NHS dental contract pilots - Care Pathway Review

A report by the dental contract pilots clinical pathway review group

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NHS dental contract pilots – Clinical pathway review after one year

A report by the dental contract pilots clinical pathway review group

Prepared by Eric Rooney, Consultant in Dental Public Health

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Foreword

Over the last year there has been much interest and discussion within the profession about the new contract pilots and the clinical model which is being used.

The report of the Evidence and Learning group published in October 2012 showed widespread support amongst pilot practices and patients for the general approach- a clinical pathway which promotes a standard oral health assessment, identification of need and disease risk and evidence based prevention for patients. Although the concept is well supported, the report highlighted the need to review this clinical pathway approach with a view to improving the efficiency of the process whilst maintaining the underlying principles.

This report covers the detailed work, predominantly undertaken by clinical colleagues from pilot practices, to review the current clinical pathway. It makes recommendations for changes to be implemented as the pilot program rolls forward into 2013.

The recommendations come from the practical experience of pilot practitioners in the first year and the majority are straightforward, pragmatic and can be implemented quickly. Work is already underway to amend the pilot software to achieve this. The outcome should be a more personally focussed approach to patients focussing only on their personal risks and the way in which they wish to manage them. This in turn should lead to fewer interim care management (ICM) appointments booked, and fewer broken appointments increasing the efficiency of the pathway approach.

Recommendations in relation to the appropriate intervals for disease specific reviews and full oral health reviews challenge current custom and practice and require further development and wider stakeholder discussion.

In the spirit of continuous improvement and development, the impact of the recommendations and the revised clinical pathway should be reassessed as part of the ongoing pilot programme.

I am grateful for the enthusiastic participation of the practitioners and others involved in the clinical pathway review and hope you will find this report of our work informative, leading to greater insight into the clinical aspects of the pilot programme

Eric Rooney

Chair of Pathway Review Group

Background

The Clinical Pathway Review was established as part of the ongoing development and refinement of the ideas being tested in the Dental Contract Pilot Programme.

The pilot programme is testing ideas for a new contract based on registration, capitation and quality and although there are three different approaches to the capitation aspects being tested, the clinical service offered to patients is common to the three pilot types.

The clinical service aims to provide high quality clinical care appropriate to the needs of individual patients. As the most common dental conditions (tooth decay and gum disease) are largely preventable, there is an emphasis on prevention and patient self care within the clinical model.

There is considerable evidence[1] to support specific preventive interventions, either by dentists and their teams or by patients themselves. Additionally, guidance also exists regarding appropriate periods for routine recall of patients based on risk[2]. Given this background, a clinical pathway approach is being used to guide pilot clinicians in the delivery of needs led, outcome focussed primary dental care.

The clinical pathway currently being used in the pilots was developed using a consensus methodology over two workshops. These took place in October 2009 and February 2010. The approach adopted built upon on the innovative work of clinicians and commissioners who had been independently developing need/risk based pathways in different parts of the country. Workshop participants included primary care clinicians – some with clinical pathway experience – specialists and consultants, clinical academics, representatives of the British Dental Association, patients and NHS commissioners.

Prior to starting the pilots, clinical training supported by those dentists with experience of working with clinical pathways was provided to all pilot practices.

Going forward any progress on information systems for a new contract that will include the underpinning clinical pathway software will take into account the Government's May 2012 overall information strategy for health and care in England – *The power of information*.

[1] Delivering Better Oral Health An evidence-based toolkit for prevention - second edition, July 2009 (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_102331)
[2] Dental recall - Recall interval between routine dental examinations, October 2004 (http://guidance.nice.org.uk/CG19)

The clinical pathway

The clinical pathway begins with a comprehensive oral health assessment which includes

- Gathering key clinical findings and personal information related to the following four main causes of poor oral health:
    - dental caries (tooth decay)
    - periodontal disease (gum disease)
    - tooth surface loss (worn down teeth)
    - conditions affecting the soft tissues of the mouth, for example oral cancer
- Identifying the degree of risk of these conditions occurring, or of the conditions progressing.

Based on this information, the pathway guides clinicians to provide patients with a preventive care plan indicating their risk using a red amber green (RAG) traffic light system. The care plan provides a platform for communication with patients and assists in the transfer of responsibility for patient self care. It includes

- personally tailored advice to patients on their oral health status and the preventive actions they need to take to improve their own oral health
- information about preventive actions recommended by the dental team - for example, fluoride varnish applications every three months, referred to as interim care management (ICM)
- suggested timing for the next oral health review (recall interval)

Figure 1 – The clinical pathway

The clinical pathway acts as a decision support system to help clinicians to offer and deliver the most effective evidence based care. Clinicians are expected to use their clinical skills and judgement in matters of diagnosis and treatment planning to deal with the four conditions, as previously listed, and any others.

