

## **Appendix: Supplemental Materials**

**Measure: Sealants for 6-9 year-old Children at Elevated Risk, Dental Services**

**NQF Measure Number 2508**

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

## DQA Measure Specification Sheet: Prevention: Sealants for 6-9 year-old Children at Elevated Risk, Dental Services

**Description:** Percentage of enrolled children in the age category of **6-9** years at “elevated” risk (i.e., “moderate” or “high”) who received a sealant on a permanent **first** molar tooth within the reporting year.  
**Numerator:** Unduplicated number of all enrolled children age **6-9** years at “elevated” risk (i.e., “moderate” or “high”) who received a sealant on a permanent **first** molar tooth as a dental service  
**Denominator:** Unduplicated number of enrolled children age 6 - 9 years at “elevated” risk (i.e., “moderate” or “high”)  
**Rates:** 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 recommend that sealants should be placed on pits and fissures of children’s primary and permanent teeth when it is determined that the tooth, or the patient, is at risk of experiencing caries. The evidence for sealant effectiveness in permanent molars is stronger than evidence for primary molars (4).

(1) National Center for Health Statistics. Healthy People 2010 Final Review. Hyattsville, MD: National Center for Health Statistics; 2012. Accessed at [http://www.cdc.gov/nchs/healthy\\_people/hp2010/hp2010\\_final\\_review.htm](http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_final_review.htm) on July 10 2013.

(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) Beauchamp J, Caufield PW, Crall JJ, Donly K, Feigal R, Gooch B, et al. Evidence-based clinical recommendations for the use of pit-and-fissure sealants: a report of the American Dental Association Council on Scientific Affairs. J Am Dent Assoc 2008;139(3):257-268.

**National Quality Forum Domain:** Process<sup>1</sup>

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

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

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

**Improvement Noted As:** A higher score indicates better quality; interpreted in the context of relative scores (e.g., over time and between reporting entities)

**Data Required:** Single year for measurement (prior 3 years may be needed for risk determination)

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

<sup>1</sup> **Process:** 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. Accessed from “NQF Glossary” at [http://www.qualityforum.org/Measuring\\_Performance/Measuring\\_Performance.aspx](http://www.qualityforum.org/Measuring_Performance/Measuring_Performance.aspx). Accessed January 2014.

1. What is the **relative percentage** of children receiving sealants when compared to another plan or program? (Note: This measure CANNOT be used to determine the absolute percentage of children ages 6-9 years who have sealants on their permanent first molars due to limitations of the administrative data in capturing prior sealant placement that are noted below. Rather, this measure indicates the prevalence of sealant placement during the reporting period.)
2. Over time, are sealant placement rates stable, increasing or decreasing?

#### Measure Limitations due to Limitations of Administrative Data

- *This measure will not delineate those whose teeth have not erupted, those who have already received sealants in prior years, and those with decayed/filled teeth not candidates for sealants. However, this measure is designed to identify the prevalence of sealant placement on a permanent first molar tooth during the reporting year for children ages 6-9 years at elevated risk for caries; this measure is not designed to provide the absolute percentage of children who have ever had a sealant on a permanent first molar. As such, this prevalence-based measure is intended to be used for monitoring trends in sealant placement over time, variations in sealant placement between reporting entities, and disparities in sealant placement*
- *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 slight overestimation of children at "elevated risk".*
- *Since "elevated risk" determination requires an evaluation (to record CDT risk code) or a treatment visit (to record a 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 measure is to seek to understand whether children who can be positively identified as being at elevated risk receive the recommended preventive services.*

## Sealants for 6 – 9 year olds - Calculation for Children at Elevated Caries Risk

1. Run records for one reporting year for paid and unpaid claims.<sup>2</sup>
2. Check if the enrollee meets age criteria at the last day of the reporting year
  - a. If child is  $\geq 6$  and  $\leq 9$ , 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.
3. Check if subject is continuously enrolled for at least 180 days<sup>3</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 enrollee does not get counted.

