures with a consequent increase in the likelihood of using general anesthesia for treatment and caries-related ED visits.[26, 27]
- A study using Medicaid claims data for children ages 6 months to 6 years found a significant increase in dental caries when:
  (1) the first oral health exam occurred at age 4 compared with age 1 (hazard ratio: 5.4) and
  (2) the oral exam was with a physician compared with a general dentist (hazard ratio: 2.6).[27]

Early Childhood Oral Evaluation with a Dental Provider after a Medical Preventive Service Visit: Importance

Clinical recommendations

- The American Academy of Pediatrics, American Public Health Association, American Academy of Pediatric Dentistry, and American Dental Association recommend that children visit a dentist by age 1 for timely prevention and identification of dental disease and to enable less invasive approaches to early childhood caries management.[28]
- The AAP notes: "although pediatricians have the opportunity to provide early assessment of risk for dental caries and anticipatory guidance to prevent disease, it is also important that children establish a dental home"[28]

Medicaid relevance

- 79% of 1–2 year-old Medicaid beneficiaries had a medical visit in FFY 2021 compared with 26% who had a dental visit.[29]
- 63% of 3-5 year-old Medicaid beneficiaries had a medical visit compared with 49% who had a dental visit.[29]
- High rates of medical visits in early childhood represent an opportunity to connect children accessing the medical system to dental care.

Measure Description and Performance:

Early Childhood Oral Evaluation with a Dental Provider after a Medical Preventive Service Visit

NUM: How many received a comprehensive or periodic oral evaluation as a dental service within 6 months of the medical preventive service visit

---

DEN: Among enrolled children aged 6 months through 5 years with a medical preventive service visit

*Exclusions: Children with a comprehensive or periodic oral evaluation in the 6 months before the medical visit

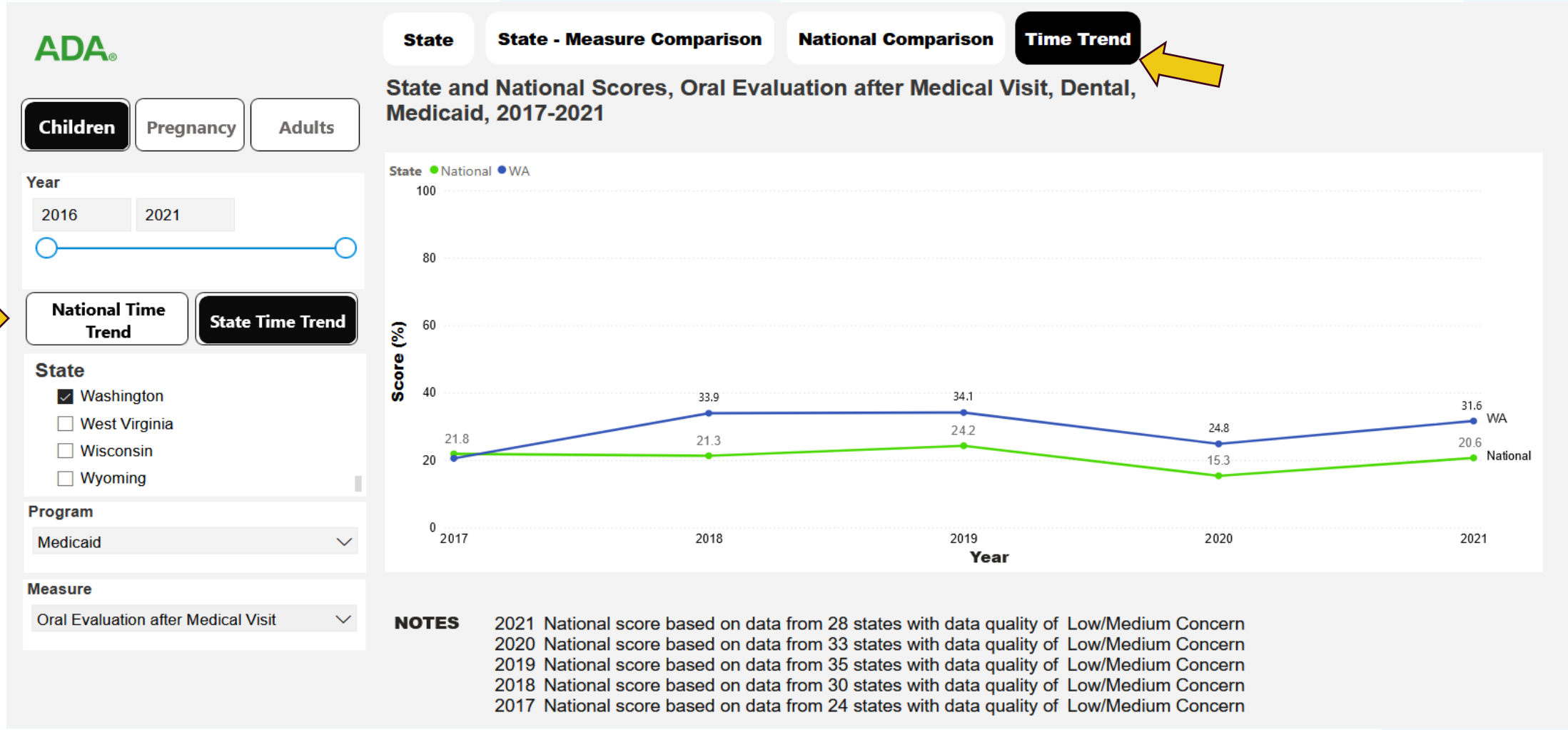
*Reported as a percentage

24%

of children <6 years had a comprehensive or periodic oral evaluation after a medical visit in 2019

