Center for Oral Health Systems Integration and Improvement

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

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Prepared by:

Dental Quality Alliance

National Maternal and Child Oral Health Resource Center

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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 common 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 current 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 systemwide 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 state oral health programs 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 Center for Oral Health Systems Integration and Improvement, 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 all 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: Quality Indicator Summaries

Content. This section includes an at-a-glance summary for each quality indicator that highlights the main features and importance of the indicator.

Intended Audience. This section is designed to aid all stakeholders in understanding and communicating the purpose and characteristics of each indicator.

Section 3: 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 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 Marissa Sanders, sandersm@ada.org, to be connected to the appropriate technical advisor.

Dental Quality Alliance: DQA@ada.org, www.ada.org/dqa

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

Section 1: Introduction

This user guide provides guidance for reporting on oral health quality indicators for the maternal and child health (MCH) population during 2020.[1]

A. Background

The Center for Oral Health Systems Integration and Improvement (COHSII) established a Quality Indicators Advisory Team (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. 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 COHSII website).

COHSII is a consortium funded by the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration. COHSII is led by the National Maternal and Child Oral Health Resource Center in partnership with the Association of State and Territorial Dental Directors and the Dental Quality Alliance (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**:

- Pregnancy Risk Assessment Monitoring System (PRAMS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Basic Screening Survey (BSS)
- 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. 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. Section 2 provides non-technical summaries of the indicators. Detailed technical specifications for epidemiologists and data analysts who calculate the indicators are provided in Appendix 1.

[1] 2020 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.

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

Access
- 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)

Utilization
- 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)

Outcome
- Percentage of pregnant women reporting that they needed to see a dentist for a problem during pregnancy (Data source: PRAMS)

Quality Indicators for Children

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

Utilization
- Percentage of children who had a dental visit in the last 12 months (Data source: Medicaid enrollment and claims)*
- Percentage of children at elevated risk receiving preventive dental services (Data source: Medicaid enrollment and claims)*

Process
- Percentage of children at elevated risk receiving at least two topical fluoride applications as a dental service (Data source: Medicaid enrollment and claims)*
- Percentage of children at elevated risk receiving at least two topical fluoride applications as an oral health service (Data source: Medicaid enrollment and claims)*
- Percentage of children who have ever received sealants on permanent first molar teeth by the10th birthdate (Data source: Medicaid enrollment and claims)*
- Percentage of children who have ever received sealants on permanent second molar teeth by the 15th birthdate (Data source: Medicaid enrollment and claims)*

Outcome
- 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

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 1).

Figure 1. Measurement Alignment Across Reporting Levels

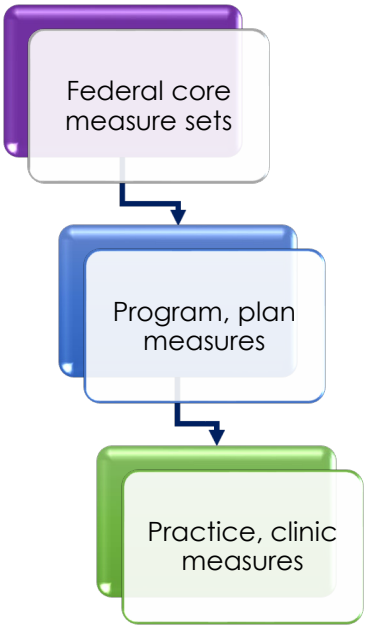

Figure adapted from Dental Quality Alliance. 2018. *Alignment and Harmonization in Reporting Quality: Establishing Reliability Across Reporting Levels*. Chicago, IL: American Dental Association.

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 results.

[2] Dental Quality Alliance. 2019. *Quality Measurement in Dentistry: A Guidebook*. Chicago: IL: American Dental Association.

Section 2: Quality Indicator Summaries

This section includes a one-page summary for each quality indicator that highlights the main features of each indicator and explains its importance. These summaries are intended to aid program administrators and staff in understanding and communicating the purpose and characteristics of each indicator.

Indicator W.1. Percentage of Pregnant Women Reporting Difficulty Getting Dental Care	
Description:	The percentage of pregnant women reporting difficulty getting dental care.
What data source is used?	The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects self-reported data on women's attitudes and experiences before, during, and shortly after pregnancy.
Who is the target population?	PRAMS is an state-level survey of resident women in the state who gave birth to a live-born infant during the year.
Which PRAMS question is used for this indicator?	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 or Yes if it was. **No** **Yes** a. I could not find a dentist or dental clinic that would take pregnant patients ❒ ❒ b. I could not find a dentist or dental clinic that would take Medicaid patients ❒ ❒ c. I did not think it was safe to go to the dentist during pregnancy ❒ ❒ d. I could not afford to go to the dentist or dental clinic ❒ ❒
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of women in the denominator who answered "Yes" to any of the items about difficulty getting dental care in PRAMS standard question Y6 **Denominator:** Number of women who answered PRAMS standard question Y6
Are any PRAMS respondents excluded?	Women who responded to the PRAMS questionnaire overall but did not answer standard question Y6 are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of **access** to oral health care among pregnant women. Medical and oral health professional organizations, such as the American College of Obstetricians and Gynecologists and the American Dental Association, recommend that pregnant women have a visit with a dentist before and during pregnancy to get their oral health assessed, obtain preventive services, receive any treatment needed, and receive guidance about good eating and oral hygiene practices.[i]
Are there any limitations to this indicator?	PRAMS data are collected only from women who delivered a live-born infant, not all pregnant women. PRAMS data are self-reported and may be subject to various types of response and measurement bias, such as inaccurate recall or responses that are influenced by what is "socially acceptable" rather than what the "true" answer would be. Not all states conduct PRAMS every year.
Where can I get more information about PRAMS?	• Additional information about PRAMS is available from CDC. • Each state has a PRAMS coordinator.

