

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

## DQA Measure Technical Specifications

### Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services

#### Program/Plan Level Reporting: Administrative Enrollment and Claims Data

**Description:** Percentage of children aged 1–21 years who are at “elevated” risk (i.e. “moderate” or “high”) who received at least 2 topical fluoride applications within the reporting year

**Numerator:** Unduplicated number of children at “elevated” risk (i.e. “moderate” or “high”) who received at least 2 topical fluoride applications as a dental service

**Denominator:** Unduplicated number of children aged 1–21 years at “elevated” risk (i.e. “moderate” or “high”)

**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. In 2014, 52% of all children and 60% of poor children (FPL<100%) did not have a dental visit during the year (3). Evidence-based Clinical Recommendations suggest that topical fluoride should be applied at least every three to six months in children at elevated risk for caries (4).

- (1) Centers for Disease Control and Prevention. Hygiene-related diseases: dental caries. Updated September 22, 2016 Available at: [http://www.cdc.gov/healthywater/hygiene/disease/dental\\_caries.html](http://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html). Accessed April 2<sup>nd</sup>, 2019.
- (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) Nasseh K, Vujcic M. Dental care utilization steady among working-age adults and children, up slightly among the elderly. Health Policy Institute Research Brief. American Dental Association. October 2016. Available from: [http://www.ada.org/-/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief\\_1016\\_1.pdf](http://www.ada.org/-/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1016_1.pdf).
- (4) 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. J Am Dent Assoc. 2013 Nov;144(11):1279-91.

**National Quality Measures Clearinghouse:** Process<sup>1</sup>

**National Quality Forum:** Process

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

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

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

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<sup>1</sup>**Process:** “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. These measures are generally calculated using patients eligible for a particular service in the denominator, and the patients who either do or do not receive the service in the numerator.” NQMC Measure Domain Definitions. Available at: <https://www.ahrq.gov/gam/summaries/domain-definitions/index.html>. Accessed April 2<sup>nd</sup>, 2019

**Improvement Noted As:** A higher score indicates better quality.<sup>2</sup>

**Data Required:** Administrative enrollment and claims data; single year for measurement (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).

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

1. What percentage of children at elevated risk for dental caries receive at least 2 topical fluoride applications as a dental service during the reporting period?
2. Over time, is the percentage of children who receive at least 2 topical fluoride applications stable, increasing, or decreasing?

#### Applicable Stratification Variables

1. Age: 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20

#### Measure Limitations:

- *This measure assumes that all modes of topical fluoride application are equally effective. The measure calls for the documentation of at least two instances (on different dates of service) of any combination of two fluoride specific CDT codes, D1206 and D1208. D1206 refers to professionally applied fluoride varnish and D1208 is any topical application of fluoride including fluoride gels or fluoride foams (excluding fluoride varnish).*
- *This measure does not take into account alternate home-use fluoride products including supplements.*
- *Some codes (i.e., a few endodontic codes) included to identify children at elevated risk may also be reported for instances such as trauma and may contribute to some overestimation of children at "elevated risk."*
- *Since the "elevated risk" determination requires an evaluation (to record a CDT risk code) or a treatment visit (to record a CDT treatment code), children who are enrolled but do not have a visit in the reporting year or a treatment visit in any of the prior three years will not have sufficient information to be included in the measure. While this is a limitation, the intent of this PROCESS OF CARE measure is to seek to understand whether children who can be positively identified as being at elevated risk receive the recommended preventive services.*

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<sup>2</sup> Evidence-based guidelines suggest that at-risk children benefit from topical fluoride applications applied at least every 3-6 months.

## Topical Fluoride Calculation for Children at Elevated Caries Risk

1. Check if the subject meets age criteria at the last day of the reporting year:<sup>3</sup>
  - a. If child is  $\geq 1$  and  $< 21$ ,<sup>4</sup> 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 subject does not get counted.
2. Check if subject is continuously enrolled for the reporting year (12 months) with a gap of no more than 31 days (one month gap for programs that determine eligibility on a monthly basis):<sup>5</sup>
  - a. If subject meets continuous enrollment criterion, then proceed to next step.
  - b. If subject does not meet enrollment criterion, then STOP processing. This subject does not get counted.

