Consortium for Oral Health Systems Integration and Improvement

Oral Health Quality Indicators for the Maternal and Child Health Population: User Guide and Technical Specifications

June 2023

Prepared by:

Dental Quality Alliance

National Maternal and Child Oral Health Resource Center

COHSII

Consortium for Oral Health Systems Integration and Improvement

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Preface

A. Purpose

This user guide provides guidance on implementing oral health quality indicators for the maternal and child health (MCH) population.

Importance of MCH Oral Health Quality Indicators

Tooth decay is the most common chronic disease among children in the United States, causing pain and other problems that can interfere with eating, sleeping, socializing, and learning. Tooth decay can also lead to more serious health problems. The need for oral health care is one of the most prevalent unmet health care needs reported by parents. Poor oral health among pregnant women may contribute to adverse birth outcomes, and a mother's oral health status can influence her child's oral health status.

Quality indicators are foundational to quality improvement in health care. They aim to detect how well systems are working, allow for comparisons between entities that promote shared learning, enable assessments of improvement over time, and improve transparency. To date, oral health care quality indicators for the MCH population have been spread across different programs and data sources and inconsistently reported. Lack of consistent and standardized measurement is a barrier to achieving system-wide improvements in care and outcomes.

This set of standardized indicators has been identified through expert consensus processes as being both feasible and meaningful for measuring and improving the quality of care in MCH programs. A combination of indicators is necessary to show how well MCH systems are providing access to care, delivering evidence-based care, and improving population health.

Intended Use

The MCH oral health quality indicators constitute a standardized and aligned quality measurement system designed to promote state efforts to monitor and improve the quality of oral health care for the MCH population. Incorporating indicators into state oral health quality measurement and surveillance plans for reporting over time will help states.

- Assess current system performance.
- Identify priority areas.
- Develop action plans to drive improvements in care quality and outcomes.
- Assess progress in achieving improvement goals.

The indicators are designed to be used as a set to provide a more complete picture of care than is possible when using indicators in isolation. It is important to recognize that each indicator provides a broad assessment about the extent to which access, use, process, and outcomes goals are being achieved. States seeking to improve on any indicator will need to evaluate the care domain addressed by the indicator in more depth to better understand the underlying factors contributing to current performance and identify improvement strategies.

Intended Users

The indicators are designed for use by the state oral health program in partnership with the state MCH program, the state department of health, and the state Medicaid agency. Implementation of these indicators will require involvement of epidemiologists and/or data analysts within these programs. With resources and technical assistance from the Consortium for Oral Health Systems Integration and Improvement (COHSII), state oral health programs can conduct a readiness assessment and report on the indicators.

Implementation of these indicators will require involvement of epidemiologists and/or data analysts within these programs.

B. Organization of User Guide

This user guide is organized into six sections:

Section 1: Introduction

Content. This section provides background information on the selection of the MCH oral health quality indicators.

Intended Audience. This section is designed for stakeholders interested in monitoring and improving oral health care quality for the MCH population, including directors and staff of state oral health programs, MCH programs, and Medicaid agencies.

Section 2: General Guidelines for Data Collection, Preparation, and Reporting

Content. This section describes data sources, data elements within those data sources, and other considerations when preparing to report the quality indicators.

Intended Audience. This section is designed for epidemiologists and/or data analysts who will be calculating the indicators.

Appendix 1: Technical Specifications

Content. This section provides a detailed, step-by-step approach for calculating each quality indicator.

Intended Audience. This section is designed for epidemiologists and/or data analysts who will be calculating the indicators.

Appendix 2: Resources, Acknowledgements, and Attributions

Content. This section includes additional online resources available to assist with indicator reporting and use, a list of Quality Indicator Advisory Team (QIAT) members and other contributors, and data sources and code sets used for indicator reporting.

Intended Audience. This section is designed for all stakeholders.

C. Technical Assistance and Contacts

Technical assistance is available to state implementation teams for the collection, analysis, and interpretation of MCH oral health quality indicator data.

Contact the Dental Quality Alliance (DQA) (DQA@ada.org, www.ada.org/dqa) to be connected to the appropriate technical advisor.

National Maternal and Child Oral Health Resource Center (OHRC): OHRCinfo@georgetown.edu, www.mchoralhealth.org

Section 1: Introduction

This user guide provides guidance for reporting on oral health quality indicators for the MCH population during 2023.[1]

A. Background

COHSII established a QIAT to identify a set of MCH oral health quality indicators to monitor and improve oral health care services delivered to the MCH population in public health programs and systems of care. The QIAT identified these indicators by developing a quality measurement and performance improvement framework, conducting a broad environmental scan of existing oral health care quality indicators and using a consensus-based process to determine the indicator set (find more information on the Oral Health Quality Indicators for the MCH Population webpage).

COHSII is funded by the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration. COHSII is led by OHRC in partnership with the Association of State and Territorial Dental Directors and DQA. COHSII works with key stakeholders to improve systems of care in support of a quality improvement, patient-centered approach to address the oral health needs of the MCH population.

The MCH oral health quality indicators are **national indicators**; their scores are calculated using the following data sources collected at the **state level**:

- Basic Screening Survey (BSS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Pregnancy Risk Assessment Monitoring System (PRAMS)
- Medicaid administrative claims and enrollment data

The availability of standardized data sources was an important consideration when selecting the indicators. Indicators were selected based on their potential to drive meaningful improvements in quality and on their near-term implementation feasibility.

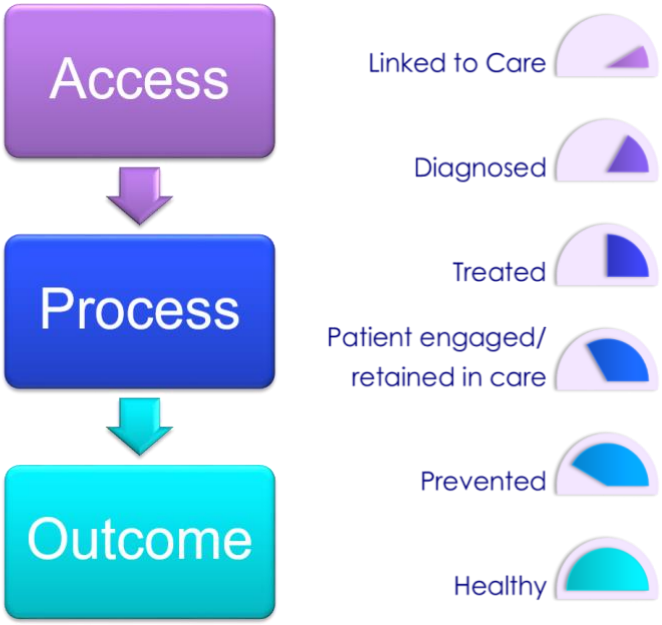
B. Maternal and Child Health Oral Health Quality Indicators

The MCH oral health quality indicators span the quality domains of access, utilization, process, and outcomes (Figure 1). As the DQA User Guide notes: "There is no single 'magic' measure. Rather, a set of carefully chosen measures can be used to provide a more complete picture of care, establish baseline performance, identify improvement opportunities, and monitor progress toward achieving the ultimate care goals."

The indicators are grouped by two MCH sub-populations: (1) women of child-bearing age and pregnant women and (2) children. The indicators are listed below. Detailed technical specifications for epidemiologists and data analysts who calculate the indicators are provided in Appendix 1.

Figure 1. Measure Sets to Support Attaining Ultimate Care Goal

[1] 2023 represents when indicators are reported and not when data for indicators were collected. Data collection timeframes vary by indicator and are noted within the specifications for each indicator.



Source: Dental Quality Alliance. 2022. *Quality Measurement in Oral Healthcare: A Guidebook*. Chicago, IL: American Dental Association.

Quality Indicators for Women of Child-Bearing Age and Pregnant Women

Indicators Based on Claims and Enrollment Data

- Percentage of persons with live-birth deliveries in the reporting year who received a comprehensive or periodic oral evaluation during pregnancy (Data source: Enrollment and claims)* †
- Percentage of persons with live-birth deliveries in the reporting year who received at least one dental service during pregnancy (Data source: Enrollment and claims)*

Indicators Based on Patient-Reported Survey Data

- Percentage of pregnant women reporting difficulty getting dental care during pregnancy (Data source: PRAMS)
- Percentage of pregnant women who had insurance to cover dental care during pregnancy (Data source: PRAMS)Percentage of pregnant women who reported having their teeth cleaned by a dentist or dental hygienist during pregnancy (Data source: PRAMS)
- Percentage of women of child-bearing age (ages 18–44) who report having a visit to a dentist or dental clinic in the past year (Data source: BRFSS)
- Percentage of pregnant women reporting that they needed to see a dentist for a problem during pregnancy (Data source: PRAMS)

† Indicators added to set in 2023.
*Developer and steward: DQA

Quality Indicators for Children

Indicators Based on Claims and Enrollment Data

- Dentists who actively participate in Medicaid per 1,000 EPSDT-eligible enrolled children (Data source: Enrollment and claims)

- Percentage of children who had a dental visit in the last 12 months (Data source: Enrollment and claims)* †
- Percentage of children at elevated risk receiving preventive dental services (Data source: Enrollment and claims)*
- Percentage of children receiving at least two topical fluoride applications as a dental or oral health service (Data source: Enrollment and claims)*
- Percentage of children who have ever received sealants on permanent first molar teeth by the10th birthdate (Data source: Enrollment and claims)*
- Percentage of children who have ever received sealants on permanent second molar teeth by the 15th birthdate (Data source: Enrollment and claims)*

Indicators Based on Clinical Screening Survey Data

- Percentage of kindergarten children with dental caries experience (treated or untreated tooth decay) (Data source: Basic Screening Survey [BSS])
- Percentage of third-grade children with dental caries experience (treated or untreated tooth decay) (Data source: BSS)
- Percentage of kindergarten children with urgent dental treatment needs (Data source: BSS)
- Percentage of third-grade children with urgent dental treatment needs (Data source: BSS)

*Developer and steward: DQA
† In 2021, two indicators were combined into one by DQA

C. Level of Measurement

Quality indicators can be reported at different levels. DQA notes that to achieve system-level improvement, it is important to have measurement that is horizontally aligned across public and private sectors and vertically aligned from the point of care to the broader systems level. "Starting with broad populations, national goals guide the development of program-level measures, which are then used to derive practice- and clinician-level measures."[2] Thus, achieving improvement at the broader systems level using the MCH oral health quality indicators requires engagement of stakeholders and alignment of measures across all system levels (Figure 2).

