**National Quality Forum—Evidence (subcriterion 1a)**

**Measure Title**: Care Continuity, Dental Services

**IF the measure is a component in a composite performance measure, provide the title of the Composite Measure here:** Click here to enter composite measure title

**Date of Submission**: 2/10/2014

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| **Instructions**  *For composite performance measures:*  *A separate evidence form is required for each component measure unless several components were studied together.*  *If a component measure is submitted as an individual performance measure, attach the evidence form to the individual measure submission.*   * Respond to all questions as instructed with answers immediately following the question. All information needed to demonstrate meeting the evidence subcriterion (1a) must be in this form. An appendix of *supplemental* materials may be submitted, but there is no guarantee it will be reviewed. * If you are unable to check a box, please highlight or shade the box for your response. * Maximum of 10 pages (*incudes questions/instructions*; minimum font size 11 pt; do not change margins). ***Contact NQF staff if more pages are needed.*** * Contact NQF staff regarding questions. Check for resources at [Submitting Standards webpage](http://www.qualityforum.org/Measuring_Performance/Submitting_Standards.aspx). |

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| **Note: The information provided in this form is intended to aid the Steering Committee and other stakeholders in understanding to what degree the evidence for this measure meets NQF’s evaluation criteria.**  **Subcriterion 1a.** **Evidence to Support the Measure Focus**  The measure focus is a health outcome or is evidence-based, demonstrated as follows:   * Health outcome:**[3](#Note3)** a rationale supports the relationship of the health outcome to processes or structures of care. * Intermediate clinical outcome, Process,**[4](#Note4)** or Structure: a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence[**5**](#Note5)that the measure focus leads to a desired health outcome. * Patient experience with care: evidence that the measured aspects of care are those valued by patients and for which the patient is the best and/or only source of information OR that patient experience with care is correlated with desired outcomes. * Efficiency:**[6](#Note6)** evidence for the quality component as noted above.   **Notes**  **3.** Generally, rare event outcomes do not provide adequate information for improvement or discrimination; however, serious reportable events that are compared to zero are appropriate outcomes for public reporting and quality improvement.  **4.** Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multistep process, the step with the strongest evidence for the link to the desired outcome should be selected as the focus of measurement.  **5.** The preferred systems for grading the evidence are the U.S. Preventive Services Task Force (USPSTF) [grading definitions](http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm) and [methods](http://www.uspreventiveservicestaskforce.org/methods.htm), or Grading of Recommendations, Assessment, Development and Evaluation [(GRADE) guidelines](http://www.gradeworkinggroup.org/publications/index.htm).  **6.** Measures of efficiency combine the concepts of resource use and quality (NQF’s [Measurement Framework: Evaluating Efficiency Across Episodes of Care](http://www.qualityforum.org/Publications/2010/01/Measurement_Framework__Evaluating_Efficiency_Across_Patient-Focused_Episodes_of_Care.aspx); [AQA Principles of Efficiency Measures](http://www.aqaalliance.org/files/PrinciplesofEfficiencyMeasurementApril2006.doc)). |

**1a.1.This is a measure of**:

Outcome

☐ Health outcome: Click here to name the health outcome

*Health outcome includes patient-reported outcomes (PRO, i.e., HRQoL/functional status, symptom/burden, experience with care, health-related behaviors)*

☐ Intermediate clinical outcome: Click here to name the intermediate outcome

**X**☐ Process: Receipt of a comprehensive or periodic oral evaluation in each of two consecutive years

☐ Structure: Click here to name the structure

☐ Other: Click here to name what is being measured

**HEALTH OUTCOME PERFORMANCE MEASURE**  *If not a health outcome, skip to* [*1a.3*](#Section1a3)

**1a.2.** **Briefly state or diagram the linkage between the health outcome (or PRO) and the healthcare structures, processes, interventions, or services that influence it.** Not applicable.

**1a.2.1.** **State the rationale supporting the relationship between the health outcome (or PRO) and at least one healthcare structure, process, intervention, or service**.

*Note: For health outcome performance measures, no further information is required; however, you may provide evidence for any of the structures, processes, interventions, or service identified above.*

**intermediate outcome, PROCESS, or STRUCTURE PERFORMANCE measure**

**1a.3.****Briefly state or diagram the linkages between structure, process, intermediate outcome, and health outcomes**. Include all the steps between the measure focus and the health outcome.

