

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

DQA Measure Technical Specifications: Administrative Claims-Based Measures Preventive Services for Children

Description: Percentage of children who received a topical fluoride application and/or sealants within the reporting year

Numerator: Unduplicated number of children who received a topical fluoride application and/or sealants as (a) dental OR oral health services (NUM1), (b) dental services (NUM2), and (c) oral health services (NUM3)

Denominator: Unduplicated number of children

Rates: NUM1/DEN; NUM2/DEN; NUM3/DEN

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 recommend that sealants should be placed on pits and fissures of children’s primary and permanent teeth (4) and topical fluoride is dose-dependent and should be applied every three to six months based on risk for dental caries (5, 6).

1. Centers for Disease Control and Prevention. Cavities (Tooth Decay). Available at: <https://www.cdc.gov/oralhealth/conditions/index.html>. Accessed July 27, 2023.
2. Fleming E, Afull 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, Vujicic 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 July 27, 2023.
4. J.T. Wright, J.J. Crall, M. Fontana, E.J. Gillette, B.B. Nový, V. Dhar, K. Donly, E.R. Hewlett, R.B. Quinonez, J. Chaffin, M. Crespín, T. Iafolla, M.D. Siegal, M.P. Tampi, L. Graham, C. Estrich, A. Carrasco-Labra Evidence-based clinical practice guideline for the use of pit-and-fissure sealants: a report of the American Dental Association and the American Academy of Pediatric Dentistry J. Am. Dent. Assoc., 147 (2016), pp. 672-682e12
5. 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.
6. 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 July 27, 2023.

AHRQ Domain: Use of Services¹

IOM Aim: Equity, Effectiveness

Level of Aggregation: Health Plan/Program

¹ **Use of Services (Related Healthcare Delivery Measure):** “Use of services is the provision of a service to, on behalf of, or by a group of persons identified by enrollment in a health plan or through use of clinical services. Use of service measures can assess encounters, tests, or interventions that are not supported by evidence for the appropriateness of the service for the specified individuals.” National Quality Measures Clearinghouse. Available at: <https://www.ahrq.gov/gam/summaries/domain-definitions/index.html>. Accessed July 27, 2023.

Improvement Noted As: In general, a higher score indicates better performance. Contextual information relating to the overall health status of the population is also useful in interpreting measure scores. The measure can also be very useful longitudinally to monitor change over time for a particular program or plan.

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 any topical fluoride or sealants?
2. Does the percentage of children who receive any topical fluoride or sealants vary by any of the stratification variables?
3. Are there disparities in the receipt of topical fluoride or sealants among different groups based on the stratification variables?
4. Over time, does the percentage of children who receive topical fluoride or sealants stay stable, increase or decrease?

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. Risk (low risk; elevated risk)
3. Payer Type (e.g., Medicaid; CHIP; private commercial benefit programs)
4. Program/Plan Type (e.g., traditional FFS; PPO; prepaid dental/DHMO)
5. Geographic Location (e.g., rural; suburban; urban)
6. Race
7. Ethnicity
8. Socioeconomic Status (e.g., premium or income category)

Measure Limitations:

- *CDT codes do not distinguish between fluoride gel and fluoride foam. This measure assumes that all modes of topical fluoride application are equally effective.*
- *This measure does not take into account alternate home-use fluoride products including supplements.*
- *This measure will not delineate those whose teeth have not erupted, those who already received sealants in prior years, and those with decayed/filled teeth not candidates for sealants.*
- *Stand-alone dental plans will only be able to report on Numerator 2 ("dental" services).*

Preventive Services Calculation for Children

1. Check if the subject meets age criterion² at the last day of the reporting year:³
 - 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., birth date), then STOP processing. This subject is not counted in the denominator.
2. Check if subject is continuously enrolled for at least 180 days during the reporting year:⁴
 - 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 is not counted in the denominator.