Within the pilot programme, there are several advanced care pathways that use information from the oral health assessment to help guide clinicians take decisions on the appropriateness of treatment in the following areas

- endodontics (root canal treatment)
- periodontal care
- indirect restorations (crowns and bridges)
- metal based partial dentures

These advanced care pathways were not covered within the review, and consequently no comments or recommendations relating to them appear in this report.

To support the delivery of the pathway, all pilot practices use software provided by one of three dental software companies.

A separate software review has taken place and, as a result, the majority of the recommendations in this report will require IT adaptations.

Reviewing the clinical pathway

The review of the clinical pathway took place during July and August 2012. It was chaired and facilitated jointly by Eric Rooney – Consultant in Dental Public Health and facilitator of the original Clinical Pathway development workshops – and Rob Haley, a senior manager with Primary Care Commissioning (PCC) who previously worked in the capacity of commissioner in the early innovative pathway work that took place in the North West

A reference group was established to guide the review and to ensure that inter- dependencies with other aspects of reviewing the pilot programme could be identified. At the same time a working group comprising of 17 pilot clinicians from 14 practices was also established.

A full list of participants can be found at Appendix 1 of this report.

Terms of reference

The purpose of the review was to develop recommendations for consideration by the National Pilot Steering Group with the aim of:

- reviewing the utility of the pathway with clinicians involved in the pilots
- improving and simplifying the clinical pathway approach whilst maintaining the concept of identifying need and risk, and delivering personalised evidence based care
- increasing the efficiency of the pathway approach to help deal with the impact on the availability of patient appointments seen in the first year of the pilots

Method

During the review, the reference group met three times and the working group met twice, in the form of two one-day workshops. At the first workshop, and following initial background briefing on the development of the clinical pathways, the working group members were asked to look at the following three areas:

- the overall pathway and its applicability
- the four key conditions and their assessment of need and risk
- the actions advised for the patient and the dental teams

Participants were asked to identify what works well, what does not, and what could be changed to make the pathway more effective and efficient.

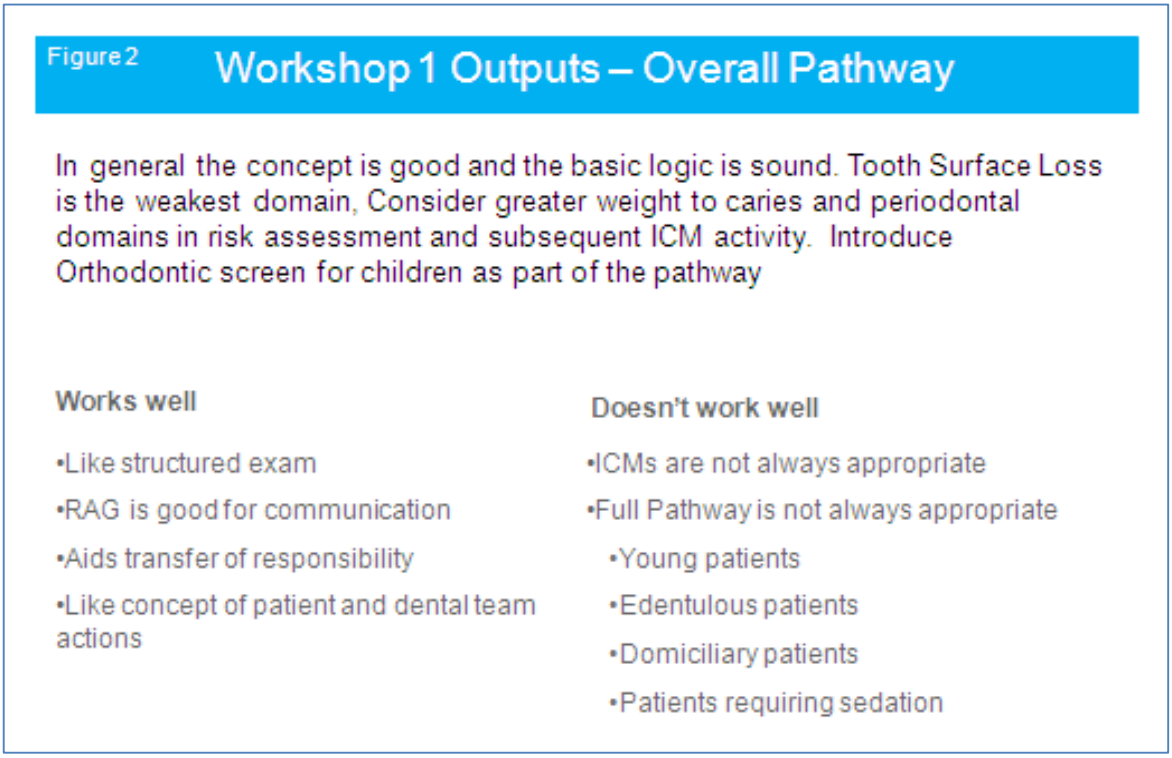
On the basis of the outputs from the first workshop – plus further information gained from two subsequent regional engagement events – the Reference Group formulated some initial suggestions for amending the pathway in each of the three areas.