The proposed measure, Care Continuity – Dental Services, captures whether a child received a comprehensive or periodic oral evaluation in each of two consecutive years. As described in 1b1 (Importance), dental caries is the most common chronic disease in children in the U.S., and a significant percentage of children have untreated dental caries. Dental decay causes significant short- and long-term adverse consequences for children’s health and functioning. Identifying caries early is important to reverse the disease process, prevent progression of caries, and reduce incidence of future lesions. Evidence-based guidelines recommend clinical oral evaluations with a regular recall schedule that is tailored to individual needs based on assessments of existing disease and risk of disease (e.g., caries risk) with the recommended recall frequency ranging from 3 months to no more than 12 months for individuals younger than 18 years of age (National Institute for Health and Care Excellence (NICE), Clinical Guideline 19, 2004). Comprehensive and periodic clinical oral evaluations are diagnostic services that are critical to evaluating oral disease and dentition development. Clinical oral evaluations also are essential to developing an appropriate preventive oral health regimen and treatment plan. Thus, clinical oral evaluations play an essential role in caries identification, prevention and treatment, thereby promoting improved oral health, overall health, and quality of life. Moreover, disease identification, risk assessment, prevention regimens, and treatment planning are ongoing processes; therefore, evaluating continuity of care over time is an important quality metric. Care Continuity allows plans and programs to identify the effectiveness of efforts to promote an ongoing relationship with their primary dental care provider, improving their receipt of diagnostic services essential to promoting oral and overall health.

**1a.3.1.** **What is the source of the systematic review of the body of evidence that supports the performance measure?**

**☐X Clinical Practice Guideline recommendation** – ***complete sections*** [***1a.4***](#Section1a4)***, and*** [***1a.7***](#Section1a7)

☐ US Preventive Services Task Force Recommendation – ***complete sections*** [***1a.5***](#Section1a5) ***and*** [***1a.7***](#Section1a7)

☐ Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*) – ***complete sections*** [***1a.6***](#Section1a6) ***and*** [***1a.7***](#Section1a7)

☐ Other – ***complete section*** [***1a.8***](#Section1a8)

*Please complete the sections indicated above for the source of evidence. You may skip the sections that do not apply.*

**1a.4. CLINICAL PRACTICE GUIDELINE RECOMMENDATION**

**1a.4.1.** **Guideline citation** (*including date*) and **URL for guideline** (*if available online*):

National Institute for Health and Care Excellence (NICE). 2004. Clinical Guidelines. “CG19: Dental Recall – Recall Interval between Routine Dental Examinations.” Available at: http://guidance.nice.org.uk/CG19.

American Academy of Pediatric Dentistry. 2013. "Guideline on Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents. " Available at: <http://www.aapd.org/media/Policies_Guidelines/G_Periodicity.pdf>.

American Academy of Pediatrics Section on Pediatric Dentistry and Oral Health. 2008. “Policy Statement: Preventive Oral Health Intervention for Pediatricians.” Pediatrics 122(6): 1387-94. Available at: <http://pediatrics.aappublications.org/content/122/6/1387.full>.

**1a.4.2.** **Identify guideline recommendation number and/or page number** and **quote verbatim, the specific guideline recommendation**.

The American Academy of Pediatric Dentistry (AAPD) recommends that all children have a dental home established by 12 months of age, which it defines as “the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way” (AAPD, Dental Home Definition, <http://www.aapd.org/media/Policies_Guidelines/P_DentalHome.pdf>). Consistent with the dental home concept, national guidelines from the American Academy of Pediatric Dentistry (AAPD) and the American Academy of Pediatrics (AAP) recommend that children receive oral health services by 1 year of age and have regular visits thereafter. The most common recall interval is six months. However, evidence-based guidelines indicate that the recall schedule should be tailored to individual needs based on assessments of existing disease and risk of disease (e.g., caries risk) with a recommended recall frequency for routine oral evaluations ranging from 3 months to no more than 12 months for individuals younger than 18 years of age. The proposed measure **Care Continuity** measures not only whether a child had a recommended comprehensive or periodic oral evaluation, but also whether this care is sustained over time. Thus, evidence related to oral evaluations and their recall intervals is presented.