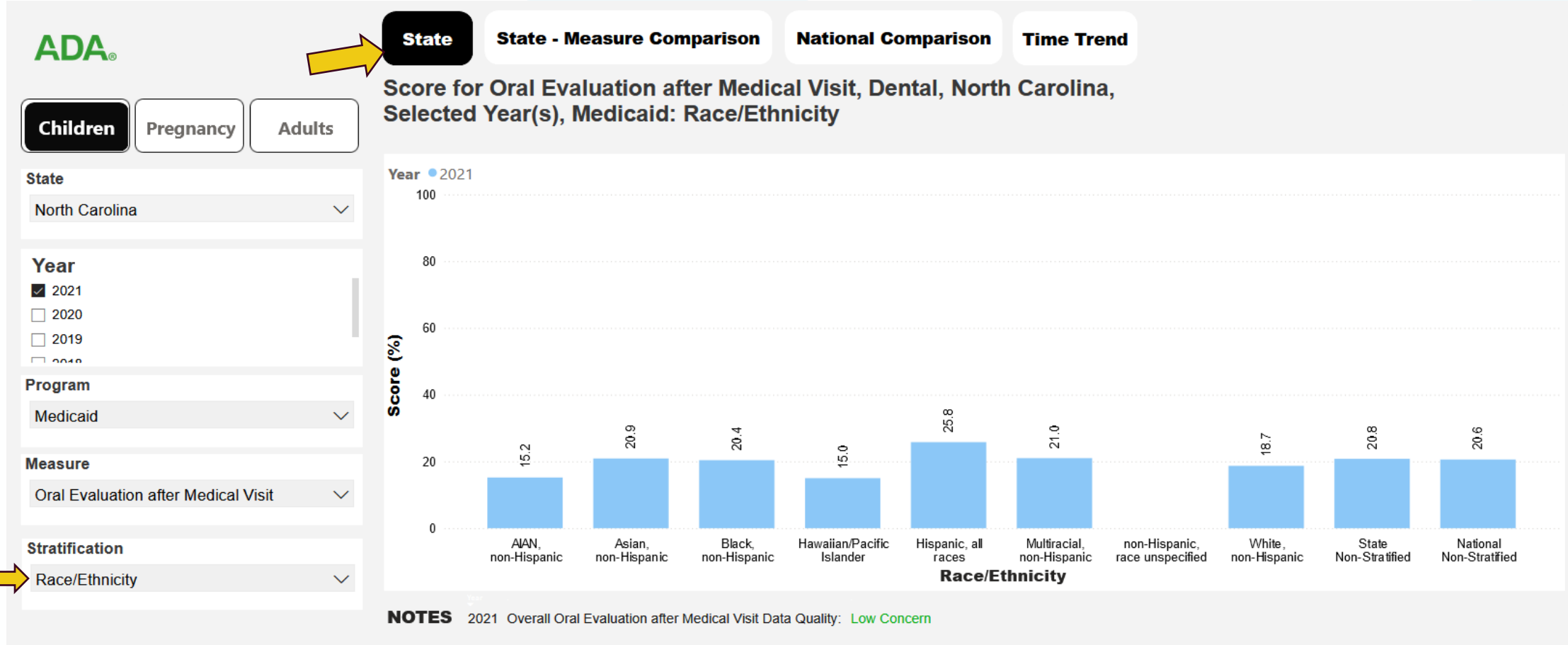
Data Source: DQA Oral Healthcare Quality Dashboard, calculated using T-MSIS Analytic Files

Sample DQA Oral Healthcare Quality Dashboard Reports (6 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Sample DQA Oral Healthcare Quality Dashboard Reports (7 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

State Examples of Improving Early Childhood Oral Evaluation Care

Rhode Island

- A federally qualified health center (FQHC) in Rhode Island implemented a program where pediatricians refer children to a dentist at age 1 or first tooth eruption.
- Children are subsequently scheduled for dental appointments every six months.[30]
- The same FQHC has a dental clinic coordinator that regularly reviews medical records to identify families that recently had babies in the past year and invite the parent to bring the child into the dental clinic for screening at age 1 year.[30]

Washington

- The Washington state Access to Baby and Child Dentistry (ABCD) program expanded dental provider networks and access for pre-school aged children to overcome the referral barriers.
- Increased Medicaid-enrolled children under age 6 with a dental visit from 20% in the early 2000s to 54% in 2018[31]

