



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 2695

Corresponding Measures:

Measure Title: Follow-Up after Emergency Department Visits for Dental Caries in Children

Measure Steward: American Dental Association

sp.02. Brief Description of Measure: Percentage of ambulatory care sensitive Emergency Department (ED) visits for dental caries among children 0 – 20 years in the reporting period for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit.

1b.01. Developer Rationale: The proposed measure, Follow-Up after Emergency Department Visit by Children for Dental Caries, measures the percentage of ambulatory care sensitive Emergency Department (ED) visits by children for dental caries for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit.

This measure focuses on follow up because care received in the ED for dental problems typically is not definitive. In addition, the measure focuses specifically on dental caries-related because: (1) dental caries (tooth decay) plays a central role in dental disease among children, (2) dental caries incidence can be reduced through routine and preventive dental care, and (3) dental caries, once present, can be effectively managed in outpatient settings with early identification and treatment. In addition, this measure has particular relevance to Medicaid programs because Medicaid provides comprehensive dental benefits, yet is the primary payer of dental-related ED visits among children.

Dental caries is the most common chronic disease in children in the United States (CDC 2013). 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 (Dye, Li, and Thornton-Evans 2012). Untreated dental caries occurs among 25% of children living in poverty compared with 10.5% of children living above poverty (Dye, Li, and Thornton-Evans 2012). Untreated dental decay among children has significant short- and long-term adverse consequences (Tinanoff and Reisine 2009). Among the more significant of these outcomes is emergency department visits for dental caries-related problems (e.g., tooth pain, abscesses).

Importantly, ED care for dental caries-related problems is generally not definitive compared to that provided in primary care dental settings and often results in referral to primary care dental sites. Studies, using nationally representative ED visit data (including both children and adults), indicate that ED care for dental problems is focused on pain management and infection control for approximately 90% of patients and only 10% of patients have procedures performed in the ED (Lewis, Lynch and Johnston 2003; Okunseri et al. 2012a). National and state studies indicate that patients presenting to the ED for dental problems are commonly referred to a primary care

site for follow-up of their condition (Cohen et al. 2011; Lewis, Lynch and Johnston 2003). National and state data suggest that 20%-25% of patients who visit the ED for a dental-related problem have a repeat ED visits for dental problems, and many patients do not have any type of follow-up dental care (Davis et al. 2010; Pajewski & Okunseri 2012).

Evidence indicates that state Medicaid programs bear a disproportionate share of dental-related ED costs relative to both private payers and relative to non-dental related ED visits. The most recent nationally-reported data on non-traumatic dental-related ED visits by children are from the Nationwide Emergency Department Sample (NEDS), which is the largest all-payer ED visits database in the U.S. and is comprised of a twenty percent stratified sample of hospital-based EDs in the U.S. (AHRQ 2014). The most recent analyses of the NEDS indicate that among individuals 21 years of age and younger, there were 215,072 non-traumatic dental-related ED visits in 2008, 107,663 (50%) of which had an ICD-9-CM diagnosis code of dental caries. The next most frequently occurring diagnosis code (71,087 visits; 33% of all dental-related ED visits) was periapical abscess without sinus, infections that arise from untreated dental caries (Allareddy et al. 2014). Medicaid-enrolled children accounted for the largest share (43%) of non-traumatic dental-related ED visits among children (Allareddy et al. 2014), consistent with earlier research indicating that Medicaid is the primary payer for dental-related ED visits among children (Nalliah et al. 2010). A study of ED discharge data for children (<18 years old) in North Carolina from 2007-2009 found that 62% of ED visits for dental-related reasons were reimbursed by Medicaid: “a proportion over two times greater than for pediatric reasons overall, 26 percent” (Hom, Burgette and Lee 2005, p. 289). This finding was consistent with two studies of the overall U.S. population (both children and adults) using national datasets that found that Medicaid enrollees and self-pay patients were more likely to have dental-related ED visits compared to those with private insurance or Medicare and that Medicaid enrollees comprise a greater proportion of ED visits for dental problems compared to ED visits for other reasons (Lewis, Lynch, and Johnston 2003; Okunseri et al. 2012b).

Dental caries and its sequelae can be avoided through routine clinical oral evaluations, receipt of evidence-based preventive services, and adoption of good oral health habits by patients and their caregivers (American Academy of Pediatric Dentistry 2013; Ahovuo-Saloranta et al, 2013; Beauchamp et al. 2008; NICE 2004; Tinanoff & Reisine 2009; Weyant et al. 2013). Although comprehensive dental benefits are covered under Medicaid and the Children’s Health Insurance Program (CHIP), only 48% of publicly-insured children nationally had a dental visit in federal fiscal year (FFY) 2012 with significant variations dental service use across states, ranging from approximately 28% to 66% (Steinmetz et al. 2014). The IOM report, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*, concluded that: “Improving access to oral health care is a critical and necessary first step to improving oral health outcomes and reducing disparities” (IOM 2011). Ensuring children receive timely follow-up after an ED visit for dental caries related reasons is an important first step in connecting these children to the dental care system.

The proposed measure, Follow-Up after Emergency Department Visit by Children for Dental Caries, represents a process of care measure that can be used to promote improved health outcomes by allowing programs to identify, monitor and increase the percentage of children with a dental caries-related ED visit who subsequently receive outpatient dental care. The high rates of prescription drugs for pain management and infection control and lack of definitive treatment suggests the need for timely definitive care in an outpatient dental setting to avoid ongoing pain, worsening of the dental condition stemming from untreated decay, and repeat ED visits. Definitive dental care occurs primarily in dental practices in the form of advanced management of dental decay. The 7-day and 30-day follow up time frames were determined based on measure testing results and published research. (More detail is provided in the testing form.)

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Okunseri C, Okunseri E, Thorpe JM, Xiang Q, Szabo A. Patient characteristics and trends in nontraumatic dental condition visits to emergency departments in the United States. *Clin Cosmet Investig Dent*. 2012;4:1-7.

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Weyant RJ, Tracy SL, Anselmo TT, Beltrán-Aguilar ED, et al; American Dental Association Council on Scientific Affairs Expert Panel on Topical Fluoride Caries Preventive Agents. Topical fluoride for caries prevention: executive summary of the updated clinical recommendations and supporting systematic review. J Am Dent Assoc. 2013;144(11):1279-91.

sp.12. Numerator Statement: Number of ambulatory care sensitive ED visits by children for dental caries for which the member visited a dentist within (a) 7 days (NUM1) and (b) 30 days (NUM2) of the ED visit

sp.14. Denominator Statement: Number of ambulatory care sensitive ED visits by children 0 through 20 years for dental caries in the reporting period.

Note: Age range is 0 through 20 years (<21 years) to coincide with Medicaid Early and Periodic Screening, Diagnostic, and Treatment eligibility. (<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html>).

sp.16. Denominator Exclusions: The following standard exclusion is applied: Medicaid programs should exclude children who do not qualify for EPSDT benefits.

Measure Type: Process

sp.28. Data Source:

Claims

sp.07. Level of Analysis:

Integrated Delivery System

IF Endorsement Maintenance – Original Endorsement Date: 2015-09-02 05:01 PM

Most Recent Endorsement Date: 9/2/2015 5:01:09 PM

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

sp.03. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?:

1. Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria

1ma.01. Indicate whether there is new evidence about the measure since the most recent maintenance evaluation. If yes, please briefly summarize the new evidence, and ensure you have updated entries in the Evidence section as needed.

[Response Begins]

[Response Ends]

Please separate added or updated information from the most recent measure evaluation within each question response in the Importance to Measure and Report: Evidence section. For example:

Current Submission:

Updated evidence information here.

Previous (Year) Submission:

Evidence from the previous submission here.

1a.01. Provide a logic model.

Briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.

[Response Begins]

[Response Ends]

1a.02. Select the type of source for the systematic review of the body of evidence that supports the performance measure.

A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data.

[Response Begins]

[Response Ends]

If the evidence is not based on a systematic review, skip to the end of the section and do not complete the repeatable question group below. If you wish to include more than one systematic review, add additional tables by clicking "Add" after the final question in the group.

Evidence - Systematic Reviews Table (Repeatable)

Group 1 - Evidence - Systematic Reviews Table

1a.03. Provide the title, author, date, citation (including page number) and URL for the systematic review.

[Response Begins]

[Response Ends]

1a.04. Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the systematic review.

[Response Begins]

[Response Ends]

1a.05. Provide the grade assigned to the evidence associated with the recommendation, and include the definition of the grade.

[Response Begins]

[Response Ends]

1a.06. Provide all other grades and definitions from the evidence grading system.

[Response Begins]

[Response Ends]

1a.07. Provide the grade assigned to the recommendation, with definition of the grade.

[Response Begins]

[Response Ends]

1a.08. Provide all other grades and definitions from the recommendation grading system.