These suggestions were then used as the basis for discussions in the second workshop to develop and agree final recommendations for inclusion in this report.

Results

The following figures highlight the main conclusions from the first workshop. Figure 2 shows the agreed views on the overall pathway and its applicability.

Figure 2



Figures 3-6 show the agreed conclusions reached on each of the clinical conditions (clinical domains) covered in the pathway.

Figure 3

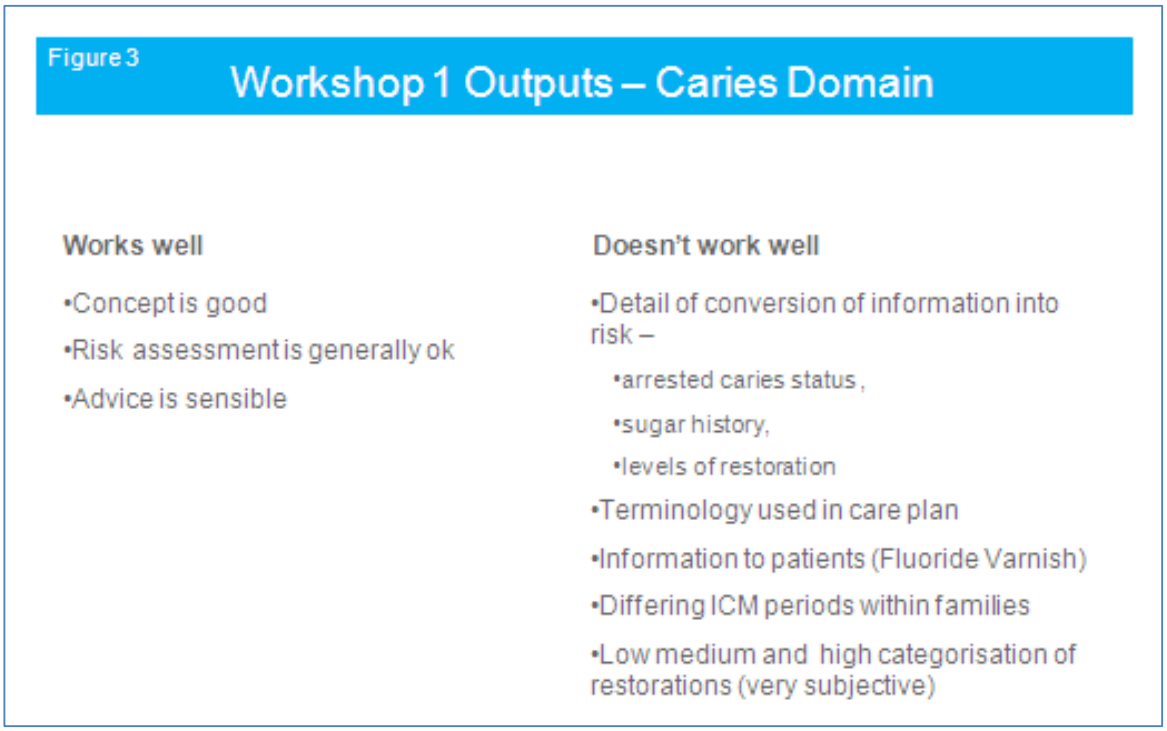


Figure 4

Workshop 1 Outputs – Periodontal Domain

Works well	Doesn't work well
•Advice for patients	•Risk is not always appropriate
•Interim Care Management times	•Risk advised in older adults
	•Some confusion over when to scale
	•Limit of pure brushing technique rather than inclusion of other oral hygiene measures