[i] Oral Health Care During Pregnancy Expert Workgroup. 2012. *Oral Health Care During Pregnancy: A National Consensus Statement*. Washington, DC: National Maternal and Child Oral Health Resource Center.

Indicator W.2. Percentage of Pregnant Women Who Had Insurance to Cover Dental Care During Pregnancy	
Description:	Percentage of pregnant women reporting that they had insurance to cover dental care during pregnancy.
What data source is used?	The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects self-reported data on women's attitudes and experiences before, during, and shortly after pregnancy.
Who is the target population?	PRAMS is an state-level survey of resident women in the state who gave birth to a live-born infant during the year.
Which PRAMS question is used for this indicator?	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. a. I knew it was important to care for my teeth and gums during my pregnancy — No ❒ Yes ❒ b. A dental or other health care worker talked with me about how to care for my teeth and gums — No ❒ Yes ❒ c. I had insurance to cover dental care during my pregnancy — No ❒ Yes ❒ d. I needed to see a dentist for a **problem** — No ❒ Yes ❒ e. I went to a dentist or dental clinic about a **problem** — No ❒ Yes ❒
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of women in the denominator 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"
Are any PRAMS respondents excluded?	Women who responded to the PRAMS questionnaire overall but did not answer standard question Y7, response option "I had insurance to cover dental care during my pregnancy" are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of **access** to oral health care among pregnant women. Medical and oral health professional organizations, such as the American College of Obstetricians and Gynecologists and the American Dental Association, recommend that pregnant women have a visit with a dentist before and during pregnancy to get their oral health assessed, obtain preventive services, receive any treatment needed, and receive guidance about good eating and oral hygiene practices.[i]
Are there any limitations to this indicator?	PRAMS data are collected only from women who delivered a live-born infant, not all pregnant women. PRAMS data are self-reported and may be subject to various types of response and measurement bias, such as inaccurate recall or responses that are influenced by what is "socially acceptable" rather than what the "true" answer would be. Not all states conduct PRAMS every year.
Where can I get more information about PRAMS?	• Additional information about PRAMS is available from CDC. • Each state has a PRAMS coordinator

[i] Oral Health Care During Pregnancy Expert Workgroup. 2012. *Oral Health Care During Pregnancy: A National Consensus Statement*. Washington, DC: National Maternal and Child Oral Health Resource Center.

Indicator W.3. Percentage of Pregnant Women Who Reported Having Their Teeth Cleaned by a Dentist or Dental Hygienist During Pregnancy	
Description:	Percentage of pregnant women reporting that they had their teeth cleaned by a dentist or dental hygienist during pregnancy.
What data source is used?	The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects self-reported data on women's attitudes and experiences before, during, and shortly after pregnancy.
Who is the target population?	PRAMS is an state-level survey of resident women in the state who gave birth to a live-born infant during the year.
Which PRAMS question is used for this indicator?	Core Question 17: **During *your most recent* pregnancy, did you have your teeth cleaned by a dentist or dental hygienist?** ❒ No ❒ Yes
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of women in the denominator who answered "yes" to core question 17 **Denominator:** Number of women who answered "yes" or "no" to core question 17
Are any PRAMS respondents excluded?	Women who responded to the PRAMS questionnaire overall but did not answer core question 17 are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of **utilization** of oral health care services by pregnant women. Medical and oral health professional organizations, such as the American College of Obstetricians and Gynecologists and the American Dental Association, recommend that pregnant women have a visit with a dentist before and during pregnancy to get their oral health assessed, obtain preventive services, receive any treatment needed, and receive guidance about good eating and oral hygiene practices.[i]
Are there any limitations to this indicator?	PRAMS data are collected only from women who delivered a live-born infant, not all pregnant women. PRAMS data are self-reported and may be subject to various types of response and measurement bias, such as inaccurate recall or responses that are influenced by what is "socially acceptable" rather than what the "true" answer would be. Not all states conduct PRAMS every year.
Where can I get more information about PRAMS?	• Additional information about the PRAMS survey is available from CDC. • Each state has a PRAMS coordinator.

[i] Oral Health Care During Pregnancy Expert Workgroup. 2012. *Oral Health Care During Pregnancy: A National Consensus Statement*. Washington, DC: National Maternal and Child Oral Health Resource Center.