**Terminology Note:** The United Kingdom’s National Institute for Health and Care Excellence (NICE) uses the term “Oral Health Review” to “refer to the continuing re-examination of an individual’s oral health and risk status.” The UK’s Oral Health Reviews are what the American Dental Association refers to as “Oral Evaluations.”

**Age of First Visit**

“The first examination is recommended at the time of the eruption of the first tooth and no later than 12 months of age.” (p. 114 of AAPD Clinical Guidelines).

“Every child should have a dental home established by 1 year of age.” (American Academy of Pediatrics Section on Pediatric Dentistry and Oral Health. 2008. “Policy Statement: Preventive Oral Health Intervention for Pediatricians.” Pediatrics 122(6): 1387-94; at page 1391).

Supporting evidence cited in AAPD Guidelines:

American Academy of Pediatric Dentistry. Policy on the dental home. Pediatr Dent 2012;34(special issue):24-5.

American Academy of Pediatrics. Oral health risk assessment timing and establishment of the dental home. Pediatr 2003:11(5):1113-6. Reaffirmed 2009;124(2):

Berg JH, Stapleton FB. Physician and dentist: New initiatives to jointly mitigate early childhood oral disease. Clin Pediatr 2012:51(6):531-7.

**Recall Interval**

“The recommended interval between oral health reviews should be determined specifically for each patient and tailored to meet his or her needs, on the basis of an assessment of disease levels and risk of or from dental disease.” (NICE Guidelines, 2004, p. 40)

“The shortest interval between oral health reviews for all patients should be 3 months.” (NICE Guidelines, 2004, p. 41) Note: NICE uses the term “oral health reviews”

“The longest interval between oral health reviews for patients younger than 18 years should be 12 months.” (NICE Guidelines, 2004, p. 41)

* Rationale: “There is evidence that the rate of progression of dental caries can be more rapid in children and adolescents than in older people, and it seems to be faster in primary teeth than in permanent teeth (see Chapter Three, Section 3.1.2.) Periodic developmental assessment of the dentition is also required in children. Recall intervals of no longer than 12 months give the opportunity for delivering and reinforcing preventive advice and for raising awareness of the importance of good oral health. This is particularly important in young children, to layout the foundations for life-long dental health.” (NICE Guidelines, 2004, p. 41)

“For practical reasons, the patient should be assigned a recall interval of 3, 6, 9, or 12 months if he or she is younger than 18 years, or 3, 6, 9, 12, 15, 18, 21, or 24 months if he or she is aged 18 years or older.” (NICE Guidelines, 2004, p. 41)

“The most common interval of examination is six months; however, some patients may require examination and preventive services at more or less frequent intervals, based upon historical, clinical, and radiographic findings.” (p. 115 of AAPD Clinical Guidelines)

Supporting evidence cited by AAPD Clinical Guidelines:

Beil HA, Rozier RG. Primary health care providers’ advice for a dental checkup and dental use in children. Pediatr 2010;126(2):435-41.

Pahel BT, Rozier RG, Stearns SC, Quiñonez RB. Effectiveness of preventive dental treatments by physicians for young Medicaid enrollees. Pediatr 2011;127(3):682-9.

Diangelis AJ, Andreasen JO, Ebeleseder KA, et al. International Association of Dental Traumatology Guidelines for the Management of Traumatic Dental Injuries: 1. Fractures and luxations of permanent teeth. Dent Traumatol 2012;28(1):2-12.

Andersson L, Andreasen JO, Day P, et al. International Association of Dental Traumatology Guidelines for the Management of Traumatic Dental Injuries: 2. Avulsion of permanent teeth. Dent Traumatol 2012;28(2):88-96.

Malmgren B, Andreasen JO, Flores MT, et al. International Association of Dental Traumatology Guidelines for the Management of Traumatic Injuries: 3. Injuries in the primary dentition. Dent Traumatol 2012;28(3):174-82.

Patel S, Bay RC, Glick M. A systematic review of dental recall intervals and incidence of dental caries. J Am Dent Assoc 2010;141(5):527-39.

American Academy of Pediatric Dentistry. Guideline on prescribing dental radiographs. Pediatr Dent 2012;34(special issue):299-301.

American Dental Association Council on Scientific Affairs.The use of dental radiographs; Update and recommendations. J Am Dent Assoc 2006;137(9):1304-12.

Greenwell H, Committee on Research, Science and Therapy American Academy of Periodontology. Guidelines for periodontal therapy. J Periodontol 2001;72(11):1624-8.