[2] Dental Quality Alliance. 2022. *Quality Measurement in Dentistry: A Guidebook*. Chicago: IL: American Dental Association.

Figure 2. Measurement Alignment Across Reporting Levels

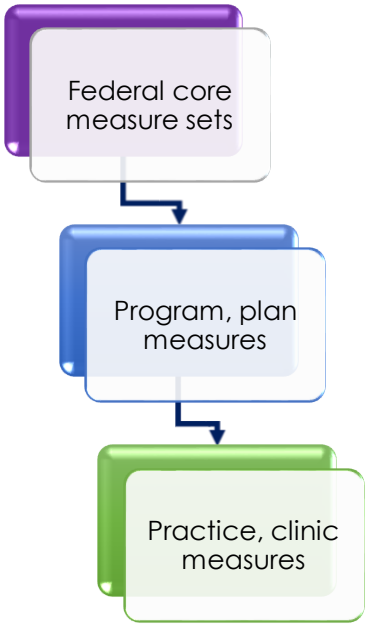


Figure adapted from Dental Quality Alliance. 2018. *Alignment and Harmonization in Reporting Quality: Establishing Reliability Across Reporting Levels*. Chicago, IL: American Dental Association.

D. Readiness Assessment: Evaluating Capacity to Measure

Before beginning to report on the MCH oral health quality indicators, states are encouraged to conduct a readiness assessment to determine what can be measured in the near term and what will require building data collection and reporting capacity. It is envisioned that staff in the state oral health program will take the lead on the readiness assessment in partnership with state epidemiologists, data analysts, the state MCH director, and Medicaid staff. Readiness assessment results can be used to develop an action plan with specific time-based goals to obtain the data and analytic capacity necessary to report on MCH oral health quality indicators.

Contact COHSII for access to an online readiness assessment form that provides tips for how to interpret your result.

Section 2: General Guidelines for Data Collection, Preparation, and Reporting

A. Data Sources and Critical Data Elements

Data sources refer to state-level data-collection systems and associated databases containing data that form the basis for calculating indicator scores. ***Critical data elements*** are the specific data elements, or variables, within a particular data source that are required to calculate a specific indicator score. Below is a summary of data sources and critical data elements required to calculate MCH oral health quality indicator scores.

Data Source: PRAMS, Surveillance Year 2021

Critical Data Elements

Phase 8 Core Question	
17.	During your most recent pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?
Phase 8 Standard Questions	
Y6.	Did any of the following things make it hard for you to go to a dentist or dental clinic during your most recent pregnancy?
Y7.	This question is about other care of your teeth during your most recent pregnancy.

Data Source: BRFSS, Surveillance Year 2020

Note: The oral health core set of questions is a rotating core that is included in BFRSS in even-numbered years.

Critical Data Elements

Section 7: Oral Health	
COH.01	Including all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists, how long has it been since you last visited a dentist or a dental clinic for any reason?
Demographics	
Respondent Age	What is your age? (Core Section 8: DEM.01)
Respondent Sex	Codebook variables: BIRTHSEX=2 (female) or SEXVAR=2 (female) if BIRTHSEX is not equal to (1,2)

Data Source: Medicaid Enrollment and Claims Data, Calendar Year 2021

Critical Data Elements

Enrollment database	Claims database
• Member ID • Date of birth • Enrollment start and end dates • Program-eligibility category	• Member ID • Date of service • CDT codes • Tooth number • National Uniform Claim Committee health care provider taxonomy codes

	• National provider identifier • Provider billed amounts

Data Source: BSS, ASTDD

Critical Data Elements

Kindergarten
• Children screened
• Caries experience (treated or untreated decay)
• Untreated decay
• Needs urgent dental care
Third-grade Children
• Children screened
• Caries experience (treated or untreated decay)
• Untreated decay
• Needs urgent dental care

B. Time Frame

This user guide is for **data-collection year 2021** or the most recent prior year for which data are available:

- **Medicaid enrollment and claims data:** enrollment and service dates in 2021
- **PRAMS:** birth year and surveillance year is 2021
- **BFRSS:** survey collection year is 2020 (oral health module is a rotating core collected only in even years)
- **BSS kindergarten survey:** Data-collection year is school year 2020-2021 or most recent available (ASTDD guidance recommends that states conduct this survey every 5 years)
- **BSS third-grade survey:** Data-collection year is school year 2020-2021 or most recent available (ASTDD guidance recommends that states conduct this survey every 5 years)

C. Level of Reporting

MCH oral health quality indicator scores are calculated at population and systems (e.g., Medicaid program or dental plan) levels (see table below). The technical specifications for each indicator indicate the applicable reporting level. Reporting on the indicator at levels other than that for which it was intended may not be reliable.

Data Source	Level of Reporting
PRAMS	Population—state sample of women who delivered a live-born infant
BRFSS	Population—state sample of adults ages 18 and older
Medicaid/CHIP administrative data	Program—children enrolled in state Medicaid or CHIP program
BSS	Population—state sample of kindergarten children and third-grade children, respectively

D. Included Populations and Age Eligibility

General age eligibility follows approaches used by DQA for oral health quality measurement.

Children may include individuals ages up to, but not including, 21 (under age 21) to be consistent with Medicaid EPSDT eligibility and the Medicaid Core Set of Children's Health Care Quality Measures for Medicaid and CHIP.

Adults may include age18 as the lower age bound consistent with the lower age bound included in the Medicaid Core Set of Adult Health Care Quality Measures.

Women of child-bearing age is frequently defined as women ages 15–44 and, therefore, may include females under age 18. The age range used is based on the indicator data source.

The age ranges for pediatric indicators and adult indicators may overlap. The applicable age range for each indicator is indicated within the technical specifications.

E. Data Collection and Quality

The Centers for Disease Control and Prevention (CDC) provides guidance for conducting, analyzing, and reporting BRFSS and PRAMS data.[3,4]

ASTDD provides guidance for conducting, analyzing, and reporting BSS data.[5]

DQA provides guidance for assessing data quality and promoting reliable implementation of measures using administrative enrollment and claims data.[6]

In addition to following the above guidance, before calculating indicator scores, implementers should evaluate and report on the extent of missing or invalid data contained within each data source, particularly for critical data elements and stratification data elements. ***Stratification data elements*** are those specific data elements, or variables, used to calculate separate indicator scores by the characteristics of the population that is the focus of the measure (i.e., included in the indicator denominator), such as age, race, ethnicity, or geographic location. The term ***missing data*** refers to not having a value filled for the data element (may include unknown and refused values for survey-based data sources). The term ***invalid data*** refers to filled values that do not represent legitimate values for that field (e.g., a code entered in the procedure code data element field that is not among the recognized set of procedure codes). For any indicator or indicator stratification with a data element that has missing or invalid values of more than 10% of data, the reasons for missing or invalid data should be explored. Improved data completeness and quality

[3] Centers for Disease Control and Prevention. 2022. *Behavioral Risk Factor Surveillance System* [webpage].
[4] Centers for Disease Control and Prevention. 2023. *PRAMS* [webpage].
[5] Association of State and Territorial Dental Directors. N.d. *ASTDD Basic Screening Surveys* [webpage].
[6] Dental Quality Alliance. 2023. *Program/Plan Level Dental Quality Measures* [webpage].

should be sought as part of overall quality improvement efforts. As indicated below, the extent of missing and invalid data should be included in indicator data reports.

F. Stratification

Following DQA guidelines,[7] to identify disparities and inform quality improvement efforts, the indicator scores should be stratified by population characteristics, when possible. ***Stratification*** refers to calculating separate indicator scores by the characteristics of the population that is the focus of the measurement (i.e., individuals eligible for inclusion in the indicator's denominator). Stratification variables may include age, race, ethnicity, geographic location, socioeconomic status, and program eligibility (e.g., Title V). To stratify indicators, "the denominator population is divided into different subsets based on the characteristic of interest (e.g., age, race, ethnicity, or geographic location) and the rates are reported for each sub-population."[7]

Race and Ethnicity Stratifications

To promote consistency in the race/ethnicity categories reported across the set of MCH oral health quality Indicators, all indicators should include overall scores as well as stratification scores by the following **mutually exclusive** race and ethnicity categories:

- Hispanic
- Non-Hispanic White
- Non-Hispanic Black
- Non-Hispanic other race or multiple race

Individuals should be classified as only one of the above categories. Individuals who select Hispanic ethnicity alone or in combination with any race category should be classified as Hispanic. Non-Hispanic individuals who select more than one race category should be classified as multiple race.

Separate detailed race/ethnicity breakouts by the following mutually exclusive categories are encouraged if sample size permits (see Section H below on sample size):

- Hispanic
- Non-Hispanic White
- Non-Hispanic Black
- Non-Hispanic American Indian/Alaska Native
- Non-Hispanic Asian
- Non-Hispanic Native Hawaiian/Other Pacific Islander
- Non-Hispanic multiple race
- Non-Hispanic other race (single other race)

States should evaluate the extent to which race and ethnicity information are missing (see the preceding section). The percentage of missing or invalid values should be reported with the report on stratifications (see following section).