CMS 2025 Quality Conference

Advancing Optimal Health for Individuals, Families, Caregivers, Clinicians and Communities

4. Oral Evaluation for Adults with Diabetes

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Oral Evaluation for Adults with Diabetes

Evidence

Diabetes is associated with xerostomia, dental caries, periodontal disease, and tooth loss with significant research examining the relationship between diabetes and periodontal disease and demonstrating a bi-directional relationship[32, 33, 34, 35, 36, 37, 38]

- Diabetes is associated with increased prevalence and severity of periodontal disease.
- Periodontal disease is associated with poor glycemic control.
- A Cochrane Database systematic review found that periodontal treatment improves glycemic control in individuals with both periodontitis and diabetes.[39]

Oral Evaluation for Adults with Diabetes: Importance

Clinical recommendations

- 2024 Standards of Medical Care in Diabetes call for initial care management to include referral to a dentist.[40]
- Oral evaluations are an important entry point into the dental care system. Diagnosis and treatment planning for the prevention and treatment of periodontal and other oral disease at these visits have the potential to improve diabetes outcomes.

Medicaid relevance

- This measure is aligned with the recommendations set forth by the CMS-established Medicaid and CHIP Oral Health initiative Workgroup, Strategic priority 1.1: Improve coordination and integration of care to increase utilization of recommended care.[41]
- Almost 60% of adults with diabetes have a medical visit but no dental visit.[34]
- These high rates of medical visits but no dental visits represent an important opportunity to connect adults with diabetes who access the medical system to dental care.

Measure Description and Performance:

Oral Evaluation for Adults with Diabetes

NUM: How many received a comprehensive or periodic oral evaluation or a comprehensive periodontal evaluation within the reporting year

---

DEN: Among enrolled adults aged 18 years and older with diabetes

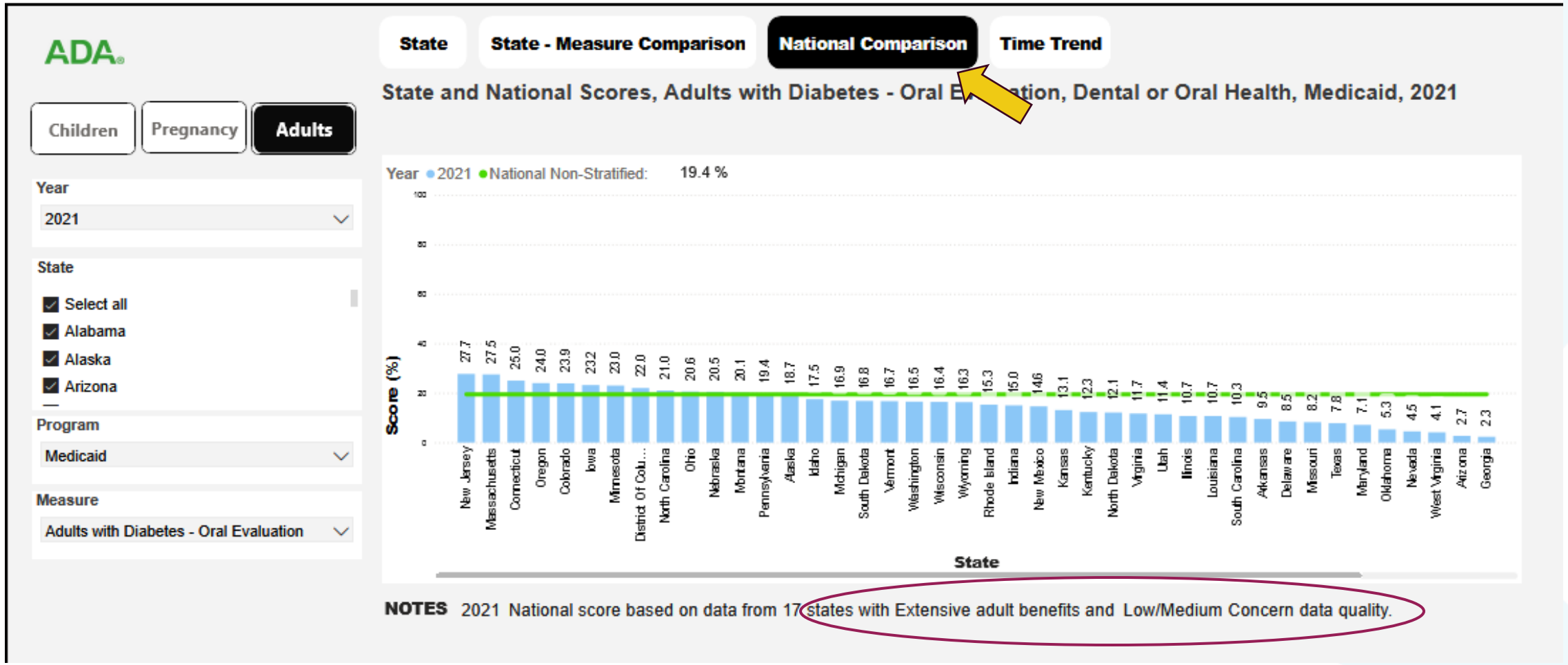
*Reported as a percentage

25%

of Medicaid-enrolled adults in states with extensive dental benefits had an oral evaluation in 2019

