

Appendix: Supplemental Materials

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

NQF Measure Number 2528

Table of Contents

| | |
|---|---|
| Measure Specifications for Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services | 1 |
| Letter from Centers for Medicare and Medicaid Services | 8 |

****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 at Elevated Caries Risk, Dental Services

Description: Percentage of enrolled 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 enrolled 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). 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). 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. Available at: http://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html. Accessed July 28, 2015.

(2) Dye BA, Li X, Thornton-Evans G. Oral health disparities as determined by selected Healthy People 2020 oral health objectives for the United States, 2009–2010. NCHS data brief, no 104. Hyattsville, MD: National Center for Health Statistics. 2012.

(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.

(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 Forum Domain: Process¹

Institute of Medicine Aim: Equity, Effectiveness

National Quality Strategy Priority: Health and Well-Being

Level of Aggregation: Health Plan/Program

Improvement Noted As: A higher score indicates better quality.²

¹ **Process (measure type):** “A healthcare service provided to, or on behalf of, a patient. This may include, but is not limited to, measures that may address adherence to recommendations for clinical practice based on evidence or consensus.” National Quality Forum. “NQF Glossary.” Available at: http://www.qualityforum.org/Measuring_Performance/Measuring_Performance.aspx. Accessed July 28, 2015.

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

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:

- 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.
- 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.

Topical Fluoride Calculation for Children at Elevated Caries Risk

1. Check if the enrollee meets age criteria at the last day of the reporting year:³
 - a. If child is ≥ 1 and < 21 ,⁴ 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 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):⁵
 - a. If subject meets continuous enrollment criterion, then proceed to next step.
 - b. If subject does not meet enrollment criterion, then STOP processing. This enrollee 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 enrollees 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 enrollee will not be included in the measure denominator.

YOU NOW HAVE THE DENOMINATOR (DEN): Enrollees 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 D1208,⁶ AND

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.⁷
- c. If both a AND b are not met, then the service was not a “dental service”; STOP processing. This enrollee 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: Enrollees at “elevated risk” who received at least two fluoride applications as a dental service

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

Table 1: CDT Codes to identify “elevated risk”

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

⁷ **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.

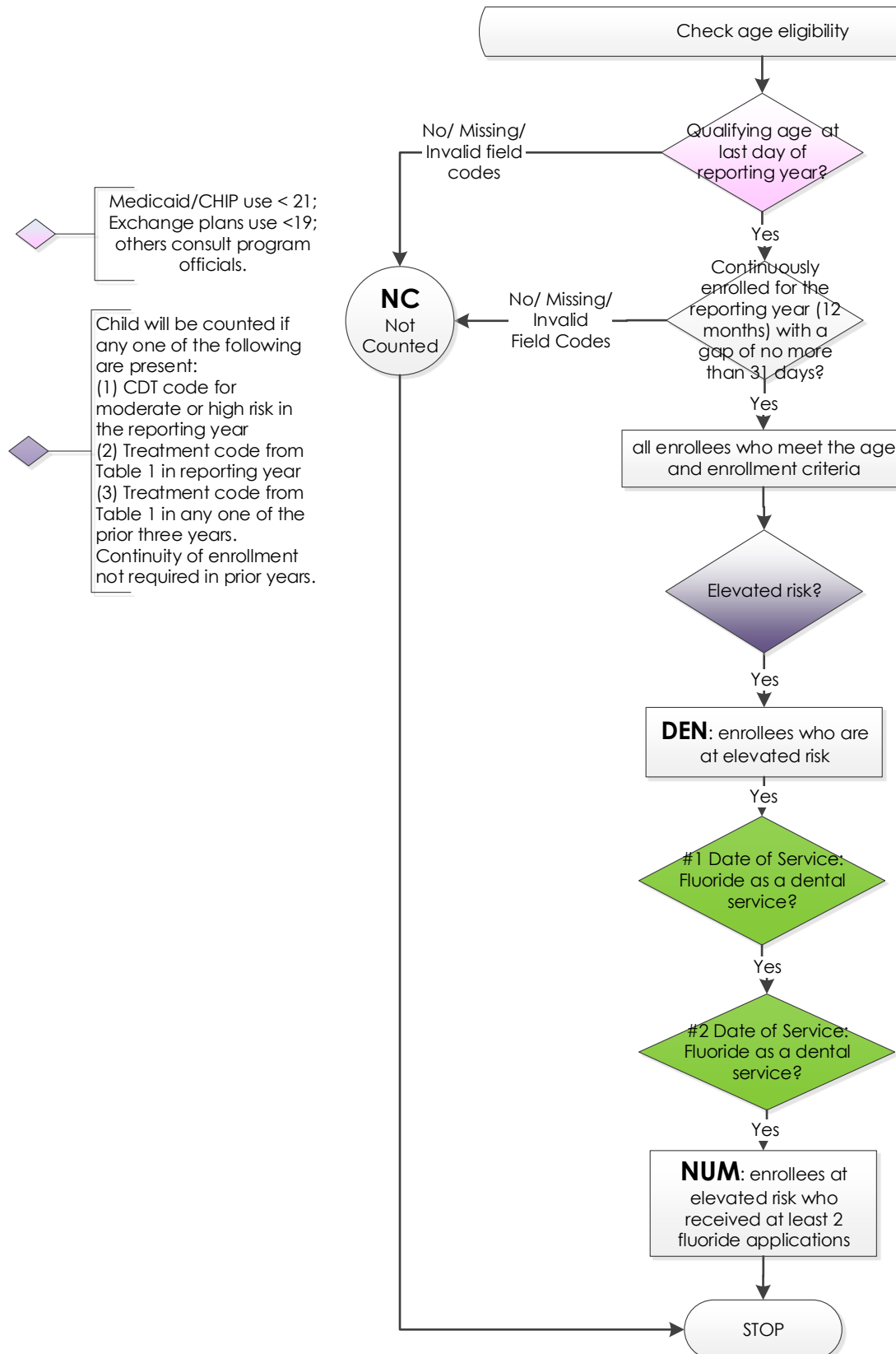
Table 2: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”*

