DQA
DENTAL QUALITY ALLIANCE™
Improving Oral Health Through Measurement

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

DQA Measure Technical Specifications: Administrative Claims-Based Measures

Non-Surgical Ongoing Periodontal Care for Adults with Periodontitis

Description: Percentage of enrolled adults aged 30 years and older with a history of periodontitis who received an oral prophylaxis OR scaling/root planing OR periodontal maintenance visit at least 2 times within the reporting year
Numerator: Unduplicated number of enrolled adults treated for periodontitis who received an oral prophylaxis OR scaling/root planing OR periodontal maintenance visit at least 2 times
Denominator: Unduplicated number of enrolled adults aged 30 years and older with a history of periodontitis
Exclusions: Adults who are completely edentulous
Rate: NUM/DEN (after exclusions)

Rationale: National estimates of the prevalence of periodontitis estimate that 47% of adults aged 30 years and older have periodontitis (1). Periodontal follow-up is critical in patients following treatment for active periodontal disease. Although evidence-based guidelines or systematic reviews do not exist on this topic, multiple independent studies have shown that a periodontal maintenance program following active periodontal therapy is effective and reduces tooth loss and recurrence of disease in compliant patients (2-4). The periodontal maintenance programs studied included updates of medical and dental histories, periodontal examinations, debridement, prophylaxis, and fluoride application as well as oral hygiene instructions and repeated scaling and root planing for sites indicating disease activity. A Position Paper from the American Academy of Periodontology (AAP) includes several citations to support its recommendation that "successful long-term control of periodontal disease and implant complications depends upon active periodontal maintenance care and appropriate additional therapy, if indicated"(5). The AAP Position Paper additionally suggests that for individuals with history of periodontitis, periodontal maintenance services should be performed at least four times per year with 3 months interval between each service for a decreased likelihood of disease progression (5).

1) Eke PI, Dye BA, Wei L, Thornton-Evans GO, Genco RJ. Prevalence of periodontitis in adults in the United States: 2009 and 2010. J Dent Res. 2012:91(10):914-920.
2) Costa FO, Lages EJ, Cota LO, Lorentz TC, Soares RV, Cortelli JR. Tooth loss in individuals under periodontal maintenance therapy: 5-year prospective study. J Periodontal Res. 2014 Feb;49(1):121-8. doi: 10.1111/jre.12087. Epub 2013 May 7.
3) Costa FO, Cota LO, Lages EJ, Lima Oliveira AP, Cortelli SC, Cortelli JR, Lorentz TC, Costa JE. Periodontal risk assessment model in a sample of regular and irregular compliers under maintenance therapy: a 3-year prospective study. J Periodontol. 2012 Mar;83(3):292-300. doi: 10.1902/jop.2011.110187. Epub 2011 Jun 21.
4) Ng MC, Ong MM, Lim LP, Koh CG, Chan YH. Tooth loss in compliant and non-compliant periodontally treated patients: 7 years after active periodontal therapy. J Clin Periodontol. 2011 May;38(5):499-508. doi: 10.1111/j.1600-051X.2011.01708.x. Epub 2011 Feb 22.
5) Cohen RE; Research, Science and Therapy Committee, American Academy of Periodontology. Position paper: periodontal maintenance. J Periodontol. 2003 Sep;74(9):1395-401.

AHRQ Domain: Process[1]

IOM Aim: Equity, Effectiveness

[1] **Process (Clinical Quality Measure):** "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." National Quality Measures Clearinghouse. Measure Domain Definitions. Available at: https://www.ahrq.gov/gam/summaries/domain-definitions/index.html. Accessed August 20, 2024.

