NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Centre for Clinical Practice

Review consultation document

Review of Clinical Guideline (CG19) – Dental recall: recall interval between routine dental examinations

1. Background information

Guideline issue date: 2004
4 year review: 2008 (1st review)
8 year review: 2012 (2nd review)
National Collaborating Centre: National Clinical Guidelines Centre (formally National Collaborating Centre for Acute Care)

2. Consideration of the evidence

Literature search

Through an assessment of abstracts from a high-level randomised control trial (RCT) search, new evidence was identified relating to the following clinical areas within the guideline:

- Dental recall intervals
- Risk factors for dental caries
- Threshold for intervention
- Effectiveness of dental health education and oral health promotion

Through this stage of the process, a sufficient number of studies relevant to the above clinical areas were identified from the high level RCT search to

allow an assessment for a proposed review decision and are summarised in Table 1 below.

From initial intelligence gathering, qualitative feedback from other NICE departments, the views expressed by the Guideline Development Group, as well as the high-level RCT search, an additional focused literature search was conducted for the following clinical area:

- Dental recall intervals: evaluation of routine dental checks at 24 month recall frequencies

The results of the focused search are summarised in Table 2 below. All references identified through the high-level RCT search, initial intelligence gathering and the focused searches can be viewed in Appendix 1.

Table 1: Summary of articles from the high level RCT search

Clinical area 1: Dental recall intervals		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Clinical questions in the guideline: Q: 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? Q: How effective are routine dental checks of different recall frequencies in improving quality of life, reducing the morbidity	Through an assessment of abstracts from the high-level RCT search, four studies relevant to the clinical questions were identified. All the identified studies were systematic reviews: • A systematic review was identified which assessed the effectiveness of routine dental checks of different recall frequencies in adults and children.[1] Due to the poor reporting and heterogeneity across identified studies the review concluded that there was no high quality evidence to support or refute six-monthly dental checks in adults and children. • The optimal frequency between dental checks was investigated in a second systematic review.[2] The review concluded that further research is needed as there was	No new evidence was identified which would invalidate current guideline recommendation(s).

associated with dental caries, periodontal disease and oral cancer, and reducing the mortality associated with oral cancer in adults? **Relevant section of the guideline** Dental recall intervals. **Recommendation(s)** 1 – 8.	insufficient evidence to support or refute the practice of encouraging patents to attend dental check-ups at six monthly intervals. • A Cochrane systematic review evaluated the beneficial and harmful effects of different fixed recall intervals (including 6 months versus 12 months, risk-based recall intervals, no recall interval and patient driven attendance).[3] One study, with a high risk of bias, was included in the review. However, as there was limited data for dental caries outcomes and economic cost outcomes the review was unable to make any definitive conclusions. • Lastly, a systematic review evaluated the evidence for six month dental recalls on caries incidence.[4] The review concluded that the evidence for using a specific one recall interval protocol for all patients to reduce caries incidence was weak. In addition, evidence from an RCT indicated that recall intervals could be extended up to 24 months.	

	Summary In summary, all four systematic reviews concluded that there was insufficient evidence to support or refute different fixed recall intervals. As such, there is currently insufficient new evidence in this area of the guideline to invalidate current guideline recommendations: • The shortest interval between oral health reviews for all patients should be 3 months. • The longest interval between oral health reviews for patients younger than 18 years should be 12 months. • The longest interval between oral health reviews for patients aged 18 years and older should be 24 months. • 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 old, or 3, 6, 9, 12, 15, 18, 21 or 24 months if he or she is aged 18 years or older.	

