

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

DQA Measure Technical Specifications: Administrative Claims-Based Measures

Early Childhood Oral Evaluation by a Dental Provider Following a Medical Preventive Service Visit

Description: Percentage of enrolled children aged 6 months through 5 years who received a comprehensive or periodic oral evaluation with a dental provider within 6 months following a medical preventive service visit
Numerator: Unduplicated number of children who received a comprehensive or periodic oral evaluation as a dental service within 6 months following a medical preventive service
Denominator: Unduplicated number of enrolled children aged 6 months through 5 years with a medical preventive service visit
Rate: NUM/DEN

Rationale: Dental caries is the most common chronic disease in children in the United States (1). Almost one-fourth of children aged 2-5 years old and 34% of 2-5-year-olds living in poverty in the United States have dental caries (2). Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce incidence of future lesions. The American Academy of Pediatrics, American Academy of Pediatric Dentistry, American Dental Association, and American Public Health Association recommend that children have a dental visit by age 1 to allow for timely prevention and identification of dental disease and to enable more conservative approaches to early childhood caries management (3). Efforts to reduce the incidence of early childhood caries and to catch disease early not only reduce adverse consequences of caries in early childhood (i.e., pain, problems with eating and sleeping, exacerbation of disease that leads to emergency department visits and hospitalizations), but also establish the foundation for better oral health in the future. In early childhood, children are more likely to have a visit with a medical provider than a dental provider. Among Medicaid-enrolled children, 79% of 1-2-year-olds had a medical visit in federal fiscal year 2021 compared with 26% who had a dental visit. Among 3-5-year-olds, 63% had a medical visit and 49% had a dental visit (4). The high rates of medical visits in early childhood represent an opportunity to connect children accessing the medical system to dental care. The AAP notes the importance of establishing care with a dental provider in early childhood through medical-dental coordination in addition to conducting oral health screenings and providing basic preventive services and anticipatory guidance within medical settings (3).

- (1) Centers for Disease Control and Prevention. Oral Health Tips for Children. Available at: <https://www.cdc.gov/oral-health/prevention/oral-health-tips-for-children.html>. Accessed June 14, 2024.
- (2) Centers for Disease Control and Prevention. Oral Health Surveillance Report: Trends in Dental Caries and Sealants, Tooth Retention, and Edentulism, United States, 1999-2004 to 2011-2016. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2019. Accessed June 14, 2024, <https://www.cdc.gov/oral-health/php/data-research/2019-oral-health-surveillance-report/>.
- (3) Krol DM, Whelan K; American Academy of Pediatrics Section on Oral Health. [Maintaining and Improving the Oral Health of Young Children](#). *Pediatrics*. 2023 Jan 1;151(1):e2022060417. doi: 10.1542/peds.2022-060417. PMID: 36530159. Accessed June 14, 2024.
- (4) Centers for Medicare and Medicaid Services. 2023. "[Early and Periodic Screening, Diagnosis, & Treatment](#)" Annual EPSDT Reporting Using the Form CMS-415, FY 2021 National Data. Accessed June 14, 2024.

AHRQ Domain: Process¹

Institute of Medicine Aim: Equity, Effectiveness

Level of Aggregation: Health Plan/Program

Improvement Noted As: A higher score indicates better quality.

Data Required: Enrollment and claims data; two years. When using claims data to determine service receipt, include both paid and unpaid claims (including pending, suspended, and denied claims).

Measure Purpose: The purpose of this measure is to support program and plan level efforts to connect young children who are accessing the medical care system with dental care. The measure focuses specifically on dental visits that include either a comprehensive oral evaluation or periodic oral evaluation. Visits with those procedures are more likely to be indicative of access to care that includes diagnosis, caries risk assessment, and prevention and treatment planning. Examples of questions that can be answered through this measure at each level of aggregation:

1. What is the percentage of children aged 6 months through 5 years who received a comprehensive or periodic oral evaluation as a dental service within 6 months of a medical preventive service visit?
2. Over time, does the percentage of children aged 6 months through 5 years who receive a comprehensive or periodic oral evaluation within 6 months of a medical preventive service visit stay stable, increase, or decrease?

Applicable Stratification Variables

1. Age: <1; 1-2; 3-5

Measure Limitations:

Due to the limitations of claims data, this measure cannot identify causal relationships: i.e., the measure cannot confirm that a child had a dental visit because of a referral by a medical provider. This measure also is not intended to signify the presence of a dental home. While improvement on the measure may indicate an increased probability of children having an ongoing care relationship with a dental provider, the measure cannot confirm that an ongoing dental care relationship has been established. However, observing trends over time may contribute to assessments of the effectiveness of improvement efforts focused on improving referral rates to dental care and follow-through on those referrals.

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 June 14, 2024.