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	
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.
What data source is used?	The Behavioral Risk Factor Surveillance System (BRFSS) is a system of telephone surveys that collect self-reported data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. BRFSS is sponsored by the Centers for Disease Control and Prevention (CDC) along with other federal agencies. The oral health module is a rotating core that is included in the BRFSS questionnaire in even-number years.
Who is the target population?	BRFSS is a state-level survey of U.S. adults ages 18 and older. The target population for this indicator is women ages 18–44.
Which BRFSS question is used for this indicator?	Section 7: Oral Health, Question C07.01: **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.] a. Within the past year (anytime less than 12 months ago) b. Within the past 2 years (1 year but less than 2 years ago) c. Within the past 5 years (2 years but less than 5 years ago) d. 5 or more years ago e. Don't know/Not sure (do not read) f. Never (do not read) g. Refused (do not read)
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of women in the denominator who reported visiting a dentist or dental clinic within the past year **Denominator:** Number of female respondents, ages 18–44, who answered core question C07.01
Are any BRFSS respondents excluded?	Respondents who are not female, and female respondents ages 45 and older are excluded. Women ages 18–44 who responded to the BRFSS questionnaire overall but did not answer core question 17 (or have responses marked as "don't know/not sure" or "refused") also are excluded.
What does this indicator measure and why is it important?	This indicator is a measure of **utilization** of oral health care services by women of child-bearing age. Routine use of oral health care services promotes receipt of preventive services and education about healthy behaviors as well as early identification and treatment of oral disease.[i] Medical and oral health professional organizations recommend that women of child-bearing age have a visit with a dentist before and during pregnancy to get their oral health assessed, obtain preventive services, receive any treatment needed, and receive guidance about good eating and oral hygiene practices.[ii]
Are there any limitations to this indicator?	BRFSS data are self-reported and may be subject to various types of response and measurement bias, such as inaccurate recall or responses that are influenced by what is "socially acceptable" rather than what the "true" answer would be.
Where can I get more information?	• Additional information about the BRFSS survey is available from CDC.

[i] Institute of Medicine and National Research Council. 2011. *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*. Washington, DC: The National Academies Press.

[ii] Oral Health Care During Pregnancy Expert Workgroup. 2012. *Oral Health Care During Pregnancy: A National Consensus Statement*. Washington, DC: National Maternal and Child Oral Health Resource Center.

Indicator W.5. Percentage of Pregnant Women Reporting That They Needed to See a Dentist for a Problem During Pregnancy	
Description:	Percentage of pregnant women reporting that they needed to see a dentist for a problem during pregnancy
What data source is used?	The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects self-reported data on women's attitudes and experiences before, during, and shortly after pregnancy.
Who is the target population?	PRAMS is a state-level survey of resident women in the state who gave birth to a live-born infant during the year.
Which PRAMS question is used for this indicator?	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. **No** **Yes** a. I knew it was important to care for my teeth and gums during my pregnancy ❒ ❒ b. A dental or other health care worker talked with me about how to care for my teeth and gums ❒ ❒ c. I had insurance to cover dental care during my pregnancy ❒ ❒ d. I needed to see a dentist for a **problem** ❒ ❒ e. I went to a dentist or dental clinic about a **problem** ❒ ❒
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of women in the denominator 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**"
Are any PRAMS respondents excluded?	Women who responded to the PRAMS questionnaire overall but did not answer standard question Y7, response option "I needed to see a dentist for a **problem**" are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of oral health care **outcomes** and signifies an adverse oral health status that requires dental care. Pregnancy-induced changes to physical and oral health can contribute to oral disease, such as gingivitis and cavities, with potential long-term impacts.[i] Regular dental visits can help reduce the risk of dental problems by providing women with preventive services and recommendations for good eating and oral health practices such as brushing. Regular dental visits also enable early diagnosis and treatment of dental problems to support better health outcomes.
Are there any limitations to this indicator?	PRAMS data are collected only from women who delivered a live-born infant, not all pregnant women. PRAMS data are self-reported and may be subject to various types of response and measurement bias, such as inaccurate recall or responses that are influenced by what is "socially acceptable" rather than what the "true" answer would be. Not all states conduct PRAMS every year.
Where can I get more information about PRAMS?	• Additional information about the PRAMS survey is available from CDC. • Each state has a PRAMS coordinator.

[i] American Dental Association. 2020. Pregnancy. American Dental Association.

Indicator C.1. Dentists Who Actively Participate in Medicaid per 1,000 EPSDT-Eligible Enrolled Children	
Description:	The number of dentists who actively participate in Medicaid per 1,000 EPSDT-eligible enrolled children.
What data source is used?	Medicaid administrative enrollment and claims data are used to calculate this indicator.
Who is the target population?	Children enrolled in Medicaid who are eligible for EPSDT.
How is the indicator measured?	The indicator is expressed as the number of dentists per 1,000 children: **Numerator:** Number of dentists who bill $10,000 or more during the year for enrolled children eligible for EPSDT in the state's Medicaid program **Denominator:** Number of EPSDT-eligible enrolled children (in thousands)
Are any Medicaid-enrolled children excluded?	No, all Medicaid enrolled children eligible for EPSDT during the reporting year are included in the measurement of this indicator.
What does this indicator measure and why is it important?	This indicator is a measure of **access** to dental providers among Medicaid-enrolled children. Dental caries is the most common chronic disease in children in the United States. The Institute of Medicine identified improving access to oral health care as a "critical and necessary first step to improving oral health outcomes and reducing disparities."[i] National guidelines from the American Academy of Pediatric Dentistry and the American Academy of Pediatrics recommend that children receive oral health care services by age 1 and have regular visits thereafter.[ii,iii] In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iv] The barriers to accessing oral health care include low dentist participation in state Medicaid programs.[i]
Are there any limitations to this indicator?	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.

