

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

## DQA Measure Technical Specifications: Administrative Claims-Based Measures Per Member Per Month Cost of Clinical Services, Dental Services

**Description:** Total amount that is paid on direct provision of care (reimbursed for clinical services) per member per month for all enrolled children during the reporting year  
**Numerator:** Total amount paid for dental services  
**Denominator:** Total dental member months for all members enrolled in dental coverage for at least one month  
**Rate:** NUM/DEN;

**Rationale:** Dental caries is the most common chronic disease in children in the United States (1). For 2015–2016, prevalence of total caries (untreated and treated) was 45.8% and untreated caries was 13.0% among youth aged 2–19 years (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).

- (1) Centers for Disease Control and Prevention. Hygiene-related diseases: dental caries. Available at: [http://www.cdc.gov/healthywater/hygiene/disease/dental\\_caries.html](http://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html). Accessed July 28, 2015.
- (2) Fleming E, Afful J. 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.
- (3) Edelstein BL, Chinn CH. Update on disparities in oral health and access to dental care for America’s children. *Acad Pediatr.* 2009;9(6):415-9. PMID: 19945076

**AHRQ Domain:** Related health care delivery - cost<sup>1</sup>

**IOM Aim:** Efficiency

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

**Data Required:** Administrative enrollment and claims data; single year. When using claims data to determine service receipt, include only paid claims.

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

1. What is the cost of dental services per member per month?
2. Are there disparities in the cost per member per month between different groups based on the stratification variables?

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<sup>1</sup> Cost (related Healthcare Delivery Measure): “Costs of care are the monetary or resource units expended by a health care organization or clinician to deliver health care to individuals or populations. Cost measures are computed from data in monetary or resource units. Costs may be reported directly (i.e., actual costs) or estimated based on the volume of resource units provided and the charges for those units.” National Quality Measures Clearinghouse. Available at: <http://www.qualitymeasures.ahrq.gov/about/domain-definitions.aspx>. Accessed August 10, 2015.

3. The numerator of this measure provides part of the information to calculate the **dental insurance loss ratio**. The loss ratio is the ratio of total amount paid for dental care services and quality improvement activities divided by the total earned premiums less federal/state taxes and license/regulatory fees.<sup>2</sup>

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

1. Age (e.g., <1; 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)

### PMPM Cost (Dental Services) Calculation

1. Check if the enrollee meets age criterion<sup>3</sup> at the last day of the reporting year:<sup>4</sup>
  - a. If age criterion is met, 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 in the denominator.
2. Check if subject is enrolled in dental coverage at least one month during the reporting year:
  - a. If subject meets enrollment criterion then proceed to next step.
  - b. If subject does not meet enrollment criterion, then STOP processing.
3. Calculate total number of member months by summing the number of months enrolled in dental coverage for all members enrolled at least one month in dental coverage during the reporting year; include as **denominator**.

### YOU NOW HAVE THE DENOMINATOR COUNT: total number of dental member months

4. Calculate total dental costs by summing paid amounts for all services with [CDT CODE] = D0100 – D9999 that were provided by a provider whose [RENDERING PROVIDER TAXONOMY] code = any of the NUCC codes in Table 1. Include as **numerator**.

**Note:** In this step, all **claims** with missing or invalid CDT CODE, missing or invalid NUCC maintained Provider Taxonomy Codes, or NUCC maintained Provider Taxonomy Codes that do not appear in Table 1 should not be included in the numerator.

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<sup>2</sup> Adapted from National Association of Insurance Commissioners.  
[http://www.naic.org/documents/committees\\_ex\\_mlr\\_reg\\_asadopted.pdf](http://www.naic.org/documents/committees_ex_mlr_reg_asadopted.pdf)

<sup>3</sup> **Age:** Medicaid/ CHIP programs use under age 21 (< 21); Exchange quality reporting use under age 19 (<19); other programs check with program officials. This criterion should be reported with the measurement score.

<sup>4</sup> **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.