[Response Begins]

[Response Ends]

1a.09. Detail the quantity (how many studies) and quality (the type of studies) of the evidence.

[Response Begins]

[Response Ends]

1a.10. Provide the estimates of benefit, and consistency across studies.

[Response Begins]

[Response Ends]

1a.11. Indicate what, if any, harms were identified in the study.

[Response Begins]

[Response Ends]

1a.12. Identify any new studies conducted since the systematic review, and indicate whether the new studies change the conclusions from the systematic review.

[Response Begins]

[Response Ends]

1a.13. If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, describe the evidence on which you are basing the performance measure.

[Response Begins]

[Response Ends]

1a.14. Briefly synthesize the evidence that supports the measure.

[Response Begins]

[Response Ends]

1a.15. Detail the process used to identify the evidence.

[Response Begins]

[Response Ends]

1a.16. Provide the citation(s) for the evidence.

[Response Begins]

[Response Ends]

1b.01. Briefly explain the rationale for this measure.

Explain how the measure will improve the quality of care, and list the benefits or improvements in quality envisioned by use of this measure.

[Response Begins]

The proposed measure, Follow-Up after Emergency Department Visit by Children for Dental Caries, measures the percentage of ambulatory care sensitive Emergency Department (ED) visits by children for dental caries for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit.

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[Response Ends]

1b.02. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.

Include mean, std dev, min, max, interquartile range, and scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

This is a new measure designed to be reported at the program level (e.g., Medicaid, CHIP). Comprehensive testing was done with multiple data sources.

Data Sources:

We used data from four program-level data sources. We included data for publicly insured children in the Texas Medicaid, Texas CHIP, Florida CHIP, and Florida Medicaid programs. Florida and Texas represent two of the largest and most diverse states. The two states also represent the upper and lower bounds of dental utilization based on data available from the Centers for Medicare and Medicaid Services (Steinmetz et al. 2014). The programs collectively represent different delivery system models. The Texas Medicaid data represented dental fee-for-service, and Texas CHIP data reflected a single dental benefits administrator (DBA). The Florida CHIP data included data from two DBAs. The Florida Medicaid data include dental fee-for-service and prepaid dental data. Data from calendar year (CY) 2011 was used for all programs.

The numbers of children ages 0-20 years enrolled at least one month in each program were as follows:

Texas Medicaid, 2011: 3,578,302
Texas CHIP, 2011: 870,433
Florida CHIP, 2011: 329,707
Florida Medicaid, 2011: 2,229,323

Data 1b.2 Performance Scores for Follow-Up after Emergency Department Visit by Children for Dental Caries, CY 2011

7-Day Follow-Up

Program, Measure Score – (SE, Lower 95% CI, Upper 95% CI)

Program 1: 35.96% (0.79 , 34.41 , 37.5)

Program 2: 38.98% (2.53 , 34.02 , 43.93)

Program 3: 32.00% (3.3 , 25.53 , 38.47)

Program 4: 21.64% (0.55 , 20.56 , 22.72)

30-Day Follow-Up

Program, Measure Score – (SE, Lower 95% CI, Upper 95% CI)

Program 1: 48.89% (0.82 , 47.28 , 50.5)

Program 2: 48.12% (2.59 , 43.04 , 53.2)

Program 3: 46.50% (3.53 , 39.59 , 53.41)

Program 4: 34.02% (0.64 , 32.78 , 35.27)

The measure ranges of 22%-36% for 7-day follow-up and 34%-49% for 30-day follow-up indicate a significant performance gap overall. Even in the highest performing program, almost 2/3 of children are not seen by a dentist within 7 days and more than 1/2 are not seen within 30 days.

In addition, this measure detects variations in performance between programs. For 7-Day Follow-Up, there was a 14 percentage point difference between the lowest performing program (Program 4) and the highest performing program (Program 1), which was statistically significant at the $p < 0.05$ level and represented a 66% higher score for Program 1 compared with that for Program 4. For 30-Day Follow-Up, there was a 15 percentage point difference between the lowest performing program (Program 4) and the highest performing program (Program 1), which was statistically significant at the $p < 0.05$ level and represented a 44% higher score for Program 1 compared with that for Program 4.

References

Steinmetz E, Bruen B, Ku L. Children's use of dental care in Medicaid: federal fiscal years 2000-2012. Prepared for the Centers for Medicare and Medicaid Services by George Washington University. 2014. Available at: <http://www.medicaid.gov/medicaid-chip-program-information/by-topics/benefits/downloads/dental-trends-2000-to-2012.pdf>. Accessed January 11th, 2015.

[Response Ends]

1b.03. If no or limited performance data on the measure as specified is reported above, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement. Include citations.

[Response Begins]

The measure testing findings are consistent with other data regarding follow-up dental use after a dental-related ED visit. A study of adult Wisconsin Medicaid enrollees who visited the ED for non-traumatic dental conditions during the period 2001-2009 examined administrative claims for subsequent ED visits and dental services within 30 days and found that the next dental encounter was a repeat ED visit for 10% of enrollees and a dental office visit for 30% of enrollees; the remaining 60% did not have subsequent dental claims. The same study also evaluated a longer follow-up time frame of 180 days and found that 18% returned to the ED, 42% visited a dental office, and 40% did not have subsequent dental claims (Pajewski & Okunseri 2012).

The measure testing findings also are consistent with other data indicating that children generally have sub-optimal utilization of dental services. Although comprehensive dental benefits are covered under Medicaid and the Children's Health Insurance Program (CHIP), only 48% of publicly-insured children nationally had a dental visit in federal fiscal year (FFY) 2012 with significant variations dental service use across states, ranging from approximately 28% to 66% (Steinmetz et al. 2014). Even among the highest performing states, approximately one-third of publicly-insured children did not have a dental visit during the year. Similar variation between states is observed among children 0-20 years of age enrolled in commercial dental plans (Nasseh et al. 2013). Untreated

dental caries occurs among 25% of children living in poverty compared with 10.5% of children living above poverty (Dye, Li, and Thorton-Evans 2012).

Dental caries can be prevented and, when present, can be effectively managed and treated in outpatient settings. Thus, Follow-Up after Emergency Department Visit by Children for Dental Caries represents a process of care measure that is directly associated with better (child receives outpatient dental follow-up and gets definitive treatment) / worse (child does not receive outpatient dental follow-up and condition remains untreated adversely affecting health and increasing likelihood of subsequent ED visit) quality of care. Our testing data, which are consistent with other reported data, indicate significant variation in outpatient dental care follow-up after an ED visit for dental caries, less than optimal performance, and opportunities for improvement.

REFERENCES

Dye BA, Li X, Thorton-Evans G. Oral health disparities as determined by selected healthy people 2020 oral health objectives for the United States, 2009-2010. NCHS Data Brief 2012(104):1-8.U.S. Dept. of Health and Human Services, National Institute of Dental and Craniofacial Research.

Nasseh K, Aravamudhan K, Vujicic M, Grau B. Dental Care Use among Children Varies Widely across States and between Medicaid and Commercial Plans within a State. Health Policy Institute Research Brief. American Dental Association. October 2013. Available at: <http://www.ada.org/>

[Response Ends]

1b.04. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability.

Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included. Include mean, std dev, min, max, interquartile range, and scores by decile. For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

The same data sources were used as described in 1b.2. The data below summarizes performance data by age, geographic location, and race/ethnicity for CY 2011 with 95% confidence intervals. Non-overlapping confidence intervals between two subgroups indicate statistically significant differences. However, the converse is not necessarily true: differences in measure scores can be statistically significant when confidence intervals overlap. Thus, for overlapping confidence intervals, we calculated the t-statistic to evaluate whether there were statistically significant differences between subgroups where significance at the 0.05 level is attained if the $t\text{-statistic} > 2.00$. We additionally verified by evaluating whether the following condition held: $2v(SEA2 + SEB2) < \text{meanB} - \text{meanA} < 2SEA + 2SEB$ (Wolfe & Hanley 2002).

Summary Key Findings:

- o Overall, there was variation by age for both 7-day and 30-day follow up even though there were not statistically significant differences for all combinations of age group pairings. In general, the youngest age cohort and the older age cohorts (>11 years) tend to have lower rates of follow-up.
- o There were statistically significant differences in 30-day follow up for children living in urban and rural areas in Program 2 ($t\text{-statistic}=2.00$) and Program 4 (non-overlapping CIs). There was a statistically significant difference in 7-day follow up for children living in suburban areas compared to rural and urban areas for Program 3 (non-overlapping CIs).
- o In the two programs for which there were adequately filled race and ethnicity data, statistically significant

variations between Hispanic, non-Hispanic White, and non-Hispanic black children were detected for both 7-day and 30-day follow up. In Program 1, there were statistically significant differences between all three groups for both 7-day and 30-day follow up (non-overlapping confidence intervals; t-statistic=2.32 for comparison between NH black and NH white for 7-day follow up). In Program 4, there were statistically significant differences between Hispanic children and non-Hispanic black and non-Hispanic white children for both 7-day and 30-day follow up. Collectively, there were statistically significant age, geographic, and race/ethnicity variations in the measure scores for 7-day and 30-day follow up.