	However, the results of an ongoing clinical trial (expected completion date - mid 2018) evaluating the effectiveness and cost effectiveness of 6 month recall, risk-based recall, and 24 month recall intervals may potentially inform guideline recommendations in the future.	
Clinical area 2: Risk factors for dental caries		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Q: What factors influence/modify the rate of progression of dental caries? **Relevant section of the guideline** Risk factors for dental caries. **Recommendation(s)**	Through an assessment of abstracts from the high-level RCT search, 26 studies relevant to the clinical questions were identified. <u>Dental prophylaxis (23 studies)</u> *Fluoride dentrifices (Five studies)* • One RCT was identified which compared the anticaries efficacy of two dentrifices (0.3% triclosan and 2% copolymer in a 0.243% sodium fluoride/silica base compared with 0.243% sodium fluoride in a silica base).[5] The dentrifice	No new evidence was identified which would invalidate current guideline recommendation(s).

Evidence relating to risk factors for oral disease and on the effectiveness of dental health education and oral health promotion was used to inform the guideline recommendations.	containing 0.3% triclosan and 2% copolymer in a 0.243% sodium fluoride/silica base had superior anticaries efficacy compared with the comparator dentrifice. • The efficacy of a dentrifice containing casein phosphopeptide in preventing caries in schoolchildren compared with fluoride containing or placebo dentrifices was evaluated in an RCT.[6] The dentrifice containing casein phosphopeptide had a similar efficacy as the fluoride containing dentrifice. • One study was identified which compared the long-term caries increment associated with a dentrifice containing 0.836% sodium monofluorophosphate in a dicalcium phosphate dehydrate base plus 10% xylitol with one containing 0.836% sodium monofluorophosphate in a dicalcium phosphate dihydrate base.[7] Mean decayed filled teeth were lower in the group using the dentrifice containing xylitol. • The anticaries effectiveness of a low dose sodium fluoride dentrifice, a high dose sodium fluoride dentrifice and an	

	experimental 0.454% stannous fluoride with sodium hexametaphosphate dentrifice (SnF2-HMP) was evaluated in an RCT.[8] No difference in caries increment was observed between the low dose sodium fluoride group and control groups however, fewer lesions were observed in the high dose sodium fluoride group and SnF2-HMP group compared with control. • An RCT was identified which investigated the caries increment during the use of a low-fluoride acidic liquid dentrifice.[9] The results of the study indicated that the low-fluoride acidic liquid dentrifice lead to similar caries progression rates as conventional fluoride toothpaste (1100 ppm fluoride). The literature relating to fluoride dentrifices is heterogeneous with each study comparing agents with differing active formulations. As such, there is insufficient available literature to recommend the use of one dentrifice over another.	

	Topical fluoride (Four studies) • A systematic review assessed the efficacy of routine dental prophylaxis applied before topical fluoride or at a regular recall visit in the prevention of caries or gingivitis.[10] The review concluded that to prevent caries in children, dental prophylaxis provided at a dental recall visit or before application of topical fluoride is not necessary. Similar results were presented in another systematic review.[11] • A systematic review concluded that fluoride is effective in preventing caries in adults of all ages.[12] • One study was identified which assessed the effects of the Nd: YAG laser in caries prevention when associated with the topical application of acidulated phosphate fluoride.[13] At one-year follow-up the number of white spots or caries cavities were lower in the Nd: YAG laser plus acidulated phosphate fluoride group compared with the control group.	

	Two reviews were identified which concluded that dental prophylaxis provided at a dental recall visit or before application of topical fluoride is not necessary in preventing caries in children. The results of one study suggested that an Nd: YAG laser plus acidulated phosphate fluoride may be beneficial in caries prevention whilst fluoride for caries prevention was confirmed in another review. *Fluoride varnish (Three studies)* • The use of fluoride varnish for the prevention of dental caries among high-risk children and adolescents was evaluated in a systematic review and found to be an effective preventative strategy in high-risk populations.[14] • One RCT was identified which compared annual applications (three applications/2 weeks) with semiannual applications (single application) of an intensive fluoride 5% sodium varnish on caries increment among adults.[15] No clear difference in efficacy between the two treatments was	