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Level of Aggregation: Health Plan/Program

Improvement Noted As: A higher score indicates better quality

Data Required: Dental administrative enrollment and claims data; single year (prior 3 years needed for determination of history of periodontitis). When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

Measure Purpose: The measure intent is "*to identify specific dental care services, indicative of ongoing care associated with successful long-term management of periodontal disease. The measure was specifically designed to be broader than a measure based ONLY on D4910, periodontal maintenance. For that reason, the measure is termed "ongoing care" instead of "periodontal maintenance." It includes a broader set of services, reflective of the different types of care that patients with a history of periodontal disease may receive as part of conservative/ limited ongoing disease management.*"

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

1. What is the percentage of adults with periodontitis who received ongoing care during the reporting period?
2. Does the percentage of adults with periodontitis who received ongoing care vary by any of the stratification variables?
3. Are there disparities in receipt of ongoing care based on stratification variables?
4. Over time, does the percentage of adults with periodontitis receiving ongoing care stay stable, increase or decrease?

Applicable Stratification Variables

1. Age: 30–34, 35–44, 45–54, 55–64, 65–74, 75–84, 85 and above

Measure Limitations due to Limitations of Claims Data:

- *Due to lack of diagnostic codes reported in dental claims, "history of periodontitis" is determined based on CDT codes.*
- *Since the "history of periodontitis" determination requires a periodontal treatment or maintenance visit recorded with dental procedure codes, adults who are enrolled but do not have a claim in any of the prior three years will not have sufficient information to be included in the measure.*
- *Identification of edentulous adults is determined based on CDT codes indicating complete dentures. Completely edentulous adults with incomplete claims data will not have sufficient information to be excluded from the measure.*

While the above are limitations, the intent of this PROCESS measure is to seek to understand whether adults who can be positively identified as having a history of periodontitis receive ongoing care. The denominator population is not intended to identify the universe of patients with periodontitis; rather, it is designed to identify a reliable sample for quality measurement.

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Non-Surgical Ongoing Periodontal Care for Adults with Periodontists Calculation

1. Check if the subject meets age criterion at the last day of the reporting year:[2]
    a. If subject is >=30 years, 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 subject is not counted in the denominator.

2. Check if subject is continuously enrolled for the reporting year (12 months) with a single gap of no more than 31 days: [3]
    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.

3. Check if subject is eligible for exclusion from the denominator because the subject is completely edentulous based on meeting criteria in (a) below in the **reporting year or in the three years prior to the reporting year**:

    a. Subject has complete dentures:
        i. [CDT code] = [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750]

        AND

        ii. [CDT code] = [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751]

    b. If (a)i AND (a)ii are both met, then the subject is completely edentulous; **remove this subject from the denominator**; STOP processing.
    c. If either (a)(i) OR (a)(ii) is NOT met, then proceed to the next step.

4. Check if subject has a history of periodontitis:
    a. If subject has a [CDT Code] = D4240 or D4241 or D4260 or D4261 or D4341 or D4342 or D4910 in any of the three years prior to the measurement year, then include in **denominator**.
    b. If not, then STOP processing. This subject will not be included in the denominator.

    Note: There is **no minimum enrollment criterion during the 3 years prior to the reporting year.** This past history is a "look back" period for *available* claims. The reporting year remains a single year and is the only year during which minimum enrollment length must be verified.

YOU NOW HAVE THE DENOMINATOR (DEN) COUNT: Subjects who meet the age and enrollment criteria and who have a history of periodontitis

[2] Medicaid programs exclude those enrollees who do not qualify for dental benefits. The exclusion criterion should be reported along with the number and percentage of members excluded.
[3] **Enrollment in "same" plan vs. "any" plan**: At the state program level (e.g., Medicaid) 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.

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5. Check if subject received **at least 2 ongoing care visits** during the reporting year — at least two unique dates of service when an ongoing care service was provided. Service provided on each date of service should satisfy the following criterion:
    a. If [CDT CODE] = D1110 OR D4910 OR D4341 OR D4342 or D4346, then include in **numerator**; STOP processing.
    b. If a is not met, then STOP processing. This subject is already included in the denominator but will not be included in the numerator.

    Note: No more than one ongoing care service can be counted for the same member on the same date of service.

YOU NOW HAVE NUMERATOR (NUM) COUNT: Subjects with periodontitis who received at least 2 ongoing care visits during the reporting year

6. Report
    a. Unduplicated number of subjects in denominator before exclusions
    b. Unduplicated number of subjects excluded
    c. Unduplicated number of subjects in denominator after exclusions (DEN)
    d. Unduplicated number of subjects in numerator (NUM)
    e. Measure rate (NUM/DEN after exclusions)
    f. Rate stratified by age

Reliability of the 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 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.

