Public Health England

Delivering better oral health: an evidence-based toolkit for prevention

Summary guidance tables

Third edition

Department of Health

NHS

The British Association for the Study of Community Dentistry

Foreword

It is well recognised that oral health has an important role in the general health and well-being of individuals and it is of concern that significant inequalities in oral health exist across England.

The risk factors for many general health conditions are common to those that affect oral health, namely smoking, alcohol misuse and a poor diet. It is therefore important that all clinical teams make every contact count and support patients to make healthier choices. By doing this not only will patients' oral health benefit but their general health will be at lower risk as well. Clinical dental teams therefore have an important role in advising their patients about how they can make choices that improve and maintain both their dental and general health.

Public Health England is pleased to provide this third edition of the prevention toolkit for clinical teams. Current evidence has been reviewed and used to revise and develop the previous edition.

I am sure this key document will allow all patients to benefit from modern preventive treatments and improved methods of self-care. It should be used by the whole dental team to ensure that all patients have equity of access to improved preventive advice and care.

Prof Kevin Fenton, director of Health and Wellbeing

Sue Gregory, head of dental public health

Public Health England

PHE gateway number: 2014126

The prevention toolkit

Many dental teams have asked for clear guidance about the advice they should give and the actions they should take to be sure they are doing the best for their patients in preventing disease. There is currently a drive for greater emphasis on prevention of ill-health and reduction of inequalities of health by the giving of advice, provision of support to change behaviour and application of evidence-informed actions. It is important that the whole dental team, as well as other healthcare workers, give consistent messages and that those messages are up to date and correct.

Recent thinking suggests that all patients should be given the benefit of advice and support to change behaviour regarding their general and dental health, not just those thought to be 'at risk'. This guide lists the advice and actions that should be provided for all patients to maintain good oral health. For those patients about whom there is greater concern (eg, those with medical conditions, those with evidence of active disease and those for whom the provision of reparative care is problematic) there is guidance about increasing the intensity of generally applied actions.

A number of well-respected experts have come together to produce 'Delivering better oral health' (third edition). It aims to provide practical, evidence-based guidance to help clinical teams to promote oral health and prevent oral disease in their patients. It is intended for use throughout primary dental care.

This toolkit is not the result of a multiple systematic review processes, rather a pragmatic and progressive approach was taken towards the original collation of the available evidence and applied in revisions for each new edition. The steering group conferred with leaders in the field and established core messages and actions for which evidence had revealed a preventive benefit. Relevant papers were assessed for the detail and strength of evidence they revealed, then statements were refined to ensure the wording correctly reflected the conclusions derived. The published papers that gave the highest level of evidence available are provided as references to support each statement. In many instances intelligence was drawn from a range of studies or reviews and statements were derived from the totality of the resulting evidence.

The information displayed in the model is supported by evidence of varying levels of strength. Where the evidence level is weak this does not mean that the intervention does not work but simply that the current evidence supporting it is not of the highest quality. Each piece of advice or suggested intervention is presented with an evidence grade. This represents the highest grade of evidence which currently exists for the advice or intervention listed in the model.

The grades of evidence given are as follows:

Grade	Strength of evidence
I	Strong evidence from at least one systematic review of multiple well-designed randomised control trial/s.
II	Strong evidence from at least one properly designed randomised control trial of appropriate size.
III	Evidence from well-designed trials without randomisation, single group pre-post, cohort, time series of matched case-control studies.
IV	Evidence from well-designed non-experimental studies from more than one centre or research group.
V	Opinions of respected authorities, based on clinical evidence, descriptive studies or reports of expert committees.

(Gray, 1997)

For this new edition a symbol that indicates good practice has been added to statements for which specific evidence is not available but which make practical sense. This is shown as GP✔. There is an intention to re-classify the evidence in the next edition of the toolkit using the GRADE system.

This summary document contains guidance tables for primary care dental teams, more detailed information supporting the statements within the tables can be found in the main document.

Section 1 Summary guidance for primary care teams

Prevention of caries in children age 0-6yrs

	Advice to be given	EB	Professional intervention	EB
Children aged up to 3 years	• Breast feeding provides the best nutrition for babies	**I**		
	• From six months of age infants should be introduced to drinking from a free-flow cup, and from age one year feeding from a bottle should be discouraged	**III**		
	• Sugar should not be added to weaning foods or drinks	**V**		
	• Parents/carers should brush or supervise toothbrushing	**I**		
	• As soon as teeth erupt in the mouth brush them twice daily with a fluoridated toothpaste • Brush last thing at night and on one other occasion.	**I** **III**		
	• Use fluoridated toothpaste containing no less than 1,000ppm fluoride • It is good practice to use only a smear of toothpaste	**I** GP ✔		
	• The frequency and amount of sugary food and drinks should be reduced.	**III, I**		
	• Sugar-free medicines should be recommended	**III**		

