

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

## DQA Measure Specifications: Administrative Claims-Based Measures

### Periodontal Evaluation in Adults with Periodontitis

**Description:** Percentage of adults aged 30 years and older with history of periodontitis who received a comprehensive or periodic oral evaluation or a comprehensive periodontal evaluation within the reporting year

**Numerator:** Unduplicated number of adults who received a comprehensive or periodic oral evaluation or a comprehensive periodontal evaluation

**Denominator:** Unduplicated number of adults 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)

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 Periodontol 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

**AHRQ Domain:** Use of Services<sup>1</sup>

<sup>1</sup> **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. Measure Domain Definitions. Available at: <https://www.ahrq.gov/gam/summaries/domain-definitions/index.html>. Accessed August 29, 2022.

**IOM Aim:** Equity, Effectiveness

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

**Improvement Noted As:** In general, a higher score indicates better performance. The measure can also be useful longitudinally to monitor change over time for a particular program or plan.

**Data Required:** Dental administrative enrollment and claims data; single year (prior 3 years needed for determination of history of periodontitis)

**Claims Data:** 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 is the percentage of adults with periodontitis who received a periodontal evaluation during the reporting period?
2. Does the percentage of adults with periodontitis who received a periodontal evaluation vary by any of the stratification variables?
3. Are there disparities in receipt of periodontal evaluations based on stratification variables?
4. Over time, does the percentage of adults with periodontitis receiving a periodontal evaluation 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 Administrative 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 UTILIZATION measure is to seek to understand whether adults who can be positively identified as having a history of periodontitis receive a periodontal evaluation. The denominator population is not intended to identify the universe of patients with periodontitis; rather, it is designed to identify a reliable sample for measurement.

## Periodontitis: Periodontal Evaluation Calculation

1. Check if the enrollee meets age criterion at the last day of the reporting year:<sup>2</sup>
  - a. If subject is  $\geq 30$ , 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 in the denominator.
2. 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.
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 met, then the subject is completely edentulous; remove this subject from the denominator; STOP processing.
  - c. If both (a)(i) AND (a)(ii) are 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 enrollee 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 with a history of periodontitis

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<sup>2</sup> Medicaid programs exclude those subject who do not qualify for dental benefits. The exclusion criterion should be reported along with the number and percentage of members excluded.

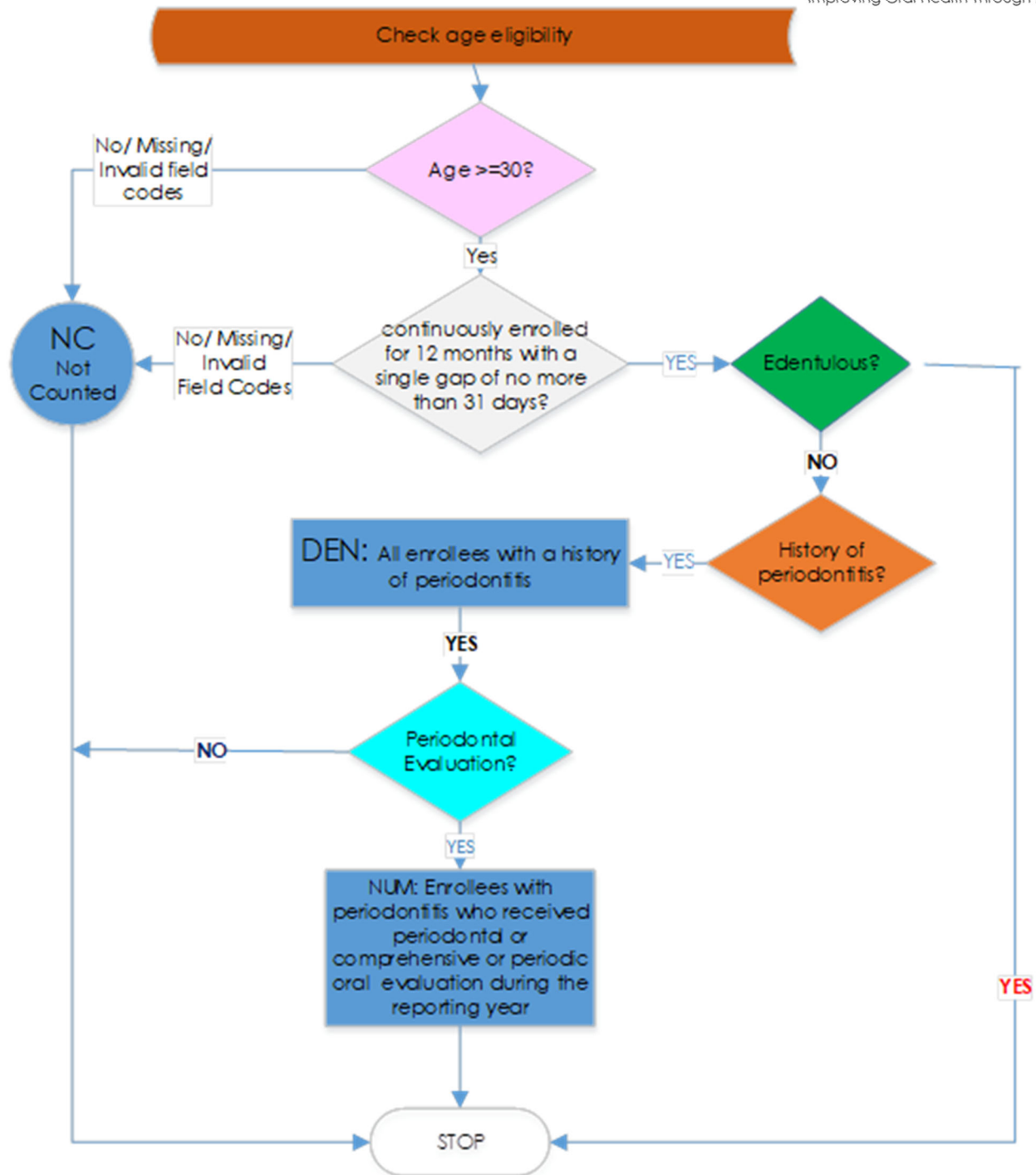
<sup>3</sup> Enrollment in “same” plan vs. “any” plan: At the state program level (e.g., Medicaid) a criterion of “any” plan applies versus at the health plan (e.g., MCO) level a criterion of “same” plan applies. The criterion used should be reported with the measure score. While this prevents direct 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. Check if subject received a periodontal evaluation or comprehensive or periodic oral evaluation during the reporting year:
  - a. If [CDT CODE] = D0120 or D0150 or D0180, then include in **numerator**, STOP processing.
  - b. If a is not met, then STOP processing. This enrollee is already included in the denominator but will not be included in the numerator.

**YOU NOW HAVE NUMERATOR (NUM) COUNT: Subjects with periodontitis who received a periodontal evaluation or comprehensive or periodic oral evaluation**

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

\*\*\* 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 may be excluded from measurement. 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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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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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),

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