[7] Dental Quality Alliance. 2023. *User Guide for Pediatric Measures Calculated Using Administrative Claims Data*. Chicago, IL: Dental Quality Alliance.

G. Reporting Missing and Invalid Data

The extent of missing and invalid data should be included in indicator data reports. For any indicator or indicator stratification with a data element missing more than 10% of data, it should be explicitly noted that the indicator/stratification should be interpreted with caution, and the percentage of missing data for the relevant data element(s) should be reported. When finding missing or invalid values of more than 10% of data, the reasons for missing or invalid data should be explored. Improved data completeness and quality should be sought as part of overall quality improvement efforts.

H. Minimum Denominator Size and Data Suppression

When indicators are stratified, the number of individuals in the denominator may be small. States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX (where XX represents the state's threshold value).

I. Guidance for Indicators Reported on Using Specific Data Sources

Indicators Reported on Using PRAMS Data

Response Rate Thresholds

CDC's minimum overall response rate threshold is set at 50% for the release of PRAMS data for public reporting purposes.[8] If the response rate threshold was not met for the reporting year, the indicator can be used for internal use to support quality improvement efforts but not for public reporting. States not meeting the threshold are encouraged to adopt strategies to improve their response rates. There is a range of incentives and rewards that states have used to improve response rates on PRAMS surveys.[9]

Indicators Reported on Using Administrative Enrollment and Claims Data

Included Populations

States should seek to report on these measures for all children for whom administrative enrollment and claims data are available. All states should have claims data for children enrolled in Medicaid and CHIP. States with all-payer claims databases that incorporate dental services are encouraged to report on a broader population of children and to stratify results by source of coverage (e.g., Medicaid, CHIP, commercial plans).

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[8] Centers for Disease Control and Prevention. 2022. *Are PRAMS Data Available to Researchers?* [webpage].

[9] Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. 2018. The Pregnancy Risk Assessment Monitory System (PRAMS): Overview of design and methodology. *American Journal of Public Health*108(10):1305–1313.

Enrollment Requirements for DQA Measure

Based on testing data, DQA elected to use the 180-day continuous enrollment requirement for most of its access and process measures "to balance sufficient enrollment duration to allow children adequate time to access care with the number of children who are excluded from the denominator due to stricter enrollment requirements." This enrollment interval differs from the 90-day continuous-eligibility criteria for Centers for Medicare & Medicaid Services (CMS) EPSDT reporting. DQA's *2023 Pediatric Measures User Guide* notes: "CMS and other stakeholders (e.g., state Medicaid programs and state Health Insurance Marketplaces) have adopted DQA measures. The 180-day enrollment interval has not been cited as a barrier to implementation although it has been recognized as a distinction from the CMS EPSDT data reporting requirements."[10] Measure implementers interested in making comparisons to CMS EPSDT data or in further evaluating the impact of enrollment requirements can conduct their own sensitivity analyses using different enrollment lengths. However, these alternative enrollment lengths should not be used for MCH oral health quality indicator reporting. For more information on enrollment requirements for these measures, see the DQA's *2022 Pediatric Measures User Guide*.

[10] Dental Quality Alliance. 2023. *User Guide for Pediatric Measures Calculated Using Administrative Claims Data.* Chicago, IL: Dental Quality Alliance.

Appendix 1. Technical Specifications

A. Oral Health Quality Indicators for Women of Child-Bearing Age and Pregnant Women

Indicator Domain: ACCESS

Indicator W.1. Percentage of Pregnant Women Reporting Difficulty Getting Dental Care During Pregnancy

Source: Centers for Disease Control and Prevention, Pregnancy Risk Assessment Monitoring System (PRAMS)

1. Description

Percentage of pregnant women reporting difficulty getting dental care

- **Numerator:** Number of women who answered "yes" to any of the response options for Phase 8, standard question Y6
- **Denominator:** Number of women who answered PRAMS standard question Y6; exclude unknowns and refusals

Phase 8, Standard Question Y6
Did any of the following things make it hard for you to go to a dentist or dental clinic during *your most recent* pregnancy? For each item, check No if it was not something that made it hard for you to go to a dentist during pregnancy or Yes if it was.

- I could not find a dentist or dental clinic that would take pregnant patients
- I could not find a dentist or dental clinic that would take Medicaid patients
- I did not think it was safe to go to the dentist during pregnancy
- I could not afford to go to the dentist or dental clinic

2. Framework Domain

Access

- Provider availability: The availability of providers to ensure that benefits for beneficiaries are accessible without unreasonable travel or time delays
- Scope of services: Range of services provided to pregnant women and children of various ages

3. Level of Reporting

This is a state-level, population-based measure of resident women within the state who recently gave birth to a live-born infant during the surveillance year.

4. Data Source

PRAMS is a mixed-mode (mail and telephone) surveillance system.[11]

5. Data Elements

Critical Data Elements	
Phase 8, standard question Y6	Did any of the following things make it hard for you to go to a dentist or dental clinic during *your most recent* pregnancy? For each item, check No if it was not something that made it hard for you to go to a dentist during pregnancy or Yes if it was.
Priority Stratifications	
Maternal age (from birth certificate)	<20 Years 20–24 Years 25–29 Years 30–34 Years ≥35 Years
Race/ethnicity, collapsed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other/multiple race
Optional Stratification Elements[12]	
Race/ethnicity, detailed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic American Indian/Alaska Native Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander Non-Hispanic multiple race Non-Hispanic other race (single other race)
Educational attainment (from birth certificate)	Less than high school High school graduate More than high school (some college or more)
Health insurance (principal source of payment for delivery; only available for states with the 2003 revision to the U.S. certificate of live birth)	Private Medicaid/CHIP Other public Uninsured

[11] Centers for Disease Control and Prevention. 2021. Methodology [webpage].
[12] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2023. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) participation (birth certificate; from PRAMS survey before 2016)	Yes No
Marital status (from birth certificate)	Married Unmarried/other

6. Measure Guidance

When calculating this measure score, states should use the weighted data provided to them by the Centers for Disease Control and Prevention (CDC). This measure should be publicly reported only if the state met the PRAMS response rate threshold of 50% specified by CDC.[13] If the response rate threshold was not met, the measure can be used for internal use to support quality improvement efforts. To improve response rates, states can use a range of incentives and rewards.[14]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1. Determine the number who answered Phase 8, standard question Y6.

Step 2. Exclude unknowns and refusals.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Number of respondents answering question Y6

B. Numerator

Step 1. Determine the number who answered "yes" to any of the four response options for Phase 8, standard question Y6:

Count respondent in numerator if she answered "yes" to:

- "I could not find a dentist or dental clinic that would take pregnant patients"

OR

- "I could not find a dentist or dental clinic that would take Medicaid patients"

OR

- "I did not think it was safe to go to the dentist during pregnancy"

OR

- "I could not afford to go to the dentist or dental clinic"

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Respondents who reported difficulty getting dental care

[13] Centers for Disease Control and Prevention. 2022. *Are PRAMS Data Available to Researchers?* [webpage].

[14] Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. 2018. The Pregnancy Risk Assessment Monitory System (PRAMS): Overview of design and methodology. *American Journal of Public Health* 108(10):1305–1313.

C. Denominator Exclusions/Exceptions

Missing responses and refusals.

D. Priority Reporting Stratifications

a. Maternal Age (<20, 20–24, 25–29, 30–34, ≥35)
b. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other/multiple race)

E. Optional Reporting Stratifications

a. Detailed race/ethnicity if sample size permits (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic American Indian/Alaska Native, Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander, Non-Hispanic other race [single other race], Non-Hispanic multiple race)
b. Educational attainment (less than high school, high school graduate, more than high school)
c. Health insurance (private, Medicaid/CHIP, other public, uninsured)
d. WIC participation (yes, no)
e. Marital status (married, unmarried/other)

F. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [priority reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Measure score, weighted, stratified by [optional reporting stratification] with 95% confidence intervals and unweighted denominator count
i. Response rate for overall survey

Reporting notes:

- States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX.
- Any indicator or indicator stratification with a data element missing more than 10% of data should explicitly note that the indicator/stratification should be interpreted with caution and identify the percentage of missing data for the relevant data element(s).

8. Limitations

Indicator limitations include: (1) PRAMS data are collected only from women who delivered a live-born infant, not from all women of reproductive age. (2) PRAMS

data are self-reported and may be subject to recall bias and under-reporting or over-reporting of behaviors based on social desirability. (3) Self-report surveys such as PRAMS may be subject to systematic error resulting from non-coverage (e.g. lower landline telephone coverage due to transition to cellular-telephone-only households, undeliverable addresses), nonresponse (e.g. refusal to participate in the survey or to answer specific questions), or measurement bias (e.g. recall bias). However, PRAMS attempts to contact potential respondents by mail and landline or cellular telephone to increase response rates. (4) Women with fetal death or abortion are excluded from PRAMS. (5) PRAMS estimates cover only the population of women in each state who also deliver in that state; therefore, women who delivered in a different state are not captured in their resident state.[15] Not all states conduct PRAMS every year.

9. Additional Notes

This indicator was created by COHSII for the MCH oral health quality indicators from the PRAMS survey. Additional information about PRAMS is available online.

[15] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].

Indicator Domain: ACCESS

Indicator W.2. Percentage of Pregnant Women Who Had Insurance to Cover Dental Care During Pregnancy

Source: Centers for Disease Control and Prevention (CDC), Pregnancy Risk Assessment Monitoring System (PRAMS)

1. Description

Percentage of pregnant women reporting that they had insurance to cover dental care during pregnancy

- **Numerator:** Number of women who answered "yes" to the response option: "I had insurance to cover dental care during my pregnancy"
- **Denominator:** Number of women who answered "yes" or "no" to standard question Y7, response option "I had insurance to cover dental care during my pregnancy"; exclude unknowns and refusals

Phase 8, Standard Question Y7

This question is about the care of your teeth *during your most recent* pregnancy. For each item, check No if it is not true or does not apply to you or Yes if it is true.