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

4. 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 visit with a CDT code = (D0602 or D0603) in the reporting year, OR
    - ii. the subject has a SERVICE Code among those in Table 1 in the reporting year, OR
    - iii. the subject has a SERVICE 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.)
  - 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”

5. Check if subject received a sealant as a dental service
  - a. If [SERVICE CODE] = D1351 and;
  - b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below, then proceed to next step.<sup>4</sup>
  - 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: In this step, all **claims** with missing or invalid SERVICE-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.

<sup>2</sup> Medicaid/ CHIP programs should apply these overall exclusions before the case finding process:

- Undocumented aliens who are eligible only for emergency Medicaid services;
- Other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (e.g., pregnancy-related services)

The exclusion criteria should be reported along with the number and percentage of members excluded.

<sup>3</sup> **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 measurement 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.

<sup>4</sup> **“Identifying “dental” services:** Programs and plans that do not use standard NUCC maintained provider Taxonomy Codes should use 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, consider all claims as “dental” services.

6. Check if sealant was placed on a permanent first molar
  - a. If [TOOTH-NUMBER] = 3, 14, 19 or 30 then include in **numerator**; STOP processing.
  - b. If not, then service was not provided for the first permanent molar; STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

**YOU NOW HAVE NUMERATOR (NUM) COUNT: Enrollees at “elevated risk” who received sealants on a permanent first molar as a dental service**

7. Report
  - a. Unduplicated number of enrollees in numerator
  - b. Unduplicated number of enrollees in each denominator
  - c. Measure rate (NUM/DEN)

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

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

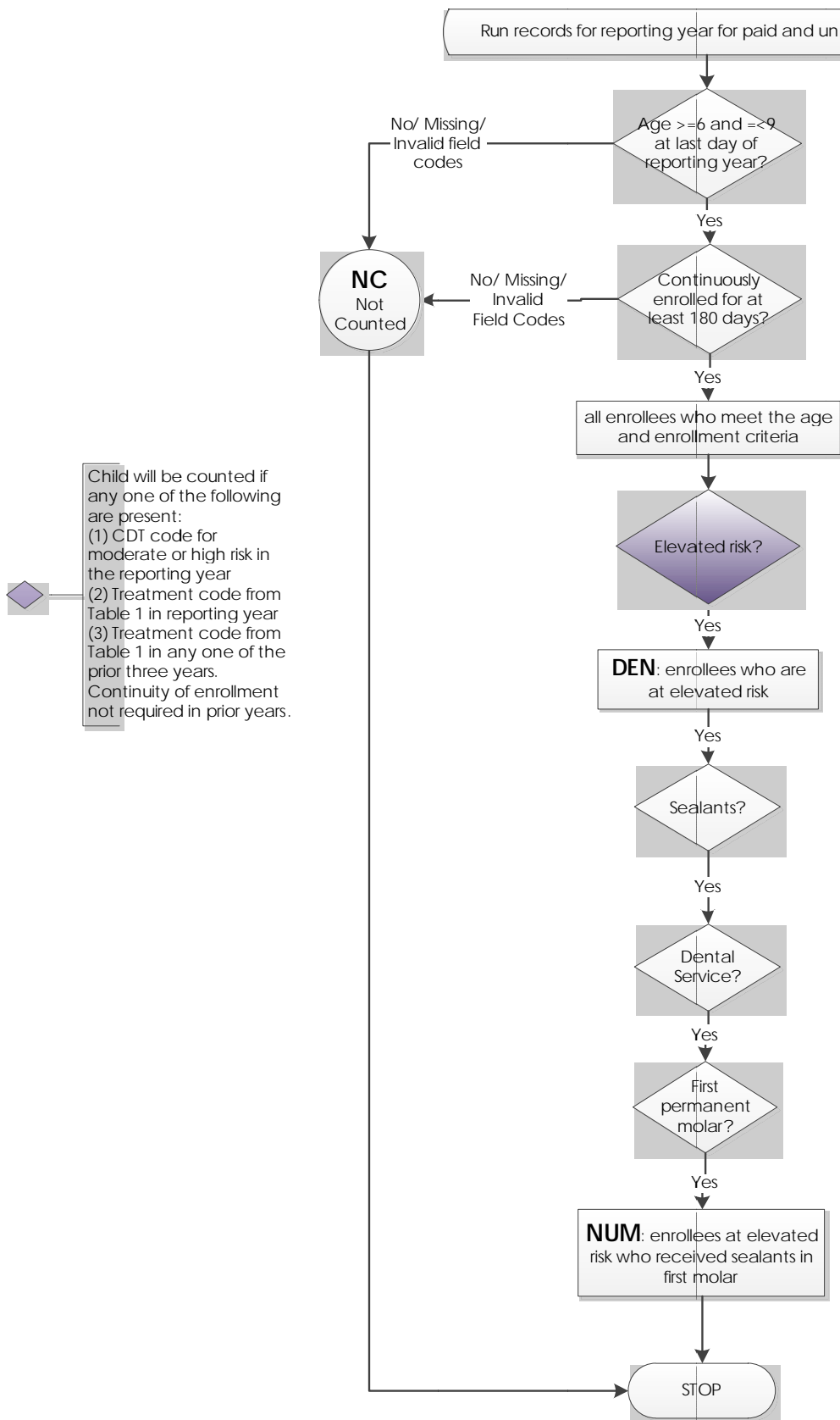
**Table 2: NUCC maintained Provider Taxonomy Codes classified as “Dental Service”\***

