

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

DQA Measure Technical Specifications: Administrative Claims-Based Measures

Prevention: Topical Fluoride for Children

“Dental” OR “Oral Health” Services

Description: Percentage of children aged 1–21 years who received at least 2 topical fluoride applications as (a) dental OR oral health services, (b) dental services, and (c) oral health services within the reporting year

Numerators: Unduplicated number of children who received at least 2 topical fluoride applications as (a) dental OR oral health services (NUM1), (b) dental services (NUM2), and (c) oral health services (NUM3)

Denominator: Unduplicated number of children aged 1–21 years

Rates: NUM1/DEN (NQF #3700); NUM2/DEN (NQF #2528); NUM3/DEN (NQF #3701)¹

Rationale: Dental caries is one of the most common chronic diseases 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 is dose-dependent and should be applied to children with a frequency of every three to six months based on risk for dental caries(4,5).

Rationale for “Dental or Oral Health” Services:

Children, particularly young children, may receive topical fluoride application from “non-dental” providers, such as medical primary care providers. Measure users may wish to seek additional information regarding whether certain services were provided to a population, irrespective of provider type. In such cases a “dental OR oral health” specification of the measure may be applicable. Further delineating the measure by “dental” and “oral health” helps programs and health care systems to understand the role of “non-dental” providers and at what age children appear to be establishing care with dental providers. The “dental OR oral health” numerator is **NOT** a sum of the “dental” and “oral health” numerators but represents the unduplicated count of children who received topical fluoride as a dental or oral health service. The DQA Measures User Guide provides additional information on categorization of “dental” and “oral health” services.

Note: Not all state Medicaid programs reimburse for “oral health” services up to age 21. Age stratifications are encouraged when interpreting this measure. The DQA Measures User Guide provides information on how to apply additional optional stratifications, including stratification by risk for dental caries.

- (1) Centers for Disease Control and Prevention. Oral Health Conditions: Cavities (Tooth Decay). Available at: <https://www.cdc.gov/oralhealth/conditions/index.html>. Accessed August 29, 2022.
- (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: https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpibrief_1016_1.pdf. Accessed August 29, 2022.

¹ These specifications reflect 3 related measures in the National Quality Forum's Quality Positioning System. Numerator 1 represents NQF #3700 (Prevention: Topical Fluoride for Children, Dental or Oral Health Services); Numerator 2 represents NQF #2528 (Prevention, Topical Fluoride for Children, Dental Services); Numerator 3 represents NQF #3701 (Prevention: Topical Fluoride for Children, Oral Health Services).

- (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.
- (5) U.S. Preventive Services Task Force. Final Recommendation Statement. Prevention of Dental Caries in Children Younger than 5 Years: Screening and Interventions. December 7, 2021 <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prevention-of-dental-caries-in-children-younger-than-age-5-years-screening-and-interventions1>. Accessed August 29, 2022.

National Quality Measures Clearinghouse: Process²

Institute of Medicine Aim: Equity, Effectiveness

National Quality Strategy Priority: Health and Well-Being

Level of Aggregation: Health Plan/Program

Improvement Noted As: In general, a higher percentage of children who receive at least two topical fluoride applications during the reporting year indicates better performance.³

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 receive at least 2 topical fluoride applications as dental or oral health services during the reporting period?
2. Over time, is the percentage of children who receive at least 2 topical fluoride applications as dental or oral health services stable, increasing, or decreasing?

Required 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. This 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 (or equivalent CPT codes when billed by non-dental providers). 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.*
- *Stand-alone dental plans will only be able to report on Numerator 2 ("dental" services).*

² **Process (measure type):** "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 August 29, 2022.

³ Evidence-based guidelines suggest that children benefit from topical fluoride applications applied with frequency of every 3–6 months based on caries risk determination.