Figure 5

Workshop 1 Outputs – Soft Tissue Domain

Works well	Doesn't work well
•Important to keep – high impact in relation to early diagnosis of oral cancer	•Mouth maps in some software systems
•Advice to patients	•Alcohol trigger level-
	•What is the evidence

Figure 6

Workshop 1 Outputs -Tooth Surface Loss Domain

Works well	Doesn't work well
•Raises awareness	•Weakest domain
	•Complexity of measure
	•Accounting for age in risk assignment
	•Frequency ICMs in red risk patients
	•ICMs for amber patients
	•Terminology used in the patient care plan

Following workshop 1, some of the ideas generated for change were tested at the North West and North East Regional engagement events, where additional comment on the current pathway was also sought.

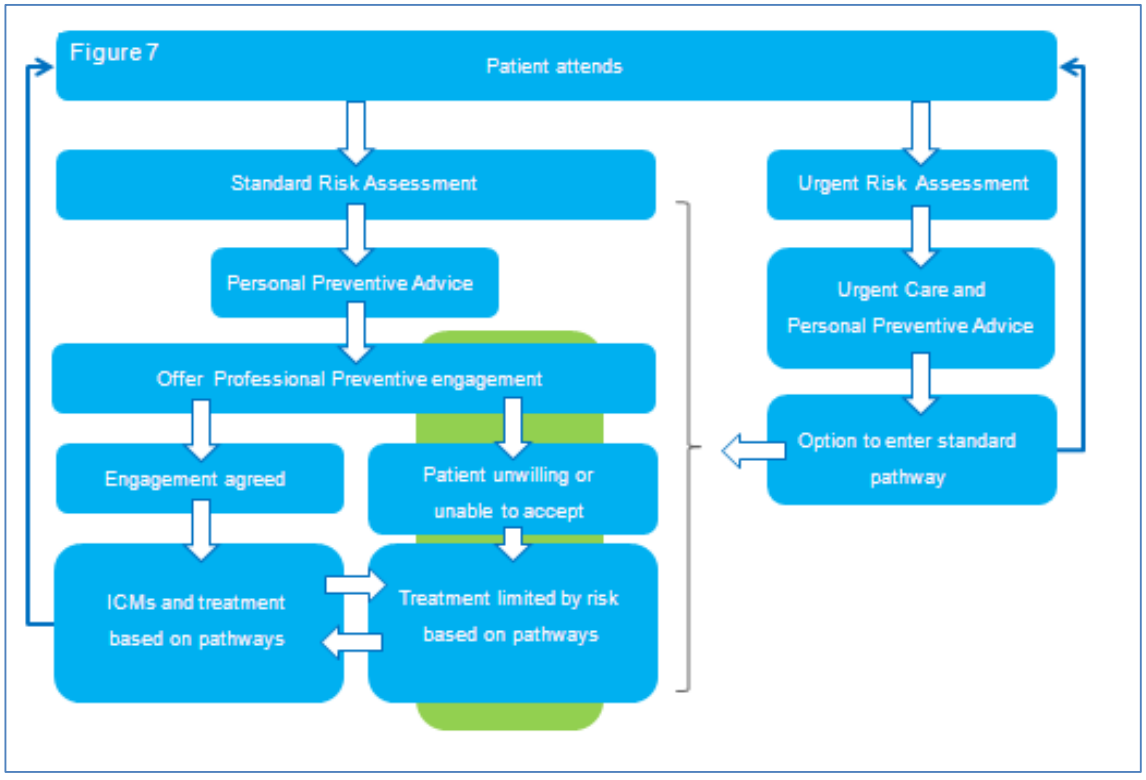
Revision of the overall pathway and changes proposed to risk assignment were generally welcomed. Wider comments from these sessions along with comments from the review group are included in “other issues” section later in report.

During the second workshop, participants reviewed the changes proposed at the first session and achieved consensus on the following recommendations.

Recommendations

- **Agreeing the approach with patients - revise the pathway to provide an option for patients who are currently unwilling or unable to accept the offer of professional preventive activity**

The group identified that a considerable amount of appointment time is currently being lost as a result of failure to attend by patients who have not bought into the concept of prevention. Whilst offering and encouraging patients to develop preventive behaviours, it was felt important to accept that some patients may not want to take up this offer and that this view should be accommodated within the pathway. Figure 7 shows the additional branch recommended within the pathway, recognising that at any time patients may change their position. It is expected that the clinical record will reflect the agreed approach to be taken. The green coloured background to this recommendation shows that this is expected to increase the efficiency of the pathway and make it more acceptable both to patients and professionals.