- I knew it was important to care for my teeth and gums during my pregnancy
- A dental or other health care worker talked with me about how to care for my teeth and gums
- I had insurance to cover dental care during my pregnancy
- I needed to see a dentist for a **problem**
- I went to a dentist or dental clinic about a **problem**

2. Framework Domain

Access

- Eligibility: Clear policies and user-friendly tools to support eligibility verification and continuity of eligibility in private and public programs[16]
- Scope of services: Range of services provided to pregnant women and children of various ages

[16] Definitions adapted from Association of Maternal and Child Health Programs. 2017. *Standards for Systems of Care for Children and Youth with Special Health Care Needs Version 2.0*. Washington, DC: Association of Maternal and Child Health Programs.

3. Level of Reporting

This is a state-level, population-based measure of resident women within the state who recently gave birth to a live-born infant during the surveillance year.

4. Data Source

PRAMS is a mixed-mode (mail and telephone) surveillance system.[17]

5. Data Elements

Critical Data Elements	
Phase 8, standard question Y7	This question is about the care of your teeth during your most recent pregnancy. For each item, check No if it is not true or does not apply to you or Yes if it is true.
Priority Stratifications	
Maternal age (from birth certificate)	<20 Years 20–24 Years 25–29 Years 30–34 Years ≥35 Years
Race/ethnicity, collapsed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other/multiple race
Optional Stratification Elements[18]	
Race/ethnicity, detailed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic American Indian/Alaska Native Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander Non-Hispanic multiple race Non-Hispanic other race (single other race)
Educational attainment (from birth certificate)	Less than high school High school graduate More than high school (some college or more)
Health insurance (principal source of payment for delivery; only available for states with the 2003 revision to the U.S. certificate of live birth)	Private Medicaid/CHIP Other public Uninsured

[17] Centers for Disease Control and Prevention. 2021. *Methodology* [webpage].
[18] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2023. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) participation (birth certificate; from PRAMS survey before 2016)	Yes No
Marital status (from birth certificate)	Married Unmarried/other

6. Measure Guidance

When calculating this measure score, states should use the weighted data provided to them by CDC. This measure should be publicly reported only if the state met the PRAMS response rate threshold of 50% specified by CDC.[19] If the response rate threshold was not met, the measure can be used for internal use to support quality improvement efforts. To improve response rates, states can use a range of incentives and rewards.[20]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1. Determine the number who answered "yes" or "no" to Phase 8, standard question Y7, response option "I had insurance to cover dental care during my pregnancy."

Step 2. Exclude unknowns and refusals.

Note: Base denominator inclusion on answers to the specific response option "I had insurance to cover dental care during my pregnancy" and not on whether the person answered any of the response options in question Y7.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Number of respondents who answered the response option "I had insurance to cover dental care during my pregnancy" of Phase 8, standard question Y7

B. Numerator

Step 1. Determine the number who answered "yes" to the response option: "I had insurance to cover dental care during my pregnancy."

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Respondents who reported they had insurance to cover dental care during pregnancy

C. Denominator Exclusions/Exceptions

Missing responses and refusals.

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[19] Centers for Disease Control and Prevention. 2022. *Are PRAMS Data Available to Outside Researchers* [webpage]

[20] Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. 2018. The Pregnancy Risk Assessment Monitory System (PRAMS): Overview of design and methodology. *American Journal of Public Health* 108(10):1305–1313.

D. Priority Reporting Stratifications

a. Maternal Age (<20, 20–24, 25–29, 30–34, ≥35)
b. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other/multiple race)

E. Optional Reporting Stratifications

a. Detailed race/ethnicity if sample size permits (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic American Indian/Alaska Native, Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander, Non-Hispanic other race [single other race], Non-Hispanic multiple race)
b. Educational attainment (less than high school, high school graduate, more than high school)
c. Health insurance (private, Medicaid/CHIP, other public, uninsured)
d. WIC participation (yes, no)
e. Marital status (married, unmarried/other)

F. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [priority reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Measure score, weighted, stratified by [optional reporting stratification] with 95% confidence intervals and unweighted denominator count
i. Response rate for overall survey

Reporting notes:

- States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX.
- Any indicator or indicator stratification with a data element missing more than 10% of data should explicitly note that the indicator/stratification should be interpreted with caution and identify the percentage of missing data for the relevant data element(s).

8. Limitations

Indicator limitations include: (1) PRAMS data are collected only from women who delivered a live-born infant, not from all women of reproductive age, and from 40 states and one city, not from the entire United States. (2) PRAMS data are self-reported and may be subject to recall bias and under-reporting or over-reporting of

behaviors based on social desirability. (3) Self-report surveys such as PRAMS may be subject to systematic error resulting from non-coverage (e.g. lower landline telephone coverage due to transition to cellular-telephone-only households or undeliverable addresses), nonresponse (e.g. refusal to participate in the survey or to answer specific questions), or measurement bias (e.g. recall bias). However, PRAMS attempts to contact potential respondents by mail and landline or cellular telephone to increase response rates. (4) Women with fetal death or abortion are excluded from PRAMS. (5) PRAMS estimates cover only the population of women in each state who also deliver in that state; therefore, women who delivered in a different state are not captured in their resident state.[21]

9. Additional Notes

This indicator was created by COHSII for the MCH oral health quality indicators from the PRAMS survey. Additional information about PRAMS is available online.

[21] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].

Indicator Domain: UTILIZATION

Indicator W.3. Percentage of Pregnant Women Who Reported Having Their Teeth Cleaned by a Dentist or Dental Hygienist During Pregnancy

Source: Centers for Disease Control and Prevention (CDC), Pregnancy Risk Assessment Monitoring System (PRAMS)

1. Description

Percentage of pregnant women reporting that they had their teeth cleaned by a dentist or dental hygienist during pregnancy

- **Numerator:** Number of women who answered "yes" to core question 17: "During your most recent pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?"
- **Denominator:** Number of women who answered "yes" or "no" to core question 17; exclude unknowns and refusals

Phase 8, Core Question 17
During *your most recent* pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?
- No
- Yes

2. Framework Domain

Utilization

- Use of services: Provision and utilization of services by a group of individuals identified by enrollment in a health plan or through use of clinical services[22]

3. Level of Reporting

This is a state-level, population-based measure of resident women within the state who recently gave birth to a live-born infant during the surveillance year.

4. Data Source

PRAMS is a mixed-mode (mail and telephone) surveillance system.[23]

[22] National Quality Measures Clearinghouse. N.d. *Guidelines and Measures* [webpage].
[23] Centers for Disease Control and Prevention. 2021. *Methodology* [webpage].

5. Data Elements

Critical Data Elements	
Phase 8, core question 17	During *your most recent* pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?
Priority Stratifications	
Maternal age (from birth certificate)	<20 Years 20–24 Years 25–29 Years 30–34 Years ≥35 Years
Race/ethnicity, collapsed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other/multiple race
Optional Stratification Elements[24]	
Race/ethnicity, detailed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic American Indian/Alaska Native Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander Non-Hispanic multiple race Non-Hispanic other race (single other race)
Educational attainment (from birth certificate)	Less than high school High school graduate More than high school (some college or more)
Health insurance (principal source of payment for delivery; only available for states with the 2003 revision to the U.S. certificate of live birth)	Private Medicaid/CHIP Other public Uninsured
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) participation (birth certificate; from PRAMS survey before 2016)	Yes No
Marital status (from birth certificate)	Married Unmarried/other

[24] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2021. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

6. Measure Guidance

When calculating this measure score, states should use the weighted data provided to them by CDC. This measure should be publicly reported only if the state met the PRAMS response rate threshold of 50% specified by CDC.[25] If the response rate threshold was not met, the measure can be used for internal use to support quality improvement efforts. To improve response rates, states can use a range of incentives and rewards.[26]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1. Determine the number who answered "yes" or "no" to Phase 8, core question 17, "During *your most recent* pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?"

Step 2. Exclude unknowns and refusals.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Number of respondents who answered Phase 8, core question 17

B. Numerator

Step 1. Determine the number who answered "yes" to Phase 8, core question 17.

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Respondents who reported they had their teeth cleaned by a dentist or dental hygienist during pregnancy

C. Denominator Exclusions/Exceptions

Missing responses and refusals.

D. Priority Reporting Stratifications

a. Maternal Age (<20, 20–24, 25–29, 30–34, ≥35)
b. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other/multiple race)

E. Optional Reporting Stratifications

a. Detailed race/ethnicity if sample size permits (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic American Indian/Alaska Native, Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander, Non-Hispanic other race [single other race], Non-Hispanic multiple race)
b. Educational attainment (less than high school, high school graduate, more than high school)
c. Health insurance (private, Medicaid/CHIP, other public, uninsured)
d. WIC participation (yes, no)
e. Marital status (married, unmarried/other)

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[25] Centers for Disease Control and Prevention. 2022. *Are PRAMS Data Available to Outside Researchers* [webpage].
[26] Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. 2018. The Pregnancy Risk Assessment Monitory System (PRAMS): Overview of design and methodology. *American Journal of Public Health* 108(10):1305–1313.

F. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [priority reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Measure score, weighted, stratified by [optional reporting stratification] with 95% confidence intervals and unweighted denominator count
j. Response rate for overall survey

Reporting notes:

- States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX.
- Any indicator or indicator stratification with a data element missing more than 10% of data should explicitly note that the indicator/stratification should be interpreted with caution and identify the percentage of missing data for the relevant data element(s).