Califano JV, Research Science and Therapy CommitteeAmerican Academy of Periodontology. Periodontal diseases of children and adolescents. J Periodontol 2003;74(11):1696-704.

Clerehugh V. Periodontal diseases in children and adoles¬cents. British Dental J 2008;204(8):469-71.845.

**Benefits Obtained**

“Early detection and management of oral conditions can improve a child’s oral health, general health and well-being, and school readiness.” (p. 114 of AAPD Clinical Guidelines)

Supporting evidence cited by AAPD Guidelines:

American Academy of Pediatric Dentistry. Policy on early childhood caries: Classifications, consequences, and preventive strategies. Pediatr Dent 2012;34(special issue):50-2.

American Academy of Pediatric Dentistry. Policy on early childhood caries: Unique challenges and treatment options. Pediatr Dent 2012;34(special issue):53-5.

Clarke M, Locker D, Berall G, Pencharz P, Kenny DJ, Judd P. Malnourishment in a population of young children with severe early childhood caries. Pediatr Dent 2006;28(3):254-9.

Dye BA, Shenkin JD, Ogden CL, Marshall TA, Levy SM, Kanellis MJ. The relationship between healthful eating practices and dental caries in children ages 2-5 years in the United States, 1988-1994. J Am Dent Assoc 2004;135(1):55-6.

Jackson SL, Vann WF, Kotch J, Pahel BT, Lee JY. Impact of poor oral health on children’s school attendance and performance. Amer J Publ Health 2011;10(10):1900-6.

Every visit provides the opportunity to provide anticipatory guidance, which “is the process of providing practice, developmentally-appropriate information about children’s health to prepare parents for the significant physical, emotional, and psychological milestones.” (AAPD Clinical Guidelines, p. 116) “Individualized discussion and counseling [anticipatory guidance] should be an integral part of each visit. Topics to be included are oral hygiene and dietary habits, injury prevention, nonnutritive habits, substance abuse, intraoral/perioral piercing, and speech/language development.” (AAPD Clinical Guidelines, p. 116).

Supporting evidence cited by AAPD Guidelines:

American Academy of Pediatrics. Oral health risk assessment timing and establishment of the dental home. Pediatr 2003:11(5):1113-6. Reaffirmed 2009;124(2): 845.

American Academy of Pediatric Dentistry. Guideline on infant oral health care. Pediatr Dent 2012;34 (special issue):132-6.

American Academy of Pediatric Dentistry. Guideline on adolescent oral health care. Pediatr Dent 2012;34(special issue):137-44.

American Academy of Pediatric Dentistry. Policy on prevention of sports-related orofacial injuries. Pediatr Dent 2013;35(special issue):67-71

American Academy of Pediatric Dentistry. Policy on the dental home. Pediatr Dent 2012;34(special issue):24-5.

American Academy of Pediatric Dentistry. Guideline on management of the developing dentition and occlusion in pediatric dentistry. Pediatr Dent 2012;34(special issue):239-51.

CDC. Preventing tobacco use among young people: A report of the Surgeon General (executive summary). MMWR Recommend Reports 1994;43(RR-4):[inclusive page numbers]

American Academy of Pediatric Dentistry. Policy on tobacco use. Pediatr Dent 2012;34(special issue):61-4.

American Academy of Pediatric Dentistry. Policy on intra- oral/perioral piercing and oral jewelry/accessories. Pediatr Dent 2012;34(special issue):65-6.

Douglass JM. Response to Tinanoff and Palmer: Dietary determinants of dental caries and dietary recommendations for preschool children. J Public Health Dent 2000; 60(3):207-9

Kranz S, Smiciklas-Wright H, Francis LA. Diet quality, added sugar, and dietary fiber intakes in American pre- schoolers. Pediatr Dent 2006;28(2):164-71.

Lewis CW, Grossman DC, Domoto PK, Deyo RA. The role of the pediatrician in the oral health of children: A national survey. Pediatrics 2000;106(6):E84.

Li H, Zou Y, Ding G. Dietary factors associated with dental erosion: A meta-analysis. PLoSOne 2012;7(8):e42626. doi:10.1371/journal.pone.0042626. Epub2012 Aug 31.

