

# NHS dental contract pilots - Early findings

*A report by the dental contract pilots  
evidence and learning reference group*

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# NHS dental contract pilots - Early findings

*A report by the dental contract pilots evidence and learning reference group*

Prepared by Professor Jimmy Steele

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# Executive summary

This report is the first to present data from the NHS dental contract pilots, which commenced in July-September 2011. It is authored by the Dental Contract Pilots Evidence and Learning Group, an independently led group of stakeholders and experts set up to oversee the analysis and presentation of the data generated for the dental contract pilots run by the Department of Health. The membership of the group and its terms of reference can be found in Appendix 1.

# Introduction

In the Coalition Agreement, the government committed to introducing a new NHS dentistry contract that would focus on achieving good oral health and increasing access to NHS dentistry, with a particular focus on improving the oral health of schoolchildren (The Coalition – our programme for government, May 2010). There is, though, a considerable distance to travel between high level policy intention and the operational detail of an entirely new contractual system for 8500 dental practices, affecting tens of millions of individual patients, as well as a myriad of other stakeholders, in the process. In December 2010, the Department of Health announced proposals for dental contract pilots based on registration, capitation and quality (NHS Dental Contract: Proposals for Pilots, December 2010) with the pilots intended to inform the design of a final contract and its implementation.

## Context

With nearly £3bn of public money spent on NHS dentistry annually in England (Department of Health Annual Report and Accounts 2010-11), both through state support and NHS charges to individuals, the government and all of the professionals who work in NHS dentistry have a responsibility to ensure that this resource is used efficiently and in the best interests of patients. In 2009, 31.7 million adults in England said they had seen a dentist within the last two years, most within the last year, representing 82% of all adults. For 70% of adults, the most recent contact had been with an NHS dentist (Adult Dental Health Survey 2009). For children, the overwhelming majority of exposure to dental services is through the NHS.

Given the frequency with which people come into contact with NHS dental services, NHS dentistry is rightly a subject of considerable public interest and scrutiny. It has been subject to review on several occasions, most recently an independent review in 2009 which advised a redirection of emphasis focused on the maintenance and improvement of oral health, rather than a service preoccupied with provision of reparative interventions. It was also recognised that patients need to be enabled to take greater ownership of their own oral health.

The need for such a change reflects not just the experience of the profession but also a profound change in the oral health of the population (Children's Dental Health Survey, 2003; Adult Dental Health Survey, 2009), a profound change which has not been matched by changes in the structure of services. The contractual change for NHS dental practices in 2006 was an important step as it moved dentistry to a commissioned service, but it did not deliver the change towards a risk and prevention based approach to care that the profession and the Department recognise is now appropriate.

The structure of the dental contract and means of remuneration are undeniably critical in determining how care is delivered. Specifically, the external motivations of remuneration, charges and contract monitoring would benefit from being aligned with the professional motivations of the dental team, built on providing appropriate care and preventing disease by managing risk where possible.

## What are the pilots?

It is important to be clear what the pilots are and what they are not. Primarily, they are about developing a model of care that is appropriate to maintaining the oral health of the population of England and improving oral health rather than simply paying for treatment. Of course, this needs to be underpinned by a system of contracts and payments that aligns with this higher health aim.

There are three slightly different sets of pilot arrangements (see Appendix 2) but all share the common features of being capitation based, of having a quality element, of conferring a responsibility for long term care of the patient on the contract holder and of being based on an oral health assessment and pathway. The differences are subtle and lie in the means of remuneration. The assessment and pathway is fundamental to the running of the pilots and their evaluation and the pathway is illustrated in Appendix 3. The oral health assessment (OHA) is the first stage of the pathway and is a fundamental step. It comprises a structured history and examination of the patient which is usually rather more detailed and time consuming than a conventional check-up and includes a calculation of the level of disease risk for the patient.

None of the pilot arrangements is simply a “dry run” for a definitive contract; in other words, the final remuneration arrangements will not necessarily look exactly like any of the three basic pilot types. The stated intention of the Department of Health is to learn from all three in designing a definitive contract.

Secondly, the arrangements within the pilot are not absolutely fixed. There are so many complexities and uncertainties in making such a transition that the pilot scheme has to be responsive if learning is to be maximised. So if an important element is too complex or confusing and all practices are struggling to get it to work, then there needs to be the ability to make adjustments during the pilots and there is the clear intention to do that where necessary, based on emerging findings. It has to be, and is, an iterative process and this report is the first point at which data are available to allow such changes to be made.

