

‘Investing For Health’ Workstream No. 11: Dentistry

Theme: ‘Quality in Dental Practice’

Tasks 1-3: “NICE into Practice” – recall intervals in dental practices.

ITEM No. 2 (of 5)

**Sample / Draft
Model PRACTICE CLINICAL POLICY**

For practices adopting a policy of operating in accord with NICE CG19 dental recall intervals

<i>Title of Document</i>	Model for Practice Clinical Policy for operating in line with NICE CG19 (dental recall intervals).
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<i>Sources used / directly adapted</i>	NICE Clinical Guideline CG019

MODEL PRACTICE CLINICAL POLICY (OR “CLINICAL PROTOCOL”)

Background

Evidence base

In 2003, a Health Technology Assessment [‘HTA’] from the NHS R&D Programme found “*little evidence to support or refute the practice of encouraging 6-monthly dental checks in adults and children*” and suggested that moving to longer (more than 6-monthly) dental check frequencies (rather than shortening the currently practised recall interval) would be more cost-effective. However, the HTA also commented that cost-effectiveness varies across risk groups and therefore consideration should be given to whether a population recall policy or a recall policy based on individual risk would be more appropriate.

In October 2004, the National Institute for Clinical Excellence published Clinical Guideline No. 19: “*Dental recall - recall interval between routine dental examinations.*” These two documents (with their references) comprise much of the evidence base up to 2004.

Implications of NICE Dental Guidelines for dental practice

The essence of NICE CG19 is that it is no longer appropriate to adopt fixed dental recall intervals that do not take account of the patient’s individual risk of dental disease. CG019 recommends each patient should be risk-assessed and a recall interval recorded for him/her.

Analysis of dental attendance patterns from the NHS Business Services Authority suggests that attendance patterns in the UK are variable and large number of patients re-attend at intervals of less than 6 monthly, with over 70% having a follow-up visit within 9 months¹.

Purpose of this document

The following document is a suggested model Practice Clinical Policy (alternate term: ‘*Clinical Protocol*’) which dental practices could adopt to help clinicians apply NICE guidance on dental recalls — which they are obliged to do under current the terms of NHS dental contracts.

Acknowledgement

This practice clinical policy is largely based on information contained in the original NICE Guideline (no 19, October 2004), however, the model on which the present document is based was a practice procedure written by Andrew Kimpton and colleagues at Kimpton and Dhody Dental Practice, 2 Bhylls Lane, Wolverhampton WV3 8DH. The present model protocol was adapted from their document with permission, and NHS West Midlands is grateful to Dr Kimpton for allowing us to adapt his work.

¹ *Access@ dental*, Issue 8, Mar 2010. Primary Care Contracting pcc.nhs.uk/accessdental/issue8/issue8.html

Assessing Risk and Setting Recall Intervals

What NICE says²

Guideline number CG019³, published by the National Institute for Clinical Excellence in 2004, helps clinicians determine appropriate recall intervals for individual patients. The recall interval should be based on the findings of an oral health assessment of current levels of dental disease and the patient's risk of, or from, future dental disease. This assessment should usually be done at the patient's initial visit and reviewed on subsequent re-examinations.

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.

This assessment should integrate the evidence presented in this guideline with the clinical judgement and expertise of the dental team, and should be discussed with the patient.

During an oral health review, the dental team (led by the dentist) should ensure that comprehensive histories are taken, examinations are conducted and initial preventive advice is given. This will allow the dental team and the patient (and/or his or her parent, guardian or carer) to discuss, where appropriate:

- The effects of oral hygiene, diet, fluoride use, tobacco and alcohol on oral health
- The risk factors (see the checklist in Appendix G) that may influence the patient's oral health, and their implications for deciding the appropriate recall interval
- The outcome of previous care episodes and the suitability of previously recommended intervals
- The patient's ability or desire to visit the dentist at the recommended interval
- The financial costs to the patient of having the oral health review and any subsequent treatments.

The interval before the next oral health review should be chosen, either at the end of an oral health review if no further treatment is indicated, on completion of a specific treatment journey. The recommended shortest and longest intervals between oral health reviews are as follows.

Shortest interval – all ages

The shortest interval between oral health reviews for all patients should be 3 months. A recall interval of less than 3 months is not normally needed for a routine dental recall. A patient may need to be seen more frequently when undergoing disease management, ongoing courses of treatment, emergency dental interventions, or episodes of specialist care – however these are not what is meant by an oral health review.

² NICE CG19: "*evidence, methods and guidance*" – Section 5 p40

³ guidance.nice.org.uk/CG19

Longest interval [under 18 years]

The longest interval between oral health reviews for patients younger than 18 years should be 12 months.