Topical Fluoride (Dental or Oral Health Services) Calculation for Children

1. Check if the subject meets age criteria at the last day of the reporting year:⁴
 - a. If child is ≥ 1 and < 21 ,⁵ 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):⁶
 - 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 DENOMINATOR (DEN): SUBJECTS WHO MEET THE AGE AND ENROLLMENT CRITERIA

3. Check if subject received at least two fluoride applications as **dental or oral health 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 [SERVICE CODE] = CDT D1206 or CDT D1208⁷ or CPT 99188⁸ then include in [numerator 1](#); proceed to next step.
 - b. If a is not met, then STOP processing. This subject is already included in the denominator but will not be included in numerator 1.

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

Note 2: In this step, all **claims** with missing or invalid SERVICE CODE should be excluded.

YOU NOW HAVE NUMERATOR 1 (NUM1) COUNT: Subjects who received at least two fluoride applications as dental or oral health services

4. Check if subject received at least two fluoride applications as **dental services**⁹ 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:

⁴ **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.

⁵ **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.

⁶ **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.

⁷ **Topical Fluoride codes:** For reporting years prior to 2013, use CDT codes D1203 or D1204 or D1206

⁸ **Services provided by medical providers:** CPT 99188 is a dedicated code for "application of topical fluoride varnish by a physician or other qualified health care professional."

⁹ Stand-alone dental plans and other commercial dental plans will only be able to report on numerator 2.

- a. If [SERVICE CODE] = CDT D1206 or D1208,¹⁰ AND
- b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in [numerator 2](#); proceed to next step.¹¹
- 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 numerator 2.

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

Note 2: In this step, all **claims** with missing or invalid SERVICE CODE or with missing or invalid NUCC maintained Provider Taxonomy Codes should be excluded.

YOU NOW HAVE NUMERATOR 2 (NUM2) COUNT: Subjects who received at least two fluoride applications as dental services

5. Check if subject received at least two fluoride applications as **oral health 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 [SERVICE CODE] = CDT D1206 or CDT D1208¹² or CPT 99188¹³, AND
 - b. If [RENDERING PROVIDER TAXONOMY] code is a valid NUCC maintained Provider Taxonomy code but NOT included in the NUCC maintained Provider Taxonomy Codes in Table 1 below, then include in [numerator 3](#); proceed to next step.¹⁴
 - c. If both a AND b are not met, then the service was not an “oral health” service; STOP processing. This enrollee is already included in the denominator but will not be included in numerator 3.

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

Note 2: In this step, all **claims** with missing or invalid SERVICE CODE or with missing or invalid NUCC maintained Provider Taxonomy Codes should be excluded.

YOU NOW HAVE NUMERATOR 3 (NUM3) COUNT: Subjects who received at least two fluoride applications as oral health services

¹⁰ **Topical Fluoride codes:** For reporting years prior to 2013, use CDT codes D1203 or D1204 or D1206.

¹¹ **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.

¹² **Topical Fluoride codes:** For reporting years prior to 2013, use CDT codes D1203 or D1204 or D1206.

¹³ **Services provided by medical providers:** CPT 99188 is a dedicated code for “application of topical fluoride varnish by a physician or other qualified health care professional.”

¹⁴ **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.

6. Report

- a. Unduplicated number of subjects in denominator (DEN)
- b. Unduplicated number of subjects in NUM1
- c. Unduplicated number of subjects in NUM2
- d. Unduplicated number of subjects in NUM3
- e. Measure rate (NUM1/DEN)
- f. Measure rate (NUM2/DEN)
- g. Measure rate (NUM3/DEN)
- h. Rates stratified by age

