

Appendix A: Summary of evidence from surveillance

2018 surveillance of [Oral health promotion: general dental practice](#) (2015) NICE guideline NG30

Summary of evidence from surveillance

Studies identified in searches are summarised from the information presented in their abstracts.

Feedback from topic experts who advised us on the approach to this surveillance review, and from stakeholders if public consultation was conducted, was considered alongside the evidence to reach a final decision on the need to update each section of the guideline.

Summary of new evidence from 2018 surveillance	Intelligence gathering	Impact
Section 1.1 Oral health advice given by dentists and dental care professionals		
<p>Promotion of smoking cessation</p> <p>A systematic review (1) including 7 other systematic reviews, evaluated the efficacy of behaviour change approaches for tobacco use cessation, in dental practices. Brief interventions, which included: counselling, giving advice, cognitive behavioural therapy, provision of leaflets and motivational interviewing, were shown to be effective, although comparators were not reported in the abstract.</p> <p>A cluster randomised control trial (RCT) (2) (n=467) evaluated the effectiveness of very brief counselling</p>	<p>The Public Health England (PHE) toolkit, Delivering better oral health (2014), was updated in 2017 to incorporate an update to the Chief Medical Officer for England's guideline on lower risk drinking and the Scientific Advisory Committee on Nutrition's evidence review regarding healthy eating advice.</p> <p>The PHE guidance, Child oral health: applying All Our Health (2017), discusses interventions at a family and individual level, a population level and a community level. The guidance described for dental</p>	<p>Promotion of smoking cessation</p> <p>The evidence identified for promoting smoking cessation supports the recommendations in this section of the guideline, specifically recommendation 1.1.3 which states that NICE's guideline on smoking cessation services should be followed and brief advice and referral provided. Therefore, no impact from this evidence is anticipated.</p>

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<p>for tobacco cessation in dentistry clinics. Intervention clinics provided structured brief advice based on the 5 A's model (Ask, Advise, Assess, Assist, and Arrange) and control clinics provided usual care. There was a significant reduction of tobacco consumption in the intervention group compared to usual care. However, there was no difference between groups in the number of people abstinent from tobacco at 6 month follow up.</p> <p>An RCT (3) evaluated the effect of brief counselling in dental clinics on tobacco use cessation compared to usual care. A significant effect on reduction in tobacco consumption was found with brief counselling, however no effect was shown for other outcomes measured (7-day abstinence, 3-month abstinence and quit attempts). In an as-treated analysis, receiving more counselling components increased the likelihood of half-reduction compared to no tobacco counselling.</p> <p>An RCT (4) evaluated tobacco cessation counselling educational programmes for dental students, comparing role play and problem based learning methods. There was no significant difference between the 2 education types on scores of knowledge, attitude and skill, as both groups showed improvement in these domains following intervention.</p>	<p>healthcare professionals at a family and individual level include:</p> <ul style="list-style-type: none"> • knowing the needs of individuals • thinking about available resources • understanding specific activities that can prevent, protect and promote • ensuring that all staff promote good oral health and have access to relevant training that is regularly updated • knowing the evidence based advice and treatment which should be given to deliver better oral health • understanding how to help people change behaviour • making every contact count <p>The PHE guidance, Health matters: child dental health (2017) reports how dental health professionals can help prevent tooth decay in children under 5. As part of this guidance, it is recommended that:</p> <ul style="list-style-type: none"> • all members of the dental team, including dental nurses, can deliver oral health advice • dental teams can signpost to PHE's Be food smart app 	<p>Prevention of harmful drinking</p> <p>The evidence identified regarding reduction of harmful drinking supports the current recommendation (1.1.4) which signposts to NICE's guidance on alcohol use disorders where screening and brief interventions are recommended. Therefore, no impact from this evidence is anticipated.</p> <p>Tailoring advice to individual needs</p> <p>Evidence was identified on methods of delivering oral health promotion aimed at people with specific needs. Recommendation 1.1.2 states that advice should be tailored to meet individual needs. The evidence on interventions for specific populations in this area is limited, therefore it is unlikely that there would be an impact on the recommendation, which already allows for individual needs.</p> <p>Behaviour change interventions</p> <p>Mixed evidence was identified regarding behaviour change interventions for oral health promotion, including motivational interviewing and gain and loss framed information. While the current recommendations do not specify motivational interviewing as a method of advice delivery, it is recommended that a variety of formats are</p>