Longest interval [18 years and over]

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, or 3, 6, 9, 12, 15, 18, 21 or 24 months if he or she is aged 18 years or older.

Recall intervals for patients who have repeatedly demonstrated that they can maintain oral health and who are not considered to be at risk of or from oral disease may be extended over time up to an interval of 24 months. Intervals of longer than 24 months are undesirable because they could diminish the professional relationship between dentist and patient, and people's lifestyles may change.

Assessing Risk – Risk Factors Summarised

Caries

The most consistent predictor of caries risk is past caries experience (clinical evidence of previous disease).

Caries risk assessment for individual patients can be carried out using information readily obtained at an oral health review. The clinical judgment of the dentist and the ability to combine risk factors, based on their knowledge of the patient and clinical and socio-demographic information is as good as, or better than, any other method of predicting 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.

There is evidence of matrilinear transmission of mutans streptococci in early childhood. Hence, the presence of caries in mothers and siblings is an indicator of increased caries risk for an individual child.

Low socio-economic status is associated with elevated caries levels. Low socio-economic status may be associated with reduced access to care, reduced oral health aspirations and health behaviours that may enhance caries risk.

Regular brushing with a fluoride containing toothpaste reduces caries risk.

Conditions that may compromise the long-term maintenance of good oral hygiene are positively associated with caries risk. These include:

- The presence of multiple restorations and oral appliances
- Physical and mental disabilities which may result in a decreased ability to perform effective oral hygiene.

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.

Long-term regular doses of medications containing glucose, fructose or sucrose may also increase caries risk. Certain medical conditions (for example, Sjögrens syndrome), pharmacological agents with xerostomic side-effects (for example, anticholinergics, tricyclic antidepressants) and head and neck radiation therapy, can lower salivary flow rates to levels that will dramatically elevate a patient's risk of caries

Assessment of caries risk should be repeated every time a patient attends for an oral health review.

Periodontal Diseases

The main risk factors for the development of periodontal disease include the presence of:

- plaque,
- smoking
- diabetes

Untreated periodontal disease is likely to progress faster than treated periodontal disease.

Although poor oral hygiene and plaque accumulation have been shown to correlate positively with gingivitis and the prevalence and severity of periodontal disease on a population level, oral hygiene is a much weaker predictor of periodontal tissue loss at the individual level. Such a paradox might be explained by the contribution of risk factors which will vary substantially between individuals. Smoking is probably the most significant modifiable risk factor for periodontal disease.

Oral Cancer

On average about four people a day die from oral cancer in the UK. The incidence of oral cancer increases with age in both males and females, typically peaking in the seventh to eighth decades of life. An increasing incidence in younger age groups (35- 64 years) has been

recently reported. The incidence of oral cancer in males is around twice that in females in virtually all age groups.

The poor survival rate from oral cancer (50%) is generally attributed to the late diagnosis of oral cancer at an advanced stage when nodal involvement and neck metastases have occurred. It has been consistently reported that there is a prognostic advantage associated with early detection of oral cancer. Early diagnosis allows for treatment with less aggressive therapies that are associated with less morbidity.

The percentage of oral cancers arising from precursor lesions is not accurately known. Potentially malignant lesions include leukoplakia and erythroplakia in varying clinical presentations. The reported rates of malignant transformation of oral leukoplakia in the international literature range from 0.3 to 17.5%. Lesions of leukoplakia on the floor of the mouth, lateral tongue and lower lip are most likely to show dysplastic or malignant changes. Erythroplakia has a high potential for malignant transformation. However, oral cancer can apparently often arise *de novo* from clinically normal mucosa. Vigilance is required for isolated lesions occurring in locations at higher risk for the development of squamous cell carcinoma, such as the lateral and ventral surfaces of the tongue and the floor of the mouth.

Risk factors for oral cancer

Tobacco use (both smoking and smokeless tobacco [*that is*, chewing tobacco, chewing tobacco with betel quid, snuff]) and excessive consumption of alcohol are recognized risk factors in the development of oral cancer (only high levels of alcohol consumption (for example, >55 drinks/week) have indicated significant increases in risk.

A strong association between betel quid chewing and oral cancer and various potentially malignant lesions and conditions (primarily leukoplakia and oral submucous fibrosis) has been established. The addition of tobacco to the quid significantly increases the risk of oral cancer. The habit of betel quid chewing is common in India and South East Asia, Eastern Melanesia and the East African Coast and may persist in UK immigrants from these areas.

Certain dietary deficiencies have been shown to play a role in oral carcinogenesis. Oral cancer patients have histories of diets low in fruit and vegetables (*that is*, a diet low in Vitamin A and C has been associated with an increased risk of oral cancer) Iron deficiency anaemia in combination with dysphagia and oesophageal webs (Plummer-Vinson syndrome) is associated with an elevated risk for development of carcinoma.