[i] Institute of Medicine and National Research Council. 2011. *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*. Washington, DC: The National Academies Press.
[ii] American Academy of Pediatric Dentistry, Council on Clinical Affairs. 2018. *Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents*. 11 pp.
[iii] American Dental Association. 2020. *Your Baby's First Dental Visit*. Chicago, IL: American Dental Association.
[iv] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up Slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.

Indicator C.2. Utilization of Services, Dental Services (NQF #2511)	
Description:	Percentage of enrolled children under age 21 who received at least one dental service within the reporting year. This indicator is a Dental Quality Alliance (DQA) measure and is endorsed by the National Quality Forum.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children under age 21 enrolled in a program (e.g., Medicaid/CHIP) or a dental plan.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator who received at least one dental service **Denominator:** Number of children under age 21
Are any children excluded?	Children who do not qualify for dental benefits should be excluded.
What does this indicator measure and why is it important?	This indicator is a measure of **utilization** of dental services among children. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of children ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iii] This measure allows assessment of whether a child received any dental services during the year and, therefore, also measures access to oral health care. The Institute of Medicine identified improving access to oral health care as a "critical and necessary first step to improving oral health outcomes and reducing disparities."[iv]
Are there any limitations to this indicator?	This indicator does not delineate the services provided during the dental visit. This indicator is designed to be used with the other indicators to provide a comprehensive picture of care.
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries*. Atlanta, GA: Centers for Disease Control and Prevention.
[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016*. NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics.
[iii] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up Slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.
[iv] Institute of Medicine and National Research Council. 2011. *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*. Washington, DC: The National Academies Press.

Indicator C.3. Preventive Services for Children at Elevated Caries Risk, Dental Services	
Description:	Percentage of enrolled children who are at "elevated" risk (i.e., "moderate" or "high") who received a topical fluoride application and/or sealants within the reporting year. This indicator is a Dental Quality Alliance (DQA) measure.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children under age 21 enrolled in a program (e.g., Medicaid/CHIP) or a dental plan who are at increased risk for dental caries.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator who received a topical fluoride application and/or sealants as a dental service **Denominator:** Number of children under age 21 who are at "elevated" risk (i.e., "moderate" or "high") for dental caries
Are any children excluded?	Children who do not qualify for dental benefits should be excluded.
What does this indicator measure and why is it important?	This indicator is a measure of **utilization** of preventive dental services among children. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of children ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. Evidence-based clinical guidelines recommend that sealants should be placed on pits and fissures of children's primary and permanent teeth[iii] and that topical fluoride should be applied at least every 3 to 6 months in children at elevated risk for caries.[iv]
Are there any limitations to this indicator?	Dental procedure codes do not distinguish between all of the different types of topical fluoride applications; the measure assumes that all modes of professionally applied topical fluoride are equally effective. The measure does not take into account home use of fluoride products. The measure does not exclude children who do not have any permanent molars that can be sealed (e.g., the molars were previously treated or have active decay).
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries.* Atlanta, GA: Centers for Disease Control and Prevention.

[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016*. NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics. 2018.

[iii] Wright JT, Crall JJ, Fontana M, Gillette EJ, Nový BB, Dhar V, Donly K, Hewlett ER, Quinonez RB, Chaffin J, Crespin M, Iafolla T, Siegal MD, Tampi MP, Graham L, Estrich C, Carrasco-Labra A. 2016. Evidence-based clinical practice guideline for the use of pit-and-fissure sealants: A report of the American Dental Association and the American Academy of Pediatric Dentistry. *Journal of the American Dental Association*147(8):672–682.e12.

[iv] Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, et al; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. Topical fluoride for caries prevention: Executive summary of the updated clinical recommendations and supporting systematic review. *Journal of the American Dental Association* 2013 Nov;144(11):1279-91.

Indicator C.4. Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services (NQF #2528)	
Description:	Percentage of enrolled children ages 1–21 who are at "elevated" risk (i.e., "moderate" or "high") who received at least two topical fluoride applications within the reporting year. This indicator is a Dental Quality Alliance (DQA) measure and is endorsed by the National Quality Forum.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children ages 1–21 enrolled in a program (e.g., Medicaid/CHIP) or a dental plan who are at increased risk for dental caries.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator who received at least two topical fluoride applications as a dental service **Denominator:** Number of children ages 1–21 who are at "elevated" risk (i.e., "moderate" or "high") for dental caries
Are any children excluded?	Children who do not qualify for dental benefits should be excluded.
What does this indicator measure and why is it important?	This indicator is a **process** measure of whether children are receiving **evidence-based care**. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of children ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. Evidence-based clinical guidelines recommend that topical fluoride should be applied at least every 3 to 6 months in children at elevated risk for caries.[iii]
Are there any limitations to this indicator?	Dental procedure codes do not distinguish between all of the different types of topical fluoride applications; the measure assumes that all modes of professionally-applied topical fluoride are equally effective. The measure does not take into account home use of fluoride products.
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries*. Atlanta, GA: Centers for Disease Control and Prevention.

[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016*. NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics.