- **Software improvements to allow flexibility**

It became clear during the workshops that the way in which the pilot software currently works makes it difficult to see a patient for unscheduled activity – either during a course of treatment, or in the period between the end of a course of treatment and the next planned oral health review – without undertaking a full oral health assessment. As this is not always required,

streamlining the software to permit this would allow for a more efficient approach whilst maintaining patient safety and effectiveness.

There are difficulties in amending a patient's risk status, should information change during the patient's course of treatment. For example, a recent medical diagnosis may change a patient's risk for a particular dental disease. This is not currently possible without redoing the whole oral health assessment.

The working group also felt that attention needs to be given to ensuring that the original information collected during the oral health assessment is available pre- populated at the oral health review stage rather than having to re-enter it.

- **Applying the clinical domains of the pathway selectively**

Currently the oral health assessment is applied in its entirety to every patient entering the pilot programme. Whilst it is important that every patient receives an assessment, the clinical disease areas (domains) should be more appropriately applied. For example, it makes no sense to go through completion of the periodontal or caries risk assessment for patients who are edentulous. Although clinicians would like to do this, the software is currently not flexible enough to accommodate this and there is at present no guidance to clinicians about which domains should be applied when.

Figure 8 shows the areas of the pathway where applying the domains selectively on the basis of patient need would improve efficiency. Figure 9 shows the suggested application of the domains in certain circumstances, including the addition of an orthodontic screening assessment. While this is something which would marginally increase the time taken for the assessment, it would improve its quality and effectiveness. The suggested changes have been colour coded (red to show those which will add time to the assessment and green for those that will reduce the time) showing that the suggested approach will predominantly increase efficiency.

Thinking about the oral health assessment in terms of its clinical domains and their applicability led the working group to reconsider the issue of timing for oral health review.

Until now we have considered the oral health assessment, and the domains within it, to be a single composite activity which guides the interval for oral health review, based on the time suggested for the highest risk clinical domain.

An alternate way of approaching this is to recognise that we are in fact carrying out four separate disease need and risk assessments, and identifying the most appropriate time for review for each separately. When thought of in this way, it allows consideration of a potentially much more efficient approach.