The pilot arrangements also have to be flexible enough for practices to be able to make their own decisions about how to run their businesses. This is particularly challenging because the pilots are presently time limited and so the ability to make important decisions, for example about workforce, is necessarily inhibited by uncertainty about the future contract. Along with the fact that patient charges cannot currently, by law, be changed for a specific set of patients (i.e. those being seen in pilot practices) this limits to some degree the ability fully to simulate the outcomes if a new contract were to be introduced. This needs to be taken into account in decision making.

Finally, the pilots are not an attempt to conduct a clinical trial. A clinical trial of one contractual arrangement against another would allow the objective assessment of clinical outcomes, costs and benefits and potentially a very high level of evidence for policy decision making. However, there are a number of reasons why a clinical trial is simply not feasible. These include the



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difficulty in defining a single primary outcome measure; the huge heterogeneity of practice types and how this would impact our ability to generalise the findings; the ability of practices to accept randomisation; and the difficulty in controlling practice costs. The requirements for iterative adjustment and flexibility, the different governance requirements and the difference between political and research timescales also mean that a clinical trial approach would be unworkable.

This is the context in which the pilots are running. Decisions will need to be made on the balance of evidence, some of which may be conflicting, but there is a wealth of evidence available. If the process is as open as is feasible, then the accountability around decision making will be more transparent, even if some decisions are not universally popular.

# Methods

Seventy pilot practices commenced new arrangements between July and September 2011. These were selected from over 500 expressions of interests following an invitation for applications in December 2010.

The approach taken to pilot selection was to draw a purposive (rather than a random) sample of those who applied. This meant that a range of practices could be represented with respect to the following factors:

- Geographic location
- Size
- Practice population demographics
- Practice ownership (independent dentists, partnerships, dental body corporates)
- Skill mix
- Current remuneration in comparison to expected remuneration under a national weighted capitation model

Whilst representing a broad range of practice types and a huge diversity of patients allows learning to be maximised, it needs to be recognised that the pilots can never be a perfect simulation of the whole population of NHS dental practices in England. The pilot practices do vary slightly from the broader practice population in the following ways:

- The eligibility criteria for pilots included the NHS contract value accounting for at least 60% of the practice's overall income
- A higher proportion of patients from the pilot practices live in areas with an Index of Multiple Deprivation in the top decile of scores (i.e. the most deprived) than in the overall population.
- There are a smaller proportion of single surgery dental practices in the pilots than in the whole population of NHS dental practices.

Appendix 3 provides further analysis illustrating how the sample of pilot practices varies from the wider practice population.

Data described in this report are generally pooled to give mean or median figures for convenience, but of course this presentation can result in the loss of much learning. Different practice types and patient groups may respond very differently to the conditions of the pilots and the most important learning will often come from closer examination of subgroups or even individual practices. This "drilling down" for richer information will take place where required, in response to specific questions.

## A priori questions

In terms of interpreting the data, we should be clear about what we should be looking for in the pilots a priori, capturing the desired impacts and also some of the inevitable service consequences that will need to be managed. This will form the framework of evaluation. The time scale is an important consideration when considering the point at which data can and should be evaluated. The longer the pilots run, the more will be learned, particularly around the provision of care and financing, but there is short term learning which is important and will be reported here.

The learning points the group have identified will be picked up as the evidence is reviewed in this and subsequent reports. The points below identify, a priori, the broad questions that this group has identified as requiring evidence to inform decision making:

- Short term (12 -18 months)
  - Whether dentists are able to make the transition (expecting difficulties)
  - Whether disease risk is consistently captured and communicated to patients
  - Whether disease risk is managed through a pathway
  - To what extent patients approve of the new arrangements
  - Whether the new arrangements make clinical sense to dentists and the dental team
  - Ideally, whether risks show some measurable evidence of net reduction across practice populations
  - To what extent there is evidence of a pattern of care which is appropriate to patients' risks and health needs at an individual level.
- Long term (not for evaluation within 1 year)
  - To what extent there is better (or worse) oral health for patients from all sectors of society who use the service
  - To what extent there are sustained improvements in health behaviours and greater awareness amongst patients
  - Whether the service is appropriate for current and future population health needs
  - Whether the incentives that emerge for patients and dentists promote health
  - Whether the emphasis of care moves from operative to preventive in a way that is appropriate for patients
  - Whether a rational and consistent approach to providing more complex interventions is used
  - Whether care is delivered at a cost that is sustainable

# Early Findings

The data presented here focus on the patient pathway, on the management of risk and on the responses of patients and dentists to the new arrangements.