YOU NOW HAVE THE DENOMINATOR (DEN): SUBJECTS WHO MEET THE AGE AND ENROLLMENT CRITERIA

3. Check if subject received topical fluoride or a sealant as a **dental or oral health service** during the reporting year:
 - a. If [SERVICE CODE] = CDT D1206 or CDT D1208⁵ or CPT 99188⁶ or CDT D1351, 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: In this step, all **claims** with missing or invalid SERVICE CODE should be excluded.

YOU NOW HAVE NUMERATOR 1 (NUM1) COUNT: Subjects who received a preventive service as a dental or oral health service

4. Check if subject received topical fluoride or a sealant as a **dental service**⁷ during the reporting year:
 - a. If [CDT CODE] = D1206 or D1208⁸ or D1351, AND
 - b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 1 below.⁹
 - c. If both a AND b are met, then include in **numerator 2**; proceed to next step.
 - d. If either a OR b is NOT met, then a "dental" service was not provided; STOP processing. This subject is already included in the denominator but will not be included in **numerator 2**.

² **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.

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 **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.

⁵ **Topical Fluoride codes:** For reporting years prior to 2013, use CDT codes D1203 or D1204 or D1206.

⁶ **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."

⁷ Stand-alone dental plans and other commercial dental plans will only be able to report on numerator 2.

⁸ **Topical Fluoride codes:** For reporting years prior to 2013, use D1203 or D1204 or D1206.

⁹ **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.

Note: 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 (NUM 2) COUNT: Subjects who received a preventive service as a dental service

5. Check if subject received topical fluoride or a sealant as an **oral health service** during the reporting year:
 - a. If [SERVICE CODE] = CDT D1206 or CDT D1208¹⁰ or CPT 99188¹¹ or CDT D1351 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.¹²
 - c. If both a AND b are met, then include in **numerator 3**; proceed to next step.
 - d. If either a OR b is NOT met, then an "oral health" service was not provided; STOP processing. This subject is already included in the denominator but will not be included in **numerator 3**.

Note: 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 (NUM3) COUNT: Subjects who received a preventive service as an oral health service

6. Report
 - a. Unduplicated count of subjects in denominator (DEN)
 - b. Unduplicated count of subjects in NUM1
 - c. Unduplicated number of subjects in NUM2
 - d. Unduplicated number of subjects in NUM3
 - e. Measure rate (NUM 1/DEN)
 - f. Measure rate (NUM2/DEN)
 - g. Measure rate (NUM3/DEN)
 - h. Rate stratified by age
 - i. Rate stratified by caries risk

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

¹¹ **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."

¹² **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.