	observed. • The efficacy of fluoride varnish in addition to caregiver counselling to prevent early childhood caries was evaluated in an RCT.[16] The study concluded that fluoride varnish added to caregiver counselling is effective in reducing early childhood caries incidence. Three studies with differing aims, interventions and populations evaluated the use of fluoride varnish in preventing caries. In general, the studies concluded that the use of fluoride varnish for the prevention of dental caries was an effective preventative strategy. *Chlorhexidine varnishes and solutions (Three studies)* • One study was identified which assessed the effect of a chlorhexidine containing varnish on the development of pit and fissure caries in children.[17] The results of the study indicated that the chlorhexidine varnish reduced the	

	development of fissure caries compared with the control group. • The effect of three monthly applications of chlorhexidine varnish on caries prevalence in children was assessed in a study.[18] The results of the study indicated that chlorhexidine varnish could not compensate for poor oral hygiene. • One study was identified which tested the impact of regular rinsing with a 0.12% chlorhexidine solution compared with placebo on tooth loss, caries and periodontal disease in adults aged 60 - 75.[19] Regular rinsing with chlorhexidine solution did not have a substantial effect on the preservation of sound tooth structure. Three studies evaluated the use of chlorhexidine products (two studies on varnish, one study on mouthwash) with one study indicating a beneficial effect and two studies suggesting that chlorhexidine did not have a substantial effect. As such, the new evidence identified on the use of chlorhexidine products (varnishes	

	and mouthwashes) for the prevention of caries is currently inconsistent. *Chewing gum (Three studies)* • The caries preventive effect of sugar substituted gum among children and adolescents was assessed in an RCT.[20] The study concluded that the caries preventive effect of chewing sugar-free gum is related to the chewing process as opposed to the effect of gum sweeteners or additives. • One RCT was identified which compared the anticariogenic effect of two sugar-free chewing gums over 24 months (one containing CPP-ACP nanocomplexes and one without CPP-ACP).[21] The CCP-ACP sugar-free gum slowed progression and enhanced regression of approximal caries compared to the control gum. • One RCT conducted in schoolchildren was identified which concluded that chewing sucrose-free gum after meals may provide a positive anticaries effect.[22]	

	Three studies were identified which indicated that chewing sugar free gum provides a caries preventive effect. *Pit and fissure sealing (Two studies)* • The long-term clinical effects of fissure sealing in the reduction of occlusal caries and on the increment of smooth surface caries was evaluated in a study.[23] Mean caries increment was lower in children with sealed teeth compared with controls although caries reduction was dependent on the number of teeth sealed. • An RCT was identified which compared children who had dental health education and their first primary molars sealed with glass ionomer with a control group receiving dental health education only.[24] No significant difference was observed between the intervention and control groups for any of the parameters examined.	

	Two studies were identified relating to sealants for the prevention of caries with one study indicating a beneficial effect and the other study observing no significant difference between the intervention and control groups. As such, the new evidence identified on the use of sealants for the prevention of caries is currently inconsistent. *Multimodal interventions (Two studies)* • One RCT was identified which compared the caries preventive effects of chlorhexidine varnish, sodium fluoride gel and dental health education programmes in adolescents with low caries activity.[25] The results of the study indicated no significant differences between the three groups in caries increment after two years. • The effectiveness of four caries-preventive programmes (including information on toothbrushing technique, prescription of fluoride lozenges, applications of fluoride varnish and oral health education plus fluoride varnish) for adolescents was assessed in a randomised trial.[26] The	

	results of the study indicated that there was no significant difference between any programme for mean 5-year caries increment. Two studies evaluating the use of multimodal interventions on caries prevention were unable to determine the effectiveness of one intervention over another. *Slow-release fluoride devices (One study)* • The effectiveness of different types of slow-release fluoride devices on preventing or arresting the progression of caries was investigated in a systematic review.[27] Weak evidence was identified which demonstrated a caries-inhibiting effect of slow-release fluoride glass beads. <u>Risk factors for dental caries (Three studies)</u> • The results of a prospective study indicated that age, extent of prior decay and toothbrushing frequency were associated	

	with caries increment.[28] • Eating sweets and not brushing teeth twice a day were found to be risk factors for caries in adolescents in a study.[29] • Similarly, one study concluded that frequent consumption of sweet drinks and snacks can influence caries development in children.[30] **Summary** In summary, the literature relating to fluoride products, although heterogeneous in terms of interventions evaluated and included populations, indicated a beneficial effect of fluoride in preventing dental caries. As such, the identified new literature is unlikely to change the conclusions in the guideline which state that: • Regular brushing with a fluoride containing toothpaste reduces caries risk. • The following should be considered when assessing caries risk for an individual patient: Medical History; Social History;	