Outdoor workers (for example, those involved in farming, fishing and postal delivery) are at greater risk from lip cancer because of long-term exposure to ultra-violet light.

Other Risk Factors for Oral Cancer

Other factors have been associated with an increased risk for oral cancer but evidence is not conclusive on whether the relationship is causal. These factors include:

- Previous carcinoma
- Bacterial and viral infections

- Genetics
- Occupational risk
- Poor oral hygiene
- Mouthwashes with a high alcohol content
- Immune Deficiency

The Risk Assessment Procedure in Theory

According to NICE Guideline No. 19, risk assessment is a three-stage procedure.

1. Identifying risk and protective factors
2. Evaluating the impact of these factors on a patient's oral health
3. Predicting the patient's future risk of disease

NICE also supplies a checklist to use with the three-stage procedure (see later).

1. Identifying risk and protective factors

This involves identifying aspects of the patient's medical and social history and behavioural habits that may impact on their oral health.

The usefulness of some of these factors in assessing a patient's risk may be limited by inaccurate self-reporting of dietary habits, oral hygiene practices, smoking and alcohol consumption.

Many oral diseases are also multi-factorial and it is important to consider the combinations of factors present in a patient rather than individual factors.

2. Evaluating the impact of these factors on a patient's oral health

This involves carrying out a thorough oral examination to determine the patient's past and current disease experience. Past caries experience is the most reliable predictor of future caries experience. However, changes in behavioural and other modifying factors can reduce its predictive power in an individual patient. This emphasises the importance of carrying out a risk assessment to detect any such changes and to evaluate their impact every time a patient attends for an oral health review.

3. Predicting the patient's future risk of disease

This involves integrating all the collected information and using clinical judgement to predict what the patient's future disease experience is likely to be. An appropriate recall interval can then be chosen that is tailored to meet the patient's individual needs. **A conservative recall interval can be assigned initially and progressively altered over time on the basis of the risk assessment performed at each oral health review.**

Factors to consider when deciding a patient's recall interval



Fig 1: Factors to consider when deciding a patient's recall interval

Practice Policy for Setting the Recall Interval

As outlined above, the fundamental recommendations of the NICE dental recalls guidance can be summarised as:

1. The interval between oral health reviews ('recall interval') should be determined specifically for each individual patient on the basis of an assessment of disease levels and risk of, or from, dental disease.
2. Assessment should combine best current evidence with the clinical judgement and expertise of the dental team, and should be discussed with the patient.
3. At each oral health review, an appropriately qualified member(s) of the dental team should ensure that a comprehensive history is taken; an examination conducted, and initial preventive advice given. This will allow the dental professionals and the patient (or parent/guardian etc) to discuss the recommended interval and the risk assessment that it has been based on.

In addition to the recommended interval being discussed with the patient, good practice requires that this discussion should be documented, and that the patient's agreement (or otherwise) should be recorded in the contemporaneous record-keeping system.

The recall interval should be reviewed again at the next oral health review, to enable monitoring of the patient's responses to the oral care given and the health outcomes achieved. This should be used to adjust the recall interval chosen next. Consequently, patients should be advised that recall interval may vary over time.

The practice will aim, ultimately to demonstrate that 90% of its patients who have had oral health reviews in the last two years, have had a recall interval set and if possible, agreed with the patient. The NICE Recall Interval Guidance recommends that clinical audit should be used to show that this is happening, and proposes the following criteria for audit.

1. At the end of each oral health review there is a record for each patient of an assessment of disease and disease risk.
2. At the end of each oral health review, or at completion of treatment, there is a record for each patient of the recall interval recommended by the dentist for the next oral health review.
3. The interval agreed each time, for each patient is 3, 6, 9 or 12 months for patients younger than 18 years, or 3, 6, 9, 12, 15, 18, 21 or 24 months for patients aged 18 years or older.
4. A record exists of the recommended interval being discussed with the patient. Where there is disagreement between the dentist and the patient over the recall interval, the reason for this is recorded.

Practice procedure — Anytown Dental Practice

Note – this model policy can be locally customized – option points for customisation are flagged ✘.