Malmgren B, Andreasen JO, Flores MT, et al. International Association of Dental Traumatology Guidelines for the Management of Traumatic Injuries: 3. Injuries in the primary dentition. Dent Traumatol 2012;28(3):174-82. 19.

Mobley C, Marshall TA, Milgrom P, Coldwell SE. The contribution of dietary factors to dental caries and disparities in caries. Acad Pediatr 2009;9(6):410-4

Reisine S, Douglass JM. Pyschosocial and behavorial issues in early childhood caries. Comm Dent Oral Epidem 1998;26(suppl):132-44.

Sigurdsson, A. Evidence-based review of prevention of dental injuries. Pediatr Dent 2013;35(2):184-90.

Tinanoff NT, Palmer C. Dietary determinants of dental caries in pre-school children and dietary recommendations for pre-school children. J Pub Health Dent 2000; 60(3):197-206.

**1a.4.3.** **Grade assigned to the quoted recommendation with definition of the grade:**

**NICE Guidelines**

“The recommended interval between oral health reviews should be determined specifically for each patient and tailored to meet his or her needs, on the basis of an assessment of disease levels and risk of or from dental disease.” (NICE Guidelines, 2004, p. 40)

**Grade: D**

“The shortest interval between oral health reviews for all patients should be 3 months.” (NICE Guidelines, 2004, p. 41) Note: NICE uses the term “oral health reviews”

**Grade: GPP**

“The longest interval between oral health reviews for patients younger than 18 years should be 12 months.” (NICE Guidelines, 2004, p. 41)

**Grade: GPP**

“For practical reasons, the patient should be assigned a recall interval of 3, 6, 9, or 12 months if he or she is younger than 18 years, or 3, 6, 9, 12, 15, 18, 21, or 24 months if he or she is aged 18 years or older.” (NICE Guidelines, 2004, p. 41)

**Grade: GPP**

**AAPD Clinical Guidelines**

Not graded. Supporting evidence is cited within the guidelines. Please see references in 1a.4.2. above.

**1a.4.4. Provide all other grades and associated definitions for recommendations in the grading system.** (*Note: If separate grades for the strength of the evidence, report them in section 1a.7.*)

**NICE Guidelines (p. 8)**

|  |  |
| --- | --- |
| A | > At least one meta-analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population, or  > A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results |
| B | > A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results, or  > Extrapolated evidence from studies rated as 1++ or 1+ |
| C | > A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results, or  > Extrapolated evidence from studies rated as 2++ |
| D | >Evidence level 3 or 4, or  > Extrapolated evidence from studies rated as 2+, or  > Formal consensus |
| GPP | A good practice point (GPP) is a recommendation for best practice based on the clinical experience of the Guideline Development Group |

**1a.4.5. Citation and URL for methodology for grading recommendations** (*if different from 1a.4.1*)**:**

Same as 1a.4.1.

**1a.4.6. If guideline is evidence-based (rather than expert opinion), are the details of the quantity, quality, and consistency of the body of evidence available (e.g., evidence tables)?**

**☐** Yes **→ *complete section*** [***1a.7***](#Section1a7)

**☐X** No **→ *report on another systematic review of the evidence in sections*** [***1a.6***](#Section1a6) ***and*** [***1a.7***](#Section1a7)***; if another review does not exist, provide what is known from the guideline review of evidence in*** [***1a.7***](#Section1a7)

**1a.5.** **UNITED STATES PREVENTIVE SERVICES TASK FORCE RECOMMENDATION**

**1a.5.1.** **Recommendation citation** (*including date*) and **URL for recommendation** (*if available online*):

Not applicable.

**1a.5.2.** **Identify recommendation number and/or page number** and **quote verbatim, the specific recommendation**. Not applicable.

**1a.5.3.** **Grade assigned to the quoted recommendation with definition of the grade**: Not applicable.

**1a.5.4. Provide all other grades and associated definitions for recommendations in the grading system.** (*Note: the* *grading system for the evidence should be reported in section 1a.7.*)

Not applicable.

**1a.5.5. Citation and URL for methodology for grading recommendations** (*if different from 1a.5.1*)**:**

Not applicable.