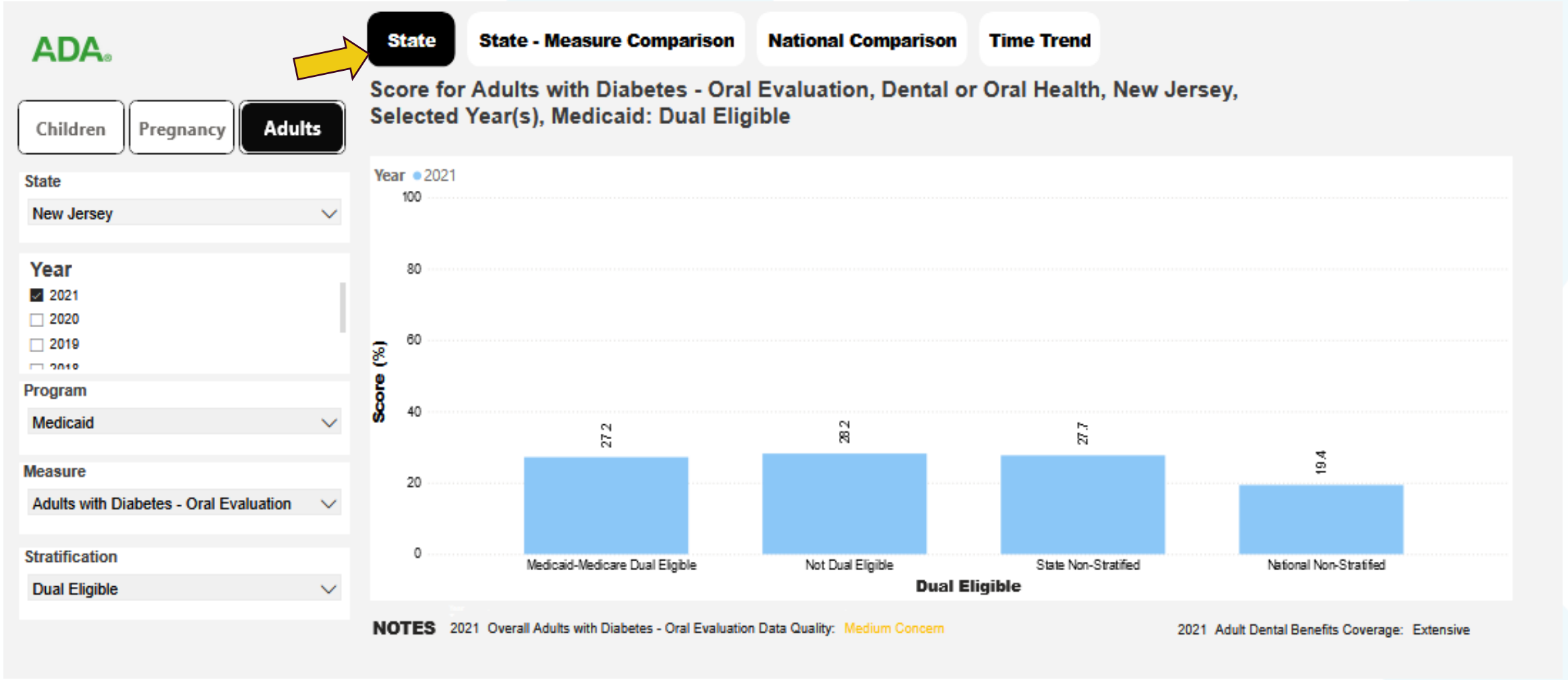
Data Source: DQA Oral Healthcare Quality Dashboard, calculated using T-MSIS Analytic Files

Sample DQA Oral Healthcare Quality Dashboard Reports (8 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

Sample DQA Oral Healthcare Quality Dashboard Reports (9 of 10)