The detailed clinical and economic analysis will require a longer period of piloting and substantial work to ensure it is robust.

The data sources from which the subsequent findings are drawn are:

Dental practice management system (DPMS) data – the activity and clinical data being generated by pilot practices using the new software systems developed to support the pilots being supplied to NHS Business Services Authority Dental Services (NHS BSA DS)

- FP17 data – pre-pilot activity and clinical data drawn from FP17 course of treatment details provided by dental practice to NHS BSA DS
- Pilot online survey – a monthly survey that is being completed by all pilot practices. Note – Obvious caution needs to be taken when interpreting these data due to their self-reported nature. .
- ICM patient survey – a survey conducted by the research agency ICM of patients who had attended the pilot practices for NHS care since the pilots began
- ICM staff survey – a survey conducted by the research agency ICM of pilot practice staff capturing their views on the care pathway

Please note that an independent report produced by ICM summarising the findings of the patient and staff surveys entitled “Dental Contracts Pilots Evaluation” was published in September 2012. All the figures included in this report from the ICM surveys are reproduced exactly as presented by ICM. The percentage values in the figures are rounded to the nearest percentage point.

The abbreviations used in the figures relating to the care pathway are defined in Appendix 4 that provides an overview of the care pathway.

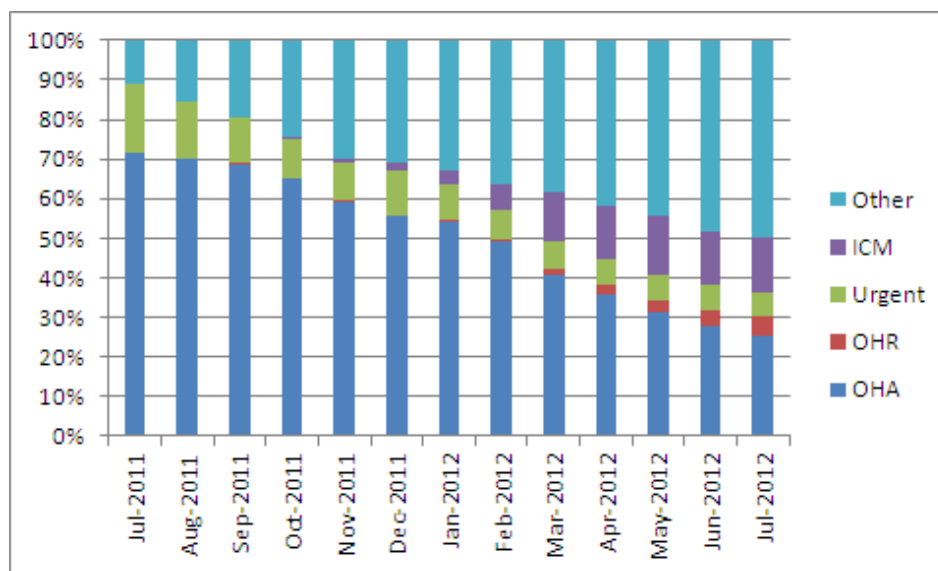
## **a) Transition to a new system and the effect on access**

Before starting to interpret clinical or service changes that result from the pilots, the stability of the service through transition needs to be assessed. Whilst there was an extensive period of training for the pilot practices, all entered into the pilot arrangements overnight and were faced with a need to undertake an OHA for all new and review patients as part of the pathway, to operate the software and direct patient care through the pathway. This took place against a background of new IT systems being run live for the first time in the practice.

Different practices will have chosen to manage this problem differently but there was undoubtedly a shift in the way time was spent in the practice, and this was expected and indeed intended. After a period of time the balance of tasks between assessment and

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treatment would be expected to adjust whilst the process of assessment would also be expected to speed up. Whatever the expectations, it is reasonable to assume that the months after the introduction would see some changes in the balance of activities on a month by month basis as the system “settled down”.