Data1b.4. Disparities in Performance by Child Age, Geographic Location and Race/Ethnicity

30-DAY FOLLOW UP

PROGRAM 1 Measure Score (Lower CI , Upper CI)

Overall performance score: 48.89% (47.28% , 50.50%)

Scores by Age

<1 year: 28.81% (17.26% , 40.37%)
1-2 years: 52.04% (45.45% , 58.62%)
3-5 years: 57.68% (54.19% , 61.18%)
6-7 years: 59.00% (54.40% , 63.60%)
8-9 years: 51.71% (46.25% , 57.18%)
10-11 years: 54.27% (47.35% , 61.19%)
12-14 years: 54.90% (49.33% , 60.48%)
15-18 years: 43.66% (40.52% , 46.81%)
19-20 years: 26.64% (22.45% , 30.82%)

Scores by Geographic Location

Urban core: 49.07% (47.07% , 51.06%)
Suburban: 48.68% (44.10% , 53.27%)
Rural: 48.31% (44.85% , 51.78%)

Scores by Race

Non-Hispanic White: 46.66% (43.48% , 49.84%)
Non-Hispanic Black: 39.65% (36.25% , 43.04%)
Hispanic: 54.49% (52.08% , 56.90%)

PROGRAM 2

Overall performance score: 48.12% (43.04% , 53.20%)

Scores by Age

<1 year: N/A
1-2 years: 33.33% (6.66% , 60.01%)
3-5 years: 52.94% (36.16% , 69.72%)
6-7 years: 54.39% (41.46% , 67.32%)
8-9 years: 55.56% (42.30% , 68.81%)
10-11 years: 58.33% (42.23% , 74.44%)
12-14 years: 53.49% (38.58% , 68.40%)
15-18 years: 38.24% (30.07% , 46.40%)
19-20 years: N/A

#2695 Follow-Up after Emergency Department Visits for Dental Caries in Children, Submission Last
Updated: Oct 14, 2022

Scores by Geographic Location

Urban core: 51.31% (45.32% , 57.31%)

Suburban: 44.74% (28.93% , 60.55%)

Rural: 37.88% (26.18% , 49.58%)

Scores by Race

Non-Hispanic White: N/A

Non-Hispanic Black: N/A

Hispanic: N/A

PROGRAM 3

Overall performance score: 46.50% (39.59% , 53.41%)

Scores by Age

<1 year: N/A

1-2 years: N/A

3-5 years: 61.54% (35.09% , 87.99%)

6-7 years: 60.87% (40.92% , 80.82%)

8-9 years: 57.14% (35.98% , 78.31%)

10-11 years: 44.44% (25.70% , 63.19%)

12-14 years: 54.55% (37.56% , 71.53%)

15-18 years: 34.94% (24.68% , 45.20%)

19-20 years: N/A

Scores by Geographic Location

Urban core: 48.08% (40.24% , 55.92%)

Suburban: 35.71% (17.97% , 53.46%)

Rural: 62.50% (28.95% , 96.05%)

Scores by Race

Non-Hispanic White: N/A

Non-Hispanic Black: N/A

Hispanic: N/A

PROGRAM 4

Overall performance score: 34.02% (32.78% , 35.27%)

Scores by Age

<1 year: 4.88% (0.00% , 11.47%)

1-2 years: 33.47% (27.63% , 39.30%)

3-5 years: 44.50% (41.31% , 47.70%)

6-7 years: 43.96% (40.06% , 47.87%)

8-9 years: 42.25% (37.66% , 46.84%)

10-11 years: 40.92% (35.75% , 46.10%)

12-14 years: 32.16% (28.10% , 36.21%)

15-18 years: 28.02% (25.85% , 30.19%)

19-20 years: 21.39% (18.51% , 24.28%)

Scores by Geographic Location

Urban core: 32.96% (31.55% , 34.38%)

Suburban: 35.98% (32.44% , 39.52%)

#2695 Follow-Up after Emergency Department Visits for Dental Caries in Children, Submission Last
Updated: Oct 14, 2022

Rural: 38.93% (34.89% , 42.97%)

Scores by Race

Non-Hispanic White: 32.60% (30.54% , 34.66%)

Non-Hispanic Black: 30.98% (28.92% , 33.05%)

Hispanic: 41.67% (38.73% , 44.62%)

7-DAY FOLLOW UP

PROGRAM 1 Measure Score (Lower CI , Upper CI)

Overall performance score: 35.96% (34.41% , 37.50%)

Scores by Age

<1 year: 23.73% (12.87% , 34.58%)

1-2 years: 40.27% (33.81% , 46.74%)

3-5 years: 43.88% (40.37% , 47.39%)

6-7 years: 45.79% (41.13% , 50.45%)

8-9 years: 40.81% (35.43% , 46.19%)

10-11 years: 42.21% (35.35% , 49.07%)

12-14 years: 37.58% (32.15% , 43.01%)

15-18 years: 30.47% (27.55% , 33.39%)

19-20 years: 15.65% (12.21% , 19.10%)

Scores by Geographic Location

Urban core: 36.83% (34.91% , 38.76%)

Suburban: 34.65% (30.28% , 39.02%)

Rural: 33.58% (30.31% , 36.85%)

Scores by Race

Non-Hispanic White: 33.09% (30.08% , 36.09%)

Non-Hispanic Black: 27.98% (24.86% , 31.10%)

Hispanic: 41.54% (39.15% , 43.93%)

PROGRAM 2

Overall performance score: 38.98% (34.02% , 43.93%)

Scores by Age

<1 year: N/A

1-2 years: 33.33% (6.66% , 60.01%)

3-5 years: 41.18% (24.63% , 57.72%)

6-7 years: 42.11% (29.29% , 54.92%)

8-9 years: 48.15% (34.82% , 61.48%)

10-11 years: 47.22% (30.91% , 63.53%)

12-14 years: 46.51% (31.60% , 61.42%)

15-18 years: 29.41% (21.75% , 37.07%)

19-20 years: N/A

Scores by Geographic Location

Urban core: 41.95% (36.03% , 47.87%)

Suburban: 31.58% (16.80% , 46.36%)

#2695 Follow-Up after Emergency Department Visits for Dental Caries in Children, Submission Last
Updated: Oct 14, 2022

Rural: 31.82% (20.58% , 43.06%)

Scores by Race

Non-Hispanic White: N/A

Non-Hispanic Black: N/A

Hispanic: N/A

PROGRAM 3

Overall performance score: 32.00% (25.53% , 38.47%)

Scores by Age

<1 year: N/A

1-2 years: N/A

3-5 years: 23.08% (0.17% , 45.98%)

6-7 years: 39.13% (19.18% , 59.08%)

8-9 years: 47.62% (26.26% , 68.98%)

10-11 years: 33.33% (15.55% , 51.11%)

12-14 years: 42.42% (25.56% , 59.29%)

15-18 years: 22.89% (13.85% , 31.93%)

19-20 years: N/A

Scores by Geographic Location

Urban core: 35.26% (27.76% , 42.75%)

Suburban: 14.29% (1.32% , 27.25%)

Rural: 37.50% (3.95% , 71.05%)

Scores by Race

Non-Hispanic White: N/A

Non-Hispanic Black: N/A

Hispanic: N/A

PROGRAM 4

Overall performance score: 21.64% (20.56% , 22.72%)

Scores by Age

<1 year: 4.88% (0.00% , 11.47%)

1-2 years: 23.11% (17.89% , 28.32%)

3-5 years: 29.53% (26.59% , 32.46%)

6-7 years: 30.43% (26.82% , 34.05%)

8-9 years: 26.74% (22.63% , 30.85%)

10-11 years: 24.78% (20.24% , 29.33%)

12-14 years: 20.00% (16.53% , 23.47%)

15-18 years: 16.96% (15.15% , 18.77%)

19-20 years: 12.24% (9.94% , 14.55%)

Scores by Geographic Location

Urban core: 21.22% (19.99% , 22.45%)

Suburban: 22.24% (19.17% , 25.31%)

Rural: 23.04% (19.55% , 26.52%)

Scores by Race

Non-Hispanic White: 20.59% (18.82% , 22.37%)

Non-Hispanic Black: 18.91% (17.16% , 20.66%)

Hispanic: 28.47% (25.77% , 31.16%)

Notes:

1. N/A for age indicates that those ages are not within the program's age eligibility.
2. N/A for race/ethnicity indicates that those had high rates of missing data.

REFERENCES

Wolfe R, Hanley J. If we're so different, why do we keep overlapping? When 1 plus 1 doesn't make 2. CMAJ. 2002; 166(1):65-66.