	Advice to be given	EB	Professional intervention	EB
All children aged 3-6 years	• Brush at least twice daily, with a fluoridated toothpaste • Brush last thing at night and at least on one other occasion	**I** **III**	• Apply fluoride varnish to teeth two times a year (2.2% NaF^-)	**I**
	• Brushing should be supervised by a parent/carer	**I**		
	• Use fluoridated toothpaste containing more than 1,000ppm fluoride • It is good practice to use only a pea size amount	**I** GP ✔		
	• Spit out after brushing and do not rinse, to maintain fluoride concentration levels	**III**		
	• The frequency and amount of sugary food and drinks should be reduced	**III, I**		
	• Sugar-free medicines should be recommended	**III**		
Children aged 0 – 6 giving concern (eg those likely to develop caries, those with special needs)	All advice as above plus: • Use fluoridated toothpaste containing 1,350-1,500ppm fluoride • It is good practice to use only a smear or pea size amount • Where medication is given frequently or long term request that it is sugar free, or used to minimise cariogenic effects	**I** GP ✔ GP ✔	• Apply fluoride varnish to teeth two or more times a year (2.2% NaF^-) • Reduce recall interval • Investigate diet and assist to adopt good dietary practice in line with the eatwell plate • Where medication is given frequently or long term liaise with medical practitioner to request it is sugar free, or used to minimise cariogenic effects	**I** **V** **I** GP ✔

Prevention of caries in children aged from 7 years and young adults

	Advice	EB	Professional intervention	EB
All patients	• Brush at least twice daily, with a fluoridated toothpaste	**I**	• Apply fluoride varnish to teeth two times a year (2.2% NaF^-)	**I**
	• Brush last thing at night and at least on one other occasion	**III, I**		
	• Use fluoridated toothpaste (1,350-1,500ppm fluoride)	**I**		
	• Spit out after brushing and do not rinse, to maintain fluoride concentration levels	**III**		
	• The frequency and amount of sugary food and drinks should be reduced	**III, I**		
Those giving concern to their dentist (eg, those with obvious current active caries, those with ortho appliances, dry mouth, other predisposing factors, those with special needs)	All the above, plus: • Use a fluoride mouth rinse daily (0.05% NaF-) at a different time to brushing	**I**	• Fissure seal permanent molars with resin sealant	**I**
			• Apply fluoride varnish to teeth two or more times a year (2.2% NaF^-)	**I**
			• For those 8 years upwards with active caries prescribe daily fluoride rinse	**I**
			• For those 10+ years with active caries prescribe 2,800ppm fluoride toothpaste	**I**
			• For those 16+ years with active disease prescribe either 2,800ppm or 5,000ppm fluoride toothpaste	**I**
			• Investigate diet and assist to adopt good dietary practice in line with the eatwell plate	**I**

Prevention of caries in adults

	Advice	EB	Professional intervention	EB
All adult patients	• Brush at least twice daily, with a fluoridated toothpaste	**I**		
	• Brush last thing at night and at least on one other occasion	**III, I**		
	• Use fluoridated toothpaste with at least 1,350ppm fluoride	**I**		
	• Spit out after brushing and do not rinse, to maintain fluoride concentration	**III**		
	• The frequency and amount of sugary food and drinks should be reduced	**III, I**		
Those giving concern to their dentist (eg with obvious current active caries, dry mouth, other predisposing factors, those with special needs	All the above, plus: Use a fluoride mouthrinse daily (0.05% NaF-) at a different time to brushing	**I**	• Apply fluoride varnish to teeth twice yearly (2.2% NaF-)	**I**
			• For those with active coronal or root caries prescribe daily fluoride rinse	**I**
			• For those with obvious active coronal or root caries prescribe 2,800 or 5,000ppm fluoride toothpaste	**I**
			• Investigate diet and assist to adopt good dietary practice in line with the eatwell plate	**I**

Prevention of periodontal disease – to be used in addition to caries prevention

	Advice to be given	EB	Professional intervention	EB
All adults and children	**Self-care plaque removal** Remove plaque effectively using methods shown by the dental team. This will prevent gingivitis and reduces the risk of periodontal disease	V III	Advise best methods of plaque removal to prevent gingivitis, achieve lowest risk of periodontitis and tooth loss	III
			Use behaviour change methods with oral hygiene instruction	I
	Daily, effective plaque removal is more important to periodontal health than tooth scaling and polishing by the clinical team	III	Correct factors which impede effective plaque control including; supra and subgingival calculus, open margins and restoration overhangs and contours which prevent effective plaque removal	GP ✔
	Toothbrushing and toothpaste Brush gum line AND each tooth twice daily (before bed and at least on one other occasion)	V	With extensive inflammation start with toothbrushing advice, followed by interdental plaque control	GP ✔
	Use either • Manual or powered toothbrush	I	**Assess patient's/parent/carer's preferences for plaque control** • Decide on manual or powered toothbrush • Demonstrate methods and types of brushes • Assess plaque removal abilities and confidence with brush • Patient sets target for toothbrushing for next visit	V
	• Small toothbrush head, medium texture	V		

	Advice to be given	EB	Professional intervention	EB
All adults and ages 12-17	**Interdental plaque control** Clean daily between the teeth to below the gum line before toothbrushing • For small spaces between teeth: use dental floss or tape • For larger spaces: use interdental or single-tufted brushes • Around orthodontic appliances and bridges: use kit suggested by the dental professional	GP ✔ V V V	**Assess patient's preferences for interdental plaque control** • Decide on appropriate interdental kit • Demonstrate methods and types of kit • Assess plaque removal abilities and confidence with kit Patient sets target for interdental plaque control	V