**Figure 1 – Pilot appointments by appointment type (Source: DPMS data)**

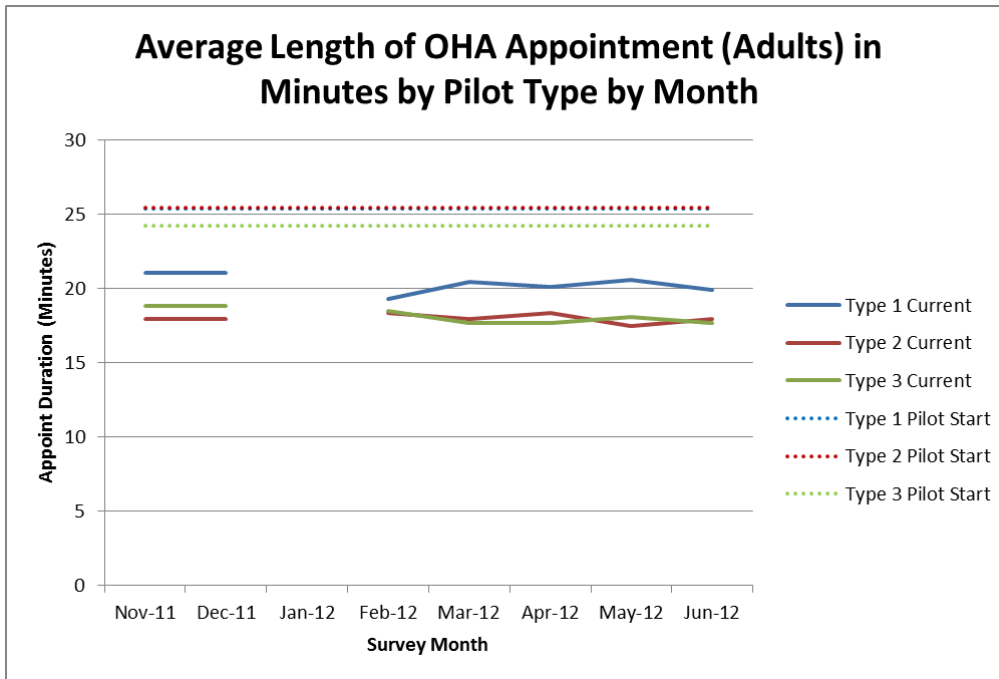
The following points should be considered when interpreting the data in Figure 1:

- This only includes appointments that are for patients who are on the new care pathway (including the urgent care pathway). In particular, it will exclude appointments relating to any courses of treatment that were still open on the day when the contract went live
- Urgent appointments exclude patients who are on a care pathway and have an open course of treatment. Over time, an increasing number of patients will fall into this definition, which may go some way to explain the reduction in urgent appointments.
- “Other” appointments will primarily be treatment appointments
- Pilots went live in three waves: on 1 July, 1 August 2011 and 1 September. Therefore, the data in July and August only represent a proportion of the 70 pilots.

Figure 1 shows very clearly that the balance of appointments changed markedly over the year. OHAs started as a very high proportion of activity (over two thirds of appointments) and by July 2012 had reduced very substantially (to around one quarter), but it is unclear how far the pilots still are from steady state. It is worth noting that the average figures hide quite wide variations between practices, reflecting different strategies employed as well as different patient mixes. Until steady state is achieved, caution must be employed not to infer too much from the initial piloting phase without careful adjustment. The next few months might be expected to indicate a more consistent and meaningful picture.

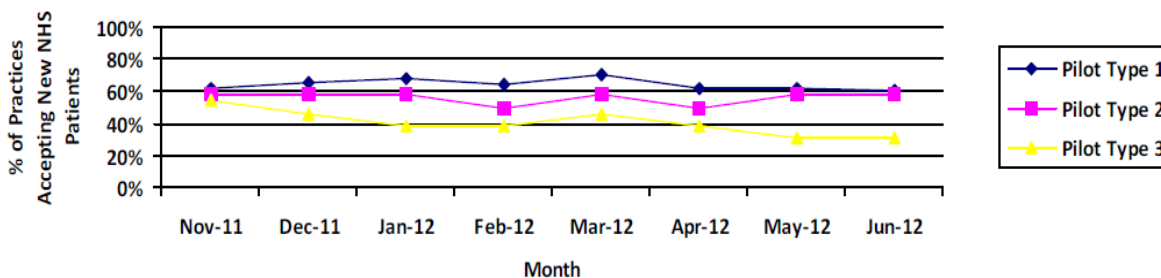
Figure 2 shows how the duration of OHAs has changed over time since the pilots began. The OHA process would also be expected to speed up as dentists become accustomed to the process and the software, and this is evident (figure 2). There is also clear emerging evidence that the pilot type affects the time taken per assessment. One of the reasons that different types were used was to observe how different drivers in the system affected clinical priorities. The evidence suggests that OHAs are taking longer in Type 1 pilots where remuneration is not dependent on the number of patients to whom care is provided.