[Response Ends]

1b.05. If no or limited data on disparities from the measure as specified is reported above, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in above.

[Response Begins]

Our findings of age, geographic, and racial/ethnic disparities in follow up after ED use for caries-related reasons are consistent with other published research. For example, Pajewski & Okunseri (2012) found that living in a rural (versus urban) county and age cohort had the strongest associations with the first site of dental care (dentist office or ED) after a non-traumatic dental ED visit. They also found that Hispanic ethnicity (compared with whites) was associated with a greater likelihood of following-up with a dentist and a lower probability of a repeat ED visit. Black enrollees were less likely to follow-up with a dentist and more likely to have a repeat ED visit compared with white enrollees.

REFERENCES

Pajewski NM, Okunseri C. Patterns of dental service utilization following nontraumatic dental condition visits to the emergency department in Wisconsin Medicaid. J Public Health Dent. 2014;74(1):34-41.

[Response Ends]

2. Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.

spma.01. Indicate whether there are changes to the specifications since the last updates/submission. If yes, update the specifications in the Measure Specifications section of the Measure Submission Form, and explain your reasoning for the changes below.

[Response Begins]

Yes

[Response Ends]

spma.02. Briefly describe any important changes to the measure specifications since the last measure update and provide a rationale.

For annual updates, please explain how the change in specifications affects the measure results. If a material change in specification is identified, data from re-testing of the measure with the new specifications is required for early maintenance review.

For example, specifications may have been updated based on suggestions from a previous NQF CDP review.

[Response Begins]

1. Changed the full name of the measure from Follow-Up after Emergency Department Visit by Children for Dental Caries to Follow-Up after Emergency Department Visits for Dental Caries in Children.
2. Measure-specific webpage link update.

[Response Ends]

sp.01. Provide the measure title.

Measure titles should be concise yet convey who and what is being measured (see [What Good Looks Like](#)).

[Response Begins]

Follow-Up after Emergency Department Visits for Dental Caries in Children

[Response Ends]

sp.02. Provide a brief description of the measure.

Including type of score, measure focus, target population, timeframe, (e.g., Percentage of adult patients aged 18-75 years receiving one or more HbA1c tests per year).

[Response Begins]

Percentage of ambulatory care sensitive Emergency Department (ED) visits for dental caries among children 0 – 20 years in the reporting period for which the member visited a dentist within (a) 7 days and (b) 30 days of the ED visit.

[Response Ends]

sp.04. Check all the clinical condition/topic areas that apply to your measure, below.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Surgery: General*

[Response Begins]

Dental

[Response Ends]

sp.05. Check all the non-condition specific measure domain areas that apply to your measure, below.

[Response Begins]

Access to Care

Disparities Sensitive

Health and Functional Status: Change

Health and Functional Status: Total Health

[Response Ends]

sp.06. Select one or more target population categories.

Select only those target populations which can be stratified in the reporting of the measure's result.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Populations at Risk: Populations at Risk*

[Response Begins]

Children (Age < 18)

[Response Ends]

sp.07. Select the levels of analysis that apply to your measure.

Check ONLY the levels of analysis for which the measure is SPECIFIED and TESTED.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*
- *Population: Population*

[Response Begins]

Integrated Delivery System

[Response Ends]

sp.08. Indicate the care settings that apply to your measure.

Check ONLY the settings for which the measure is SPECIFIED and TESTED.

[Response Begins]

Outpatient Services

[Response Ends]

sp.09. Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials.

Do not enter a URL linking to a home page or to general information. If no URL is available, indicate "none available".

[Response Begins]

<http://www.ada.org/>

[Response Ends]

sp.12. Attach the data dictionary, code table, or value sets (and risk model codes and coefficients when applicable). Excel formats (.xlsx or .csv) are preferred.

Attach an excel or csv file; if this poses an issue, [contact staff](#). Provide descriptors for any codes. Use one file with multiple worksheets, if needed.

[Response Begins]

No data dictionary/code table – all information provided in the submission form

[Response Ends]

sp.13. State the numerator.

Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome).

DO NOT include the rationale for the measure.

[Response Begins]

Number of ambulatory care sensitive ED visits by children for dental caries for which the member visited a dentist within (a) 7 days (NUM1) and (b) 30 days (NUM2) of the ED visit

[Response Ends]

sp.14. Provide details needed to calculate the numerator.

All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

Please see Section S18

[Response Ends]

sp.15. State the denominator.

Brief, narrative description of the target population being measured.

[Response Begins]

Number of ambulatory care sensitive ED visits by children 0 through 20 years for dental caries in the reporting period.

Note: Age range is 0 through 20 years (<21 years) to coincide with Medicaid Early and Periodic Screening, Diagnostic, and Treatment eligibility. (<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html>).

[Response Ends]

sp.16. Provide details needed to calculate the denominator.

All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

Please see section S18.

[Response Ends]

sp.17. Describe the denominator exclusions.

Brief narrative description of exclusions from the target population.

[Response Begins]

The following standard exclusion is applied: Medicaid programs should exclude children who do not qualify for EPSDT benefits.

[Response Ends]

sp.18. Provide details needed to calculate the denominator exclusions.

All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

There are no other exclusions than those described above.

[Response Ends]

sp.19. Provide all information required to stratify the measure results, if necessary.

Include the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate. Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format in the Data Dictionary field.

[Response Begins]

This measure will be stratified by age using the following categories:

<1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20

No new data are needed for this stratification. Please see attached specifications for complete measure details.

These stratification categories are consistent with other recently NQF-endorsed dental measures (NQF#2511; NQF#2517). Collapsed categories were considered; however, expert consensus concluded that given the different patterns between programs, a more refined approach would be more informative to measure implementers.

[Response Ends]

sp.20. Is this measure adjusted for socioeconomic status (SES)?

[Response Begins]

[Response Ends]

sp.21. Select the risk adjustment type.

Select type. Provide specifications for risk stratification and/or risk models in the Scientific Acceptability section.

[Response Begins]

No risk adjustment or risk stratification

[Response Ends]

sp.22. Select the most relevant type of score.

Attachment: If available, please provide a sample report.

[Response Begins]

Rate/proportion

[Response Ends]

sp.23. Select the appropriate interpretation of the measure score.

Classifies interpretation of score according to whether better quality or resource use is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score

[Response Begins]

Better quality = Higher score

[Response Ends]

sp.24. Diagram or describe the calculation of the measure score as an ordered sequence of steps.

Identify the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period of data, aggregating data; risk adjustment; etc.

[Response Begins]

Follow-Up after Emergency Department Visit by Children for Dental Caries Calculation:

1. Run records for one reporting year for paid claims
2. Identify all emergency department visits for caries-related reasons occurring during eligible member months between January 1 and December 1 of the reporting year:

a. Identify a health care encounter as an ED visit if any of the following are met:

- CPT codes 99281-99285 (ED visit for patient evaluation/management); OR
- Revenue code 0450-0459 (Emergency Room) or 0981 (professional fees for ER services); OR
- CMS place of service code for professional claims - 23 (Emergency Room)

b. Exclude visits that result in inpatient admissions where inpatient admissions are identified as:

(i) the patient has an inpatient admission defined by UB Type of Bill = 11x OR 12x OR 41x

AND

ii) that admission occurred within 48 hours:

[inpatient admit date] – [ED admit date] >= 0 days AND <= 2 days.

c. Count only one visit per member per day

d. Member must be <21 years on date of visit

Reporting note: Age stratifications will be based on subject's age on date of ED visit.

e. Identify an ED visit as being caries related if:

i. any of the ICD-9-CM diagnosis codes in Table 1 is listed as a FIRST-LISTED diagnosis code associated with the visit

OR

ii. (a) any of the ICD-9-CM diagnosis codes in Table 2 is listed as a FIRST-LISTED diagnosis AND (b) any of the ICD-9-CM diagnosis codes in Table 1 is listed as an ADDITIONAL LISTED diagnosis. (Codes from Table 2 must be accompanied by a code from Table 1 to qualify.)

f. Member must be enrolled on date of ED visit and through 30 days following the visit.

g. Sum the number of ED visits for caries-related reasons

YOU NOW HAVE THE DENOMINATOR: Number of ED Visits for caries-related reasons

Table 1. Dental Caries-Related ICD-9-CM Diagnosis Codes

Note: The corresponding ICD-10 codes are provided in the attached Excel file that has the Data Dictionary Code

Table associated with S.2b. above.