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<p>An RCT (5) (n=197) evaluated different approaches to referring adolescents (aged 13-18) presenting at a medical and dental clinic to smoking cessation services. Participants were either referred to the smoking cessation programme by a link via e-mail or by a printed card. Both referral approaches were found to be equally effective.</p> <p>A qualitative study (6) investigated the barriers facing 262 dental students when providing smoking cessation advice. Patient disinterest and lack of time were quoted as important barriers. While not discussed specifically as a barrier, knowledge of smoking cessation advice among dental students was low.</p> <p>A qualitative study (7) investigated the barriers and attitudes towards delivery of smoking cessation interventions, through questionnaires given to dental hygienists, dental therapists and oral health therapists. The most prevalent barriers were lack of knowledge of pharmacological treatments and lack of access to smoking cessation resources. Time and financial incentives were not commonly cited barriers to delivering smoking cessation interventions.</p> <p>A qualitative study (8) (n=726) investigated patients attitudes towards receiving smoking behaviour advice from dentists. Almost all participants</p>		<p>considered, to meet the needs of different groups (recommendation 1.1.5). As a limited volume of mixed evidence has been identified, it is unlikely that there would be an impact in this area.</p> <p>Format of information delivery</p> <p>Evidence was identified on the effectiveness of media by dental practices to improve oral health, including text message services and computerised oral hygiene instruction. However, only 1 small RCT was identified in each area and this limited evidence is unlikely to have an impact on the current recommendations, which do not specify the use of particular forms of media. Further evidence which evaluated forms of information delivery, such as a mobile app, verbal information and written information, indicated mixed effectiveness. Therefore, there is unlikely to be an impact on the recommendations.</p> <p>Barriers and facilitators to oral health promotion</p> <p>The main barriers which were identified to delivering oral health promotion included a lack of time, knowledge, remuneration and patient interest. The recommendations in this guideline do not specifically address barriers to oral health promotion, although evidence was identified in this area during guideline development. The information</p>

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<p>indicated they would be comfortable with their dentist asking about their smoking and that the dentist should advise them to quit if their smoking was effecting their oral health.</p> <p>Prevention of harmful drinking</p> <p>A cluster RCT (9) (n=103) evaluated the effectiveness of screening and brief intervention in dental practices for heavy drinkers. At 6 month follow up, there was a significant improvement in total drinks per week in people exposed to the intervention compared to people who were not. Improvement was also seen in the quantity and frequency of drinking among people exposed to the intervention, compared to control groups.</p> <p>Tailoring advice to individual needs</p> <p>An RCT (10) (n=120) evaluated the delivery of oral hygiene awareness instructions in dental practices, for visually impaired children. Combinations of verbal and tactile messaging; verbal and braille messaging; and verbal, braille and tactile messaging where compared. Instructions regarding maintenance of good oral hygiene and brushing technique were explained to all children using the different intervention methods. Children who were given instructions with verbal, braille and tactile messaging showed the highest percentage of reduction in plaque scores, whereas children given</p>		<p>identified during surveillance confirms the findings considered by the guideline committee during development, and therefore there is unlikely to be any impact on the guideline.</p> <p>Intelligence gathering</p> <p>The identified PHE guidance describes the importance of oral health promotion and how dental health professionals can approach this. This PHE guidance supports the current recommendations and therefore there is unlikely to be any impact on the guideline. There is also unlikely to be any impact from the update of PHE’s toolkit: Delivering better oral health, as the guideline focuses on how to best deliver advice from this toolkit.</p>

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<p>instructions with verbal and braille messaging showed the highest decrease in gingival scores.</p> <p>A qualitative study (11) (n=149) used questionnaire led interviews with dental professionals, to understand the perceived barriers to providing oral health care for children with special needs. The greatest barriers were the level of training and a lack of motivation of the children's caretakers.</p> <p>Behaviour change interventions</p> <p>A systematic review (12) including 5 RCTs evaluated the effectiveness of motivational interviewing as an adjunct to periodontal therapy in dental practices (the comparator was not reported). Mixed results were reported across the included studies. Two studies reported a significant positive effect with motivational interviewing, on the outcomes bleeding on probing and plaque values. One study showed improvement of self-efficacy in interdental cleaning with motivational interviewing, and 2 studies reported that motivational interviewing showed no effect on periodontal outcomes.</p> <p>A systematic review (13) including 8 studies evaluated the use of motivational interviewing in general dental practice. Five RCTs were included in the review, all of which demonstrated that interventions including motivational interviewing</p>		