	Dietary Habits; Use of Fluoride; Clinical Evidence; Oral Hygiene; Salivary flow rate The identified evidence on the use of chlorhexidine products (varnishes and mouthwahses) for the prevention of caries is currently inconsistent. The current guideline does not consider chlorhexidine products however, it would be pertinent to await further evidence before warranting consideration of an update of the guideline. Three studies were identified which indicated that chewing sugar free gum may provide a caries preventive effect. Two studies were identified relating to sealants for the prevention of caries with one study indicating a beneficial effect and the other study observing no significant difference between the intervention and control groups. As such, the new evidence identified on the use of sealants for the prevention of caries is currently inconsistent. In	

	addition, two studies evaluating the use of multimodal interventions on caries prevention were unable to determine the effectiveness of one intervention over another. Three studies were identified which highlighted that age, extent of prior decay, toothbrushing frequency and frequent consumption of sweet drinks and snacks can influence caries development. This is in agreement with the current guideline conclusions which states that: • Regular brushing with a fluoride containing toothpaste reduces caries risk. • Fermentable carbohydrate consumption is associated with caries, particularly in the absence of fluoride. The frequency, amount and consistency of sugar containing foods and drinks consumed may impact on a patient's caries risk. • There is evidence that the rate of progression of caries can be more rapid in children and adolescents than in many older persons.	

Clinical area 3: Threshold for intervention		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Q: At what point can lesion progression no longer be arrested or reversed? **Relevant section of the guideline** Threshold for intervention. **Recommendation(s)** Evidence relating to risk factors for oral disease and on the effectiveness of dental health education and oral health promotion was used to inform the guideline recommendations.	Through an assessment of abstracts from the high-level RCT search, five studies relevant to the clinical question were identified. <u>Non-cavitated caries (Two studies)</u> • One study was identified which evaluated the efficacy of conservative treatment of dentin non-cavitated caries using a fluoride-containing pit and fissure sealant.[31] The results of the study indicated that, over a one year period, clinical and radiographic caries progression was significantly more frequent in control teeth compared with the intervention group. • The effect of an ozone delivery system combined with daily use of a remineralising patient kit on the clinical severity of non-cavitated leathery primary root carious lesions was	No new evidence was identified which would invalidate current guideline recommendation(s).

	evaluated in a study.[32] Compared with air, as a control, ozone arrested leathery non-cavitated primary root caries. <u>Carious lesions (Two studies)</u> • The effect of early treatment of questionable carious lesions in pits and fissures of posterior teeth on conservation of tooth structure was investigated in a trial.[33] In the treatment group the teeth were sealed and restored with a flowable resin-based composite. The authors concluded that treating questionable carious lesions early may not conserve tooth structure. • One study compared the incidence of recurrent caries around two glass ionomer restorative materials and one amalgam material at six months, one year and two year time points.[34] Xerostomic patients were divided into users and non users of fluoride. The results of the study indicated that in fluoride non users at the two year time point, less caries developed at the margins of glass ionomer restorations compared with	

	amalgam restorations. <u>White spot lesions (One study)</u> • One study was identified which assessed whether supplementary daily use of amine fluoride toothpaste with weekly brushing with amine fluoride gel enhances remineralisation of white spot lesions on smooth surfaces.[35] No significant remineralisation of white spot lesions, as measured using quantitative light-induced fluorescence every three months over a 12 month period, was observed. **<u>Summary</u>** In summary, five studies were identified which evaluated the effect of interventions on non-cavitated caries, white spot lesions and carious lesions. The studies were heterogeneous, evaluating different interventions in a variety of lesions. As such, the identified new literature is unlikely to change the conclusion in the guideline which states that:	