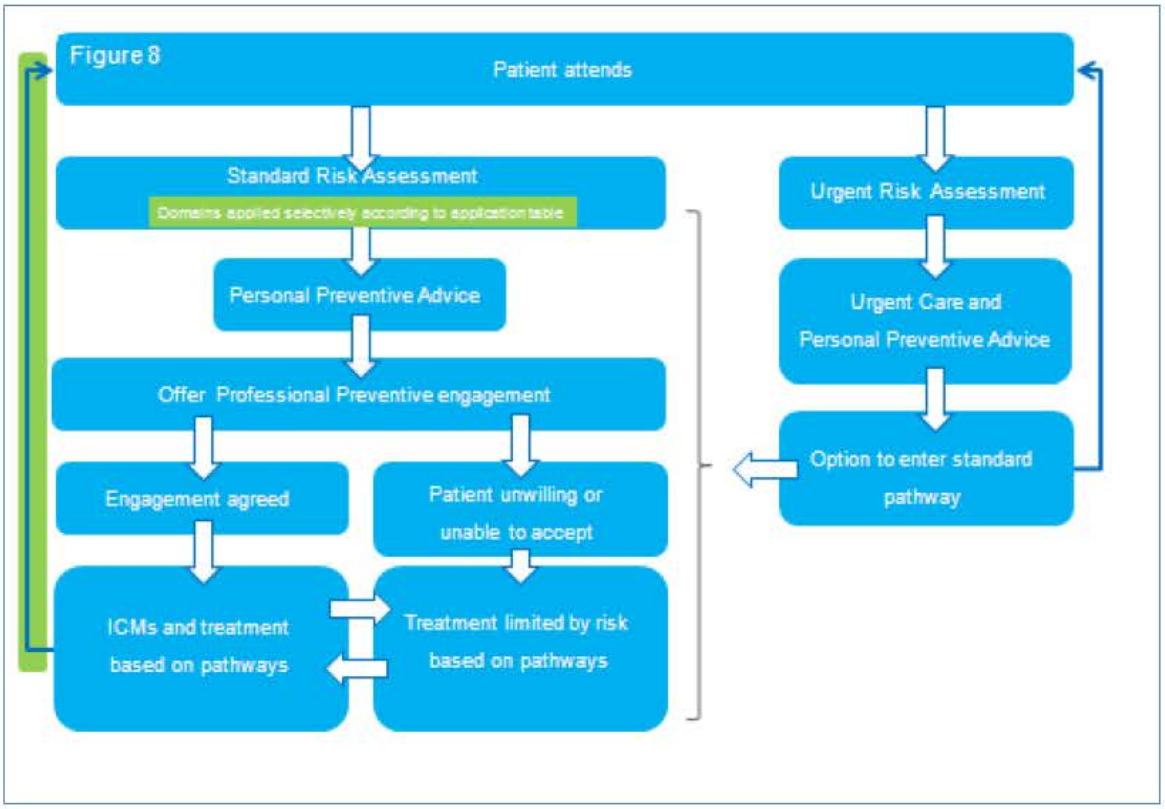


Figure 9

Recommendations – Application

	Caries	Perio	TSL	Soft Tissue	Ortho
Age under 3	yes	no	no	yes	no
Age 3-6	yes	yes	no	yes	no
Age 7-17	yes	yes	yes	yes	yes
Age 18+	yes	yes	yes	yes	no
Edentulous	no	no	no	yes	no
Unscheduled had assessment	no	no	no	no	no
Unscheduled not had assessment	yes	yes	yes	yes	Yes (age 7 -17 only)
On referral	no	no	no	no	no

Figure 10 shows a possible scenario where the patient is at high (red) risk only in the caries domain, while at low risk in the other domains. Currently we take the shortest risk period and undertake a full risk assessment at six months based on the caries risk – even though we are content that the other domains do not need assessing for two years (Ref blue box in figure 10). A more logical approach would be to apply only the caries review formally at the six month intervals – and review the other domains at appropriate intervals specifically applicable to them as previously planned. (Ref green box in figure 10).

A further development of this thinking is to consider, as NICE have done, that the maximum time interval for oral health review is 12 months for children and 24 months for adults, and to set this as the default time for a comprehensive (all 4 domain) review, only undertaking domain specific reviews at shorter intervals determined by disease specific risk.

This approach challenges the tradition of the all-encompassing dental examination. Further work is required to carefully determine the purpose and nomenclature of domain specific reviews taking place in between comprehensive reviews in order to understand the ethical and medico legal aspects of this recommendation.

Despite this, this approach is worthy of further detailed work as there are considerable benefits to the effectiveness and efficiency of the pathway model for patients and for pilot practices.

- **Revision of need/risk assessment and suggested preventive activities including interim care management**

A number of detailed issues within each clinical domain were identified in the first workgroup meeting under the heading “what doesn’t work well”. The underlying information, risk assignment and suggested actions associated with these were reviewed by the reference group. Suggested amendments to the large matrix, which is the reference for these, were circulated by email to the whole group. These were further worked on at the second workshop and the recommended changes to the matrices are shown in the following Figures 11-17.

For each clinical domain, changes are split into those that relate to the risk assignment method and those that are about the advice or interim care management aspect of the pathway. Changes which will improve effectiveness and efficiency are shown in green, those which will improve effectiveness but have little impact on efficiency are shown in grey, and those which will increase effectiveness but add time are shown in red.