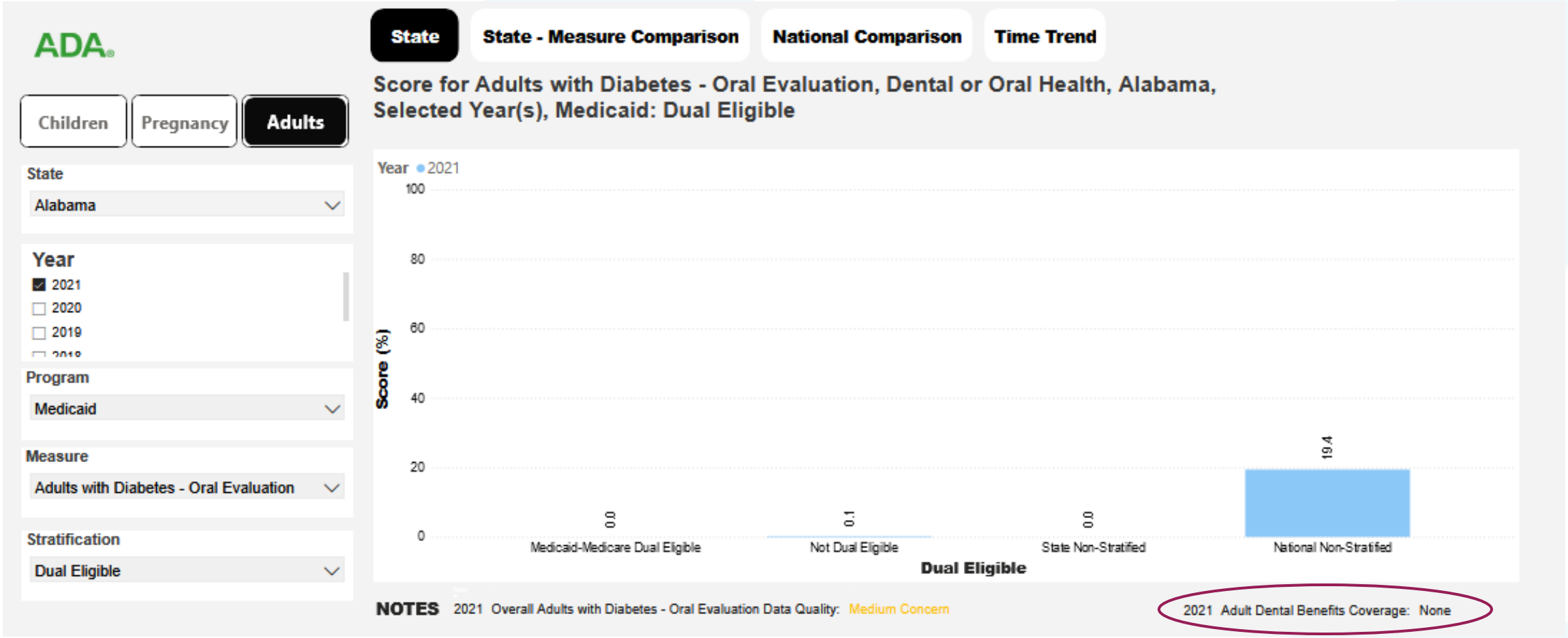


CMS 2025 Quality Conference

Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

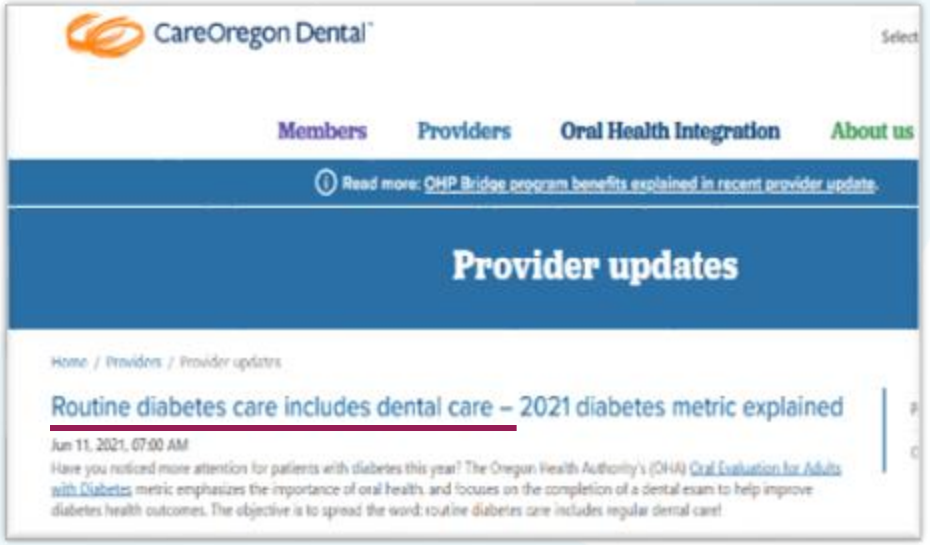
Sample DQA Oral Healthcare Quality Dashboard Reports (10 of 10)



Source: https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives

State Examples of Improving Oral Health Care for Adults with Diabetes

- **Oregon**
  - CareOregon Oral Health Integration Team improved the DQA measure by developing brochures about diabetes and oral health for patients and trainings for medical professionals to help them identify the oral manifestations of diabetes and encourage referrals to dental exams.
  - Includes resources for medical-to-dental referrals.[41]
- **Colorado**
  - The Colorado Oral Health Unit has a Diabetes, Cardiovascular Disease, and Oral Health Integration program that includes increasing diabetes disease screening, bidirectional referral and management outcomes in federally qualified health centers.
  - Resources include implementation plans, workflows, and educational materials.[42]



https://careoregondental.org/providers/provider-updates/2021/06/11/routine-diabetes-care-includes-dental-care-2021-diabetes-metric-explained

For More Information

- **Email DQA:** dqa@ada.org
- **DQA Website:** www.ada.org/dqa
- **Dashboard:** https://www.ada.org/resources/research/dental-quality-alliance/dqa-improvement-initiatives
- **Measure specifications:** https://www.ada.org/resources/research/dental-quality-alliance/dqa-dental-quality-measures

Advancing performance measurement as a means to improve oral health, patient care, and safety through a consensus-building process.