	• Early caries lesions can be arrested or even reversed thus justifying consideration of the use of remineralising procedures (preventive intervention) for such lesions as opposed to automatic restorative intervention.	
Clinical area 4: Risk factors for oral cancer		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Q: What factors influence an individual's risk of developing oral cancer? **Relevant section of the guideline** Risk factors for oral cancer. **Recommendation(s)** Evidence relating to risk factors	Through an assessment of abstracts from the high-level RCT search, one study relevant to the clinical question was identified. One systematic review was identified which assessed the potential benefits and risks of screening for oral squamous cell carcinomas.[36] The review recommended that dentists remain alert for potentially malignant lesions while performing routine examinations in all patients, particularly in patients who use tobacco or who consume alcohol heavily.	No new evidence was identified which would invalidate current guideline recommendation(s).

for oral disease and on the effectiveness of dental health education and oral health promotion was used to inform the guideline recommendations.	**Summary** In summary, no new evidence was identified which would change the conclusion in the guideline which states that tobacco use (both smoking and smokeless tobacco) and excessive consumption of alcohol are the principle risk factors for oral cancer.	
Clinical area 5: Effectiveness of dental health education and oral health promotion		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Clinical questions in the guideline: Q: How effective is 'chairside' oral health promotion and dental health education in: • Reducing levels of dental caries • Controlling initial carious	Through an assessment of abstracts from the high-level RCT search, four studies relevant to the clinical questions were identified. Dental health educators (Two studies) • One RCT was identified which assessed the effectiveness of dental health educators in general dental practice.[37] Dental health educators were seconded to general dental practices and provided dental health counselling to mothers of children at risk of caries who were randomised to the intervention	No new evidence was identified which would invalidate current guideline recommendation(s).

lesions (preventative management of dental caries) • Improving periodontal health • Promoting dietary change • Promoting change in oral health related knowledge, attitudes and behaviours • Promoting smoking cessation Q: Does the effectiveness of this advice vary according to differing intervals of delivery?	group. Although an improvement in mean DMFT (Decayed Missing Filled Teeth) was observed in the intervention group, the difference between the two groups was not statistically significant. Similarly, a second RCT evaluating the use of a dental health educator who provides counselling to mothers of children at risk of caries failed to identify a substantial improvement in dental health over a two year period.[38] <u>Oral health programmes (Two studies)</u> • One RCT assessed the implementation of a tobacco assisted referral programme in dental practice.[39] The programme included chairside advice and brief counselling in addition to encouraging smokers to speak with a tobacco counsellor. The results of the study indicated that the referral programme was successfully integrated into routine dental care and was well received by patients. • One trial was identified which aimed to investigate the effects of a long-term prevention programme on dental health of	

Relevant section of the guideline Effectiveness of dental health education and oral health promotion. **Recommendation(s)** Evidence relating to risk factors for oral disease and on the effectiveness of dental health education and oral health promotion was used to inform the guideline recommendations.	adolescents aged 13 to 14 years.[40] The study was divided into four phases: preventative care during pregnancy, assessment of mothers and their children until the age of three years, assessment of mothers and children at six years and investigation of adolescents aged 13 to 14 years. The intervention consisted of an examination and education about oral health care. The results of the study indicated that mean DMFT in adolescents aged 13 to 14 years was lower in the intervention group. **Summary** In summary, the identified new literature indicated that the presence of dental health educators in general dental practice failed to lead a substantial improvement in dental health among children at risk of caries. However, it was unclear from the abstracts if the advice provided by dental health educators was at the chairside or by another method. Conversely, the results of one study described the successful implementation of a chairside tobacco assisted referral	

	programme. This new evidence is unlikely to change the conclusion in the guideline which states that: • Dental health education advice should be provided to individual patients at the chairside as this intervention has been shown to be beneficial (in the short term). One study described the effects of a long-term preventive oral health programme suggesting that it had a positive impact on mean DMFT in adolescents. However, additional consistent evidence is required before considering changing the conclusion in the guideline which states that: • The effectiveness of other means of delivering dental health education and oral health promotion is unclear since, despite its importance, some issues have been poorly researched and there are design challenges around the use of randomised controlled trials.	