Early Childhood Dental Oral Evaluation Following Medical Preventive Service Visit Calculation

Reporting year: The reporting year is the calendar year for which performance is being measured.

Time frame for identifying index medical preventive service visit:

July 1 of year prior to reporting year through June 30 of reporting year.

Time frame for identifying oral evaluation: 6-month period following the index medical visit

1. Check if subject received a **medical preventive service visit** between July 1 of the year prior to the reporting year and June 30 of the reporting year:
 - a. If [PROCEDURE CODE] = any code in Table 1, AND
 - b. [JULY 1 OF PRIOR YEAR] <= [PROCEDURE CODE DATE] <= [JUNE 30 OF REPORTING YEAR]
 - c. If both a AND b are met, then proceed to next step.
 - d. If either a OR b is NOI met, then STOP processing. This subject is not included in the denominator.

Note: If a child had more than one medical preventive service visit, select the first visit occurring between July 1 of the Prior Year and June 30 of the Reporting Year as the index visit.

2. Check if the subject meets **age criteria** on date of index medical preventive service visit:²
 - a. If subject is >6 months (180 days) and <6 years (2,191 days) on date of index medical preventive service visit, 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 subject is not included in the denominator.

Reporting note: Age stratifications are based on subject's age on date of index medical preventive service visit.

3. Check if subject meets **enrollment criteria:**³
 - a. If subject is enrolled on date of index medical preventive service visit, AND
 - b. If subject is continuously enrolled for at least 180 days following the index medical preventive service visit. (**Note:** For programs/plans that verify enrollment on a monthly basis, the continuous enrollment criteria should include the month in which the index medical preventive service visit occurred AND 6 months after the index medical preventive service visit.) AND
 - c. If subject is enrolled at any time during the reporting year.
 - d. If all a **AND** b **AND** c are met, then **include in initial population (denominator before exclusions)**; proceed to next step.
 - e. If any of a **OR** b **OR** c is NOI met, then STOP processing. This subject is not included in the denominator.

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 **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.

YOU NOW HAVE THE INITIAL POPULATION (IP) OF SUBJECTS IN THE DENOMINATOR BEFORE EXCLUSIONS: All subjects who meet age and enrollment criteria and had a medical preventive service visit

4. **EXCLUSION:** Check if subject qualifies for an exclusion from the denominator because subject had a comprehensive or periodic oral evaluation as a dental service during the 180 days before the index medical preventive service visit:
 - a. If [CDT CODE] = D0120 or D0150 or D0145, AND
 - b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below,⁴ AND
 - c. [MEDICAL PREVENTIVE SERVICE DATE – CDT CODE DATE] <=180 DAYS
 - d. If all a **AND** b **AND** c are met, then **exclude this subject from the denominator**.
 - e. If any of a **OR** b **OR** c is NOT met, then **retain this subject in the denominator**; proceed to next step.

YOU NOW HAVE THE DENOMINATOR (DEN) AFTER EXCLUSIONS: All subjects who meet age and enrollment criteria, had a medical preventive service visit, and did NOT have an oral evaluation in the 6 months before the medical preventive service visit.

5. Check if subject received an oral evaluation as a dental service within 6 months of the index medical preventive service visit:
 - a. If [CDT CODE] = D0120 or D0150 or D0145, AND
 - b. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 2 below,⁴ AND
 - c. If [CDT CODE DATE – MEDICAL PREVENTIVE SERVICE DATE] <=180 DAYS.
 - d. If all a **AND** b **AND** c are met, then **include in numerator**; proceed to next step.
 - e. If any of a **OR** b **OR** c is NOT met, then STOP processing. This subject is included in the denominator, but is not included in the numerator.

Note: In this step, 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: Subjects who received an oral evaluation as a dental service

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

⁴ **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 1: Codes to Identify Medical Preventive Service Visits for Children

CPT	99381-99383	Initial comprehensive preventive medicine evaluation and management of an individual including an age and gender appropriate history, examination, counseling/anticipatory guidance/risk factor reduction interventions, and the ordering of laboratory/diagnostic procedures, new patient; infant
CPT	99381	age younger than 1 year
CPT	99382	age 1 through 4 years
CPT	99383	age 5 through 11 years
CPT	99391-99393	Periodic comprehensive preventive medicine re-evaluation and management of an individual, including an age- and gender-appropriate history, examination, counseling/anticipatory guidance/risk factor reduction interventions, and the ordering of appropriate immunizations, laboratory/diagnostic procedures for an established patient
CPT	99391	age younger than 1 year
CPT	99392	age 1 through 4 years
CPT	99393	age 5 through 11 years
ICD-10-CM Diagnosis Codes		
ICD-10-CM	Z00.121	Encounter for routine child health examination with abnormal findings
ICD-10-CM	Z00.129	Encounter for routine child health examination without abnormal findings
ICD10CM	Z76.2	Encounter for health supervision and care of other healthy infant and child
HCPCS Codes		
HCPCS	S0302	Completed early periodic screening diagnosis and treatment (epsdt) service (list in addition to code for appropriate evaluation and management service)
HCPCS	G9964	Patient received at least one well-child visit with a pcp during the performance period