Suggested model	<i>Options for local customisation</i>
Practice staff and dentists have received preparatory training on adopting NICE Guidelines in the practice.	✘ <i>“will receive” — if practice is in the preparatory phase</i>
<i>Definition of ‘Oral Health Review or Assessment.’</i> Recall intervals do not need to be set except at start of a full course of treatment. “Urgent Band 1” treatments do not trigger setting of a recall interval.	
An oral health review will be done at the first visit of any planned full course of treatment.	✘ <i>A practice may opt to defer all or part of the assessment until near the end of the course of treatment as this may assist to judge risk better.</i>
A detailed medical and dental history will be taken at this time to provide the additional information needed for the assessment.	✘ <i>Collection of some history may be delegated to properly trained support staff, perhaps using specially designed questionnaires.</i>
The basic approach to the assessment will be that shown in Fig 2 overleaf.	
The factors summarised above will be used, and will be combined with clinical judgement to arrive at the assessment of risk of or from dental disease.	✘ <i>Or “summarised in NICE Clinical Guideline 19: Dental Recall; Appendix E, pp 23-38”.</i>
The recall interval will be recorded in the notes	✘ <i>Or, a custom screen, if provided by practice management software may be used.</i>
The discussion of the dominant risk factors and the interval recommended will be recorded in the notes.	
If the patient disagrees with the recommendation, an attempt will be made to understand why. The reason will be recorded in the notes.	

Suggested model	Options for local customisation
The practice will have a policy for resolving problems arising due to disagreements over the recall interval.	✘ This may include (for example) a policy on private charging for more frequent recalls than advised; or for a second dentist in the practice to offer a “second opinion”
The practice will conduct a clinical audit of its (compliance) (success) NICE recall guidance interval	✘ A report of the audit results will be sent to the PCT. If the figure falls below 80% after the introductory phase, an action plan will be developed to improve performance.

Fig 2: Overview of how the interval before recall interval is set.

Overview of how the interval between oral health reviews is set		
	Children and young people If the patient is younger than 18 years	Adults If the patient is 18 years or older
Step 1	<ul style="list-style-type: none"> Consider the patient's age; this sets the range of recall intervals 3 months ↔ 12 months	3 months ↔ 24 months
Step 2	<ul style="list-style-type: none"> Consider modifying factors (see checklist on page 2) in light of the patient's medical, social and dental histories and findings of the clinical examination 3 months ↔ 12 months	3 months ↔ 24 months
Step 3	<ul style="list-style-type: none"> Integrate all diagnostic and prognostic information, considering advice from other members of the dental team where appropriate Use clinical judgement to recommend interval to the next oral health review 3 months ↔ 12 months	3 months ↔ 24 months
Step 4	<ul style="list-style-type: none"> Discuss recommended interval with the patient Record agreed interval or any reason for disagreement discussion	discussion
Step 5	<ul style="list-style-type: none"> At next oral health review, consider whether the interval was appropriate Adjust the interval depending on the patient's ability to maintain oral health between reviews reassessment	reassessment

✘ Option: Add...

Practice name/author ✘

Document date ✘

Document revision number ✘

Date for next review ✘

Appendix A: NICE CG19 checklist of factors to assess dental disease risk (simplified)

Checklist – risk factors to consider in assessing risk of and from dental / oral disease							
Simplified from – Nat, Institute of Clinical Excellence, CG019 [October 2004], p101.							
Patient Name					DoB		
					Ref.		
Date					1	2	3
		YES	NO	YES	NO	YES	NO
Medical history	General conditions where dental disease adversely puts health at risk , e.g. - c.v. disease; bleeding disorder; immunosuppression						
	General conditions which increase risk of developing dental disease , e.g. diabetes, xerostomia						
	General conditions that complicate dental care or patient's self-care , e.g. special needs, anxiety/phobia						
Social & family history	High caries in mother and/or siblings						
	Tobacco use						
	Increased alcohol use						
	Family hist of periodontitis (chronic, aggressive, juvenile etc)						
Dietary habits	High and / or frequent sugar intake						
	High and or frequent dietary acid intake						
Fluoride	NOT USING fluoride toothpaste						
	NO KNOWN other ongoing sources of F ⁻ (e.g. water fluoride)						
Recent & past caries exp.	New decay lesions recently/since last check up						
	Anterior decay and restorations						
	Premature extractions resulting from decay						
	Past root caries, or large number of exposed root surfaces						
	Heavily restored dentition						
Periodontal disease	Previous history of periodontal (gum) disease						
	Gingivitis of clinical concern						
	Presence of periodontal pockets (BPE 3 or 4) and /or bleeding on probing						
	Periodontally involved root furcations or advanced loss of gum attachment (BPE code * used when loss ≥ 7 mm \pm furcation involvement)						
Mucosal lesion	Soft tissue lesions of clinical significance						
Plaque saliva and erosion	Level of oral hygiene raises concern						
	Low salivary flow rate						
	Toothwear noted of clinical significance						
Outcome	Yeses and No's (number of)						
	RECOMMEND RECALL INTERVAL: MTHS						
	RECORD IF PATIENT DISAGREES with recommended interval and document in clinical records						