521.00 UNSPECIFIED DENTAL CARIES
521.01 DENTAL CARIES LIMITED TO ENAMEL
521.02 DENTAL CARIES EXTENDING INTO DENTINE
521.03 DENTAL CARIES EXTENDING INTO PULP
521.04 ARRESTED DENTAL CARIES
521.05 ODONTOCLASIA
521.06 DENTAL CARIES PIT AND FISSURE
521.07 DENTAL CARIES OF SMOOTH SURFACE
521.08 DENTAL CARIES OF ROOT SURFACE
521.09 OTHER DENTAL CARIES
522.0 PULPITIS
522.1 NECROSIS OF THE PULP
522.2 PULP DEGENERATION
522.3 ABNORMAL HARD TISSUE FORMATION IN PULP
522.4 ACUTE APICAL PERIODONTITIS OF PULPAL ORIGIN
522.5 PERIAPICAL ABSCESS WITHOUT SINUS
522.6 CHRONIC APICAL PERIODONTITIS
522.7 PERIAPICAL ABSCESS WITH SINUS
522.8 RADICULAR CYST
522.9 OTHER AND UNSPECIFIED DISEASES OF PULP AND PERIAPICAL TISSUES
525.3 RETAINED DENTAL ROOT
525.60 UNSPECIFIED UNSATISFACTORY RESTORATION OF TOOTH
525.61 OPEN RESTORATION MARGINS
525.63 FRACTURED DENTAL RESTORATIVE MATERIAL WITHOUT LOSS OF MATERIAL
525.64 FRACTURED DENTAL RESTORATIVE MATERIAL WITH LOSS OF MATERIAL
525.8 OTHER SPECIFIED DISORDERS OF THE TEETH AND SUPPORTING STRUCTURES
525.9 UNSPECIFIED DISORDER OF THE TEETH AND SUPPORTING STRUCTURES
526.4 INFLAMMATORY CONDITIONS OF JAW
526.5 ALVEOLITIS OF JAW
526.61 PERFORATION OF ROOT CANAL SPACE
526.62 ENDODONTIC OVERFILL
526.63 ENDODONTIC UNDERFILL
526.69 OTHER PERIRADICULAR PATHOLOGY ASSOCIATED WITH PREVIOUS ENDODONTIC TREATMENT
528.3 CELLULITIS AND ABSCESS OF ORAL SOFT TISSUES

Table 2. Additional First-Listed ICD-9-CM Diagnosis Codes to Identify Caries-Related Visits when Paired with an Additional Listed Diagnosis Code from the Caries-Related ICD-9-CM Codes in Table 1

Note: The corresponding ICD-10 codes are provided in the attached Excel file that has the Data Dictionary Code

Table associated with S.2b. above.

682.0 CELLULITIS AND ABSCESS OF FACE
• must be paired with additional diagnosis code from Table 1
682.1 CELLULITIS AND ABSCESS OF NECK
• must be paired with additional diagnosis code from Table 1
682.9 CELLULITIS AND ABSCESS OF UNSPECIFIED SITES
• must be paired with additional diagnosis code from Table 1
782.3 EDEMA
• must be paired with additional diagnosis code from Table 1
784.2 SWELLING MASS OR LUMP IN HEAD AND NECK
• must be paired with additional diagnosis code from Table 1

3. Check if subject had a visit with a dentist (dental service) within 30 days of the ED visit:

a. If CDT [SERVICE-CODE] = D0100 – D9999 (any dental service), AND;

b. [DATE OF ED VISIT]-[DATE OF DENTAL VISIT] <=30 days;

Note: If two or more caries-related ED visits occur for same child within 30 days of one another, then use the first ED visit as the index date for follow-up. Both ED visits will count in the denominator. A follow-up dental visit within 30 days of the first ED visit will be counted once in the numerator.

AND;

c. If [RENDERING PROVIDER TAXONOMY] code = any of the NUCC maintained Provider Taxonomy Codes in Table 3 below, then proceed to next step (#4).

d. If a AND b AND c are not met, then the service was not a “follow-up dental service” STOP processing. This ED visit is already included in the denominator but will not be included in the subsequent counts.

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 3 should be excluded.

YOU NOW HAVE NUMERATOR 2 (NUM2): ED visits for caries-related reasons for which the child had a visit with a dentist within 30 days

4. Among the ED visits identified in Step 3, check if the subject had a visit with a dentist (dental service) within 7 days of the ED visit:

[DATE OF ED VISIT]-[DATE OF DENTAL VISIT] <=7 days

YOU NOW HAVE NUMERATOR 1 (NUM1): ED visits for caries-related reasons for which the child had a visit with a dentist within 7 days

5. Report

a. Unduplicated count of caries-related ED visits with 30-day dentist visit follow-up in numerator

b. Unduplicated count of caries-related ED visits with 7-day dentist visit follow-up in numerator

c. Unduplicated count of caries-related ED visits in denominator

d. Rates: (NUM1/DEN), (NUM2/DEN)

Table 3: NUCC maintained Provider Taxonomy Codes classified as dentist*

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.

*** Note: Reliability of the measure score depends on quality of the data that is used to calculate the measures.

Flow rates (% of missing or 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 score and will not be reliable.***

[Response Ends]

sp.27. If measure testing is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.

Examples of samples used for testing:

- Testing may be conducted on a sample of the accountable entities (e.g., hospital, physician). The analytic unit specified for the particular measure (e.g., physician, hospital, home health agency) determines the sampling strategy for scientific acceptability testing.
- The sample should represent the variety of entities whose performance will be measured. The [2010 Measure Testing Task Force](#) recognized that the samples used for reliability and validity testing often have limited generalizability because measured entities volunteer to participate. Ideally, however, all types of entities whose performance will be measured should be included in reliability and validity testing.
- The sample should include adequate numbers of units of measurement and adequate numbers of patients to answer the specific reliability or validity question with the chosen statistical method.
- When possible, units of measurement and patients within units should be randomly selected.

[Response Begins]

Not applicable

[Response Ends]

sp.30. Select only the data sources for which the measure is specified.

[Response Begins]

Claims

[Response Ends]

sp.31. Identify the specific data source or data collection instrument.

For example, provide the name of the database, clinical registry, collection instrument, etc., and describe how data are collected.

[Response Begins]

Not applicable

[Response Ends]

sp.32. Provide the data collection instrument.

[Response Begins]

No data collection instrument provided

[Response Ends]

2ma.01. Indicate whether additional empirical reliability testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Reliability - Testing. Include information on all testing conducted (prior testing as well as any new testing).

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous Submission:

Testing from the previous submission here.

[Response Begins]

[Response Ends]

2ma.02. Indicate whether additional empirical validity testing at the accountable entity level has been conducted. If yes, please provide results in the following section, Scientific Acceptability: Validity - Testing. Include information on all testing conducted (prior testing as well as any new testing).

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous Submission:

Testing from the previous submission here.

[Response Begins]

[Response Ends]

2ma.03. For outcome, patient-reported outcome, resource use, cost, and some process measures, risk adjustment/stratification may be conducted. Did you perform a risk adjustment or stratification analysis?

[Response Begins]

[Response Ends]

2ma.04. For maintenance measures in which risk adjustment/stratification has been performed, indicate whether additional risk adjustment testing has been conducted since the most recent maintenance evaluation. This may include updates to the risk adjustment analysis with additional clinical, demographic, and social risk factors.

Please update the Scientific Acceptability: Validity - Other Threats to Validity section.

Note: This section must be updated even if social risk factors are not included in the risk adjustment strategy.

[Response Begins]

[Response Ends]

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate fields in the Scientific Acceptability sections of the Measure Submission Form.

- Measures must be tested for all the data sources and levels of analyses that are specified. If there is more than one set of data specifications or more than one level of analysis, contact NQF staff about how to present all the testing information in one form.
- All required sections must be completed.
- For composites with outcome and resource use measures, Questions 2b.23-2b.37 (Risk Adjustment) also must be completed.
- If specified for multiple data sources/sets of specifications (e.g., claims and EHRs), Questions 2b.11-2b.13 also must be completed.
- An appendix for supplemental materials may be submitted (see Question 1 in the Additional section), but there is no guarantee it will be reviewed.
- Contact NQF staff with any questions. Check for resources at the [Submitting Standards webpage](#).
- For information on the most updated guidance on how to address social risk factors variables and testing in this form refer to the release notes for the [2021 Measure Evaluation Criteria and Guidance](#).

Note: The information provided in this form is intended to aid the Standing Committee and other stakeholders in understanding to what degree the testing results for this measure meet NQF's evaluation criteria for testing.

2a. Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise. For instrument-based measures (including PRO-PMs) and composite performance measures, reliability should be demonstrated for the computed performance score.

2b1. Validity testing demonstrates that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality. For instrument based measures (including PRO-PMs) and composite performance measures, validity should be demonstrated for the computed performance score.

2b2. Exclusions are supported by the clinical evidence and are of sufficient frequency to warrant inclusion in the specifications of the measure;

AND

If patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that the exclusion impacts performance on the measure; in such cases, the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

2b3. For outcome measures and other measures when indicated (e.g., resource use):

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified; is based on patient factors (including clinical and social risk factors) that influence the measured outcome and are present at start of care; 14,15 and has demonstrated adequate discrimination and calibration

OR

- rationale/data support no risk adjustment/ stratification.