DQA
DENTAL QUALITY ALLIANCE®

CMS 2025 Quality Conference

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

CMS 2025 Quality Conference

Make America Healthy: Improving Health Outcomes Through Prevention, Quality, and Safety

Thank you!

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

References (1 of 4)

1. Dental Quality Alliance. (2024). *Dental Quality Measures*. Retrieved November 19, 2024 from https://www.ada.org/resources/research/dental-quality-alliance/dqa-dental-quality-measures

2. American Dental Association Health Policy Institute. (2020). *Emergency Department Visits for Dental Conditions - A Snapshot*. Health Policy Institute, American Dental Association. Retrieved November 19, 2024 from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/community-initiatives/action-for-dental-health/emergency-department-referrals/ed_referral_hpi_infographic.pdf

3. Kelekar, U., & Naavaal, S. (2019). Dental visits and associated emergency department charges in the United States: Nationwide Emergency Department Sample, 2014. *J Am Dent Assoc*, *150*(4), 305-312 e301. https://doi.org/10.1016/j.adaj.2018.11.021

4. Cothron, A., Diep, V. K., Shah, S., Brow, A., Thakkar-Samtani, M., Okunseri, C., Tranby, E. P., & Frantsve-Hawley, J. (2021). A systematic review of dental-related emergency department among Medicaid beneficiaries. *J Public Health Dent*, *81*(4), 280-289. https://doi.org/10.1111/jphd.12458

5. Cohen, L. A., Bonito, A. J., Eicheldinger, C., Manski, R. J., Macek, M. D., Edwards, R. R., & Khanna, N. (2011). Comparison of patient visits to emergency departments, physician offices, and dental offices for dental problems and injuries. *J Public Health Dent*, *71*(1), 13-22. https://doi.org/10.1111/j.1752-7325.2010.00195.x

6. Hocker, M. B., Villani, J. J., Borawski, J. B., Evans, C. S., Nelson, S. M., Gerardo, C. J., & Limkakeng, A. T. (2012). Dental visits to a North Carolina emergency department: a painful problem. *N C Med J*, *73*(5), 346-351. http://www.ncbi.nlm.nih.gov/pubmed/23189415

7. Okunseri, C., Okunseri, E., Thorpe, J. M., Xiang, Q., & Szabo, A. (2012). Medications prescribed in emergency departments for nontraumatic dental condition visits in the United States. *Med Care*, *50*(6), 508-512. https://doi.org/10.1097/MLR.0b013e318245a575

8. Rui, P., Santo, L., & Ashman, J. J. (2020). Trends in opioids prescribed at discharge from emergency departments among adults: United States, 2006-2017. *Natl Health Stat Report*(135), 1-12. https://www.ncbi.nlm.nih.gov/pubmed/32510308

9. Curt, A., & Samuels-Kalow, M. (2022). How should emergency department clinicians respond to unmet dental needs? *AMA J Ethics*, *24*(1), E13-18. https://doi.org/10.1001/amajethics.2022.13

10. Higbea, R. J., Palumbo, C. H., Pearl, S. A., Byrne, M. J., & Wise, J. (2013). Dentists' partnership of Michigan's Calhoun County: a care model for uninsured populations. *Health Aff (Millwood)*, *32*(9), 1646-1651. https://doi.org/10.1377/hlthaff.2013.0159

11. Rowland, S., Leider, J. P., Davidson, C., Brady, J., & Knudson, A. (2016). Impact of a community dental access program on emergency dental admissions in rural Maryland. *Am J Public Health*, *106*(12), 2165-2170. https://doi.org/10.2105/AJPH.2016.303467

References (2 of 4)

12. DentistryIQ. (2013). *Maine hospital opens dental clinic to alleviate ER burdens.* Retrieved November 19, 2024 from https://www.dentistryiq.com/practice-management/insurance/article/16353323/maine-hospital-opens-dental-clinic-to-alleviate-er-burdens

13. Durity, A. (2020). *Waldo County Dental Care provides free, reduced-price dental work.* Penobscot Bay Pilot. Retrieved November 19, 2024 from https://www.penbaypilot.com/article/waldo-county-dental-care-provides-free-reduced-price-dental-work/138917

14. American College of Obstetricians and Gynecologists. (2013). Committee Opinion No. 569: oral health care during pregnancy and through the lifespan. *Obstet Gynecol*, *122*(2 Pt 1), 417-422. https://doi.org/10.1097/01.AOG.0000433007.16843.10