## YOU NOW HAVE THE COUNT OF THOSE WHO MEET THE AGE AND ENROLLMENT CRITERIA

3. Check if subject is at "elevated risk":
  - a. If subject meets ANY of the following criteria, then include in **denominator**:
    - i. the subject has a CDT Code among those in Table 1 in the reporting year,  
OR
    - ii. the subject has a CDT Code among those in Table 1 in any of the three years prior to the reporting year, (**NOTE:** The subject does not need to be enrolled in any of the prior three years for the denominator enrollment criteria; this is a "look back" for subjects who do have claims experience in any of the prior three years.)  
OR
    - iii. the subject has a visit with a CDT code = (D0602 or D0603) in the reporting year.
  - b. If the subject does not meet any of the above criteria for elevated risk, then STOP processing. This subject will not be included in the measure denominator.

## YOU NOW HAVE THE DENOMINATOR (DEN): Subjects who are at "elevated risk"

4. Check if subject received at least two fluoride applications as dental services during the reporting year – at least two unique dates of service when topical fluoride was provided. Service provided on each date of service should satisfy the following criteria:
  - a. If [CDT CODE] = D1206 or D1208,<sup>6</sup> AND

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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 Topical Fluoride codes: For reporting years prior to 2013, use CDT codes D1203 or D1204 or D1206.

- b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below, then include in numerator; proceed to next step.<sup>7</sup>
- c. If both a AND b are not met, then the service was not a “dental service”; STOP processing. This subject is already included in the denominator but will not be included in the numerator.

**Note 1:** No more than one fluoride application can be counted for the same member on the same date of service.

**Note 2:** 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 2 should not be included in the numerator.

**YOU NOW HAVE NUMERATOR (NUM) COUNT: Subjects at “elevated risk” who received at least two fluoride applications as a dental service**

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

**Table 1: CDT Codes to identify “elevated risk”**

D1352	D2392	D2610	D2710	D2782	D2940	D3330
D1354	D2393	D2620	D2712	D2783	D2941	
D2140	D2394	D2630	D2720	D2790	D2950	
D2150	D2410	D2642	D2721	D2791	D3110	
D2160	D2420	D2643	D2722	D2792	D3120	
D2161	D2430	D2644	D2740	D2794	D3220	
D2330	D2510	D2650	D2750	D2799	D3221	
D2331	D2520	D2651	D2751	D2930	D3222	
D2332	D2530	D2652	D2752	D2931	D3230	
D2335	D2542	D2662	D2753	D2932	D3240	
D2390	D2543	D2663	D2780	D2933	D3310	
D2391	D2544	D2664	D2781	D2934	D3320	

<sup>7</sup> 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.

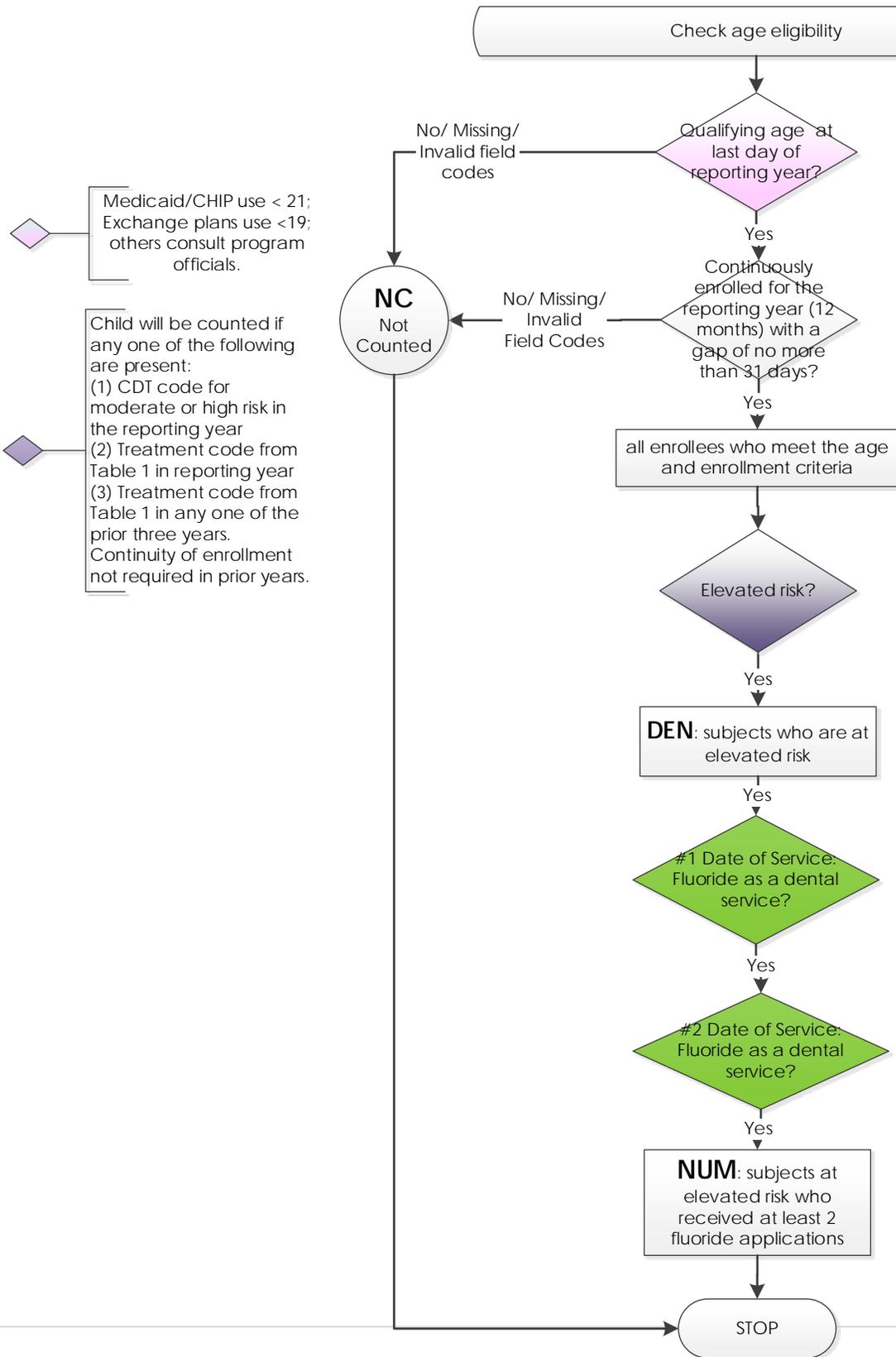
**Table 2: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”\*\***