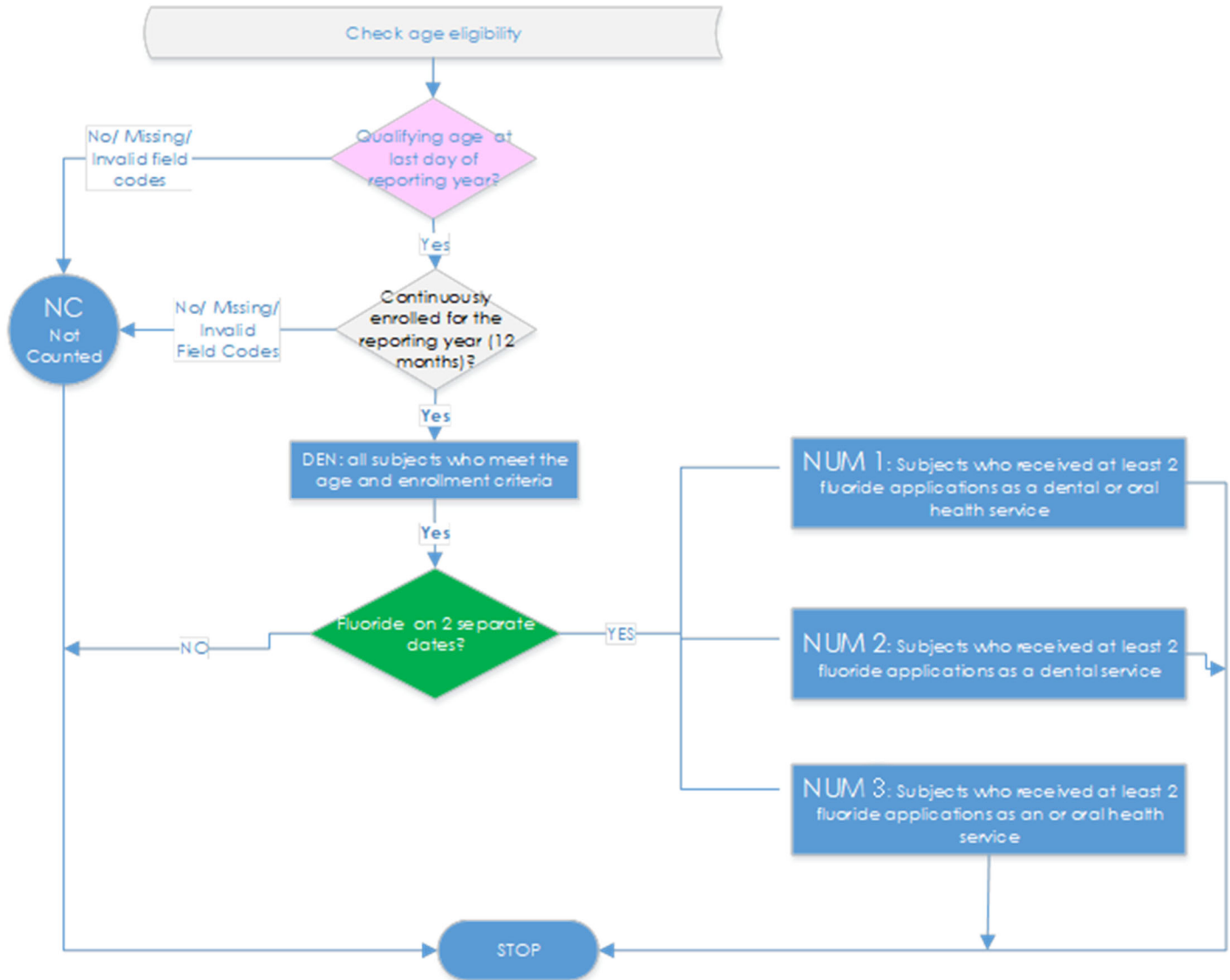
Table 1: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”*

122300000X	1223P0106X	1223X0008X	125Q00000X	126800000X
1223D0001X	1223P0221X	1223X0400X	261QF0400X	261QD0000X
1223D0004X	1223P0300X	124Q00000X+	261QR1300X	204E00000X
1223E0200X	1223P0700X	125J00000X	1223X2210X	261QS0112X
1223G0001X	1223S0112X	125K00000X	122400000X	

*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 SERVICE 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.***



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