122300000X	1223P0106X	1223X0008X	261QF0400X
1223D0001X	1223P0221X	1223X0400X	261QR1300X
1223D0004X	1223P0300X	124Q00000X+	
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 measures. The percentage 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 will be counted in the “all enrollees” but not in “all enrollees who received service.” These records are assumed to not have had a visit. In this case, a low quality data set will result in a low utilization score and will not be reliable.\*\*\*





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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.

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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.

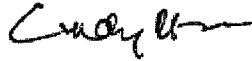
I, Dr. Mouden, and the CMS dental team are now focused on how we can best use these new DQA quality measures. We will consider how the measures could be used within CMS' data collection systems and/or how they could be used in states' data collection and quality improvement efforts. We encourage you 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.

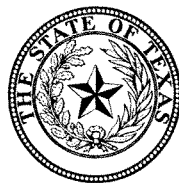
Sincerely,

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



## TEXAS HEALTH AND HUMAN SERVICES COMMISSION

KYLE L. JANEK, M.D.  
EXECUTIVE COMMISSIONER

January 27, 2014

Krishna Aravamudhan  
Senior Manager, Office of Quality Assessment and Improvement  
American Dental Association  
211 E. Chicago Ave  
Chicago, IL 60611

Krishna:

This letter is to inform you that HHSC is currently using the Dental Quality Alliance measures as part of its quality assurance program in both Medicaid and the Children's Health Insurance Program (CHIP). These are included in Texas' Uniform Managed Care Manual for dashboard reporting. Please see the below information in response to your questions:

- Name of program and sponsor: HHSC Quality Assurance Division
- URL:
  - Medicaid--<http://www.hhsc.state.tx.us/medicaid/umcm/Chp10/10-1-10.pdf>
  - CHIP--<http://www.hhsc.state.tx.us/medicaid/umcm/Chp10/10-1-9.pdf>
- Purpose: Quality Improvement
- Geographic area and number and percentage of accountable entities and patients included: Statewide
- Measures in use:
  - Utilization of Services
  - Preventive Services
  - Treatment Services
  - Oral Evaluation
  - Topical Fluoride Intensity
  - Sealant use in 6-9 years
  - Sealant use in 10-14 years
  - Care Continuity
  - Usual Source of Services
  - Per member per month Cost

Total enrollment statistics for both the Medicaid and CHIP programs are posted on a monthly basis on the HHSC website here:

<http://www.hhsc.state.tx.us/research/index.shtml>

The latest figures available show a total Medicaid Enrollment of 3,644,992 during the month of June, 2013.

P. O. Box 13247 • Austin, Texas 78711 • 4900 North Lamar, Austin, Texas 78751 • (512) 424-6500

Please let me know if you need any additional information.

Very truly yours,

A handwritten signature in black ink, appearing to read "JR Roberts DDS". The signature is stylized with a large, looping "R" and "DDS" written in a separate, more legible script to the right.

John "JR" Roberts, DDS  
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