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<p>had a positive effect on oral health and health behaviour.</p> <p>A qualitative study (14) (n=9) used semi-structured interviews to gain insight into the experiences of dental hygienists trained in motivational interviewing. The main barriers to delivering motivational interviewing were described as time, difficulty and managing patient resistance.</p> <p>An RCT (15) (n=855) evaluated the effect of presenting gain- and loss-framed information videos about oral health and how they influenced self-reported flossing behaviour, compared to people who received no health message. The intervention was delivered in a dental practice setting. Susceptibility to messaging was measured as either low or high. People who watched a video where the frame (gain or loss) matched their susceptibility, were significantly more likely to floss at recommended levels at 6 month follow up, compared to people who watched a video not matched to their susceptibility or watched no video at all.</p> <p>Format of information delivery</p> <p>A systematic review (16) including 44 studies found that oral health promotion in the dental practice setting based on behavioural and psychological models was effective for improving oral health.</p>		

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<p>Different methods of advice delivery were evaluated, with verbal advice leading to improvements in knowledge and reported behaviour, and written advice increasing oral health knowledge. Evidence was also identified which indicated that the sender of an oral health promotion message influenced its effectiveness (although sender preferences were not reported in the abstract).</p> <p>An RCT (17) (n= 50) evaluated the use of text message reminders sent from dental practices compared to an undefined control group. Twelve text messages were sent over the course of 4 weeks, and 1 text message for 8 weeks thereafter. A significant improvement in plaque coverage was observed in people receiving text message reminders.</p> <p>An RCT (18) (n=60) compared computerised oral hygiene instruction with verbal instruction as methods of oral health promotion for fixed orthodontic patients, delivered in a dental practice. At 3 weeks follow up, mean score for plaque index and bleeding on probing index was significantly decreased and dental health knowledge was significantly increased in people given computerised instruction, whereas this was not the case for those provided with verbal instruction.</p>		

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<p>An RCT (19) (n=191) evaluated methods of oral health promotion by dentists, comparing information delivery using verbal description, video and pictures. People shown a video gained a greater understanding of what oral impression taking was than people given verbal information or pictures. Understanding, measured by questionnaire, was significantly higher in people shown pictures than people given verbal information, however there was no significant difference between these groups when patient performance was measured. A higher rate of satisfaction was reported by people who were shown a video or pictures compared to people given verbal information.</p> <p>An RCT (20) (n=89) aimed to investigate the effectiveness of a poster and a mobile healthcare application for improving knowledge about dental trauma management. Participants used both a poster and mobile application, but were randomly assigned as to which was used first. Both tools were deemed effective, with the majority of participants answering trauma management questions correctly.</p> <p>Barriers and facilitators to oral health promotion</p> <p>A qualitative study (21) (n=426) used a questionnaire to investigate the attitudes of dental hygienists and oral health therapists towards providing dietary advice, and the barriers that limit</p>		

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<p>its delivery. Generally, positive beliefs regarding the importance of dietary counselling were reported. Barriers included time, patient compliance, patient knowledge of nutrition, personal counselling skills and the practitioners' knowledge of nutrition.</p> <p>A qualitative study (22) investigated the barriers and facilitators to dentists in the English NHS following oral health prevention guidance (n=26). Emerging themes included that dentists were motivated to provide prevention advice but financial and time constraints stop them from doing so; they may use prevention guidance but restrict it to certain patients and that dentists appeared 'health focused'. Importance was placed on working to prevention guidance, but greater patient and professional support is desired.</p> <p>A qualitative study (23) investigated clinical director and health service manager's perceptions, regarding the factors which could support the delivery of preventive care to adolescents. It was reported that fiscal accountability and meeting performance targets impacts the levels and types of preventive care oral health and dental therapists provided. Suggestions were made that professional clinical structures for continuous quality improvement should be implemented and monitored and that an adequate workforce mix and more resources would</p>		