[iii] Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, et al; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. 2013. Topical fluoride for caries prevention: Executive summary of the updated clinical recommendations and supporting systematic review. *Journal of the American Dental Association* 144(11):1279–291.

Indicator C.5. Prevention: Topical Fluoride for Children at Elevated Caries Risk, Oral Health Services	
Description:	Percentage of enrolled children ages 1–21 who are at "elevated" risk (i.e. "moderate" or "high") who received at least two topical fluoride applications within the reporting year as oral health services. This indicator is a Dental Quality Alliance (DQA) measure.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children ages 1–21 enrolled in a program (e.g., Medicaid/CHIP) or a dental plan who are at increased risk for dental caries.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator who received at least two topical fluoride applications as oral health services **Denominator:** Number of children ages 1–21 who are at "elevated" risk (i.e., "moderate" or "high") for dental caries
What is the difference between "oral health services" and "dental services"?	Oral health services are services that are not provided by or under the supervision of a dentist. For example, oral health care services provided by medical primary care providers would be classified as an "oral health service" and not as a "dental service."
Are any children excluded?	Children who do not qualify for dental benefits should be excluded.
What does this indicator measure and why is it important?	This indicator is a **process** measure of whether children are receiving **evidence-based care**. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of youth ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. Evidence-based clinical guidelines recommend that topical fluoride should be applied at least every 3 to 6 months in children at elevated risk for caries.[iii]
Are there any limitations to this indicator?	Dental procedure codes do not distinguish between all of the different types of topical fluoride applications; the measure assumes that all modes of professionally applied topical fluoride are equally effective. The measure does not take into account home use of fluoride products. Not all state Medicaid programs reimburse for "oral health" services up to age 21; age stratifications may be used when interpreting this measure.
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries.* Atlanta, GA: Centers for Disease Control and Prevention.

[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016.* NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics.

[iii] Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, et al; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. 2013. Topical fluoride for caries prevention: Executive summary of the updated clinical recommendations and supporting systematic review. *Journal of the American Dental Association* 144(11):1279–1291.

Indicator C.6. Prevention: Sealant Receipt on Permanent 1st Molars	
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. This indicator is a Dental Quality Alliance (DQA) measure.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children who have their 10th birthdate during the reporting year and are enrolled in a program (e.g., Medicaid/CHIP) or a dental plan.
How is the indicator measured?	The indicator reports **two percentages** based on the same denominator [numerator/denominator x 100%]: **Numerator 1:** The subset of children in the denominator who ever received at least one sealant on a permanent first molar tooth **Numerator 2:** The subset of children in the denominator who ever received sealants on all four permanent first molar teeth **Denominator:** Number of children with their 10th birthdate in the reporting year
Are any children excluded?	Children who have received treatment (restorations, extractions, endodontic, prosthodontic, and other dental treatments) on all four permanent first molars prior to the 10th birthdate should be excluded. Children who do not qualify for dental benefits should also be excluded.
What does this indicator measure and why is it important?	This indicator is a **process** measure of whether children are receiving **evidence-based care**. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of youth ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. Evidence-based guidelines recommend that sealants be placed on the pits and fissures of permanent molars as effective prevention to reduce dental caries.[iii]
Are there any limitations to this indicator?	Claims data cannot identify teeth with active decay, sealants not billed to the program/plan, or treatment (e.g., restorations/extractions) not billed to the program/plan, which will impact the precision of the denominator and the numerator.
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries*. Atlanta, GA: Centers for Disease Control and Prevention.

[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016.* NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics.

[iii] Wright JT, Crall JJ, Fontana M, Gillette EJ, Nový BB, Dhar V, Donly K, Hewlett ER, Quinonez RB, Chaffin J, Crespin M, Iafolla T, Siegal MD, Tampi MP, Graham L, Estrich C, Carrasco-Labra A. 2016. Evidence-based clinical practice guideline for the use of pit-and-fissure sealants: A report of the American Dental Association and the American Academy of Pediatric Dentistry. *Journal of the American Dental Association* 147(8): 672–682e.12.

Indicator C.7. Prevention: Sealant Receipt on Permanent 2nd Molars	
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. This indicator is a Dental Quality Alliance (DQA) measure.
What data source is used?	Administrative enrollment and claims data are used to calculate this indicator. This indicator can be applied to both public program and commercial (private payer) administrative claims. This indicator is recommended for states to report for their pediatric Medicaid and Children's Health Insurance Program (CHIP) beneficiaries. Reporting on this indicator may also be possible for children with dental benefits through state health insurance exchanges or children represented in all-payer claims databases.
Who is the target population?	Children who have their 15th birthdate during the reporting year and are enrolled in a program (e.g., Medicaid/CHIP) or a dental plan.
How is the indicator measured?	The indicator reports **two percentages** based on the same denominator [numerator/denominator x 100%]: **Numerator 1:** The subset of children in the denominator who ever received at least one sealant on a permanent second molar tooth **Numerator 2:** The subset of children in the denominator who ever received sealants on all four permanent second molar teeth **Denominator:** Number of children with their 15th birthdate in the reporting year
Are any children excluded?	Children who have received treatment (restorations, extractions, endodontic, prosthodontic, and other dental treatments) on all four permanent second molars prior to the 15th birthdate should be excluded. Children who do not qualify for dental benefits should also be excluded.
What does this indicator measure and why is it important?	This indicator is a **process** measure of whether children are receiving **evidence-based care**. Dental caries is the most common chronic disease in children in the United States.[i] In 2015–2016, 45.8% of youth ages 2–19 had dental caries (both treated and untreated), and 13% had untreated caries.[ii] Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce the likelihood of future caries. Evidence-based guidelines recommend that sealants be placed on the pits and fissures of permanent molars as effective prevention to reduce dental caries.[iii]
Are there any limitations to this indicator?	Claims data cannot identify teeth with active decay, sealants not billed to the program/plan, or treatment (e.g., restorations/extractions) not billed to the program/plan, which will impact the precision of the denominator and the numerator.
Where can I get more information about Dental Quality Alliance (DQA) measures?	• The technical specifications for this indicator are available from DQA. • All DQA measures and user guides are available online.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries.* Atlanta, GA: Centers for Disease Control and Prevention.