**YOU NOW HAVE NUMERATOR (NUM) COUNT: Total paid amount for dental services**

5. Report
  - a. Total dental costs (NUM)
  - b. Total dental member months (DEN)
  - c. Measure rate (NUM/DEN)

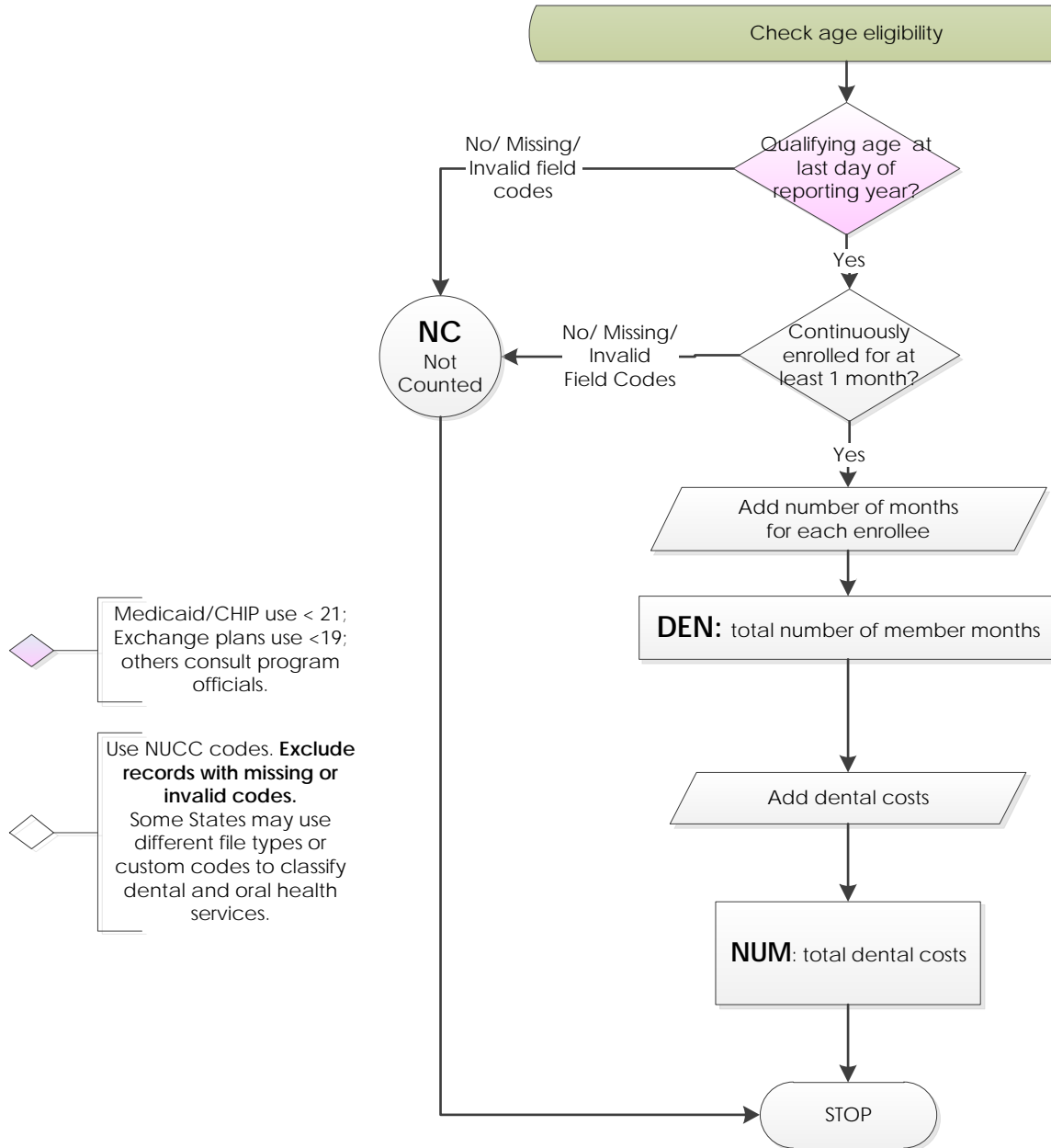
**Table 1: NUCC Codes classified as “Dental Service”\***

122300000X	1223P0106X	1223X0008X	125Q00000X
1223D0001X	1223P0221X	1223X0400X	261QF0400X
1223D0004X	1223P0300X	124Q00000X+	261QR1300X
1223E0200X	1223P0700X	125J00000X	1223X2210X
1223G0001X	1223S0112X	125K00000X	

\*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.\*\*\*



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