DQA Measure Technical Specifications: Administrative Claims-Based Measures

Care Continuity, Dental Services

**Description:** Percentage of all children enrolled in two consecutive years who received a comprehensive or periodic oral evaluation in both years

**Numerator:** Unduplicated number of children who received a comprehensive or periodic oral evaluation as a dental service in both years

**Denominator:** Unduplicated number of all children enrolled in two consecutive years

**Rate:** NUM/DEN

**Rationale:** 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). Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce incidence of future lesions. Approximately three quarters of children younger than age 6 years did not have at least one visit to a dentist in the previous year (3).


**AHRQ Domains:** Access;¹ Process²

**IOM Aim:** Equity, Effectiveness

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

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

**Data Required:** Administrative enrollment and claims data; two consecutive years. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

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¹ **Access (Clinical Quality Measure):** “Access to care is the attainment of timely and appropriate health care by patients or enrollees of a health care organization or clinician. Access measures are supported by evidence that an association exists between the measure and the outcomes of or satisfaction with care.” National Quality Measures Clearinghouse. Available at: http://www.qualitymeasures.ahrq.gov/about/domain-definitions.aspx. Accessed August 10, 2015.

² **Process (Clinical Quality Measure):** “A process of care is a health care-related activity performed for, on behalf of, or by a patient. Process measures are supported by evidence that the clinical process—that is the focus of the measure—has led to improved outcomes.” National Quality Measures Clearinghouse. Available at: http://www.qualitymeasures.ahrq.gov/about/domain-definitions.aspx. Accessed August 10, 2015.
Measure purpose: Examples of questions that can be answered through this measure at each level of aggregation.

1. What is the percentage of children who have continuous care over 2 years?
2. Does the percentage of children with continuous care vary by the stratification variables?
3. Are there disparities in continuous care among different groups based on the stratification variables?
4. Over time, does the percentage of children with continuous care stay stable, increase or decrease?

Applicable Stratification Variables (Optional: Contact Program Official to determine reporting requirement):

1. Age (e.g., 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20)
2. Payer Type (e.g., Medicaid; CHIP; 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
6. Ethnicity
7. Socioeconomic Status (e.g., premium or income category)
Care Continuity (Dental Services) Calculation

1. Check if the enrollee meets age criteria at the last day of the reporting year: \(^3\)
   a. If child is \(\geq 1\) and \(<21\), then proceed to next step.
   b. If age criteria are 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 each year (i.e., 180 days in reporting year AND 180 days in prior year): \(^5\)
   a. If subject meets continuous enrollment criteria, then include in denominator; proceed to next step.
   b. If subject does not meet enrollment criteria, then STOP processing. This enrollee does not get counted in the denominator.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: All enrollees who meet age and enrollment criteria in each year

3. Check if subject received oral evaluation as a dental service in each year:
   a. If \([CDT\ CODE] = D0120\) or \(D0150\) or \(D0145\) in the reporting year AND in the prior year, AND
   b. If \([RENDERING\ PROVIDER\ TAXONOMY]\ code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in numerator; proceed to next step.\(^6\)
   c. If both a AND b are not met, then the service was not provided or was not provided as a "dental service"; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

Note: At least one claim for oral evaluation in the reporting year AND in the prior year must be with a provider whose [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1.

YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees who received an oral evaluation as a dental service in each year

4. Report
   a. Unduplicated count of enrollees in numerator
   b. Unduplicated count of enrollees in denominator
   c. Measure rate (NUM/DEN)

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\(^3\) 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.

\(^4\) 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.

\(^5\) 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.

\(^6\) Identifying “dental” services: Programs and plans that do not use standard NUCC maintained provider taxonomy codes should use a valid mapping to identify providers whose services would be categorized as “dental” services. Stand-alone dental plans that reimburse ONLY for services rendered by or under the supervision of the dentist can consider all claims as “dental” services.
### Table 1: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”*

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<td>1223S0112X</td>
<td>125K00000X</td>
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</table>

*Services provided by County Health Department dental clinics may also be included as “dental” services.  
+Only dental hygienists who provide services under the supervision of a dentist should be classified as “dental” services. Services provided by independently practicing dental hygienists should be classified as “oral health” services and are not applicable to this measure.

*** 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 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 measure score that will not be reliable.***
Check age eligibility

Qualifying age at last day of reporting year?

Yes

Continuously enrolled for at least 180 days in EACH year?

Yes

DEN: all enrollees who meet the age and enrollment criteria

No/ Missing/Invalid field codes

NC Not Counted

No/ Missing/Invalid field codes

Oral evaluation in EACH year?

Yes

Dental services?

Yes

NUM: enrollees who had oral evaluation in both years

STOP

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

Use NUCC codes. Exclude records with missing or invalid codes. Some States may use different file types or custom codes to classify dental and oral health services.
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