[ii] Fleming E, Afful J. 2018. *Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016.* NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics.

[iii] Wright JT, Crall JJ, Fontana M, Gillette EJ, Nový BB, Dhar V, Donly K, Hewlett ER, Quinonez RB, Chaffin J, Crespin M, Iafolla T, Siegal MD, Tampi MP, Graham L, Estrich C, Carrasco-Labra A. 2016. Evidence-based clinical practice guideline for the use of pit-and-fissure sealants: a report of the American Dental Association and the American Academy of Pediatric Dentistry. *Journal of the American Dental Association.* 147(8):672–682e.12.

Indicator C.8. Percentage of Kindergarten Children with Dental Caries Experience (Treated or Untreated Tooth Decay)	
Description:	Percentage of kindergarten children with dental caries experience (treated or untreated tooth decay).
What data source is used?	The Basic Screening Survey (BSS) is a tool for oral health surveillance that was developed by the Association of State and Territorial Dental Directors (ASTDD) to help state and local public health agencies monitor the burden of oral disease. These surveys include direct observation of a child's mouth.
Who is the target population?	This indicator is based on a state-level, population-based BSS of kindergarten children.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator with treated or untreated tooth decay **Denominator:** Number of kindergarten children screened
Are any children excluded?	The following children are excluded from the denominator: (1) children with missing information for both untreated and treated decay, (2) children with no treated decay and missing information about untreated decay, (3) children with no untreated decay and missing information about treated decay.
What does this indicator measure and why is it important?	This indicator is a measure of oral health care **outcomes** among kindergarten children and signifies an adverse oral health status (tooth decay). Dental caries is the most common chronic disease in children in the United States.[i] National guidelines from the American Academy of Pediatric Dentistry (AAPD) and the American Academy of Pediatrics (AAP) recommend that children receive oral health care services by age 1 and have regular visits thereafter.[ii,iii] In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iv] Monitoring trends in tooth decay among children can help to guide the development of prevention and disease management programs and evaluate the effectiveness of those programs over time.
Are there any limitations to this indicator?	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.
Where can I get more information about BSS?	• Additional information about the BSS is available from ASTDD.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental caries*. Atlanta, GA: Centers for Disease Control and Prevention.
[ii] American Academy of Pediatric Dentistry, Council on Clinical Affairs. 2018. *Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents*. 11 pp.
[iii] American Dental Association. 2020. *Your Baby's First Dental Visit*. Chicago, IL: American Dental Association.
[iv] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up Slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.

Indicator C.9. Percentage of Third-Grade Children with Dental Caries Experience (Treated or Untreated Tooth Decay)	
Description:	Percentage of third-grade children with dental caries experience (treated or untreated tooth decay).
What data source is used?	The Basic Screening Survey (BSS) is a tool for oral health surveillance that was developed by the Association of State and Territorial Dental Directors (ASTDD) to help state and local public health agencies monitor the burden of oral disease. These surveys include direct observation of a child's mouth.
Who is the target population?	This indicator is based on a state-level, population-based BSS of third-grade children.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator with treated or untreated tooth decay **Denominator:** Number of third-grade children screened
Are any children excluded?	The following children are excluded from the denominator: (1) children with missing information for both untreated and treated decay, (2) children with no treated decay and missing information about untreated decay, (3) children with no untreated decay and missing information about treated decay.
What does this indicator measure and why is it important?	This indicator is a measure of oral health care **outcomes** among kindergarten children and signifies an adverse oral health status (tooth decay).Dental caries is the most common chronic disease in children in the United States.[i] National guidelines from the American Academy of Pediatric Dentistry (AAPD) and the American Academy of Pediatrics (AAP) recommend that children receive oral health care services by age 1 and have regular visits thereafter.[ii,iii] In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iv] Monitoring trends in tooth decay among children can help to guide the development of prevention and disease management programs and evaluate the effectiveness of those programs over time.
Are there any limitations to this indicator?	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.
Where can I get more information about BSS?	• Additional information about the BSS is available from ASTDD.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries.* Atlanta, GA: Centers for Disease Control and Prevention.
[ii] American Academy of Pediatric Dentistry, Council on Clinical Affairs. 2018. *Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents*. 11 pp.
[iii] American Dental Association. 2020. *Your Baby's First Dental Visit*. Chicago, IL: American Dental Association.
[iv] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.