Figure 11

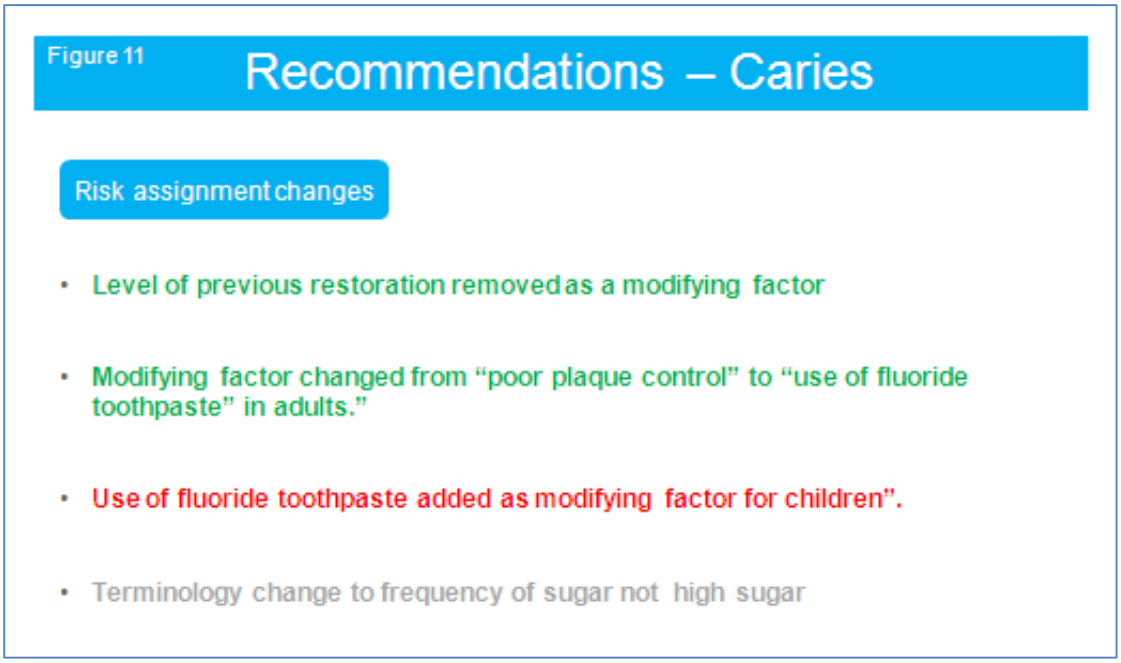


Figure 12

Recommendations – Caries

Advice or ICM changes

- For adult patients free of caries ICMs removed
  (previously ICMs 6/12 based on modifying factors and age)
- For adults with arrested caries ICMs removed
  (previously ICMs 6/12 based on modifying factors and age)
- ICMs for children aligned on 3 month appointments
  (to simplify coordination of family appointments around 3, 6. 9. 12, 18 and 24 months)

Figure 13

Recommendations – Periodontal

Risk assignment changes

- Clearer definition of plaque levels
- Patients with diabetes – definition clarified

Figure 14

Recommendations – Periodontal

Advice or ICM changes

- For patients with green clinical findings (no sextant with a BPE of 2 or more except the lower anteriors) ICMs removed
  (previously ICMs 6/12 or 12 months based on modifying factors)

Rationale – there are no evidence based professional preventive actions, only those in the direct control of the patient ie toothbrushing

Figure 15

Recommendations – Tooth Surface Loss

Risk assignment changes

- Removal of crown height measurement
- Rationale - Currently complex, now freedom for clinician to judge if TSL is a problem or age appropriate

Figure 16

Recommendations – Tooth Surface Loss

Advice or ICM changes

- For all cases of tooth surface loss, ICMs removed
  (previously ICMs 6/12 or 4/12 based on "moderate or excessive")
- For patients with "normal" wear recall extended to 24 months
  (previously 18 months)

Rationale - ICMs are about prevention and monitoring. Evidence for prevention is not strong, and progress of TSL is slow

Figure 17

Recommendations – Soft tissue

- No changes recommended to the soft tissue matrix

Other issues

Throughout the course of the workshops, several issues which were not strictly part of the terms of reference were discussed. While these were not about the detail of the clinical pathway, they have an inherent bearing on the way the pathway has been delivered in year one of the pilot programme.

- **Software**

One of the most commonly occurring issues in the discussions was the way in which the software is currently configured, resulting in inefficiencies in pathway delivery. It was considered necessary to be able to revisit and amend the information-gathering screens and domain risk assessments in order to allow for flexible and more efficient operating systems within the dental practice environment.

It is recognised that the software currently in use has been developed mainly on previous systems which were not intended to support a care pathway approach and further efficiency gains may be achieved through fundamental redesign.

- **Using skill mix**

Workshop members with experience of using the pathway approach identified that elements of the pathway fall within the scope of practice of other members of the dental team. The clinical pathway has supported and reinforced the application of Delivering Better Oral Health guidance. Some practices already had a skill mixed workforce prior to joining the pilots and this has made implementation easier. Other practices would be prepared to introduce this to facilitate more efficient delivery – but the key to moving in this direction was their need for a degree of assurance from the Department of Health that the pathway approach and the focus on prevention would be the clinical approach required in any new contract.

- **Cultural change and training**

In discussing the move to either further piloting or a national rollout of a revised clinical pathway approach, the group identified that training is a major factor in the implementation of such a change, and that priority needs to be given to this aspect. It is important that training is not only aimed at dentists, either providers or performers, but that the whole dental team within the practice is involved in understanding the cultural and operational changes required to ensure a smooth transition.