***Complete section*** [***1a.7***](#Section1a7)

**1a.6. OTHER SYSTEMATIC REVIEW OF THE BODY OF EVIDENCE**

**1a.6.1.** **Citation** (*including date*) and **URL** (*if available online*):

Riley P, Worthington HV, Clarkson JE, Beirne PV. Recall intervals for oral health in primary care patients. Cochrane Database of Systematic Reviews 2013, Issue 12. http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004346.pub4/abstract

**1a.6.2.** **Citation and** **URL for methodology for evidence review and grading** (*if different from 1a.6.1*)**:**

Not applicable.

***Complete section*** [***1a.7***](#Section1a7)

**1a.7. FINDINGS FROM SYSTEMATIC REVIEW OF BODY OF THE EVIDENCE supporting the measure**

**1a.7.1.** **What was the specific structure, treatment, intervention, service, or intermediate outcome addressed in the evidence review?**

**NICE Guidelines**

Key Clinical Questions:

(a) How effective are routine dental checks of different recall frequencies in improving quality of life and reducing the morbidity associated with dental caries and periodontal disease in children?

(b) How effective are routine dental checks of different recall frequencies in improving quality of life, reducing the morbidity associated with dental caries, periodontal disease and oral cancer, and reducing the mortality associated with oral cancer in adults?

**AAPD Guidelines**

The periodicity guideline covers a broad range of services. Consequently, the evidence review for the most recent update of this guideline (2013), included the following search terms for articles published in the last 10 years: “periodicity of dental examinations”, “dental recall intervals”, “preventive dental services”, “anticipatory guidance and dentistry”, “caries risk assessment”, “early childhood caries”, “dental caries prediction”, “dental care cost effectiveness children”, “periodontal disease and children and adolescents US”, “pit and fissure sealants”, “dental sealants“, “fluoride supplementation and topical fluoride”, “dental trauma”, “dental fracture and tooth”, “nonnutritive oral habits”, “treatment of developing malocclusion”, “removal of wisdom teeth”, “removal of third molars”. Additional search limitations were humans, English language, clinical trials, and ages birth -18 years. The search returned 3,418 articles, 113 which were chosen for a detailed review after reviewing the titles and abstracts. (AAPD Clinical Guidelines, p. 114)

**1a.7.2.** **Grade assigned for the quality of the quoted evidence with definition of the grade**:

**NICE Guidelines**

Although NICE has a detailed method for grading evidence in developing clinical guidelines, the report does not contain the specific grades assigned for the evidence associated with each clinical guideline.

**AAPD Guidelines**

Evidence grades were not assigned.

**1a.7.3. Provide all other grades and associated definitions for strength of the evidence in the grading system.**

NICE’s Evidence Grading System is (p. 6):

|  |  |
| --- | --- |
| 1++ | High-quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias |
| 1+ | Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias |
| 1- | Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias |
| 2++ | High-quality systematic reviews of case control or cohort studies  High-quality case-control or cohort studies with a very low risk of confounding, bias or chance and a high probability that the relationship is causal |
| 2+ | Well-conducted case-control or cohort studies with a low risk of confounding, bias or chance and a moderate probability that the relationship is causal |
| 2- | Case-control or cohort studies with a high risk of confounding bias or chance and a significant risk that the relationship is not causal |
| 3 | Non-analytic studies (for example, case reports, case series) |
| 4 | Expert opinion, formal consensus |

**1a.7.4.** **What is the time period covered by the body of evidence? (*provide the date range, e.g., 1990-2010*). Date range**: NICE: NICE built upon an existing systematic review that addressed the focus the guidelines conducted by Davenport et al. (2003). Davenport et al.’s review covered the literature through February 2001. NICE updated that search through July 2003. The AAPD Guidelines conducted a literature search covering the period 2003-2013 for the most recent update of the guidelines; however, evidence from earlier guideline issuance is also included. These guidelines were first adopted in 1991.

**QUANTITY AND QUALITY OF BODY OF EVIDENCE**

**1a.7.5.****How many and what type of study designs are included in the body of evidence**? (*e.g., 3 randomized controlled trials and 1 observational study*)

**NICE Guidelines**

The literature review addressed a range of outcomes for children and adult associated with different dental recall intervals. There was no restriction on study design. A total of 38 studies were used to make final recommendations. (p.5)

**AAPD Guidelines**

The AAPD guidelines do not provide a detailed summary of this information. For the update, there were 113 articles selected for detailed review. The search was restricted to clinical trials.