8. Limitations

Indicator limitations include: (1) PRAMS data are collected only from women who delivered a live-born infant, not from all women of reproductive age, and from 40 states and one city, not from the entire United States. (2) PRAMS data are self-reported and may be subject to recall bias and under-reporting or over-reporting of behaviors based on social desirability. (3) Self-report surveys such as PRAMS may be subject to systematic error resulting from non-coverage (e.g. lower landline telephone coverage due to transition to cellular-telephone-only households, undeliverable addresses), nonresponse (e.g. refusal to participate in the survey or to answer specific questions), or measurement bias (e.g. recall bias). However, PRAMS attempts to contact potential respondents by mail and landline or cellular telephone to increase response rates. (4) Women with fetal death or abortion are excluded from PRAMS. (5) PRAMS estimates cover only the population of women in each state who also deliver in that state; therefore, women who delivered in a different state are not captured in their resident state.[27]

[27] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].

9. Additional Notes

This indicator was created by COHSII for the MCH oral health quality Indicators from the PRAMS survey. This indicator is similar to MCHB National Performance Measure 13: Percent of women who had a preventive dental visit during pregnancy. Additional information about PRAMS is available online.

Indicator Domain: UTILIZATION

Indicator W.4. Percentage of Women of Child-Bearing Age (ages 18–44) Who Report Having a Visit to a Dentist or Dental Clinic in the Past Year

Source: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS)

1. Description

Percentage of women of child-bearing age (ages 18–44) who report having a visit to a dentist or dental clinic in the past year

- **Numerator:** Number of women who reported visiting a dentist or dental clinic within the past year
- **Denominator:** Number of female respondents, ages 18–44 who answered core question COH.01; exclude unknowns and refusals

Section 7: Oral Health, Question COH.01
Including all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists, how long has it been since you last visited a dentist or a dental clinic for any reason?
[Response options only read if necessary.]

- Within the past year (anytime less than 12 months ago)
- Within the past 2 years (1 year but less than 2 years ago)
- Within the past 5 years (2 years but less than 5 years ago)
- 5 or more years ago
- Don't know/not sure (do not read)
- Never (do not read)
- Refused (do not read)

2. Framework Domain

Utilization

- Use of services: Provision and utilization of services by a group of individuals identified by enrollment in a health plan or through use of clinical services[28]

3. Level of Reporting

This is a state-level, population-based measure of adults ages 18 and older residing within the state during the surveillance year.

[28] National Quality Measures Clearinghouse. 2019. *Guidelines and Measures* [webpage].

4. Data Source

BRFSS uses a complex sampling design. When reporting this measure, states should use the weighted data provided to them by CDC.

5. Data Elements

Critical Data Elements	
Core Section 7: Oral Health	
2020 Surveillance Year, Section 7, Question COH.01.	Including all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists, how long has it been since you last visited a dentist or a dental clinic for any reason?
Demographics	
Respondent Age	What is your age? (Core Section 8: DEM.01)
Respondent Sex	Codebook variables: BIRTHSEX=2 (female) or SEXVAR=2 (female) if BIRTHSEX is not equal to (1,2)
Priority Stratifications	
Age	18–24 Years 25–34 Years 35–44 Years
Race/ethnicity, collapsed	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other/multiple race
Optional Stratification Elements[29]	
Race/ethnicity, detailed	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic American Indian/Alaska Native Non-Hispanic Asian Non-Hispanic Native Hawaiian/other Pacific Islander Non-Hispanic other/multiple race
Educational attainment	Less than high school High school graduate More than high school
Health insurance (current status)	Insured Uninsured
Marital status	Married Unmarried/other
Household income/poverty[30]	<$15,000 $15,000–$24,999 $25,000–$49,999

[29] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2021. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.
[30] The FAD document states: "Missing data exceeded 10%; interpret with caution."

	≥$50,000
Language (language of survey administration)	English Non-English
Urban-rural residence[31] [Metropolitan Statistical Area (MSA) defined by Census Bureau]	MSA, central city MSA, non-central city Non-MSA

6. Measure Guidance

When reporting on this measure, states should use the weighted data provided to them by CDC and report only if the state met the response rate threshold specified by CDC.

7. Measure Calculation: Detailed Specification

Note: The analyst must set the correct strata and weight variables. Strata are defined by the variable _STSTR and the primary weight is _LLCPWT, the weight for individuals in the combined landline and cellular telephone samples.

A. Denominator

Determine the number of women ages 18–44 who answered question COH.01:

Step 1: Identify number of respondents to question COH.01.

Step 2: Restrict to female respondents.

Step 3: Restrict to respondents ages18–44.

Step 4: Exclude those who refused to answer, had a missing answer, or answered "don't know/not sure."

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Female respondents ages 18–44 who answered core question COH.01

B. Numerator

Step 1: Determine the subset of the denominator (number of female respondents ages 18–44) who reported having been to the dentist or dental clinic "within the past year (any time less than 12 months ago)."

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Female respondents ages 18–44 who reported having a dental visit within the past year

[31] The FAD document states: "Missing data exceeded 10%; interpret with caution."

C. Denominator Exclusions/Exceptions

Missing responses, don't know/not sure responses, and refusals.

D. Reporting Stratifications

a. Age (18–24, 25–34, 35–44)
b. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other/multiple race)

E. Optional Reporting Stratifications

a. Detailed race/ethnicity if sample size permits (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic American Indian/Alaska Native, Non-Hispanic Asian, Non-Hispanic Native Hawaiian/other Pacific Islander, Non-Hispanic other race, Non-Hispanic multiple race)
b. Educational attainment (less than high school, high school graduate, more than high school)
c. Health insurance (insured, uninsured)
d. Household income (<$15,000, $15,000–$24,999, $25,000–$49,999)
e. Marital status (married, unmarried/other)
f. Language (English, non-English)
g. Urban-rural residence (MSA central city, MSA non-central city, non-MSA)

F. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [priority reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Measure score, weighted, stratified by [optional reporting stratification] with 95% confidence intervals and unweighted denominator count
k. Response rate for overall survey

Reporting notes:

- States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX.
- Any indicator or indicator stratification with a data element missing more than 10% of data should explicitly note that the indicator/stratification should be interpreted with caution and identify the percentage of missing data for the relevant data element(s).

8. Limitations

The oral health module is a rotating core that is included in the BRFSS core questionnaire only in even-numbered years. As with all self-reported sample surveys, BRFSS data might be subject to systematic error resulting from noncoverage (e.g., on college campuses or in the military), nonresponse (e.g., refusal to participate in the survey or to answer specific questions), or measurement (e.g., social desirability or recall bias). To address some of these potential concerns, BRFSS began including cellular-telephone-only users in the 2011 data collection.[32]

9. Additional Notes

This indicator is adapted from CDC's Chronic Disease Indicators, Oral Health Indicator 1.1, "Visits to dentist or dental clinic among adults age ≥ 18 years."[33] This MCH oral health quality indicator is restricted to females ages 18–44. Additional information on the BRFSS is available online.

[32] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].
[33] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].

Indicator Domain: OUTCOME

Indicator W.5. Percentage of Pregnant Women Reporting That They Needed to See a Dentist for a Problem During Pregnancy

Source: Centers for Disease Control and Prevention (CDC), Pregnancy Risk Assessment Monitoring System (PRAMS)

1. Description

Percentage of pregnant women reporting that they needed to see a dentist for a problem during pregnancy

- **Numerator:** Number of women who answered "yes" to the response option: "I needed to see a dentist for a **problem**"
- **Denominator:** Number of women who answered "yes" or "no" to standard question Y7, response option "I needed to see a dentist for a **problem**"; exclude unknowns and refusals

Phase 8, Standard Question Y7

This question is about the care of your teeth *during your most recent* pregnancy. For each item, check No if it is not true or does not apply to you or Yes if it is true.

- I knew it was important to care for my teeth and gums during my pregnancy
- A dental or other health care worker talked with me about how to care for my teeth and gums
- I had insurance to cover dental care during my pregnancy
- I needed to see a dentist for a **problem**
- I went to a dentist or dental clinic about a **problem**

2. Framework Domain

Outcome

- Care experience: Experience when a person seeks and receives care, including elements such as ease or difficulty in getting appointments, accessing information, and communicating with health care providers
- Patient-reported outcomes: Any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response

3. Level of Reporting

This is a state-level, population-based measure of resident women within the state who recently gave birth to a live-born infant during the surveillance year.

4. Data Source

PRAMS is a mixed-mode (mail and telephone) surveillance system.[34]

5. Data Elements

Critical Data Elements	
Phase 8, standard question Y7	This question is about the care of your teeth during your most recent pregnancy. For each item, check No if it is not true or does not apply to you or Yes if it is true.
Priority Stratifications	
Maternal age (from birth certificate)	<20 Years 20–24 Years 25–29 Years 30–34 Years ≥35 Years
Race/ethnicity, collapsed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other/multiple race
Optional Stratification Elements[35]	
Race/ethnicity, detailed (from birth certificate)	Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic American Indian/Alaska Native Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander Non-Hispanic multiple race Non-Hispanic other race (single other race)
Educational attainment (from birth certificate)	Less than high school High school graduate More than high school (some college or more)
Health insurance (principal source of payment for delivery; only available for states with the 2003 revision to the U.S. certificate of live birth)	Private Medicaid/CHIP Other public Uninsured
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) participation (birth certificate; from PRAMS survey before 2016)	Yes No

[34] Centers for Disease Control and Prevention. 2021. *Methodology* [webpage].
[35] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2021. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

Marital status (from birth certificate)	Married Unmarried/other

6. Measure Guidance

When calculating this measure score, states should use the weighted data provided to them by CDC. This measure should be publicly reported only if the state met the PRAMS response rate threshold of 50% specified by CDC.[36] If the response rate threshold was not met, the measure can be used for internal use to support quality improvement efforts. To improve response rates, states can use a range of incentives and rewards.[37]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1. Determine the number who answered "yes" or "no" to Phase 8, standard question Y7, response option "I needed to see a dentist for a **problem**."