Table 2: Summary of articles from the focused search

Clinical area 1: Dental recall intervals		
Clinical question	**Summary of evidence**	**Relevance to guideline recommendations**
Q: How effective are routine dental checks at 24 month 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? **Relevant section of the guideline** Dental recall intervals.	Through an assessment of abstracts from the focused search, two studies relevant to the clinical question were identified. A cross-sectional study was identified which evaluated the effect of routine dental check-ups on tooth loss in Brazil.[41] The results of the study indicated a positive effect of routine dental checks on maintaining teeth with the effect being similar for one year or two year intervals between check-ups. In addition, a systematic review assessing the evidence for dental recall intervals and incidence of caries reported the results of an RCT which showed no significant differences in oral health between patients recalled every 12 months and those recalled every 24 months.[4]	No new evidence was identified which would invalidate current guideline recommendation(s).

Recommendation(s) 1 – 8.	**<u>Summary</u>** In summary, the identified new evidence does not demonstrate a detrimental effect of a 24 month dental recall interval, compared to shorter intervals, on oral health in adults. As such, there is currently insufficient new evidence available to invalidate the following guideline recommendation: • The longest interval between oral health reviews for patients aged 18 years and older should be 24 months.	

Three relevant clinical trials were identified:

- INTERVAL Dental recalls trial (Investigation of NICE Technologies for Enabling Risk-Variable-Adjusted-Length Dental Recalls Trial) – feasibility study and follow on [Completed].
    - This study initially assessed the feasibility and acceptability of a randomised controlled trial to evaluate the effectiveness and cost effectiveness of three dental recall strategies by assessing their impact on maintaining oral health. Following this 18 month feasibility study, the trial was extended for 4 years (see trial below).
- INTERVAL Dental Recalls Trial (Investigation of NICE Technologies for Enabling Risk-Variable-Adjusted-Length Dental Recalls Trial) - Full Trial Follow-on [In progress: expected completion date - mid 2018].
    - This parallel-group randomised controlled comparison of three forms of dental recall strategies (6 month recall, risk-based recall, and 24 month recall), will evaluate the effectiveness and cost effectiveness of these dental recall strategies by assessing their impact on maintaining oral health.
- INCENTIVE: Improving the organisation and delivery of dental health care to patients [In progress: expected completion date – July 2015]
    - The aim of this study is to evaluate NHS Bradford and Airedale's new model of dental service provision by exploring stakeholder perspectives of the model, assessing the effectiveness of the model in reducing dental disease and enhancing oral health related quality of life in patients and evaluating the cost-effectiveness of the new model of service provision.

The results of these trials may potentially inform guideline recommendations in the future.

Guideline Development Group and National Collaborating Centre perspective

A questionnaire was distributed to GDG members and the National Collaborating Centre to consult them on the need for an update of the guideline. Three responses were received with two respondents indicating that there is no new relevant literature that would potentially change current recommendations. Nonetheless, respondents indicated general concerns about the lack of an evidence base to inform the recommended recall intervals and the deviation from the 6-monthly intervals to a more variable interval. However, a relevant ongoing trial (expected completion date - mid 2018) evaluating the effectiveness and cost effectiveness of 6 month recall, risk-based recall, and 24 month recall intervals was highlighted as the results may potentially inform guideline recommendations in the future.

Overall, one respondent felt that it would be premature to update the guideline at this time until the results of pilots testing new dental contractual arrangements are reported. Conversely, two respondents felt that the guideline should undergo an update.