2b4. Data analysis of computed measure scores demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance;

OR

there is evidence of overall less-than-optimal performance.

2b5. If multiple data sources/methods are specified, there is demonstration they produce comparable results.

2b6. Analyses identify the extent and distribution of missing data (or nonresponse) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders) and how the specified handling of missing data minimizes bias.

2c. For composite performance measures, empirical analyses support the composite construction approach and demonstrate that:

2c1. the component measures fit the quality construct and add value to the overall composite while achieving the related objective of parsimony to the extent possible; and

2c2. the aggregation and weighting rules are consistent with the quality construct and rationale while achieving the related objective of simplicity to the extent possible.

(if not conducted or results not adequate, justification must be submitted and accepted)

Definitions

Reliability testing applies to both the data elements and computed measure score. Examples of reliability testing for data elements include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing of the measure score addresses precision of measurement (e.g., signal-to-noise).

Validity testing applies to both the data elements and computed measure score. Validity testing of data elements typically analyzes agreement with another authoritative source of the same information. Examples of validity testing of the measure score include, but are not limited to: testing hypotheses that the measures scores indicate quality of care, e.g., measure scores are different for groups known to have differences in quality assessed by another valid quality measure or method; correlation of measure scores with another valid indicator of quality for the specific topic; or relationship to conceptually related measures (e.g., scores on process measures to scores on outcome measures). Face validity of the measure score as a quality indicator may be adequate if accomplished through a systematic and transparent process, by identified experts, and explicitly addresses whether performance scores resulting from the measure as specified can be used to distinguish good from poor quality. The degree of consensus and any areas of disagreement must be provided/discussed.

Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, variability of exclusions across providers, and sensitivity analyses with and without the exclusion.

Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

Risk factors that influence outcomes should not be specified as exclusions.

With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74 percent v. 75 percent) is clinically meaningful; or whether a statistically significant difference of \$25 in cost for an episode of care (e.g., \$5,000 v.\$5,025) is practically meaningful. Measures with overall less-than-optimal performance may not demonstrate much variability across providers.

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous (Year) Submission:

Testing from the previous submission here.

2a.01. Select only the data sources for which the measure is tested.

[Response Begins]

[Response Ends]

2a.02. If an existing dataset was used, identify the specific dataset.

The dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry).

[Response Begins]

[Response Ends]

2a.03. Provide the dates of the data used in testing.

Use the following format: "MM-DD-YYYY - MM-DD-YYYY"

[Response Begins]

[Response Ends]

2a.04. Select the levels of analysis for which the measure is tested.

Testing must be provided for all the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*
- *Population: Population*

[Response Begins]

[Response Ends]

2a.05. List the measured entities included in the testing and analysis (by level of analysis and data source).

Identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample.

[Response Begins]

[Response Ends]

2a.06. Identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis), separated by level of analysis and data source; if a sample was used, describe how patients were selected for inclusion in the sample.

If there is a minimum case count used for testing, that minimum must be reflected in the specifications.

[Response Begins]

[Response Ends]

2a.07. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing.

[Response Begins]

[Response Ends]

2a.08. List the social risk factors that were available and analyzed.

For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient (e.g. census tract), or patient community characteristics (e.g. percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.

[Response Begins]

[Response Ends]

Note: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – in 2a.09 check patient or encounter-level data; in 2a.010 enter “see validity testing section of data elements”; and enter “N/A” for 2a.11 and 2a.12.

2a.09. Select the level of reliability testing conducted.

Choose one or both levels.

[Response Begins]

[Response Ends]

2a.10. For each level of reliability testing checked above, describe the method of reliability testing and what it tests.

Describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used.

[Response Begins]

[Response Ends]

2a.11. For each level of reliability testing checked above, what were the statistical results from reliability testing?

For example, provide the percent agreement and kappa for the critical data elements, or distribution of reliability statistics from a signal-to-noise analysis. For score-level reliability testing, when using a signal-to-noise analysis,

more than just one overall statistic should be reported (i.e., to demonstrate variation in reliability across providers). If a particular method yields only one statistic, this should be explained. In addition, reporting of results stratified by sample size is preferred (pg. 18, [NQF Measure Evaluation Criteria](#)).

[Response Begins]

[Response Ends]

2a.12. Interpret the results, in terms of how they demonstrate reliability.

(In other words, what do the results mean and what are the norms for the test conducted?)

[Response Begins]

[Response Ends]

2b.01. Select the level of validity testing that was conducted.

[Response Begins]

[Response Ends]

2b.02. For each level of testing checked above, describe the method of validity testing and what it tests.

Describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.03. Provide the statistical results from validity testing.

Examples may include correlations or t-test results.

[Response Begins]

[Response Ends]

2b.04. Provide your interpretation of the results in terms of demonstrating validity. (i.e., what do the results mean and what are the norms for the test conducted?)

[Response Begins]

[Response Ends]

2b.05. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified.

Describe the steps—do not just name a method; what statistical analysis was used? Do not just repeat the information provided in Importance to Measure and Report: Gap in Care/Disparities.

[Response Begins]

[Response Ends]

2b.06. Describe the statistical results from testing the ability to identify statistically significant and/or clinically/practically meaningful differences in performance measure scores across measured entities.

Examples may include number and percentage of entities with scores that were statistically significantly different from mean or some benchmark, different from expected; how was meaningful difference defined.

[Response Begins]

[Response Ends]

2b.07. Provide your interpretation of the results in terms of demonstrating the ability to identify statistically significant and/or clinically/practically meaningful differences in performance across measured entities.

In other words, what do the results mean in terms of statistical and meaningful differences?

[Response Begins]

[Response Ends]

2b.08. Describe the method of testing conducted to identify the extent and distribution of missing data (or non-response) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders). Include how the specified handling of missing data minimizes bias.

Describe the steps—do not just name a method; what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.09. Provide the overall frequency of missing data, the distribution of missing data across providers, and the results from testing related to missing data.

For example, provide results of sensitivity analysis of the effect of various rules for missing data/non-response. If no empirical sensitivity analysis was conducted, identify the approaches for handling missing data that were considered and benefits and drawbacks of each).

[Response Begins]

[Response Ends]

2b.10. Provide your interpretation of the results, in terms of demonstrating that performance results are not biased due to systematic missing data (or differences between responders and non-responders), and how the specified handling of missing data minimizes bias.

In other words, what do the results mean in terms of supporting the selected approach for missing data and what are the norms for the test conducted; if no empirical analysis was conducted, justify the selected approach for missing data.

[Response Begins]

[Response Ends]

Note: This item is directed to measures that are risk-adjusted (with or without social risk factors) OR to measures with more than one set of specifications/instructions (e.g., one set of specifications for how to identify and compute the measure from medical record abstraction and a different set of specifications for claims or eQMs). It does not apply to measures that use more than one source of data in one set of specifications/instructions (e.g., claims data to identify the denominator and medical record abstraction for the numerator). Comparability is not required when comparing performance scores with and without social risk factors in the risk adjustment model. However, if comparability is not demonstrated for measures with more than one set of specifications/instructions, the different specifications (e.g., for medical records vs. claims) should be submitted as separate measures.

2b.11. Indicate whether there is more than one set of specifications for this measure.

[Response Begins]

[Response Ends]

2b.12. Describe the method of testing conducted to compare performance scores for the same entities across the different data sources/specifications.

Describe the steps—do not just name a method. Indicate what statistical analysis was used.

[Response Begins]

[Response Ends]

2b.13. Provide the statistical results from testing comparability of performance scores for the same entities when using different data sources/specifications.

Examples may include correlation, and/or rank order.

[Response Begins]

[Response Ends]

2b.14. Provide your interpretation of the results in terms of the differences in performance measure scores for the same entities across the different data sources/specifications.

In other words, what do the results mean and what are the norms for the test conducted.

[Response Begins]

[Response Ends]

2b.15. Indicate whether the measure uses exclusions.

[Response Begins]

[Response Ends]

2b.16. Describe the method of testing exclusions and what was tested.

Describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used?

[Response Begins]

[Response Ends]

2b.17. Provide the statistical results from testing exclusions.

Include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores.

[Response Begins]

[Response Ends]

2b.18. Provide your interpretation of the results, in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results.

In other words, the value outweighs the burden of increased data collection and analysis. Note: If patient preference is an exclusion, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion.

[Response Begins]

[Response Ends]

2b.19. Check all methods used to address risk factors.

[Response Begins]

[Response Ends]

2b.20. If using statistical risk models, provide detailed risk model specifications, including the risk model method, risk factors, risk factor data sources, coefficients, equations, codes with descriptors, and definitions.

[Response Begins]

[Response Ends]

2b.21. If an outcome or resource use measure is not risk-adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (i.e., case mix) is not needed to achieve fair comparisons across measured entities.