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 for 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 to identify topical fluoride 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.\*\*\*



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

Child will be counted if any one of the following are present:  
 (1) CDT code for moderate or high risk in the reporting year  
 (2) Treatment code from Table 1 in reporting year  
 (3) Treatment code from Table 1 in any one of the prior three years.  
 Continuity of enrollment not required in prior years.

## Practice-Level Reporting

**NOTE: Practice-level reporting of this measure is not NQF-endorsed. NQF endorsement applies only to the program and plan level specification of this measure.**

### GUIDANCE FOR MEASURING PERFORMANCE OF DENTAL PRACTICES

Standardized measurement that is aligned across different levels of reporting aggregation and across public and private sectors can help pave the way to improvement. As Medicaid programs and managed care organizations are increasingly held accountable for performance on these measures, they in turn hold their contracted practices accountable. Because practice-level measurement is often driven vertically (from program to plan to practice), practice-level measures will be most effective when aligned with program- and plan-level measurement. Before proceeding with measure implementation, please review the [DQA's Guidance on Practice Based Measures Implementation](#).

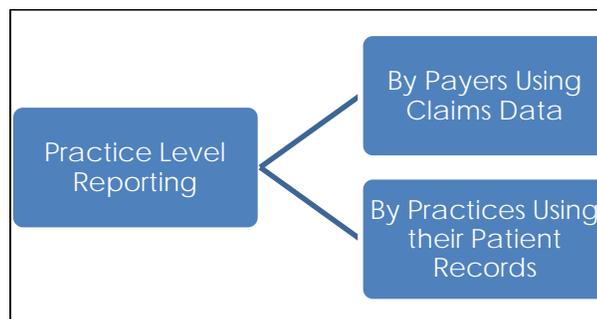
**Description:** Percentage of children aged 1 through 20 years *in a practice* at "elevated" risk (i.e., "moderate" or "high") who received at least 2 fluoride applications within the reporting year

**Numerator:** Unduplicated number of children aged 1 through 20 years *in a practice* at "elevated" risk (i.e., "moderate" or "high") who received at least 2 fluoride applications

**Denominator:** Unduplicated number of children aged 1 through 20 years *in a practice* who received a *comprehensive or periodic oral evaluation* and who are at "elevated" risk (i.e., "moderate" or "high")

**Rate:** NUM/DEN

Attribution of patients to a practice for the purposes of defining the denominator is the main characteristic that must be adapted for this level of reporting. In addition, there must also be consideration of denominator sizes that allow for reliable comparisons between entities. Practice level reporting can occur in 2 ways:



E-specifications currently under development

## GUIDANCE ON USING CLAIMS DATA FOR REPORTING ON THE PERFORMANCE OF DENTAL PRACTICES BY PAYERS

**ATTRIBUTION for determining the denominator: Identify practices eligible for the measure and patients attributable to the practice**