Risk factor control

Tobacco (all adults and adolescents)	Do not smoke Smoking increases the risk of periodontal disease, reduces benefits of treatment and increases the chance of losing teeth.	III	Ask, Advise, Act: take a history of tobacco use, give brief advice to users to quit and sign post to local stop smoking service (see tobacco table for more detail)	I
Diabetes	Patients with diabetes should try to maintain good diabetes control as they are • At greater risk of developing serious periodontal disease • Less likely to benefit from periodontal treatment if the diabetes is not well controlled	V III V	For patients with diabetes • Explain risk related to diabetes	GP ✔

	Advice to be given	EB	Professional intervention	EB
Medications	Some medications can affect gingival health	**V**	For patients who use medications that cause dry mouth or gingival enlargement • Explain oral health findings and risk related to medication • Assess and discuss clinical management (see section 6)	 GP ✔ GP ✔

Prevention of peri-implant disease

All adults with dental implants	Dental implants require the same level of oral hygiene and maintenance as natural teeth	**V**	Advise best methods for self-care plaque control, both toothbrushing and interdental cleaning	**V**
	Clean both between and around implants carefully with interdental kit and toothbrushes	**V**		
	Attend for regular checks of the health of gum and bone around implants	**V**		

Prevention of oral cancer

Risk level	Advice	EB	Professional intervention	EB
All adolescents and adults	• Do not smoke	**III**	• Ask, Advise, Act – tobacco use very brief advice	**I**
	• Do not use smokeless tobacco (eg paan, chewing tobacco, gutkha)	**I**	• Take a history of tobacco use, give brief advice to users and signpost to local stop smoking service	**I**
	• Reduce alcohol consumption to moderate (recommended) levels	**I**	• Ask, Advise, Act – alcohol very brief advice Establish if the patient is drinking above low risk (recommended) levels. If appropriate signpost to GP or local alcohol misuse support services if available. See tobacco and alcohol tables	**I**
	• Increase intake of non-starchy vegetables and fruit	**III**		

Evidence-based advice and professional intervention about smoking and other tobacco use

	Advice	EB	Professional intervention	EB
All adolescents and adults	Tobacco use, both smoking and chewing tobacco seriously affects general and oral health. The most significant effect on the mouth is oral cancers and pre-cancers.	**III**	Ask, Advise, Act: take a history of tobacco use, give brief advice to users and signpost to local stop smoking service	**I**
	• Do not smoke or use shisha pipes	**I**	• Ask – establish and record smoking status	
	• Do not use smokeless tobacco (eg, paan, chewing tobacco, gutkha)	**I**	• Advise – advise on benefits of stopping and that evidence shows the best way is with a combination of support and treatment • Act – offer help referring to local stop smoking services	
	If the patient is not ready or willing to stop they may wish to consider reducing how much they smoke using a licensed nicotine-containing product to help reduce smoking. The health benefits to reducing are unclear but those who use these will be more likely to stop smoking in the future.	**V**		

Evidence-based advice and professional intervention about alcohol and oral health

	Advice	EB	Professional intervention	EB
All adolescents and adults	Drinking alcohol above recommended levels adversely affects general and oral health with the most significant oral health impact being the increased risk of oral cancer. Reduce alcohol consumption to low risk (recommended) levels. **Recommended levels (May 2014):** Men should not regularly consume more than 3 to 4 units per day Women should not regularly consume more than 2 to 3 units per day All drinkers should avoid alcohol for 2 days following a heavy drinking session to allow the body to recover Pregnant women or women trying to conceive should avoid drinking alcohol but if they choose to drink they should limit this to no more than 1 to 2 units once or twice a week and avoid getting drunk	**IV** **I**	For all patients: Ask – establish and record if the patient is drinking above low risk (recommended) levels Advise – offer brief advice to those drinking above recommended levels Act – refer or signpost high risk drinkers to their GP or local alcohol support services	**I**

Evidence-based advice and professional intervention about healthier eating

	Advice to be given	EB	Professional intervention	EB
All ages	The frequency and amount of consumption of sugars should be reduced	**III, I**	To aid dietary modification advice consider using a diet diary over 3 days, one weekend day and 2 weekdays	GP ✔
	Avoid sugar containing foods and drinks at bedtime when saliva flow is reduced and buffering capacity is lost	**III**		

Prevention of erosion/toothwear

No table could be provided as the evidence to support interventions to prevent toothwear is currently limited. Some tooth wear is a natural part of ageing; thus at present evidence-based population advice on tooth wear, and particularly erosion, cannot be substantiated. Evidence from studies to support preventive interventions for individuals with pathological wear is limited, but growing. Much of the available evidence to date relates to associations and is largely limited to epidemiology, laboratory and in situ studies; thus, further research in this field is recommended. The later chapter about erosion and toothwear describes possible causes and an overview of methods of management, which includes advice about prevention of toothwear according to the need of individual patients.