DENTAL QUALITY ALLIANCE™
Improving Oral Health Through Measurement

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

DQA Measure Technical Specifications

Caries Risk Documentation

Program/Plan Level Reporting: Administrative Enrollment and Claims Data

Description: Percentage of enrolled children under age 21 years who have caries risk documented in the reporting year
Numerator: Unduplicated number of children with caries risk documented
Denominator: Unduplicated number of enrolled children under age 21 years
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) Caries risk assessment is the determination of the likelihood of the incidence of caries (i.e., the number of new cavitated or incipient lesions) during a certain time period(3) or the likelihood that there will be a change in the size or activity of lesions already present.(4) Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce incidence of future lesions.(4) The American Academy of Pediatric Dentistry states that "the process of determining risk should be a component in the clinical decision-making process."(4) The American Dental Association notes: "Systematic methods of caries detection, classification, and risk assessment, as well as prevention/risk management strategies, can help to reduce patient risk of developing advanced disease and may even arrest the disease process."(5) Caries risk assessment is recommended for identifying risk factors and developing individualized care plans for prevention and treatment.(4-5)

1) Centers for Disease Control and Prevention. Hygiene-related diseases: dental caries. Updated September 22, 2019. Available at: http://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html. Accessed April 2nd, 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) Reich E, Lussi A, Newbrun E. Caries-risk assessment. Int Dent J 1999; 49(1):15-26.
4) Council on Clinical Affairs, American Academy of Pediatric Dentistry (2014). Guideline on Caries-Risk Assessment and Management for Infants, Children, and Adolescents. Available at: http://www.aapd.org/media/policies_guidelines/g_cariesriskassessment.pdf.
5) Center for Scientific Information, ADA Science Institute. American Dental Association. (2016) Caries Risk Assessment and Management. Available at: http://www.ada.org/en/member-center/oral-health-topics/caries-risk-assessment-and-management.

National Quality Measures Clearinghouse: Process[1]

Institute of Medicine Aim: Equity, Effectiveness

National Quality Strategy Priority: Health and Well-Being

[1] **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 April 2nd, 2019

Level of Aggregation: Health Plan/Program

Improvement Noted As: A higher score indicates better quality.

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 have caries risk documented during the reporting period?

Applicable Stratification Variables

1. Age: < 1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20
2. Payer Type (e.g., Medicaid; private commercial benefit programs)
3. Program/Plan Type (e.g., Traditional FFS; PPO; prepaid dental/DHMO)
4. Geographic Location (e.g., rural; suburban; urban)
5. Race/Ethnicity
6. Socioeconomic Status (e.g., premium or income category)

Measure Limitations:

Although the most commonly used caries-risk assessment tools share common elements, there is no evidence that supports one tool over another. As a result, different providers use different risk assessment tools, combined with clinical judgment, to arrive at a caries risk determination. Despite the limited evidence on the relative effectiveness of caries risk prediction using different assessment tools, professional clinical guidelines recommend that providers conduct caries risk assessment and use that information to develop individualized prevention and treatment care planning. Surveys of dentists find that approximately 30% do not conduct caries risk assessment.(a)(b) A substantial percentage of caries risk assessments are not documented.(b)(c) Consequently, ***this measure is designed for use in quality improvement applications*** *to support quality improvement efforts around caries risk assessment and documentation. In addition,* ***this measure is designed only to document that the enrollee received a risk assessment. This measure is <u>not</u> designed to be used to assess the health state of the population or to create population risk profiles.***

a) Riley JL, 3rd, Qvist V, Fellows JL, Rindal DB, Richman JS, Gilbert GH, Gordan VV, et al. Dentists' use of caries risk assessment in children: Findings from the dental practice-based research network. Gen Dent. 2010;58(3):230-4.
b) Fontana M, Zero DT. Assessing Patients' Caries Risk. J Am Dent Assoc. 2006; 137(9):1231-9.
c) Trueblood R, Kerins, CA, Seale NS. Caries risk assessment practices among Texas pediatric dentists. Pediatr Dent. 2008;30(1):49-53.

Caries Risk Calculation for Children

1. Check if the enrollee meets age criterion at the last day of the reporting year: [2]
    a. If child is <21 years,[3] 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.

2. Check if subject is continuously enrolled for at least 180 days in the reporting year:[4]
    a. If subject meets continuous enrollment criterion, then include in denominator; 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 DENOMINATOR (DEN); Enrollees who meet the age and enrollment criteria

3. Check if subject has caries risk documented during the reporting year:
    a. If subject has a visit with a CDT code = (D0601 or D0602 or D0603) in the reporting year, then include in the numerator.
    b. If the subject does not have the CDT Code documented, then STOP processing. This enrollee will not be included in the measure numerator.