Practice Definition

“Practice” = An entity with a unique TIN

“Group Practice” = An overall dental group with more than one practice location

“Practice Location” = A physical office that is a practice or part of a group of practices

### 1. Determine if practice is eligible for this measure (i.e., does not include only specialty practice dentists):

- a. If [BILLING PROVIDER] = \*unique TIN\* in the reporting year, AND
- b. If [RENDERING PROVIDER] = any of the NUCC Codes in Table 2 in any claim from \*unique TIN\*

- This step is not tied to the individual patient. Use \*all claims\* by billing practice and check if \*any\* claim has the appropriate rendering provider.
- In some instances, each location may have its own unique TIN. In other instances, a group practice with several physical locations may share a single TIN. In the latter situation, if the intent of measurement is to derive a score for each location, then local data elements that can uniquely identify individual practice locations may need to be applied.
- Map to provider files that have data available on provider type/specialty if NUCC codes are not used. The purpose of restricting by provider type is to eliminate practices that do not provide routine, preventive care.
- Claims with missing or invalid TIN or NUCC codes should not be included.

### 2. Among patients meeting the age, enrollment, and elevated risk criteria for the payer, attribute individual patients to eligible practices (patient had a comprehensive or periodic oral evaluation in an eligible practice):

- a. If [CDT CODE] = D0120 OR D0150 or D0145 in the reporting year, AND
- b. If [BILLING PROVIDER] = one of the eligible \*unique TIN\* in the reporting year, then include in denominator.

- The same patient may be attributed to multiple “practices” or multiple “locations”; i.e., one patient can be counted in the denominator of more than one eligible TIN [or practice location within a TIN]. However, within a single measured entity, the patient should only be attributed once; i.e., within a TIN when reporting for the group overall, a patient is only counted once in the denominator.

**You now have the practice-level specific denominator. Follow the program/plan level specifications for determining the practice-level numerator.**

**DENOMINATOR SIZE:** If the denominator is <100 patients, the measure score may not be reliable and should not be used in accountability applications.

**GUIDANCE ON USING DATA FROM BILLING/PRACTICE MANAGEMENT SOFTWARE OR PATIENT ELECTRONIC RECORDS FOR REPORTING ON THE PERFORMANCE OF DENTAL PRACTICES (BY DENTAL PRACTICES)**

**ATTRIBUTION for determining the denominator: Identifying patients of record in the practice**

**Identify patients of record for the practice - check if subject received a periodic or comprehensive oral evaluation in the practice in the reporting year:**

- a. If [CDT CODE] = D0120 OR D0150 or D0145 in the reporting year within the practice, then include in the denominator.
- b. If a is not met, then the patient is not eligible for inclusion in the denominator.

**Note:** This replaces Step 2 (enrollment requirements) in the Program/Plan specification above. Practices should follow all other steps in the program/plan specifications.

**Additional Guidance**

- **“Active” Patients:** Some systems have a structured data element to denote if a patient is active in the practice. This is not universally present in all systems or universally used by practices that have this. For the purposes of this measure, that data element should \*not\* be used when determining whether a patient should be included in the practice’s denominator.
- **Patient attribution:** The same patient may be attributed to multiple “practices” or multiple “locations”; i.e., one patient can be counted in the denominator of more than one eligible TIN [or practice location within a TIN]. However, within a single measured entity, the patient should only be attributed once; i.e., within a TIN when reporting for the group overall, a patient is only counted once in the denominator.
- **Completed Procedure:** Include all posted procedures for completed treatment whether paid or unpaid. The code does NOT need to have been billed to an insurance company. Do not include procedures for which treatment was not completed (i.e., planned treatment).
- **Assessment of Risk status:** If a patient has multiple risk assessments (recorded using CDT codes D0601, D0602, or D0603) in the reporting year, identify the patient as at “elevated” risk if **any** of the risk assessments is D0602 or D0603. Risk assessment does not need to be tied to the practice location being measured; i.e., any records for the patient in the reporting year regardless of provider or practice location may be used. If the database has proprietary risk assessment codes that map 1:1 to the CDT risk codes, these codes may be used in clause 3(a)(iii).
- **Fluoride Attribution:** If fluoride was applied in the reporting year, it should be counted regardless of the provider or practice that actually provided the service. Date of Service 1 and Date of Service 2 should be unique dates of service. No more than one fluoride application can be counted for the same patient on the same date of service. There is no temporal relationship between the evaluation and the fluoride application. This is because the evaluation is simply being used as a marker for attribution.

**DENOMINATOR SIZE:** If the denominator is <50 patients, the measure score may not be reliable and should not be used in accountability applications.

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