Step 2. Exclude unknowns and refusals.

Note: Base denominator inclusion on answers to the specific response option "I needed to see a dentist for a **problem**" and not on whether the person answered any of the response options in question Y7.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Number of respondents who answered the response option "I needed to see a dentist for a problem" of Phase 8, standard question Y7

B. Numerator

Step 1. Determine the number who answered "yes" to the response option: "I needed to see a dentist for a **problem**."

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Respondents who reported they needed to see a dentist for a problem

C. Denominator Exclusions/Exceptions

Missing responses and refusals.

D. Priority Reporting Stratifications

a. Maternal Age (<20, 20–24, 25–29, 30–34, ≥35)
b. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other/multiple race)

E. Optional Reporting Stratifications

[36] Centers for Disease Control and Prevention. 2022. *Are PRAMS Data Available to Outside Researchers* [webpage]
[37] Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. 2018. The Pregnancy Risk Assessment Monitory System (PRAMS): Overview of design and methodology. *American Journal of Public Health* 108(10):1305–1313.

a. Detailed race/ethnicity if sample size permits (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic American Indian/Alaska Native, Non-Hispanic Asian Non-Hispanic Native Hawaiian/Other Pacific Islander, Non-Hispanic other race [single other race], Non-Hispanic multiple race)
b. Educational attainment (less than high school, high school graduate, more than high school)
c. Health insurance (private, Medicaid/CHIP, other public, uninsured)
d. WIC participation (yes, no)
e. Marital status (married, unmarried/other)

F. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [priority reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Measure score, weighted, stratified by [optional reporting stratification] with 95% confidence intervals and unweighted denominator count
I. Response rate for overall survey

Reporting notes:

- States should follow their own data suppression methodologies, provide a reporting note for any cells that fall below the data suppression threshold, and specify the threshold value. For example: NR=Not reportable due to respondent count of less than XX.
- Any indicator or indicator stratification with a data element missing more than 10% of data should explicitly note that the indicator/stratification should be interpreted with caution and identify the percentage of missing data for the relevant data element(s).

8. Limitations

Indicator limitations include: (1) PRAMS data are collected only from women who delivered a live-born infant, not from all women of reproductive age, and from 40 states and one city, not from the entire United States. (2) PRAMS data are self-reported and may be subject to recall bias and under-reporting or over-reporting of behaviors based on social desirability. (3) Self-report surveys such as PRAMS may be subject to systematic error resulting from non-coverage (e.g. lower landline telephone coverage due to transition to cellular-telephone-only households, undeliverable addresses), nonresponse (e.g. refusal to participate in the survey or to answer specific questions), or measurement bias (e.g. recall bias). However, PRAMS attempts to contact potential respondents by mail and landline or cellular telephone to increase response rates. (4) Women with fetal death or abortion are

excluded from PRAMS. (5) PRAMS estimates cover only the population of women in each state who also deliver in that state; therefore, women who delivered in a different state are not captured in their resident state.[38]

9. Additional Notes

This indicator was created by COHSII for the MCH oral health quality indicators from the PRAMS survey. Additional information on PRAMS is online.

[38] Centers for Disease Control and Prevention. 2015. *Chronic Disease Indicators: Indicator Definitions—Oral Health* [webpage].

Indicator Domain: UTILIZATION

Indicator W.6. Utilization of Dental Services During Pregnancy

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

1. Description

Percentage of enrolled persons aged 15 through 44 years with live-birth deliveries in the reporting year who received any dental service during pregnancy

- **Numerator:** Unduplicated number of enrolled persons with live-birth deliveries in the reporting year who received at least one dental service during pregnancy
- **Denominator:** Unduplicated number of enrolled persons aged 15 through 44 years with live-birth deliveries in the reporting year

2. Framework Domains

Utilization

- Use of services: Provision and utilization of services by a group of individuals identified by enrollment in a health plan or through use of clinical services[39]

3. Level of Reporting

This measure is intended to be used at a systems level, such as at the Medicaid program level.

4. Data Source

Administrative enrollment and claims data (medical and dental); reporting year and prior year. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes • ICD-10-PCS and ICD-10-CM codes • CPT codes

[39] National Quality Measures Clearinghouse. N.d. *Guidelines and Measures* [webpage].

Indicator Domain: ACCESS

Indicator W.7. Oral Evaluation During Pregnancy

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

6. Description

Percentage of enrolled persons aged 15 through 44 years with live-birth deliveries in the reporting year who received a comprehensive or periodic oral evaluation during pregnancy

- **Numerator:** Unduplicated number of enrolled persons with live-birth deliveries in the reporting year who received a comprehensive or periodic oral evaluation during pregnancy
- **Denominator:** Unduplicated number of enrolled persons aged 15 through 44 years with live-birth deliveries in the reporting year

7. Framework Domains

Access

Scope of services: Range of services provided to pregnant women and children of various ages

8. Level of Reporting

This measure is intended to be used at a systems level, such as at the Medicaid program level.

9. Data Source

Administrative enrollment and claims data (medical and dental); reporting year and prior year. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

10. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes • ICD-10-PCS and ICD-10-CM codes • CPT codes

B. Oral Health Quality Indicators for Children

Indicator Domain: ACCESS

Indicator C.1. Dentists Who Actively Participate in Medicaid per 1,000 EPSDT-Eligible Enrolled Children

Source: Medicaid administrative enrollment and claims data

1. Description

Dentists who actively participate in Medicaid per 1,000 EPSDT-eligible enrolled children

- **Numerator:** Number of dentists who bill $10,000 or more during the year for enrolled children eligible for EPDST in the state's Medicaid program
- **Denominator:** Number of EPSDT-eligible enrolled children (in thousands)

2. Framework Domain

Access

- Provider availability: The availability of providers to ensure that benefits for beneficiaries are accessible without unreasonable travel or time delays

3. Level of Reporting

This is a state-level measure of provider participation in the state's Medicaid program for children.

4. Data Source

Medicaid administrative enrollment and claims data.

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Program eligibility category	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes • National provider identifier • Provider billed amounts

6. Measure Guidance

When reporting and interpreting this measure, it is important to recognize that the number of providers does not represent all providers who participated in the Medicaid program during the reporting year; instead, it represents the subset of rendering providers who billed the Medicaid program at least $10,000 during the reporting year.

7. Measure Calculation: Detailed Specification

A. Denominator

Determine the number of children under age 21 enrolled in the state Medicaid program who were eligible for the EPSDT benefit during the reporting year. Include all enrollees, regardless of enrollment length.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Number of EPSDT-eligible enrolled children

B. Numerator

Step 1. Identify all claims for Medicaid-enrolled children (under age 21) eligible for EPSDT.

Step 2. Using unique national provider identifiers for **rendering providers**, identify providers who have billed for at least one service for Medicaid ESPDT-eligible children. (Use the rendering provider number and not the billing provider number.)

Step 3. Sum the billed amounts for each provider for services provided to Medicaid EPSDT-eligible children during the year.

Step 4. Determine the number of providers whose billings to the Medicaid program for EPSDT-eligible children during the year totaled $10,000 or more.

Note 1: Duplicate claims should be deduplicated before step 3.

Note 2: In states with dental services provided through managed care organizations, coordinated care organizations, dental care organizations, or dental benefit administrators, states should request the information in steps 1–3 from the contracted entities and then sum the amounts for each provider to determine total billings.

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Providers who billed more than $10,000 to Medicaid for services provided to EPSDT-eligible children

C. Denominator Exclusions/Exceptions

Not applicable.

D. Measure Score

Report:

a. Number in denominator
b. Number in numerator
c. Measure rate (NUM/DEN) x 1,000

8. Limitations

This indicator does not delineate provider participation by geographic area or other factors that may be important to assessing provider availability and access to care. States may want to conduct a deeper analysis of this indicator to identify disparities in provider availability.

9. Additional Notes

This indicator was created by COHSII for the MCH oral health quality indicators.

Indicator Domain: UTILIZATION

Indicator C.2. Utilization of Services, Dental Services (NQF #2511)

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

11. Description

Percentage of all enrolled children under age 21 who received at least one dental service within the reporting year

- **Numerator:** Unduplicated number of children who received at least one dental service
- **Denominator:** Unduplicated number of all enrolled children under age 21

12. Framework Domain

Utilization

- Use of services: Provision and utilization of services by a group of individuals identified by enrollment in a health plan or through use of clinical services[40]

13. Level of Reporting

This measure is intended to be used at a systems level, such as at the Medicaid program or dental plan level.

14. Data Source

Administrative claims and enrollment data; single year. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

15. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes

[40] National Quality Measures Clearinghouse. N.d. *Guidelines and Measures* [webpage].

Indicator Domain: UTILIZATION

Indicator C.3. Preventive Services for Children, Dental and Oral Health Services

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

1. Description

Percentage of enrolled children who received a topical fluoride application and/or sealants within the reporting year

- **Numerator:** Unduplicated number of children who received a topical fluoride application and/or sealants as (a) dental OR oral health services (NUM1), (b) dental services (NUM2), and (c) oral health services (NUM3) within the reporting year
- **Denominator:** Unduplicated number of enrolled children

2. Framework Domain

Utilization

- Use of services: Provision and utilization of services by a group of individuals identified by enrollment in a health plan or through use of clinical services[41]

3. Level of Reporting

This measure is intended to be used at a systems level, (e.g., Medicaid program level, dental plan level).

4. Data Source

Administrative claims and enrollment data; single year. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes

[41] National Quality Measures Clearinghouse. N.d. *Guidelines and Measures*. [webpage].