[Response Begins]

[Response Ends]

2b.22. Select all applicable resources and methods used to develop the conceptual model of how social risk impacts this outcome.

[Response Begins]

[Response Ends]

2b.23. Describe the conceptual and statistical methods and criteria used to test and select patient-level risk factors (e.g., clinical factors, social risk factors) used in the statistical risk model or for stratification by risk.

Please be sure to address the following: potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of $p < 0.10$ or other statistical tests; correlation of x or higher. Patient factors should be present at the start of care, if applicable. Also discuss any “ordering” of risk factor inclusion; note whether social risk factors are added after all clinical factors. Discuss any considerations regarding data sources (e.g., availability, specificity).

[Response Begins]

[Response Ends]

2b.24. Detail the statistical results of the analyses used to test and select risk factors for inclusion in or exclusion from the risk model/stratification.

[Response Begins]

[Response Ends]

2b.25. Describe the analyses and interpretation resulting in the decision to select or not select social risk factors.

Examples may include prevalence of the factor across measured entities, availability of the data source, empirical association with the outcome, contribution of unique variation in the outcome, or assessment of between-unit effects and within-unit effects. Also describe the impact of adjusting for risk (or making no adjustment) on providers at high or low extremes of risk.

[Response Begins]

[Response Ends]

2b.26. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (describe the steps—do not just name a method; what statistical analysis was used). Provide the statistical results from testing the approach to control for differences in patient characteristics (i.e., case mix) below. If stratified ONLY, enter “N/A” for questions about the statistical risk model discrimination and calibration statistics.

Validation testing should be conducted in a data set that is separate from the one used to develop the model.

[Response Begins]

[Response Ends]

2b.27. Provide risk model discrimination statistics.

For example, provide c-statistics or R-squared values.

[Response Begins]

[Response Ends]

2b.28. Provide the statistical risk model calibration statistics (e.g., Hosmer-Lemeshow statistic).

[Response Begins]

[Response Ends]

2b.29. Provide the risk decile plots or calibration curves used in calibrating the statistical risk model.

The preferred file format is .png, but most image formats are acceptable.

[Response Begins]

[Response Ends]

2b.30. Provide the results of the risk stratification analysis.

[Response Begins]

[Response Ends]

2b.31. Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix).

In other words, what do the results mean and what are the norms for the test conducted?

[Response Begins]

[Response Ends]

2b.32. Describe any additional testing conducted to justify the risk adjustment approach used in specifying the measure.

Not required but would provide additional support of adequacy of the risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods that were assessed.

[Response Begins]

[Response Ends]

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3.01. Check all methods below that are used to generate the data elements needed to compute the measure score.

[Response Begins]

Coded by someone other than person obtaining original information (e.g., DRG, ICD-10 codes on claims)

[Response Ends]

3.02. Detail to what extent the specified data elements are available electronically in defined fields.

In other words, indicate whether data elements that are needed to compute the performance measure score are in defined, computer-readable fields.

[Response Begins]

ALL data elements are in defined fields in electronic claims

[Response Ends]

3.03. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using data elements not from electronic sources.

[Response Begins]

[Response Ends]

3.04. Describe any efforts to develop an eCQM.

[Response Begins]

[Response Ends]

3.06. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

[Response Begins]

[Response Ends]

Consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

3.07. Detail any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm),

Attach the fee schedule here, if applicable.

[Response Begins]

This measure is intended to be transparent and available for widespread adoption. As such, it was purposefully designed to avoid using software or other proprietary materials that would require licensing fees. The measure specifications will be accessible through a website and can be used free of charge for non-commercial purposes. The main requirements of users will be to ensure the quality of their source data and expertise to program the measures within their information systems, following the clear and detailed specifications. Technical assistance will be available to users.

[Response Ends]

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making.

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement, in addition to demonstrating performance improvement.

4a.01. Check all current uses. For each current use checked, please provide:

Name of program and sponsor

URL

Purpose

Geographic area and number and percentage of accountable entities and patients included

Level of measurement and setting

[Response Begins]

[Response Ends]

4a.02. Check all planned uses.

[Response Begins]

Public reporting

Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

[Response Ends]

4a.03. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing), explain why the measure is not in use.

For example, do policies or actions of the developer/steward or accountable entities restrict access to performance results or block implementation?

[Response Begins]

This is a new measure. There are no policies or actions currently in place that the developer is aware of that impede implementation of this measure.

[Response Ends]

4a.04. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes: used in any accountability application within 3 years, and publicly reported within 6 years of initial endorsement.

A credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.

[Response Begins]

This is a new measure that has been developed and tested using four data sources: Texas Medicaid, Texas CHIP, Florida CHIP, and Florida Medicaid programs. Please note that this measure was approved by the membership of the Dental Quality Alliance in October 2014. The Dental Quality Alliance (DQA) was formed at the request of the Centers of Medicare and Medicaid Services (CMS) specifically for the purpose of bringing together recognized expertise in oral health to develop quality measures through consensus processes. DQA pursued NQF endorsement of its measures under the guidance from the CMS. Five DQA measures have since been endorsed (NQF# 2517 Oral Evaluation, Dental Services; NQF# 2509 Prevention: Dental Sealants for 10-14 Year-Old Children at Elevated Caries Risk; NQF# 2508 Prevention: Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk; NQF# 2528 Prevention: Topical Fluoride for Children at Elevated Caries Risk, Dental Services; and NQF# 2511 Utilization of Services, Dental Services). The CMS recently announced the inclusion of the DQA measure, Dental Sealants in 6-9 year olds (NQF# 2508) into the 2015 CHIPRA Core Set of Children's Health Care Quality Measures. Included in the Appendix as attachments to this application is a letter from key stakeholder, indicating their support for these measures for performance and quality improvement:

o Ms. Mary Foley, Executive Director, Medicaid and CHIP State Dental Associations

[Response Ends]

4a.05. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

Detail how many and which types of measured entities and/or others were included. If only a sample of measured entities were included, describe the full population and how the sample was selected.

[Response Begins]

Per the annual survey conducted by the Medicare-Medicaid and Children's Health Insurance Program State Dental Association (MSDA), 18 Medicaid agencies are implementing DQA measures.

In an effort to facilitate implementation of the DQA measures, the DQA provides technical assistance to users of DQA measures through webinars, resource document development and one-on-one staff support.

[Response Ends]

4a.06. Describe the process for providing measure results, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

[Response Begins]

In order to ensure transparency, establish proper protocols for timely assessment of the evidence and measure properties, and to comply with the NQF's endorsement agreement, the DQA has established an annual measure review and maintenance process. This measure review process is overseen by the DQA's Measures Development and Maintenance Committee (MDMC) which is comprised of six subject matter experts. This annual review process includes: (1) call for public comments, (2) evaluation of the comments, (3) user group feedback, and (4) code set reviews.

DQA provides technical assistance to users of DQA measures through webinars, resource document development and one-on-one staff support.

[Response Ends]

4a.07. Summarize the feedback on measure performance and implementation from the measured entities and others. Describe how feedback was obtained.

[Response Begins]

In 2016, the DQA expanded its scope of review of its measures by convening conference calls for two user groups – one comprised of representatives from 6 state Medicaid programs (Alabama, Florida, Kentucky, Oregon, Nevada, and Pennsylvania) and the other comprised of representatives from 8 dental plans. Participants shared their experiences implementing DQA measures in their respective programs, including any challenges related to the DQA measures specifications and use of these measures in their quality improvement programs. Participants did not have any significant issues related to the clarity or feasibility of implementing the measure specifications.

[Response Ends]

4a.08. Summarize the feedback obtained from those being measured.

[Response Begins]

There have been no significant issues related to the clarity or feasibility of implementing the measure specifications.

[Response Ends]

4a.09. Summarize the feedback obtained from other users.

[Response Begins]

There have been no significant issues related to the clarity or feasibility of implementing the measure specifications.

[Response Ends]

4a.10. Describe how the feedback described has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

[Response Begins]

Changed the full name of the measure from Follow-Up after Emergency Department Visit by Children for Dental Caries to Follow-Up after Emergency Department Visits for Dental Caries in Children.

[Response Ends]

4b.01. You may refer to data provided in Importance to Measure and Report: Gap in Care/Disparities, but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included). If no improvement was demonstrated, provide an explanation. If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

[Response Begins]

The proposed measure, Follow-Up after Emergency Department Visit by Children for Dental Caries, represents a process of care measure that can be used to promote improved health outcomes by allowing programs to identify, monitor and increase the percentage of children with a dental caries-related ED visit who subsequently receive outpatient dental care and, therefore, have a decreased likelihood of repeat ED visits. Although there are a limited number of studies that examine repeat ED visits for dental conditions, a study of five hospital systems in Minneapolis-St. Paul found that almost 25% of non-traumatic dental ED visits (by children and adults) were due to repeat visits (Davis et al. 2010). A study of adult Wisconsin Medicaid enrollees who visited the ED for non-traumatic dental conditions during the period 2001-2009 examined administrative claims for subsequent ED visits and dental services within 30 days and found that the next dental encounter was a repeat ED visit for 10% of enrollees and a dental office visit for 30% of enrollees; the remaining 60% did not have subsequent dental claims. The same study also evaluated a longer follow-up time frame of 180 days and found that 18% returned to the ED,

42% visited a dental office, and 40% did not have subsequent dental claims (Pajewski & Okunseri 2012).