**1a.7.6.** **What is the overall quality of evidence across studies in the body of evidence**? (*discuss the certainty or confidence in the estimates of effect particularly in relation to study factors such as design flaws, imprecision due to small numbers, indirectness of studies to the measure focus or target population*)

**NICE Guidelines**

The guidelines noted a lack of high-quality evidence in this area. However, it also advised: “A recommendation’s grade may not necessarily reflect the importance attached to the recommendation. For example, the Guideline Development Group agreed that the principles underlying the individualisation of recall intervals advocated in this guideline are particularly important.” (p. 40)

**AAPD Guidelines**

The guidelines do not provide a formal grade of the quality of evidence across studies. However, these studies were reviewed by dental experts serving on the AAPD’s Clinical Affairs Committee and the overall recommendations were further reviewed by the Council on Clinical Affairs. APPD guidelines are developed by members of the AAPD’s Council on Clinical Affairs, Council on Scientific Affairs, and additional participants with appropriate expertise. The review team must include members from both academia and clinical practice. Members also participate in evidence-based training sessions sponsored by the AAPD.

**Overall Assessment**

Although high-quality evidence is lacking, there is expert consensus nationally and internationally based on the best evidence currently available that children should have a routine dental check-up (i.e., Oral Evaluation) at least once a year and more often based on the individual child’s disease and risk status.

**ESTIMATES OF BENEFIT AND CONSISTENCY ACROSS STUDIES IN BODY OF EVIDENCE**

**1a.7.7.** **What are the estimates of benefit—magnitude and direction of effect on outcome(s) across studies in the body of evidence**? (*e.g., ranges of percentages or odds ratios for improvement/ decline across studies, results of meta-analysis, and statistical significance*)

Not specifically assessed as part of the review for guideline development. However, as noted above, there is expert consensus regarding the benefits of routine dental check-ups – Oral Evaluation – for children at least once per year and more often based on their disease and risk status.

**1a.7.8.** **What harms were studied and how do they affect the net benefit (benefits over harms)?**

Not specifically assessed as part of the review for guideline development. However, minimal harm would be expected from an oral evaluation that involves visual inspection of the oral tissues, evaluation/recording of medical and oral health history, and evaluation for caries risk and risk assessment.

**UPDATE TO THE SYSTEMATIC REVIEW(S) OF THE BODY OF EVIDENCE**

**1a.7.9.** **If new studies have been conducted since the systematic review of the body of evidence, provide for each new study: 1) citation, 2) description, 3) results, 4) impact on conclusions of systematic review**.

A more recent Cochrane review evaluated this topic (Riley et al. 2013). The Cochrane review only included randomized controlled trials; thus, only 1 study was included. The study compared the effects of a clinical examination every 12 months with a clinical examination every 24 months on the outcomes of caries (decayed, missing, filled surfaces (dmfs/DMFS) increment) and economic cost outcomes (total time used per person). The main finding of that study was: “For three to five-year olds with primary teeth, the mean difference (MD) in dmfs increment was -0.90 (95% CI -1.96 to 0.16) in favour of 12-month recall. For 16 to 20-year olds with permanent teeth, the MD in DMFS increment was -0.86 (95% CI -1.75 to 0.03) also in favour of 12-month recall.” The quality of the body of evidence was rated as very low because the study was at high risk of bias, had a small sample size and only included low-risk participants. Thus, the review authors concluded: “There is a very low quality body of evidence from one RCT which is insufficient to draw any conclusions regarding the potential beneficial and harmful effects of altering the recall interval between dental check-ups. There is no evidence to support or refute the practice of encouraging patients to attend for dental check-ups at six-monthly intervals.” This finding is consistent with those of NICE regarding existing evidence and with the NICE guidelines which advise tailoring recall intervals to individual patient needs within a recommended range of 3 months to 12 months for children. As noted by the NICE and Bright Futures guidelines, although the quality of evidence is weak, the need for a comprehensive evaluation of oral health remains critical to improving outcomes. Citation: Riley P, Worthington HV, Clarkson JE, Beirne PV. Recall intervals for oral health in primary care patients. Cochrane Database of Systematic Reviews 2013, Issue 12.

**1a.8 OTHER SOURCE OF EVIDENCE**

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

**1a.8.1** **What process was used to identify the evidence?** Not applicable.

**1a.8.2.** **Provide the citation and summary for each piece of evidence.** Not applicable.