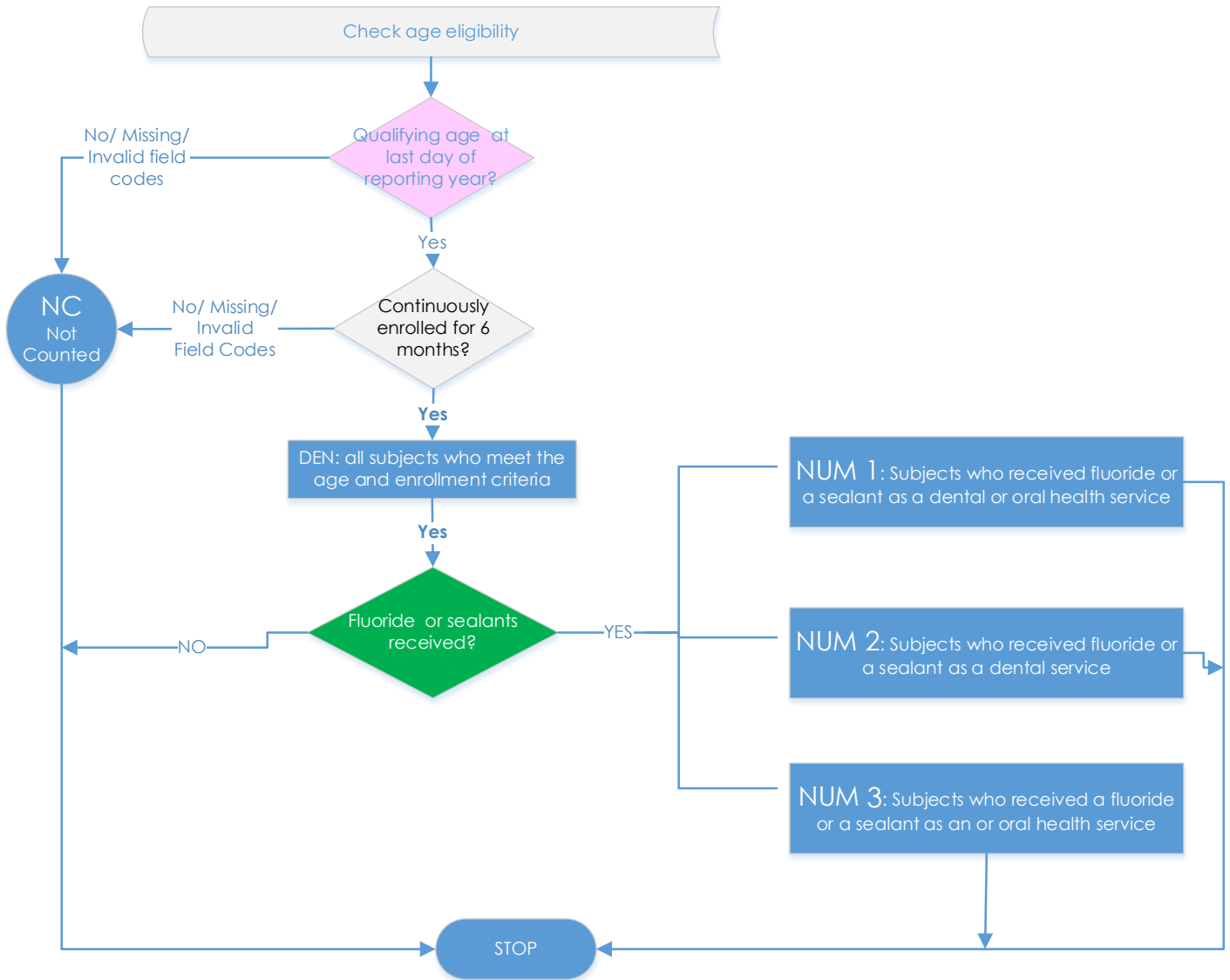
Table 1: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”*

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 to this measure.

*** Note: Reliability of each measure score depends on the quality of the data elements that are used to calculate the measure. The percentages of missing or invalid data for each data element used to calculate the measure 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, subjects who have records with missing or invalid CDT CODE to identify topical fluoride or sealants 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.***



2024 American Dental Association on behalf of the Dental Quality Alliance (DQA) ©. All rights reserved. Use by individuals or other entities for purposes consistent with the DQA's mission and that is not for commercial or other direct revenue generating purposes is permitted without charge.

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. The DQA shall be acknowledged as the measure steward in any and all references to the measure. Measures developed by the DQA, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain. 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.

THE MEASURES ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND

Limited proprietary coding is contained in the Measure specifications for convenience.

For Proprietary Codes:

The code on Dental Procedures and Nomenclature is published in Current Dental Terminology (CDT), Copyright © 2023 American Dental Association (ADA). All rights reserved.

This material contains National Uniform Claim Committee (NUCC) Health Care Provider Taxonomy codes (http://www.nucc.org/index.php?option=com_content&view=article&id=14&Itemid=125). Copyright © 2023 American Medical Association. All rights reserved.

Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The DQA, American Dental Association (ADA), and its members disclaim all liability for use or accuracy of any terminologies or other coding contained in the specifications.

THE SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.