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<p>enhance the ability to provide appropriate levels of preventive care. Facilitators to achieving oral health promotion included capitalising on the strengths of visiting paediatric dental specialists and working with local health district clinical leaders.</p> <p>A qualitative study (24) (n=1,037) evaluated barriers and facilitators for dental hygienists to providing oral hygiene instructions and patient motivation. Lack of time, remuneration and patient interest were reported as barriers. It was indicated that assistants should provide preventive care.</p> <p>A qualitative study (25) investigated NHS dentists' knowledge, attitudes and behaviours in providing preventive care. Limited knowledge was found in key aspects of prevention, but generally positive attitudes towards preventive care were expressed. The main perceived barriers were related to organisational factors including insufficient remuneration, lack of time and poor patient compliance.</p>		
<p>Section 1.2 How dentists and dental care professionals can adopt a patient-centred approach</p>		
<p>A qualitative study (26) (n=1,360) investigated the factors affecting dental anxiety among adults seeking dental care. Questionnaires were given to participants while in a dental waiting room to explore reasons for anxiety. Female participants and</p>	<p>None.</p>	<p>Evidence was identified which evaluated the impact of interventions on anxiety and cooperation in dental practices, in children with individual needs. However, as this evidence was specific to populations with individual needs it was limited in</p>

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<p>younger participants were more likely to be anxious, as were people who had previously had a negative dental experience. When asked specifically about undergoing tooth extraction, anxiety was significantly associated with gender, age, education level, employment status, income, self-perceived oral health status and their history of visits to the dentist.</p> <p>An RCT (27) (n=40) evaluated visual teaching methods and preventative practices during dental check-ups, for children (aged 6-12) with autism. A significant increase in children's cooperation during fluoride therapy was shown with repeated visits and teaching sessions.</p> <p>An RCT (28) evaluated the use of dental sign language during an oral examination, for hearing impaired children. In the intervention group, dental sign language education was provided at two consecutive dental clinic visits. On the second visit, oral prophylaxis and dental restoration was also performed. The control group was given oral prophylaxis and dental restoration at their initial visit, with no sign language used. Anxiety levels were measured using facial image scale, pulse oximeter and electronic blood pressure equipment. A significant reduction in anxiety was reported in children who had sign language education.</p>		<p>each area. The limited evidence identified is not sufficient to prompt an update, as the recommendations currently state that individual needs should be taken into consideration, and that a welcoming environment is an important consideration, including for people with a physical or sensory impairment. Although there is evidence to suggest that specific groups may be more likely to experience dental anxiety, as the current recommendations suggest that a welcoming environment should be provided for everyone, it is unlikely that this evidence would have an impact on the recommendations.</p>

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<p>Research recommendation 1</p> <p>For groups at high risk of poor oral health, how effective and cost effective is it to extend an existing appointment by a few minutes, or to offer separate sessions on oral health advice?</p>		
None	None	None
<p>Research recommendation 2</p> <p>What interventions are effective and cost effective at encouraging people who usually only go to emergency dental services to use general dental services regularly, in a bid to improve their oral health?</p>		
None	None	None
<p>Research recommendation 3</p> <p>What behaviour change methods and resources (such as phone apps, leaflets and messaging) help dental teams to provide people with support to improve their oral health?</p>		
<p>Mixed evidence was identified regarding behaviour change interventions and resources for oral health promotion, including motivational interviewing and gain and loss framed information, text messages and phone apps.</p>	None	<p>The evidence identified is not likely to have an impact on the current guideline recommendations (see impact statements on behaviour change interventions and format of information delivery for further details).</p>

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<p>Research recommendation 4</p> <p>What triggers and other factors encourage groups at high risk of poor oral health to change their behaviours in response to oral health messages?</p>		
None	None	None
<p>Research recommendation 5</p> <p>What would motivate dental practice teams to take a preventive approach to oral health – especially with high risk groups – and how does this fit into the dental practice business model?</p>		
None	None	None

Editorial corrections

During surveillance of the guideline we identified the following issues with the NICE version of the guideline that should be corrected:

- Reference to NHS choices is made in recommendation 1.2.3 which should be removed. This recommendation should be updated to read:
“Provide information about how people can find a local dentist or find out if they qualify for free or subsidised NHS dental care. If they do qualify for free or subsidised care, tell them where they can find out how to make a claim.”
- Recommendation 1.1.3 refers to recommendation 6 in NICE’s guideline on smoking cessation services, and provides a link to NICE guideline PH10. NICE guideline PH10 has been updated and replaced by NICE guideline NG92. A correction should be made to recommendation 1.1.3 to replace “Follow recommendation 6 in NICE’s guideline on smoking cessation services...” to “Follow recommendations in NICE’s guideline on [stop smoking interventions and services...](#)”

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