ED care for caries-related problems is generally not definitive compared to that provided in primary care dental settings and often results in referral to primary care dental sites (Cohen et al. 2011; Hocker et al. 2012; Lewis, Lynch and Johnston 2003). A survey of 401 adults in Maryland who experienced a dental problem found that among those who sought treatment at an ED, 89% were instructed by the ED to follow-up with a dentist (Cohen et al. 2011). ED care for dental conditions is mainly comprised of pain management and infection control. Studies, using nationally representative ED visit data (including both children and adults), indicate that ED care for dental problems is focused on pain management and infection control for approximately 90% of patients and only 10% of patients have procedures performed in the ED (Lewis, Lynch and Johnston 2003; Okunseri et al. 2012a). The high rates of prescription drugs for pain management and infection control and lack of definitive treatment suggests the need for timely definitive care in an outpatient dental setting to avoid ongoing pain, worsening of the dental condition stemming from untreated decay, and repeat ED visits. Follow-Up after Emergency Department Visit by Children for Dental Caries is a process of care quality measure that allows for the identification, monitoring, and improvement of the percentage of children who are receiving timely, definitive care for caries-related dental problems.

Cohen LA, Bonito AJ, Eicheldinger C, Manski RJ, Macek MD, Edwards RR, et al. Comparison of patient visits to emergency departments, physician offices, and dental offices for dental problems and injuries. J Public Health Dent. 2011;71(1):13-22. Epub 2010/08/24.

Davis EE, Deinard AS, Maiga EWH. Doctor, my tooth hurts: the costs of incomplete dental care in the emergency room. J Public Health Dent. 2010;70:205-210.

Lewis C, Lynch H, Johnston B. Dental complaints in emergency departments: a national perspective. Ann Emerg Med. 2003; 42(1):93-9.

Okunseri C, Okunseri E, Thorpe JM, Xiang Q, Szabo A. Medications prescribed in emergency departments for nontraumatic dental condition visits in the United States. Med Care. 2012;50(6):508-512.

Pajewski NM, Okunseri C. Patterns of dental service utilization following nontraumatic dental condition visits to the emergency department in Wisconsin Medicaid. J Public Health Dent. 2014;74(1):34-41.

[Response Ends]

4b.02. Explain any unexpected findings (positive or negative) during implementation of this measure, including unintended impacts on patients.

[Response Begins]

No unintended or negative consequences have been identified.

[Response Ends]

4b.03. Explain any unexpected benefits realized from implementation of this measure.

[Response Begins]

[Response Ends]

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

If you are updating a maintenance measure submission for the first time in MIMS, please note that the previous related and competing data appearing in question 5.03 may need to be entered in to 5.01 and 5.02, if the measures are NQF endorsed. Please review and update questions 5.01, 5.02, and 5.03 accordingly.

5.01. Search and select all NQF-endorsed related measures (conceptually, either same measure focus or target population).

(Can search and select measures.)

[Response Begins]

[Response Ends]

5.02. Search and select all NQF-endorsed competing measures (conceptually, the measures have both the same measure focus or target population).

(Can search and select measures.)

[Response Begins]

[Response Ends]

5.03. If there are related or competing measures to this measure, but they are not NQF-endorsed, please indicate the measure title and steward.

[Response Begins]

[Response Ends]

5.04. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s), indicate whether the measure specifications are harmonized to the extent possible.

[Response Begins]

[Response Ends]

5.05. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

[Response Begins]

Not applicable

[Response Ends]

5.06. Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality). Alternatively, justify endorsing an additional measure.

Provide analyses when possible.

[Response Begins]

Not applicable

[Response Ends]

Appendix

Supplemental materials may be provided in an appendix.:

Contact Information

Measure Steward (Intellectual Property Owner): American Dental Association

Measure Steward Point of Contact: Colangelo, Erica, colangeloe@ada.org

Ojha, Diptee, ojhad@ada.org

Alliance, Dental, dqa@ada.org

Measure Developer if different from Measure Steward: American Dental Association

Measure Developer Point(s) of Contact: Colangelo, Erica, colangeloe@ada.org

Herndon, Jill, jill.herndon@keyanalyticsconsulting.com

Ojha, Diptee, ojhad@ada.org

Alliance, Dental, dqa@ada.org

Additional Information

1. Provide any supplemental materials, if needed, as an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be collated one file with a table of contents or bookmarks. If material pertains to a specific criterion, that should be indicated.

[Response Begins]

[Response Ends]

2. List the workgroup/panel members' names and organizations.

Describe the members' role in measure development.

[Response Begins]

This project is headed by the DQA through its Measure Development and Maintenance Committee (formerly Research and Development Committee). The following individuals were responsible for executing and overseeing all scientific aspects of this project.

James J. Crall, DDS, ScD, American Academy of Pediatric Dentistry; Professor & Chair, Division of Public Health & Community Dentistry and Director, National Oral Health Policy Center at UCLA. Dr. Crall serves as chair for the Committee.

Craig W. Amundson, DDS, General Dentist, HealthPartners, National Association of Dental Plans

Rob D. Compton, DDS, Executive Director, DentaQuest Institute

Chris Farrell, RDH, BSDH, MPA, Oral Health Program Director, Michigan Department of Community Health

Jed J. Jacobson, DDS, MS, MPH, Chief Science Officer and Sr. Vice President, Delta Dental of Michigan, Ohio, Indiana, North Carolina

Mark Casey, DDS, MPH, Dental Director, North Carolina Department of Health and Human Services Division of Medical Assistance

JC Shirley, DDS, MS, Children's Healthcare of Atlanta; President, Board of Directors, American Board of Pediatric Dentistry

W. Ken Rich, DMD, Kentucky Medicaid Dental Director, Department of Medicaid Services

Robert Mazzola, DDS, Council on Dental Benefit Programs, American Dental Association

This group oversaw the development and validation of the measure. All work of this Committee was distributed for review and formal vote and approval by the entire Dental Quality Alliance. (<http://ada.org/dqa>) The DQA is made up of representatives from 34 stakeholder organizations. This Committee partnered with the University of Florida (Jill Herndon, PhD, Principal Investigator) to validate the measure. Data for measure testing were provided by the Florida Agency for Health Care Administration (Florida Medicaid), Florida Healthy Kids Corporation (Florida's CHIP program), and Texas Health and Human Services Commission (Texas Medicaid and CHIP programs).

[Response Ends]

3. Indicate the year the measure was first released.

[Response Begins]

[Response Ends]

4. Indicate the month and year of the most recent revision.

[Response Begins]

[Response Ends]

5. Indicate the frequency of review, or an update schedule, for this measure.

[Response Begins]

Annual

[Response Ends]

6. Indicate the next scheduled update or review of this measure.

[Response Begins]

[Response Ends]

7. Provide a copyright statement, if applicable. Otherwise, indicate "N/A".

[Response Begins]

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[Response Ends]

8. State any disclaimers, if applicable. Otherwise, indicate "N/A".

[Response Begins]

Dental Quality Alliance Measures (Measures) and related data specifications, developed by the Dental Quality Alliance (DQA), are intended to facilitate quality improvement activities.

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.

Measures are subject to review and may be revised or rescinded at any time by the DQA. The Measures may not be altered without the prior written approval of the DQA. Measures developed by the DQA, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain. Commercial uses of the Measures require a license agreement between the user and DQA. Neither the DQA nor its members shall be responsible for any use of these Measures.

THE MEASURES ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND

Limited proprietary coding is contained in the Measure specifications for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The DQA, American Dental Association (ADA), and its members disclaim all liability for use or accuracy of any terminologies or other coding contained in the specifications.

THE SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.

[Response Ends]

9. Provide any additional information or comments, if applicable. Otherwise, indicate "N/A".

[Response Begins]

In 2008, the Centers for Medicare and Medicaid Services (CMS) asked the ADA to lead the development of a broad coalition of organizations that would lead dentistry to improve the oral health of Americans through quality measurement and quality improvement. The ADA subsequently established the DQA. The DQA is a multi-stakeholder alliance comprised of approximately 30 stakeholders (with organizations as members) from across the oral health community, including federal agencies, third-party payers, professional associations, and an individual member from the general public. The DQA's mission is to advance the field of performance measurement to improve oral health, patient care, and safety through a consensus building process.

[Response Ends]