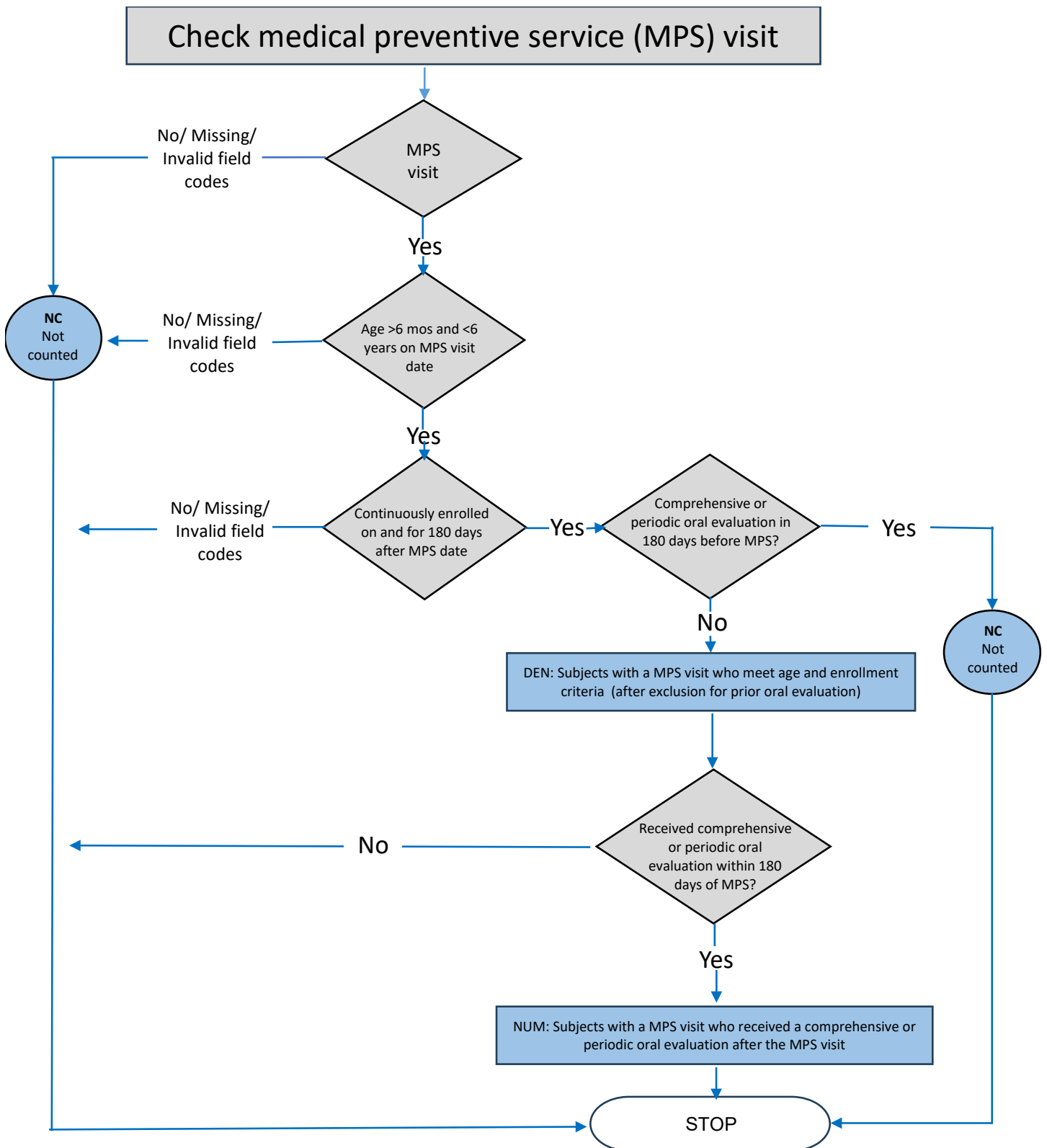
Table 2: NUCC maintained Provider Taxonomy Codes classified as "Dental Service"*

122300000X	1223P0106X	1223X0008X	125Q00000X	126800000X
1223D0001X	1223P0221X	1223X0400X	261QF0400X	261QD0000X
1223D0004X	1223P0300X	124Q00000X+	261QR1300X	204E00000X
1223E0200X	1223P0700X	125J00000X	1223X2210X	261QS0112X
1223G0001X	1223S0112X	125K00000X	122400000X	

*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 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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