As an option to help develop this, the group felt that more sharing of innovation and efficient practice arrangements around the pathway would help both the existing pilot practices, and also any others wishing to adopt this pathway model.

One of the suggested ways of addressing this was the development of a clear set of supporting guidelines which included not only the details of the pathway, but also the learning from the first year of the pilots on practical arrangements and organisation.

Topics covered might include the extent of planning required before starting to deliver this model of care, the importance of the whole practice team understanding the approach and hints and tips on how the practice might adapt its arrangements to facilitate efficient implementation and delivery.

Given the changed focus towards considering the needs of the whole practice population, it was felt that it would be beneficial to include in the NHS Dental Services reports for practices, a summary of the needs and risk profile for the whole practice population rather than just individuals.

- **Relationships with other policy aspects**

The group identified that the pilots are currently running with the generic NHS dental charging system and recognise the importance of this in terms of equity for patients within and outside of the pilot programme. They did, however, note that patient behaviours may be influenced by the charging system and that this needs to be considered in the design of a new charging system to support a new national contract.

Although this review was not concerned with the advanced care pathways, the group recognised that the pathways considered here are the first step in the continuum towards advanced care if the patient needs it. Within the pilot, dentists carry out elements of advanced care and record the level of care if they make a referral. Each advanced care pathway identifies three levels of competency for different clinical procedures

The group felt that as we move towards a new contract model based on capitation, registration and quality, clear definitions of the levels of care to be delivered within the new contract capitation envelope need to be specified. This is important for dental providers and commissioners to ensure clarity in operating the new contract, and for patients in terms of their understanding of the NHS dental offer

Appendix 1: Members of the clinical pathway review group

Membership of Clinical Pathway Review Reference Group

Eric Rooney (Co-Chair)	Consultant in dental public health
Rob Haley (Co-Chair)	DCR programme – Project support
Anousheh Alavi	Scientific affairs manager, UK & Ireland (Colgate)
Jane Moore	GDPC executive (BDA)
Colette Bridgman	Consultant in dental public health (NHS Manchester)
Professor Paul Brunton	Professor of Restorative Dentistry (University of Leeds)
Ruth Gasser	Head of dental policy (NHS BSA DS)
Sue Gregory	Deputy Chief Dental Officer (DH)
Serbjit Kaur	Head of dental quality & standards (DH)
Duncan Thomas	Dentist (Amble Dental Practice (Pilot site)
Helen Miscampbell	Head of dental strategy (DH)
Daisy Wild	Data analysis lead (DH)
Wendy Crew	DCR Programme - Project support
Angela Moon	DCR Programme - Project support
Natasha Dogmetchi	DCR Programme - Project support

Membership of Clinical Pathway Review Working Group

Eric Rooney (Co-Chair)	Consultant in Dental Public Health
Rob Haley (Co-Chair)	DCR programme – Project support
Stephen Owen	Dentist (S Owen & Associates (Pilot site))
Duncan Thomas	Dentist (Amble Dental Practice (Pilot site))
Richard Ablett	Director (Integrated Dental Holdings)
Steve Wright	Dentist (Thornhedge Dental Practice (Pilot site))
John Rayner	Dentist (Rayner Dental Practice (Pilot site))
Alison Rayner	Dentist (Rayner Dental Practice (Pilot site))
Stephen Denny	Dentist (Benfleet Dental Clinic (Pilot site)
Shani Kalsi	Dentist (Lancaster House Dental Practice (Pilot site))
Sandra Whiston	Specialist registrar in dental public health (NHS North Yorkshire & York)
Abhi Pal	Dentist (University Dental Centre (Pilot site))
Sukhinder Singh Atthi	Dentist (Hillbrook Dental Health Centre (Pilot site))
Stuart Hemsley	Dentist (Hemlington Dental Surgery (Pilot site))
Caroline Hemsley	Dentist (Hemlington Dental Surgery (Pilot site))
Kulvinder Nijjar	Dentist (Valley Dental Care (Pilot site))
Onkar Dhanoya	Dentist (Stanley Dental (Pilot site))
Mark Nanda	Dentist (The Smile Centre (Pilot site))
Harj Basra	Dentist (Station House Dental Practice (Pilot

	site))
Sue Gregory	Deputy Chief Dental Officer (DH)
Helen Miscampbell	Head of dental strategy (DH)
Serbjit Kaur	Head of dental quality & standards (DH)
Professor Paul Brunton	Professor of restorative dentistry (Leeds University)
Natasha Dogmetchi	DCR programme – Project support
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