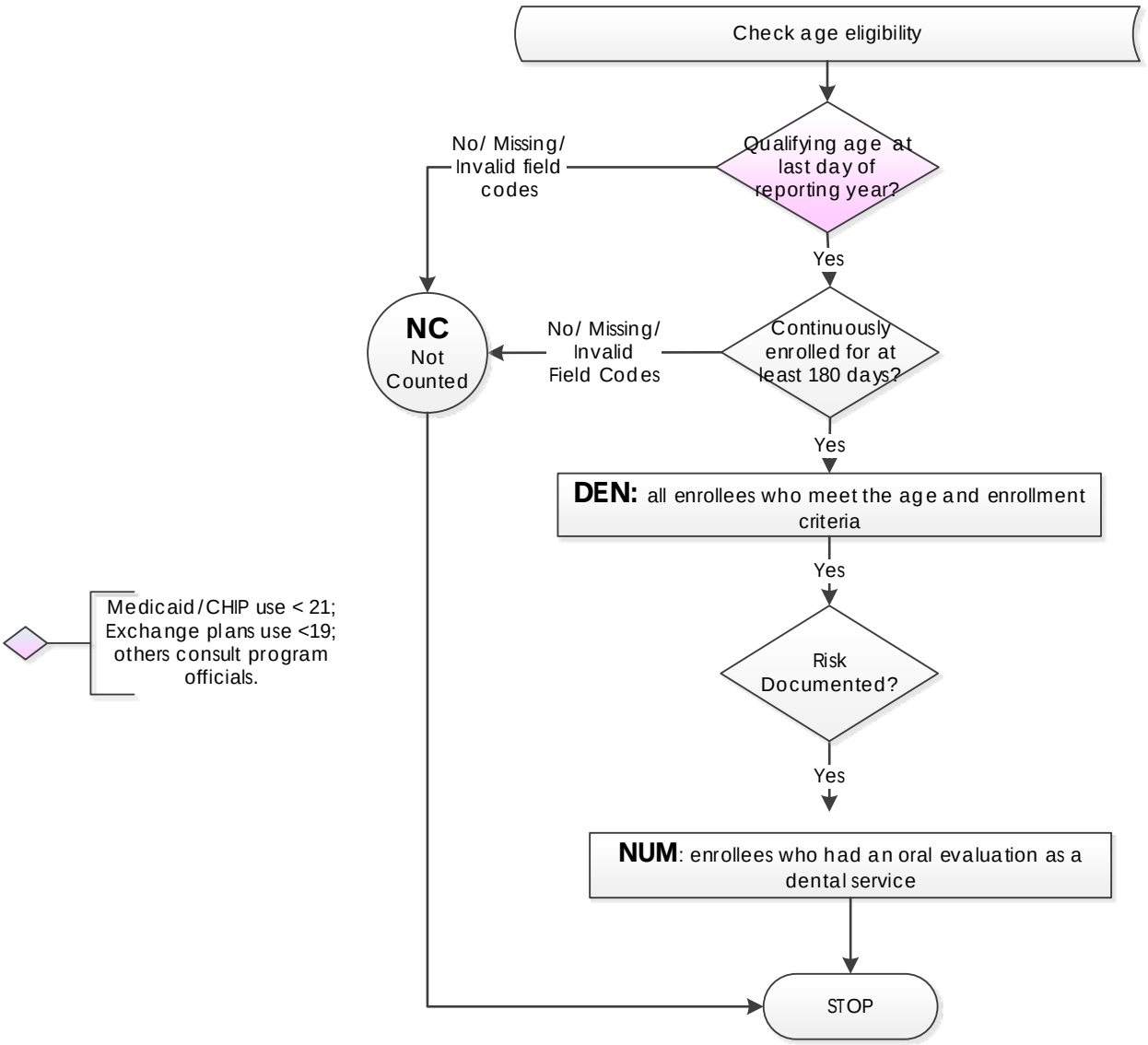
    Note: All **claims** with missing or invalid CDT CODE, should not be included in the numerator.

YOU NOW HAVE THE NUMERATOR (NUM): Enrollees who have caries risk documented

4. 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

*** 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 caries risk documentation 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.***

[2] **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.
[3] **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.
[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.



Practice-Level Reporting

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.

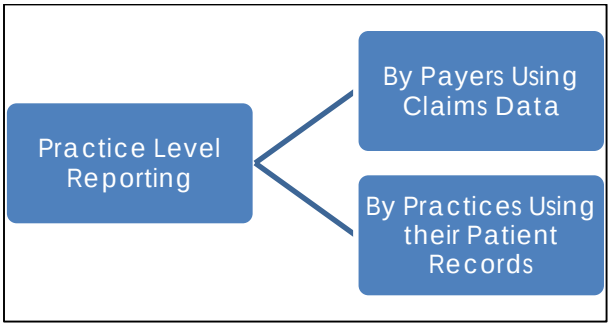
Description: Percentage of children aged 1 through 20 years *in a practice* who have caries risk documented in the reporting year

Numerator: Unduplicated number of children aged 1 through 20 years *in a practice* who have caries risk documented

Denominator: Unduplicated number of children aged 1 through 20 years *in a practice who received a comprehensive or periodic oral evaluation*.

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:



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 and enrollment 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).

DENOMINATOR SIZE

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