Indicator C.10. Percentage of Kindergarten Children with Urgent Dental Treatment Needs	
Description:	Percentage of kindergarten children with urgent dental treatment needs.
What data source is used?	The Basic Screening Survey (BSS) is a tool for oral health surveillance that was developed by the Association of State and Territorial Dental Directors (ASTDD) to help state and local public health agencies monitor the burden of oral disease. These surveys include direct observation of a child's mouth.
Who is the target population?	This indicator is based on a state-level, population-based BSS of kindergarten children.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]: **Numerator:** The subset of children in the denominator needing urgent dental care **Denominator:** Number of kindergarten children screened
Are any children excluded?	Children with missing information for the "needs urgent dental care" variable are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of oral health care **outcomes** among kindergarten children and signifies an adverse oral health status that requires dental care. Dental caries is the most common chronic disease in children in the United States.[i] National guidelines from the American Academy of Pediatric Dentistry (AAPD) and the American Academy of Pediatrics (AAP) recommend that children receive oral health care services by age 1 and have regular visits thereafter.[ii,iii] In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iv] Monitoring trends in children's need for urgent dental care can help to guide the development of prevention and disease management programs and evaluate the effectiveness of those programs over time in reducing the incidence and severity of oral disease among children.
Are there any limitations to this indicator?	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.
Where can I get more information about BSS?	• Additional information about the BSS is available from ASTDD.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries*. Atlanta, GA: Centers for Disease Control and Prevention.
[ii] American Academy of Pediatric Dentistry, Council on Clinical Affairs. 2018. *Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents*. 11 pp.
[iii] American Dental Association. 2020. *Your Baby's First Dental Visit*. Chicago, IL: American Dental Association.
[iv] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up Slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.

Indicator C.11. Percentage of Third-Grade Children with Urgent Dental Treatment Needs	
Description:	Percentage of third-grade children with urgent dental treatment needs.
What data source is used?	The Basic Screening Survey (BSS) is a tool for oral health surveillance that was developed by the Association of State and Territorial Dental Directors (ASTDD) to help state and local public health agencies monitor the burden of oral disease. These surveys include direct observation of a child's mouth.
Who is the target population?	This indicator is based on a state-level, population-based BSS of kindergarten children.
How is the indicator measured?	The indicator is expressed as a percentage [numerator/denominator x 100%]. **Numerator:** The subset of children in the denominator needing urgent dental care **Denominator:** Number of third-grade children screened
Are any children excluded?	Children with missing information for the "needs urgent dental care" variable are excluded from the indicator.
What does this indicator measure and why is it important?	This indicator is a measure of oral health care **outcomes** among third-grade children and signifies an adverse oral health status that requires dental care. Dental caries is the most common chronic disease in children in the United States.[i] National guidelines from the American Academy of Pediatric Dentistry (AAPD) and the American Academy of Pediatrics (AAP) recommend that children receive oral health care services by age 1 and have regular visits thereafter.[ii,iii] In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year.[iv] Monitoring trends in children's need for urgent dental care can help to guide the development of prevention and disease management programs and evaluate the effectiveness of those programs over time in reducing the incidence and severity of oral disease among children.
Are there any limitations to this indicator?	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.
Where can I get more information about BSS?	• Additional information about the BSS is available from ASTDD.

[i] Centers for Disease Control and Prevention. 2016. *Hygiene-Related Diseases: Dental Caries.* Atlanta, GA: Centers for Disease Control and Prevention.
[ii] American Academy of Pediatric Dentistry, Council on Clinical Affairs. 2018. *Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents*. 11 pp.
[iii] American Dental Association. 2020. *Your Baby's First Dental Visit*. Chicago, IL: American Dental Association.
[iv] Nasseh K, Vujicic M. 2016. *Dental Care Utilization Steady Among Working-Age Adults and Children, Up Slightly Among the Elderly*. Health Policy Institute Research Brief. Chicago, IL: American Dental Association.

Section 3: 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 2018

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 2018

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	
C07.01	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?
Section 8: Demographics	
C08.01	What is your sex? OR What was your sex at birth? Was it . . .
C08.02.	What is your age?

Data Source: Medicaid Enrollment and Claims Data, Calendar Year 2018

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 2018** or the most recent prior year for which data are available:

- **Medicaid enrollment and claims data:** enrollment and service dates in 2018
- **PRAMS:** birth year and surveillance year is 2018
- **BFRSS:** survey collection year is 2018 (oral health module is a rotating core collected only in even years)
- **BSS kindergarten survey:** Data-collection year is school year 2017–2018 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 2017–2018 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. 2019. *Behavioral Risk Factor Surveillance System* [webpage].
[4] Centers for Disease Control and Prevention. 2020. *PRAMS* [webpage].
[5] Association of State and Territorial Dental Directors. N.d. *ASTDD Basic Screening Surveys* [webpage].
[6] Dental Quality Alliance. 2020. *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. 2020. *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 55% 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. 2020. *Are PRAMS Data Available to Outside 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 Measures

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 *2020 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 user guide.

J. Reporting Templates

Sample Excel-based reporting templates are available on the COHSII website. These templates include reporting the overall scores for each indicator as well as scores by specific population characteristics such as age and race/ethnicity. The templates also include auto-populated charts.