15. Figuero, E., Carrillo-de-Albornoz, A., Martin, C., Tobias, A., & Herrera, D. (2013). Effect of pregnancy on gingival inflammation in systemically healthy women: a systematic review. *J Clin Periodontol*, *40*(5), 457-473. https://doi.org/10.1111/jcpe.12053

16. Daalderop, L. A., Wieland, B. V., Tomsin, K., Reyes, L., Kramer, B. W., Vanterpool, S. F., & Been, J. V. (2018). Periodontal disease and pregnancy outcomes: overview of systematic reviews. *JDR Clin Trans Res*, *3*(1), 10-27. https://doi.org/10.1177/2380084417731097

17. Finlayson, T. L., Gupta, A., & Ramos-Gomez, F. J. (2017). Prenatal maternal factors, intergenerational transmission of disease, and child oral health outcomes. *Dent Clin North Am*, *61*(3), 483-518. https://doi.org/10.1016/j.cden.2017.02.001

18. da Silva Bastos Vde, A., Freitas-Fernandes, L. B., Fidalgo, T. K., Martins, C., Mattos, C. T., de Souza, I. P., & Maia, L. C. (2015). Mother-to-child transmission of Streptococcus mutans: a systematic review and meta-analysis. *J Dent*, *43*(2), 181-191. https://doi.org/10.1016/j.jdent.2014.12.001

19. American Public Health Association. (October 24, 2020.). *Policy Number 20203: Improving Access to Dental Care for Pregnant Women through Education, Integration of Health Services, Insurance Coverage, an Appropriate Dental Workforce, and Research*. Retrieved December 22, 2022 from https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2021/01/12/improving-access-to-dental-care-for-pregnant-women

20. Rocha, J. S., Arima, L. Y., Werneck, R. I., Moyses, S. J., & Baldani, M. H. (2018). Determinants of dental care attendance during pregnancy: a systematic review. *Caries Res*, *52*(1-2), 139-152. https://doi.org/10.1159/000481407

21. U.S. Department of Health and Human Services. (September 22, 2022.). *HHS Approves 12-month Extension of Postpartum Medicaid and CHIP Coverage in North Carolina*. Retrieved November 19, 2024 from https://www.cms.gov/newsroom/press-releases/hhs-approves-12-month-extension-postpartum-medicaid-and-chip-coverage-north-carolina

References (3 of 4)

22. Connecticut Dental Health Partnership. (2019). *Connecticut Perinatal and Infant Oral Health Project Update.* Retrieved November 19, 2024 from https://www.cga.ct.gov/ph/med/related/20190101_Women%20&%20Childrens%20Health%20Committee/20190610/Perinatal%20and%20Infant%20Oral%20Health%20Project.pdf

23. Lorenzo, S., Goodman, H., Stemmler, P., Holt, K., & Barzel, R., eds. (2019). *The Maternal and Child Health Bureau-Funded Perinatal and Infant Oral Health Quality Improvement (PIOHQI) Initiative 2013-2019: Final Report*. National Maternal and Child Oral Health Resource Center, Georgetown University. Retrieved November 19, 2024 from https://www.mchoralhealth.org/PDFs/piohqi-final-report-2019.pdf

24. Milgrom, P., Sutherland, M., Shirtcliff, R. M., Ludwig, S., & Smolen, D. (2010). Children's tooth decay in a public health program to encourage low-income pregnant women to utilize dental care. *BMC Public Health*, *10*, 76. https://doi.org/10.1186/1471-2458-10-76

25. Centers for Disease Control and Prevention. (2024). *Oral Health Tips for Children*. Retrieved November 19, 2024 from https://www.cdc.gov/oral-health/prevention/oral-health-tips-for-children.html

26. Nowak, A. J., Casamassimo, P. S., Scott, J., & Moulton, R. (2014). Do early dental visits reduce treatment and treatment costs for children? *Pediatr Dent*, *36*(7), 489-493. https://www.ncbi.nlm.nih.gov/pubmed/25514078

27. Ahmed, I., McGivern, S., Beymer, M. R., Okunev, I., Tranby, E. P., Frantsve-Hawley, J., Tseng, C. H., & Ramos-Gomez, F. (2021). Age of First Oral Health Examination and Dental Treatment Needs of Medicaid-Enrolled Children. *JDR Clin Trans Res*, 23800844211057793. https://doi.org/10.1177/23800844211057793

28. Krol, D. M., Whelan, K., & The Section On Oral Health. (2023). Maintaining and Improving the Oral Health of Young Children. *Pediatrics*, *151*(1). https://doi.org/10.1542/peds.2022-060417

29. Centers for Medicare & Medicaid Services. *Early and Periodic Screening, Diagnosis, & Treatment: FY 2021 National Data*. Retrieved November 19, 2024 from https://www.medicaid.gov/medicaid/benefits/early-and-periodic-screening-diagnostic-and-treatment/index.html