Indicator Domain: PROCESS

Indicators C.4./C.5. Prevention: Topical Fluoride for Children, Dental and Oral Health Services (NQF #2528, 3700, 3701)

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA). In 2021, C4. and C5. were combined into one indicator by DQA.

Please use the DQA website to access the complete specification details.

1. Description

Percentage of enrolled children ages 1 through 20 who received at least two topical fluoride applications within the reporting year

- **Numerator:** Unduplicated number of children who received at least two topical fluoride applications as (a) dental OR oral health services, (b) dental services, and (c) oral health services within the reporting year
- **Denominator:** Unduplicated number of enrolled children ages 1 through 20

2. Framework Domain

Process

- Evidence-based care: Oral health care is provided using the judicious integration of systematic assessments of clinically relevant scientific evidence (evidence-based guidelines), relating to the person's oral and medical condition and history, with the oral health care provider's clinical expertise and the person's treatment needs and preferences.

3. Level of Reporting

This measure is intended to be used at a systems level (e.g., Medicaid program level, dental plan level).

4. Data Source

Administrative claims and enrollment data; single year. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • National Uniform Claim Committee health care provider taxonomy codes

Indicator Domain: PROCESS

Indicator C.6. Prevention: Sealant Receipt on Permanent 1st Molars

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

1. Description

Percentage of enrolled children, who have ever received sealants on permanent **first** molar teeth: (1) at least one sealant and (2) all four molars sealed by the 10th birthdate

- **Numerator:** Unduplicated number of enrolled children who ever received sealants on a permanent first molar tooth: (1) at least one sealant and (2) all four molars sealed
- **Denominator:** Unduplicated number of enrolled children with their 10th birthdate in the measurement year

2. Framework Domain

Process

- Evidence-based care: Oral health care is provided using the judicious integration of systematic assessments of clinically relevant scientific evidence (evidence-based guidelines), relating to the person's oral and medical condition and history, with the oral health provider's clinical expertise and the person's treatment needs and preferences

3. Level of Reporting

This measure is intended to be used at a systems level, (e.g., Medicaid program level, dental plan level).

4. Data Source

Administrative enrollment and claims data; data for reporting year and 4 years prior. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • Tooth number and surface • National Uniform Claim Committee health care provider taxonomy codes

Indicator Domain: PROCESS

Indicator C.7. Prevention: Sealant Receipt on Permanent 2nd Molars

Source: American Dental Association (ADA) on behalf of the Dental Quality Alliance (DQA)

Please use the DQA website to access the complete specification details.

1. Description

Percentage of enrolled children, who have ever received sealants on permanent **second** molar teeth: (1) at least one sealant and (2) all four molars sealed by the 15th birthdate

- **Numerator:** Unduplicated number of enrolled children who ever received sealants on a permanent **second** molar tooth: (1) at least one sealant and (2) all four molars sealed
- **Denominator:** Unduplicated number of enrolled children with their 15th birthdate in the measurement year

2. Framework Domain

Process

- Evidence-based care: Oral health care is provided using the judicious integration of systematic assessments of clinically relevant scientific evidence (evidence-based guidelines), relating to the person's oral and medical condition and history, with the oral health provider's clinical expertise and the person's treatment needs and preferences.

3. Level of Reporting

This measure is intended to be used at a systems level, (e.g., Medicaid program level, dental plan level).

4. Data Source

Administrative enrollment and claims data; data for reporting year and 4 years prior. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims)

5. Critical Data Elements

Enrollment Database	Claims Database
• Member ID • Date of birth • Enrollment start and end dates	• Member ID • Date of service • CDT codes • Tooth number and surface • National Uniform Claim Committee health care provider taxonomy codes

Indicator Domain: OUTCOME

Indicator C.8. Percentage of Kindergarten Children with Dental Caries Experience (Treated or Untreated Tooth Decay)

Source: Association of State and Territorial Dental Directors (ASTDD), Basic Screening Survey (BSS)

1. Description

Percentage of kindergarten children with dental caries experience (treated or untreated tooth decay)

- **Numerator:** Number of kindergarten children screened with treated or untreated tooth decay
- **Denominator:** Number of kindergarten children screened

2. Framework Domain

Outcome

- Health status: The health state of a person or change in health state resulting from health care

3. Level of Reporting

This is a state-level, population-based surveillance measure of the burden of oral disease among kindergarten children.

4. Data Source

Clinical screening examinations using the BSS tool developed by ASTDD.

5. Data Elements

Critical Data Elements	
Kindergarten BSS	
Children screened	
Dental caries experience	
Available Stratification Elements	
Race/ethnicity	Option 1 Non-Hispanic White Hispanic and Non-Hispanic other Unknown/missing Option 2 Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other Unknown/missing

6. Measure Guidance

- **Data-collection year.** Indicate the school year of the most recent kindergarten BSS. Also indicate when the next survey is planned.
- **Adjustment for sampling methodology.** Data should be adjusted for the complex sampling scheme, following guidance provided by ASTDD.[42]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1: Identify the number of children screened in the state during the most recent kindergarten BSS.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Children screened in the state during the most recent kindergarten BSS

B. Numerator

Step 1: Determine the subset of the denominator (number of children screened) who were identified as having any caries experience in the **primary or permanent** dentition (treated decay or untreated decay):

a. If treated decay=YES, OR
b. If untreated decay=YES, then include in numerator; STOP processing.
c. If a OR b is not met (i.e., if treated decay=no AND untreated decay=no), then do not include the child in the numerator

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Children screened in the state during the most recent kindergarten BSS who have caries experience

C. Denominator Exclusions/Exceptions

Exclude children from the denominator with:

a. Missing variables for **both** treated decay and untreated decay
b. Treated decay=NO **and** untreated decay=missing
c. Treated decay=missing **and** untreated decay=NO

D. Reporting Stratifications

a. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other race, Non-Hispanic multiple race, unknown/missing)

Note: If data limitations necessitate, race categories can be collapsed as: Non-Hispanic White, Hispanic and Non-Hispanic other race, and unknown/missing

[42]Association of State and Territorial Dental Directors. 2017. *Guidance on How to Analyze Data from a School-Based Oral Health Survey*. Reno, NV: Association of State and Territorial Dental Directors.

E. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [reporting stratification] with 95% confidence intervals and unweighted denominator count
h. Whether positive or passive consent is used and the response rate

8. Limitations

BSS tools were developed by ASTDD to help state and local public health agencies monitor the burden of oral disease at a level consistent with *Healthy People* objectives. BSS tools were not designed to measure small changes in disease levels and are probably not appropriate for use in oral health research.[43]

The BSS is typically conducted at a recommended interval of every 5 years within a state. Consequently, this outcome indicator will not be updated annually.

If a state uses positive consent, the information is representative only of children whose families returned a consent form. ASTDD encourages states to use passive (opt-out) consent.

9. Additional Notes

Additional information on the BSS is available online.

[43] Association of State and Territorial Dental Directors. 2017. *The Basic Screening Survey: A Tool for Oral Health Surveillance Not Research*. Reno, NV: Association of State and Territorial Dental Directors.

Indicator Domain: OUTCOME

Indicator C.9. Percentage of Third-Grade Children with Dental Caries Experience (Treated or Untreated Tooth Decay)

Source: Association of State and Territorial Dental Directors (ASTDD), Basic Screening Survey (BSS)

1. Description

Percentage of third-grade children with dental caries experience (treated or untreated tooth decay)

- **Numerator:** Number of third-grade children screened with treated or untreated tooth decay
- **Denominator:** Number of third-grade children screened

2. Framework Domain

Outcome

- Health status: The health state of a person or change in health state resulting from health care

3. Level of Reporting

This is a state-level, population-based surveillance measure of the burden of oral disease among third-grade children.

4. Data Source

Clinical screening examinations using the BSS tool developed by ASTDD.

5. Data Elements

Critical Data Elements	
Third-grade BSS	
Children screened	
Dental caries experience	
Available Stratification Elements	
Race/ethnicity	Option 1 Non-Hispanic White Hispanic and Non-Hispanic other Unknown/missing Option 2 Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other Unknown/missing

6. Measure Guidance

- **Data-collection year.** Indicate the school year of the most recent third-grade BSS. Also indicate when the next survey is planned.
- **Adjustment for sampling methodology.** The data should be adjusted for the complex sampling scheme, following guidance provided by ASTDD.[44]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1: Identify the number of children screened in the state during the most recent third-grade BSS.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Children screened in the state during the most recent third-grade BSS

B. Numerator

Step 1: Determine the subset of the denominator (number of children screened) who were identified as having any caries experience in the **primary or permanent** dentition (treated decay or untreated decay):

a. If treated decay=YES, OR
b. If untreated decay=YES, then include in numerator; STOP processing.
c. If a OR b is not met (i.e., if treated decay=no AND untreated decay=no), then do not include the child in the numerator

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Children screened in the state during the most recent third-grade BSS who have caries experience

C. Denominator Exclusions/Exceptions

Exclude children from the denominator with:

a. Missing variables for **both** treated decay and untreated decay;
b. Treated decay=NO **and** untreated decay=missing
c. Treated decay=missing **and** untreated decay=NO

D. Reporting Stratifications

a. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other race, Non-Hispanic multiple race, unknown/missing)

Note: If data limitations necessitate, race categories can be collapsed as: Non-Hispanic White, Hispanic and Non-Hispanic other race, and unknown/missing

[44]Association of State and Territorial Dental Directors. 2017. *Guidance on How to Analyze Data from a School-Based Oral Health Survey*. Reno, NV: Association of State and Territorial Dental Directors.

E. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [reporting stratification] with 95% confidence intervals and unweighted denominator count
i. Whether positive or passive consent is used and the response rate

8. Limitations

BSS tools were developed by ASTDD to help state and local public health agencies monitor the burden of oral disease at a level consistent with *Healthy People* objectives. BSS tools were not designed to measure small changes in disease levels and are probably not appropriate for use in oral health research.[45]

The BSS is typically conducted at a recommended interval of every 5 years within a state. Consequently, this outcome indicator will not be updated annually.