[10] Dental Quality Alliance. 2020. *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
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	Yes No

[11] Centers for Disease Control and Prevention. 2019. Methodology [webpage].
[12] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2019. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

participation (birth certificate; from PRAMS survey before 2016)	
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 55% 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. 2020. *Are PRAMS Data Available to Outside 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 maternal and child (MCH) oral health quality indicators from the PRAMS survey. Fine additional information about PRAMS 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. 2014. *Standards for Systems of Care for Children and Youth with Special Health Care Needs*. 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. 2019. *Methodology* [webpage].
[18] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2019. *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 55% 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. 2020. *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 the Center for Oral Health Systems Integration and Improvement for the maternal and child (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. 2019. *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. 2019. *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 55% 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. 2020. *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 the Center for Oral Health Systems Integration and Improvement for the maternal and child (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 C07.01; exclude unknowns and refusals

Section 7: Oral Health, Question C07.01

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	
2018 Surveillance Year, Section 7, Question C07.01.	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?
Core Section 8: Demographics	
C08.01.	What is your sex? OR What was your sex at birth? Was it . . .
C08.02.	What is your age?
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

[29] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2019. *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."

	$25,000–$49,999 ≥$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
Disability	Activity limitations No activity limitations

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 C07.01:

Step 1: Identify number of respondents to question C07.01.

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 C07.01

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 maternal and child (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)	Yes No

[34] Centers for Disease Control and Prevention. 2019. *Methodology* [webpage].
[35] Adapted from Health Resource and Services Administration, Maternal and Child Health Bureau. 2019. *Federally Available Data (FAD) Resource Document*. Rockville, MD: Health Resource and Services Administration, Maternal and Child Health Bureau.

participation (birth certificate; from PRAMS survey before 2016)	
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 55% 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)

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[36] Centers for Disease Control and Prevention. 2020. *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.

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, 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 the Center for Oral Health Systems Integration and Improvement for the maternal and child (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].

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 EPSDT 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 the Center for Oral Health Systems Integration and Improvement for the maternal and child (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.

1. 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

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[39]

3. Level of Reporting

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

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

Indicator Domain: UTILIZATION

Indicator C.3. Preventive Services for Children at Elevated Caries Risk, Dental 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 are at "elevated" risk (i.e., "moderate" or "high") who received a topical fluoride application and/or sealants within the reporting year

- **Numerator:** Unduplicated number of children at "elevated" risk (i.e., "moderate" or "high") who received a topical fluoride application and/or sealants as a dental service
- **Denominator:** Unduplicated number of enrolled children at "elevated" risk (i.e., "moderate" or "high")

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[40]

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 (prior 3 years needed for risk determination). 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

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

Indicator Domain: PROCESS

Indicator C.4. Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services (NQF #2528)

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 ages 1–21 who are at "elevated" risk (i.e. "moderate" or "high") who received at least two topical fluoride applications within the reporting year

- **Numerator:** Unduplicated number of children at "elevated" risk (i.e. "moderate" or "high") who received at least two topical fluoride applications as a dental service
- **Denominator:** Unduplicated number of enrolled children ages 1–21 at "elevated" risk (i.e. "moderate" or "high")

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 (prior 3 years needed for risk determination). 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.5. Prevention: Topical Fluoride for Children at Elevated Caries Risk, 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 ages 1–21 who are at "elevated" risk (i.e. "moderate" or "high") who received at least two topical fluoride applications as oral health services within the reporting year

- **Numerator:** Unduplicated number of children at "elevated" risk (i.e. "moderate" or "high") who received at least two topical fluoride applications as oral health services
- **Denominator:** Unduplicated number of enrolled children ages 1–21 at "elevated" risk (i.e. "moderate" or "high")

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 claims and enrollment data; single year (prior 3 years needed for risk determination). 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 • CPT codes (selected states) • 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.[41]

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

[41] 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.[42]

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.

[42] 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.[43]

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

[43]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.[44]

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.

[44] 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.[45]

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

[45]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.[46]

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.

[46] 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.[47]

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

[47] 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.[48]

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.

[48] 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. Center for Oral Health Systems Integration and Improvement Maternal and Child Health (COHSII) 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)

- *Federally Available Data (FAD) Resource Document*
- 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 MCH Services Block Grant Oral Health Toolkit*
- *Oral Health Care During Pregnancy: A National Consensus Statement*

C. Acknowledgements

Quality Indicator Advisory Team

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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

Dental Quality Alliance Measures (Measures) and related data specifications, developed by the Dental Quality Alliance (DQA), are intended to facilitate quality improvement activities. These Measures are intended to assist stakeholders in enhancing quality of care. These performance Measures are not clinical guidelines and do not establish a standard of care. The DQA has not tested its Measures for all potential applications.

Measures are subject to review and may be revised or rescinded at any time by the DQA. The Measures may not be altered without the prior written approval of the DQA. The DQA shall be acknowledged as the measure steward in any and all references to the measure. Measures developed by the DQA, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain. Commercial uses of the Measures require a license agreement between the user and DQA. 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. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The DQA, American Dental Association (ADA), and its members disclaim all liability for use or accuracy of any terminologies or other coding contained in the specifications.

The specifications are provided "as is" without warranty of any kind.

https://www.ada.org/en/science-research/dental-quality-alliance/dqa-measure-development-reports/dqa-dental-quality-measures

E. Proprietary Codes

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