30. McKernan, S. C., Kuthy, R. A., Ryeynolds, J. C., Tuggle, L., & Garcia, D. T. (2018). *Medical-Dental Integration in Public Health Settings: An Environmental Scan.* University of Iowa Public Policy Center. Retrieved November 19, 2024 from https://iro.uiowa.edu/esploro/outputs/report/Medical-Dental-Integration-in-Public-Health-Settings/9983557186402771

31. Access to Baby and Child Dentistry (ABCD). (2024). *Results*. Retrieved November 19, 2024 from https://abcd-dental.org/results/

32. D'Aiuto, F., Gable, D., Syed, Z., Allen, Y., Wanyonyi, K. L., White, S., & Gallagher, J. E. (2017). Evidence summary: The relationship between oral diseases and diabetes. *Br Dent J*, *222*(12), 944-948. https://doi.org/10.1038/sj.bdj.2017.544

References (4 of 4)

33. Sandberg, G. E., Sundberg, H. E., Fjellstrom, C. A., & Wikblad, K. F. (2000). Type 2 diabetes and oral health: a comparison between diabetic and non-diabetic subjects. *Diabetes Res Clin Pract*, *50*(1), 27-34. https://doi.org/10.1016/s0168-8227(00)00159-5

34. Centers for Disease Control and Prevention. (2024). *Diabetes and Oral Health Facts*. Retrieved November 19, 2024 from https://www.cdc.gov/oral-health/data-research/facts-stats/fast-facts-diabetes-and-oral-health.html

35. Wu, C. Z., Yuan, Y. H., Liu, H. H., Li, S. S., Zhang, B. W., Chen, W., An, Z. J., Chen, S. Y., Wu, Y. Z., Han, B., Li, C. J., & Li, L. J. (2020). Epidemiologic relationship between periodontitis and type 2 diabetes mellitus. *BMC Oral Health*, *20*(1), 204. https://doi.org/10.1186/s12903-020-01180-w

36. Alwithanani, N. (2023). Periodontal Diseases and Diabetes Mellitus: A Systematic Review. *J Pharm Bioallied Sci*, *15*(Suppl 1), S54-S63. https://doi.org/10.4103/jpbs.jpbs_515_22

37. Chapple, I. L., Genco, R., on behalf of workgroup 2 of the joint EFP/AAP workshop. (2013). Diabetes and periodontal diseases: consensus report of the Joint EFP/AAP Workshop on Periodontitis and Systemic Diseases. *J Periodontol*, *84*(4 Suppl), S106-112. https://doi.org/10.1902/jop.2013.1340011

38. Casanova, L., Hughes, F. J., & Preshaw, P. M. (2014). Diabetes and periodontal disease: a two-way relationship. *Br Dent J*, *217*(8), 433-437. https://doi.org/10.1038/sj.bdj.2014.907

39. Simpson, T. C., Clarkson, J. E., Worthington, H. V., MacDonald, L., Weldon, J. C., Needleman, I., Iheozor-Ejiofor, Z., Wild, S. H., Qureshi, A., Walker, A., Patel, V. A., Boyers, D., & Twigg, J. (2022). Treatment of periodontitis for glycaemic control in people with diabetes mellitus. *Cochrane Database Syst Rev*, *4*(4), CD004714. https://doi.org/10.1002/14651858.CD004714.pub4

40. American Diabetes Association Professional Practice Committee. (2024). 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes-2024. *Diabetes Care*, *47*(Suppl 1), S52-S76. https://doi.org/10.2337/dc24-S004

41. Reyna, S., Anderson, S., Yang, S., & Rosehbach, M. (2024). *Recommendations for Improving Oral Health Care Access, Quality, and Outcomes and Advancing Equity in Medicaid and the Children's Health Insurance Program.* Center for Medicaid and CHIP Services, Centers for Medicare & Medicaid Services. Retrieved November 19, 2024 from https://www.medicaid.gov/medicaid/benefits/downloads/ohi-exp-workgroup-rpt.pdf

42. CareOregon Dental. (2024). *Oral Health Integration Project.* Retrieved November 19, 2024 from https://www.careoregondental.org/ohip

43. Oral Health Unit, C. D. o. P. H. a. E. (2024). *Diabetes, Cardiovascular Disease, and Oral Health Integration.* Retrieved November 19, 2024 from https://coloradooralhealth.org/initiatives/oral-health-integration/dcvdohi/

T-MSIS Data Acknowledgement & Resources

- DQA Oral Healthcare Quality Dashboard reports are part of a research project titled "The State of Oral Healthcare Use, Quality and Spending: Findings from Medicaid and CHIP Programs," made possible through Data Use Agreement (DUA) RSCH-2020-55639 with the Centers for Medicare & Medicaid Services.
- Centers for Medicare & Medicaid Services, T-MSIS Data: https://www.medicaid.gov/medicaid/data-systems/macbis/medicaid-chip-research-files/transformed-medicaid-statistical-information-system-t-msis-analytic-files-taf/index.html