If a state uses positive consent, the information is representative only of children whose families returned a consent form. ASTDD encourages states to use passive (opt-out) consent.

9. Additional Notes

Additional information on the BSS is available online.

[45] Association of State and Territorial Dental Directors. 2017. *The Basic Screening Survey: A Tool for Oral Health Surveillance Not Research*. Reno, NV: Association of State and Territorial Dental Directors.

Indicator Domain: OUTCOME

Indicator C.10. Percentage of Kindergarten Children with Urgent Dental Treatment Needs

Source: Association of State and Territorial Dental Directors (ASTDD), Basic Screening Survey (BSS)

1. Description

Percentage of kindergarten children with urgent dental treatment needs

- **Numerator:** Number of kindergarten children screened needing urgent dental care
- **Denominator:** Number of kindergarten children screened

2. Framework Domain

Outcome

- Health status: The health state of a person or change in health state resulting from health care

3. Level of Reporting

This is a state-level, population-based surveillance measure of the burden of oral disease among kindergarten children.

4. Data Source

Clinical screening examinations using the BSS tool developed by ASTDD.

5. Data Elements

Critical Data Elements	
Kindergarten BSS	
Children screened	
Needs urgent dental care	
Available Stratification Elements	
Race/ethnicity	Option 1 Non-Hispanic White Hispanic and Non-Hispanic other Unknown/missing Option 2 Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other Unknown/missing

6. Measure Guidance

- **Data-collection year.** Indicate the school year of the most recent kindergarten BSS. Also indicate when the next survey is planned.
- **Adjustment for sampling methodology.** The data should be adjusted for the complex sampling scheme, following guidance provided by ASTDD.[46]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1: Identify the number of children screened in the state during the most recent kindergarten BSS.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Children screened in the state during the most recent kindergarten BSS

B. Numerator

Step 1: Determine the subset of the denominator (number of children screened) who were identified as needing urgent dental care.

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Children screened in the state during the most recent kindergarten BSS who needed urgent dental care

C. Denominator Exclusions/Exceptions

Exclude children with missing variable for needs urgent dental care.

D. Reporting Stratifications

a. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other race, Non-Hispanic Black multiple race, unknown/missing)

Note: If data limitations necessitate, race categories can be collapsed as: Non-Hispanic White, Hispanic and Non-Hispanic other race, and unknown/missing)

E. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [reporting stratification] with 95% confidence intervals and unweighted denominator count
j. Whether positive or passive consent is used and the response rate

[46]Association of State and Territorial Dental Directors. 2017. *Guidance on How to Analyze Data from a School-Based Oral Health Survey*. Reno, NV: Association of State and Territorial Dental Directors.

8. Limitations

BSS tools were developed by ASTDD to help state and local public health agencies monitor the burden of oral disease at a level consistent with *Healthy People* objectives. BSS tools were not designed to measure small changes in disease levels and are probably not appropriate for use in oral health research.[47]

The BSS is typically conducted at a recommended interval of every 5 years within a state. Consequently, this outcome indicator will not be updated annually.

If a state uses positive consent, the information is representative only of children whose families returned a consent form. ASTDD encourages states to use passive (opt-out) consent.

9. Additional Notes

Additional information on the BSS is available online.

[47] Association of State and Territorial Dental Directors. 2017. *The Basic Screening Survey: A Tool for Oral Health Surveillance Not Research*. Reno, NV: Association of State and Territorial Dental Directors.

Indicator Domain: OUTCOME

Indicator C.11. Percentage of Third-Grade Children with Urgent Dental Treatment Needs

Source: Association of State and Territorial Dental Directors (ASTDD), Basic Screening Survey (BSS)

1. Description

Percentage of third-grade children with urgent dental treatment needs

- **Numerator:** Number of third-grade children screened needing urgent dental care
- **Denominator:** Number of third-grade children screened

2. Framework Domain

Outcome

- Health status: The health state of a person or change in health state resulting from health care

3. Level of Reporting

This is a state-level, population-based surveillance measure of the burden of oral disease among third-grade children.

4. Data Source

Clinical screening examinations using the BSS tool developed by ASTDD.

5. Data Elements

Critical Data Elements	
Third-grade BSS	
Children screened	
Needs urgent dental care	
Available Stratification Elements	
Race/ethnicity	Option 1 Non-Hispanic White Hispanic and Non-Hispanic other Unknown/missing Option 2 Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic other Unknown/missing

6. Measure Guidance

- **Data-collection year.** Indicate the school year of the most recent third-grade BSS. Also indicate when the next survey is planned.
- **Adjustment for sampling methodology.** Data should be adjusted for the complex sampling scheme, following guidance provided by ASTDD.[48]

7. Measure Calculation: Detailed Specification

A. Denominator

Step 1: Identify the number of children screened in the state during the most recent third-grade BSS.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Children screened in the state during the most recent third-grade BSS

B. Numerator

Step 1: Determine the subset of the denominator (number of children screened) who were identified as needing urgent dental care.

YOU NOW HAVE THE NUMERATOR (NUM) COUNT: Children screened in the state during the most recent third-grade BSS who needed urgent dental care

C. Denominator Exclusions/Exceptions

Exclude children with missing variable for needs urgent dental care.

D. Reporting Stratifications

a. Race/ethnicity (Hispanic, Non-Hispanic White, Non-Hispanic Black, Non-Hispanic other race, Non-Hispanic multiple race, unknown/missing)

Note: If data limitations necessitate, race categories can be collapsed as: Non-Hispanic White, Hispanic and Non-Hispanic other race, and unknown/missing)

E. Measure Score

Report:

a. Number of individuals excluded from denominator, unweighted
b. Number in denominator (after exclusions), unweighted sample count
c. Number in numerator, unweighted sample count
d. Number in denominator, weighted
e. Number in numerator, weighted
f. Measure score (NUM/DEN), weighted, with 95% confidence interval
g. Measure score, weighted, stratified by [reporting stratification] with 95% confidence intervals and unweighted denominator count
k. Whether positive or passive consent is used and the response rate

[48]Association of State and Territorial Dental Directors. 2017. *Guidance on How to Analyze Data from a School-Based Oral Health Survey*. Reno, NV: Association of State and Territorial Dental Directors.

8. Limitations

BSS tools were developed by ASTDD to help state and local public health agencies monitor the burden of oral disease at a level consistent with *Healthy People* objectives. BSS tools were not designed to measure small changes in disease levels and are probably not appropriate for use in oral health research.[49]

The BSS is typically conducted at a recommended interval of every 5 years within a state. Consequently, this outcome indicator will not be updated annually.

If a state uses positive consent, the information is representative only of children whose families returned a consent form. ASTDD encourages states to use passive (opt-out) consent.

9. Additional Notes

Additional information on the BSS is available online.

[49] Association of State and Territorial Dental Directors. 2017. *The Basic Screening Survey: A Tool for Oral Health Surveillance Not Research*. Reno, NV: Association of State and Territorial Dental Directors.

Appendix 2. Resources, Acknowledgements, and Attributions

A. Consortium for Oral Health Systems Integration and Improvement (COHSII) Maternal and Child Health Oral Health Quality Indicators Reports and Resources

Reports describing the environmental scan, development of the quality-domain framework, expert consensus identification of the quality-indicator set, and a vision for a cohesive and aligned measurement system are online. Resources include a project overview, indicator handout, readiness assessment, this user guide, and indicator-reporting templates.

B. Additional Online Resources

Association of State and Territorial Dental Directors (ASTDD)

- Basic Screening Surveys

Centers for Disease Control and Prevention

- Behavioral Risk Factor Surveillance System (BRFSS)
    - The *BRFSS Data User Guide*
- Pregnancy Risk Assessment Monitoring System (PRAMS)
    - Participating PRAMS Sites

Centers for Medicare & Medicaid Services

- Children's Health Insurance Program (CHIP)
- Dental Care
- EPSDT
- Expenditure Reports from MBES/CBES [This automated Medicaid Budget and Expenditure System/State CHIP Budget and Expenditure System (MBES/CBES) reports provide Medicaid and CHIP spending on dental services, along with other services and administrative expenses.]

Dental Quality Alliance (DQA)

- Educational Resources
- Dental Quality Measures

Maternal and Child Health Bureau (MCHB)

- Title V Maternal and Child Health Services Block Grant Program
- Title V MCH Services Block Grant Program Resource Page

National Maternal and Child Oral Health Resource Center

- *Title V National Performance Measure on Oral Health*
- *Oral Health Care During Pregnancy: A National Consensus Statement*

C. Acknowledgements

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D. Indicator Sources

Indicators Derived from Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. www.cdc.gov/brfss

Indicators Derived from Centers for Disease Control and Prevention Pregnancy Risk Assessment Monitoring System

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Pregnancy Risk Assessment Monitory System. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. www.cdc.gov/prams

Indicators Derived from Association of State and Territorial Dental Directors Basic Screening Survey

Association of State and Territorial Dental Directors. 2015. *ASTDD Basic Screening Survey for Children Planning and Implementation Tool.* Reno, NV: Association of State and Territorial Dental Directors. www.astdd.org/basic-screening-survey-tool

Dental Quality Alliance Measures

Neither the DQA nor its members shall be responsible for any use of these Measures. The Measures are provided "as is" without warranty of any kind. Limited proprietary coding is contained in the measure specifications for convenience.

The specifications are provided "as is" without warranty of any kind. www.ada.org/resources/research/dental-quality-alliance/dqa-dental-quality-measures

E. Proprietary Codes

For Proprietary Codes: The code on Dental Procedures and Nomenclature is published in Current Dental Terminology (CDT), Copyright © 2023 American Dental Association (ADA). All rights reserved.

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