| | | | |
|------------|------------|-------------|------------|
| 122300000X | 1223P0106X | 1223X0008X | 125Q00000X |
| 1223D0001X | 1223P0221X | 1223X0400X | 261QF0400X |
| 1223D0004X | 1223P0300X | 124Q00000X+ | 261QR1300X |
| 1223E0200X | 1223P0700X | 125J00000X | |
| 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.***



2018 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 © 2017 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 © 2017 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.



NOV 04 2013

Robert A. Faiella, D.M.D., M.M.SC.
President
American Dental Association
211 E. Chicago Avenue
Chicago, IL 60611-2637

Dear Dr. Faiella:

Thank you for your letter concerning the dental quality measures recently tested and validated by the Dental Quality Alliance (DQA). As you mentioned, the DQA was formed at the behest of Centers for Medicare & Medicaid Services (CMS) and we continue to be vitally interested in the group's efforts. We are pleased that Dr. Lynn Mouden, the CMS Chief Dental Officer, serves on the DQA to provide CMS input into the DQA's collaborative efforts.

The dearth of tested quality measures in oral health has been a concern to CMS and other payers of oral health services for quite some time. The DQA-funded testing for feasibility, reliability and validity of the ten measures in the DQA Starter Set is truly a step forward in quality measurement.

The changing landscape of health care, in light of CHIPRA, the Patient Protection and Affordable Care Act, and other factors, continues to drive efforts in CMS to improve health and health care quality. Along with these changes, implementing new quality measures within Medicaid and CHIP will be important.

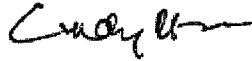
I, Dr. Mouden, and the CMS dental team are now focused on how we can best use these new DQA quality measures. We will consider how the measures could be used within CMS' data collection systems and/or how they could be used in states' data collection and quality improvement efforts. We encourage you to explore endorsement from the National Quality Forum as a means to move these measures forward.

We look forward to our continuing work with the DQA and our joint efforts to measure and improve the quality oral health services for all the beneficiaries served in our programs.

Page 2 – Robert A. Faiella, D.M.D., M.M.SC.

Please feel free to contact Dr. Mouden at 410-786-4126 at any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Cindy Mann", with a stylized flourish at the end.

Cindy Mann
Director

cc:

Dr. Kathy O'Loughlin, Executive Director, ADA
Dr. Ron Hunt, Chair, DQA
Dr. Krishna Aravamudhan
Dr. Lynn Douglas Mouden, Chief Dental Officer, CMS
Laurie Norris, JD, Coordinator, CMS Oral Health Initiative