DQA Measure Specifications: Administrative Claims-Based Measures

Caries Risk Documentation

**Please read the DQA Measures User Guide prior to implementing this measure.**

**Description:** Percentage of enrolled children under age 21 years who have caries risk documented in the reporting year

**Numerator:** Unduplicated number of children with caries risk documented

**Denominator:** Unduplicated number of enrolled children under age 21 years

**Rate:** NUM/DEN

Dental caries is the most common chronic disease in children in the United States. (1) In 2009–2010, 14% of children aged 3–5 years had untreated dental caries. Among children aged 6–9 years, 17% had untreated dental caries, and among adolescents aged 13–15, 11% had untreated dental caries. (2) Caries risk assessment is the determination of the likelihood of the incidence of caries (i.e., the number of new cavitated or incipient lesions) during a certain time period (3) or the likelihood that there will be a change in the size or activity of lesions already present. (4) Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce incidence of future lesions. (4) The American Academy of Pediatric Dentistry states that “the process of determining risk should be a component in the clinical decision-making process.” (4) The American Dental Association notes: “Systematic methods of caries detection, classification, and risk assessment, as well as prevention/risk management strategies, can help to reduce patient risk of developing advanced disease and may even arrest the disease process.” (5) Caries risk assessment is recommended for identifying risk factors and developing individualized care plans for prevention and treatment. (4–5)


**National Quality Forum Domain:** Process

**Institute of Medicine Aim:** Equity, Effectiveness

**National Quality Strategy Priority:** Health and Well-Being

**Level of Aggregation:** Health Plan/Program

**Improvement Noted As:** A higher score indicates better quality.

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1 Process (measure type): “A healthcare service provided to, or on behalf of, a patient. This may include, but is not limited to, measures that may address adherence to recommendations for clinical practice based on evidence or consensus.” National Quality Forum. “NQF Glossary.” Available at: http://www.qualityforum.org/Measuring_Performance/Measuring_Performance.aspx. Accessed May 30, 2017.
**Data Required:** Administrative enrollment and claims data; single year for measurement. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

**Measure purpose:** Examples of questions that can be answered through this measure at each level of aggregation:

1. What percentage of children have caries risk documented during the reporting period?

**Applicable Stratification Variables**

1. Age: < 1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20
2. Payer Type (e.g., Medicaid; private commercial benefit programs)
3. Program/Plan Type (e.g., Traditional FFS; PPO; prepaid dental/DHMO)
4. Geographic Location (e.g., rural; suburban; urban)
5. Race/Ethnicity
6. Socioeconomic Status (e.g., premium or income category)

**Measure Limitations:**

Although the most commonly used caries-risk assessment tools share common elements, there is no evidence that supports one tool over another. As a result, different providers use different risk assessment tools, combined with clinical judgment, to arrive at a caries risk determination. Despite the limited evidence on the relative effectiveness of caries risk prediction using different assessment tools, professional clinical guidelines recommend that providers conduct caries risk assessment and use that information to develop individualized prevention and treatment care planning. Surveys of dentists find that approximately 30% do not conduct caries risk assessment. A substantial percentage of caries risk assessments are not documented. Consequently, this measure is designed for use in quality improvement applications to support quality improvement efforts around caries risk assessment and documentation. In addition, this measure is designed only to document that the enrollee received a risk assessment. This measure is not designed to be used to assess the health state of the population or to create population risk profiles.


Caries Risk Calculation for Children

1. Check if the enrollee meets age criterion at the last day of the reporting year:\(^2\)
   a. If child is <21 years,\(^3\) then proceed to next step.
   b. If age criterion is not met or there are missing or invalid field codes (e.g., date of birth), then STOP processing. This enrollee does not get counted.

2. Check if subject is continuously enrolled for at least 180 days in the reporting year:\(^4\)
   a. If subject meets continuous enrollment criterion, then include in denominator; proceed to next step.
   b. If subject does not meet enrollment criterion, then STOP processing. This enrollee does not get counted.

**YOU NOW HAVE THE DENOMINATOR (DEN): Enrollees who meet the age and enrollment criteria**

3. Check if subject has caries risk documented during the reporting year:
   a. If subject has a visit with a CDT code = (D0601 or D0602 or D0603) in the reporting year, then include in the numerator.
   b. If the subject does not have the CDT Code documented, then STOP processing. This enrollee will not be included in the measure numerator.

   **Note:** All claims with missing or invalid CDT CODE, should not be included in the numerator.

**YOU NOW HAVE THE NUMERATOR (NUM): Enrollees who have caries risk documented**

4. Report
   a. Unduplicated number of enrollees in numerator
   b. Unduplicated number of enrollees in denominator
   c. Measure rate (NUM/DEN)
   d. Rate stratified by age

*** Note: Reliability of the measure score depends on the quality of the data that are used to calculate the measure. The percentages of missing and invalid data for these data elements must be investigated prior to measurement. Data elements with high rates of missing or invalid data will adversely affect the subsequent counts that are recorded. For example, records with missing or invalid CDT CODE to identify caries risk documentation may be counted in the denominator but not in the numerator. These records are assumed to not have had a qualifying service. In this case, a low quality data set will result in a low measure score and will not be reliable.***

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\(^2\) Medicaid/CHIP programs should exclude those individuals who do not qualify for dental benefits. The exclusion criteria should be reported along with the number and percentage of members excluded.

\(^3\) **Age:** Medicaid/CHIP programs use under age 21 (<21) as upper bound of age range; Exchange quality reporting use under age 19 (<19) as the upper bound of the age range; other programs check with program officials. The age criteria should be reported with the measure score.

\(^4\) **Enrollment in “same” plan vs. “any” plan:** At the state program level (e.g., Medicaid/CHIP) a criterion of “any” plan applies versus at the health plan (e.g., MCO) level a criterion of “same” plan applies. The criterion used should be reported with the measure score. While this prevents direct aggregation of results from plan to program, each entity is given due credit for the population it serves. Thus, states with multiple MCOs should not merely “add up” the plan level scores but should calculate the state score from their database to allow inclusion of individuals who may be continuously enrolled but might have switched plans in the interim.
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. Measures developed by the DQA, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes. 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.

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Check age eligibility

- Continuously enrolled for at least 180 days?
  - No/ Missing/ Invalid Field Codes
  - Qualifying age at last day of reporting year?
    - Yes
      - Continuously enrolled for at least 180 days?
        - Yes
          - DEN: all enrollees who meet the age and enrollment criteria
            - Risk Documented?
              - Yes
                - NUM: enrollees who had an oral evaluation as a dental service

- NC Not Counted

Medicaid/CHIP use < 21; Exchange plans use <19; others consult program officials.