Implementation and post publication feedback

In total 70 enquiries were received from post-publication feedback, most of which were routine. Two key themes emerging from post-publication feedback were queries about oral cancer checks and enquiries from patients seeking clarification on why intervals periods have changed in their own personal circumstances.

Feedback from the NICE implementation team included:

- A briefing for dentists and practice teams, available March 2011, on the NICE guideline on dental recalls and oral health. Results compiled by NHS Dental Services (Business Services Authority) found that when

recall intervals were reviewed at PCT or SHA levels, the recall rates were: 13% (for under 3 months) and 58% (for 3-9 months). A total 71% of people were re-attending within a 9 month period.

- NHS Dental Statistics for England report 2010/11 which provides information on all patients that received NHS dental care in England for the 12 month period to 31st March 2011. The report stated that 1.0 million more patients were seen by an NHS dentist compared to the March 2006 baseline.
- NHS Dental Statistics for England report 2011/12 which provides information on all patients that received NHS dental care in England for the second quarter period to 30 September 2011. A total of 29.5 million patients were seen in the 24 month period ending December 2011, an increase of 1.3 million on the March 2006 baseline. This represents 56.4 per cent of the population compared with the March 2006 baseline of 55.8 per cent.

No new evidence was identified through post publication enquiries or implementation feedback that would indicate a need to update the guideline.

Relationship to other NICE guidance

The following NICE guidance is related to CG19:

Guidance	**Review date**
Public health guidance: Oral health: guidance for dental health practitioners on promoting oral health, including making a visit to the dentist a positive experience.	Publication date: TBC.

Public health guidance: Oral health: guidance for local authorities on commissioning programmes to promote oral health, particularly among vulnerable groups.	Publication date: TBC.
Public health guidance: Oral health: guidance for nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment.	Publication date: TBC.

Anti-discrimination and equalities considerations

One GDG member queried whether special care dentistry (a relatively new specialist field first introduced in 2008 focusing on providing care to individuals or groups who have a sensory, mental, intellectual, emotional or social disability or condition) was considered in the development of the original guideline. However, the guideline includes recommendations for patients of all ages (both dentate and edentulous patients) and covers primary care received from NHS dental staff (dentists, independent contractors contracting within the NHS, dental hygienists and therapists) practising in England and Wales. The guideline takes into account the potential of the patient and the dental team to improve or maintain quality of life and to reduce morbidity associated with oral and dental disease.

Conclusion

Through the process no additional areas were identified which would indicate a significant change in clinical practice. There are no factors described above which would invalidate or change the direction of current guideline recommendations. However, the results of an ongoing clinical trial (expected

completion date - mid 2018) evaluating the effectiveness and cost effectiveness of 6 month recall, risk-based recall, and 24 month recall intervals may potentially inform guideline recommendations in the future.

3. Review recommendation

The guideline should not be considered for an update at this time.

The guideline will be reviewed again according to current processes.

Centre for Clinical Practice
25 June 2012

Appendix I

1. Davenport CF, Elley KM, Fry-Smith A et al. (2003) The effectiveness of routine dental checks: a systematic review of the evidence base. British Dental Journal 195:87-98.

2. Mettes D. (2005) Insufficient evidence to support or refute the need for 6-monthly dental check-ups. What is the optimal recall frequency between dental checks? Evidence-Based Dentistry 6:62-63.

3. Beirne P, Clarkson JE, and Worthington HV. (2007) Recall intervals for oral health in primary care patients. Cochrane Database of Systematic Reviews CD004346.

4. Patel S, Bay RC, and Glick M. (2010) A systematic review of dental recall intervals and incidence of dental caries. Journal of the American Dental Association 141:527-539.

5. Mann J, Vered Y, Babayof I et al. (2001) The comparative anticaries efficacy of a dentifrice containing 0.3% triclosan and 2.0% copolymer in a 0.243% sodium fluoride/silica base and a dentifrice containing 0.243% sodium fluoride/silica base: a two-year coronal caries clinical trial on adults in Israel. The Journal of clinical dentistry 12:71-76.