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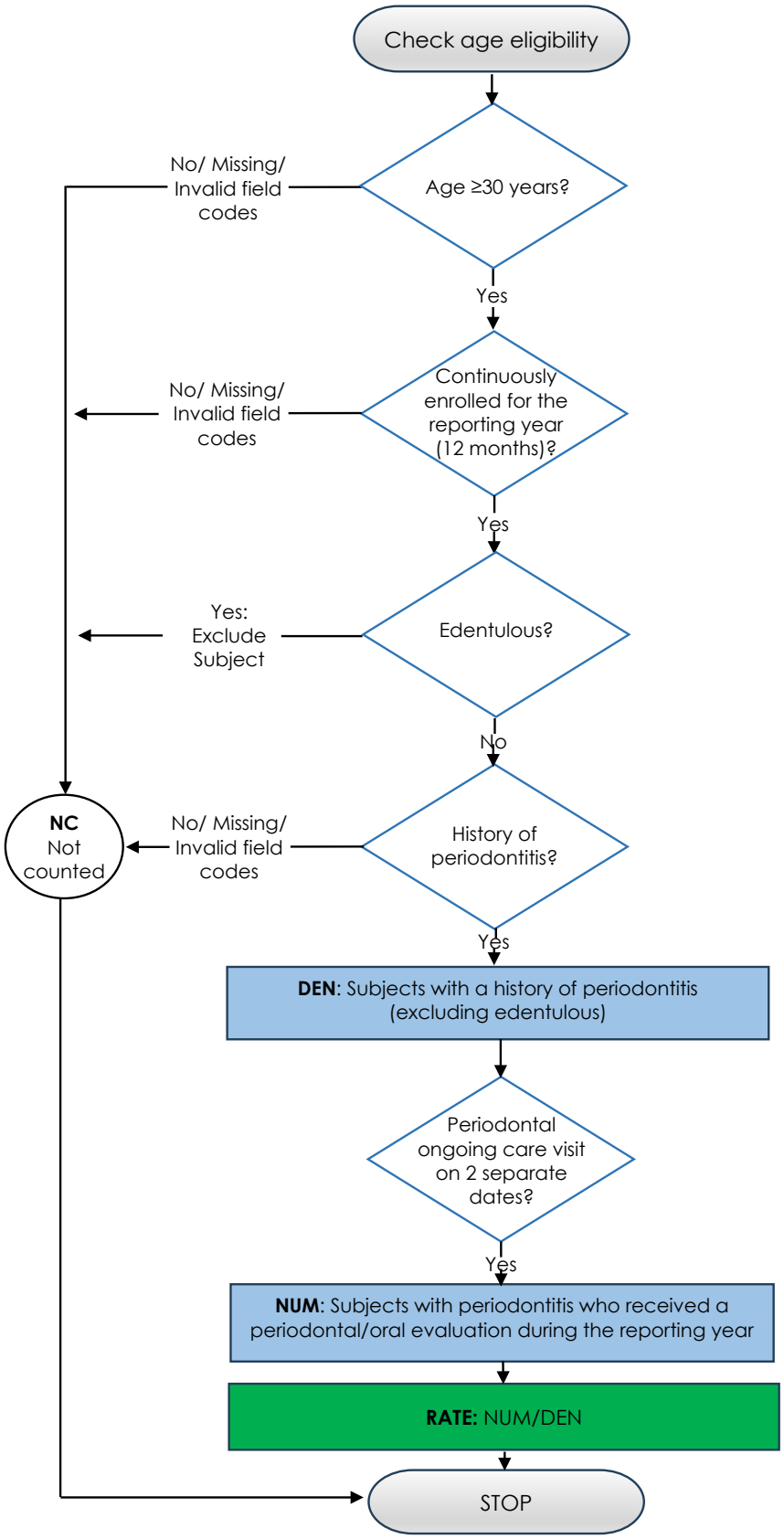

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