6. Rao SK, Bhat GS, Aradhya S et al. (2009) Study of the efficacy of toothpaste containing casein phosphopeptide in the prevention of dental caries: a randomized controlled trial in 12- to 15-year-old high caries risk children in Bangalore, India. Caries Research 43:430-435.

7. Sintes JL, Elías-Boneta A, Stewart B et al. (2002) Anticaries efficacy of a sodium monofluorophosphate dentifrice containing xylitol in a dicalcium phosphate dihydrate base. A 30-month caries clinical study in Costa Rica. American Journal of Dentistry 15:215-219.

8. Stookey GK, Mau MS, Isaacs RL et al. (2004) The relative anticaries effectiveness of three fluoride-containing dentifrices in Puerto Rico. Caries Research 38:542-550.

9. Vilhena FV, Olympio KP, Lauris JR et al. (2010) Low-fluoride acidic dentifrice: a randomized clinical trial in a fluoridated area. Caries Research 44:478-484.

10. Azarpazhooh A and Main PA. (2009) Efficacy of dental prophylaxis (rubber cup) for the prevention of caries and gingivitis: a systematic review of literature. British Dental Journal 207:E14-E19.

11. Sampson C. (2010) Is routine dental prophylaxis effective? Evidence-Based Dentistry 11:16-17.

12. Yeung CA. (2007) Fluoride prevents caries among adults of all ages. Evidence-Based Dentistry 8:72-73.

13. Zezell DM, Boari HG, Ana PA et al. (2009) Nd:YAG laser in caries prevention: a clinical trial. Lasers in surgery and medicine 41:31-35.

14. Azarpazhooh A and Main PA. (2010) Fluoride varnish in the prevention of dental caries in children and adolescents: a systematic review. Hawaii Dental Journal 40:6-7.

15. Weinstein P, Spiekerman C, and Milgrom P. (2009) Randomized equivalence trial of intensive and semiannual applications of fluoride varnish in the primary dentition. Caries Research 43:484-490.

16. Weintraub JA, Ramos-Gomez F, Jue B et al. (2006) Fluoride varnish efficacy in preventing early childhood caries. Journal of Dental Research 85:172-176.

17. Joharji RM and Adenubi JO. (2001) Prevention of pit and fissure caries using an antimicrobial varnish: 9 month clinical evaluation. Journal of Dentistry 29:247-254.

18. Plotzitza B, Kneist S, Berger J et al. (2005) Efficacy of chlorhexidine varnish applications in the prevention of early childhood caries. European journal of paediatric dentistry : official journal of European Academy of Paediatric Dentistry 6:149-154.

19. Wyatt CC, Maupome G, Hujoel PP et al. (2007) Chlorhexidine and preservation of sound tooth structure in older adults. A placebo-controlled trial. Caries Research 41:93-101.

20. Machiulskiene V, Nyvad B, and Baelum V. (2001) Caries preventive effect of sugar-substituted chewing gum. Community dentistry and oral epidemiology 29:278-288.

21. Morgan MV, Adams GG, Bailey DL et al. (2008) The anticariogenic effect of sugar-free gum containing CPP-ACP nanocomplexes on approximal caries determined using digital bitewing radiography. Caries Research 42:171-184.

22. Tsao CE and Morgan MV. (2005) Does chewing sucrose-free chewing gum after meals reduce the development of carious lesions? Medical Journal of Australia 182:85-86.

23. Jodkowska E. (2008) Efficacy of pit and fissure sealing: long-term clinical observations. Quintessence international (Berlin, Germany : 1985) 39:593-602.

24. Uribe S. (2005) No evidence to support use of glass ionomer as a fissure sealant in primary molars. Evidence-Based Dentistry 6:35.

25. Ersin NK, Eden E, Eronat N et al. (2008) Effectiveness of 2-year application of school-based chlorhexidine varnish, sodium fluoride gel, and dental health education programs in high-risk adolescents. Quintessence International 39:e45-e51.

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