**Figure 2 – Change in adult OHA appointment lengths (Source: Pilot online survey)Note – The data was not**



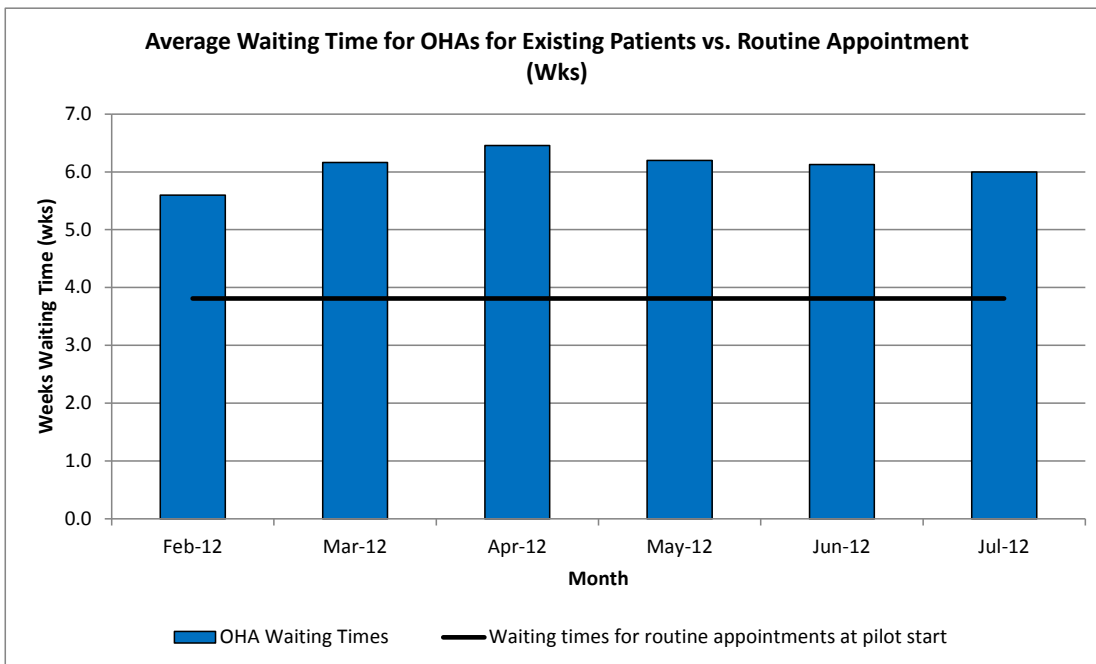
collected for January 2012

The fact that assessments dominate appointments in the early months, coupled with the fact that assessments take longer than check-ups under units of dental activity (UDAs), suggest there will be transitional issues that need to be addressed. This is picked up later. Figures 3 and 4 illustrate the impact of the pilot process on access. Given the transition process discussed above, an impact on access and on waiting times might be expected. There is some indication of this and this is something that will need to be dealt with going forward.



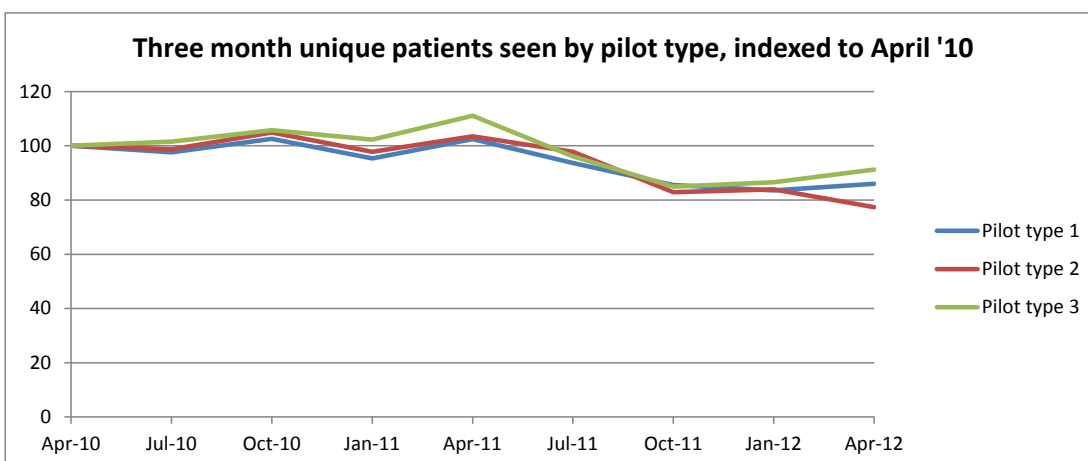
**Figure 3 – Percentage of practices accepting new patient (Source: Pilot online survey)**

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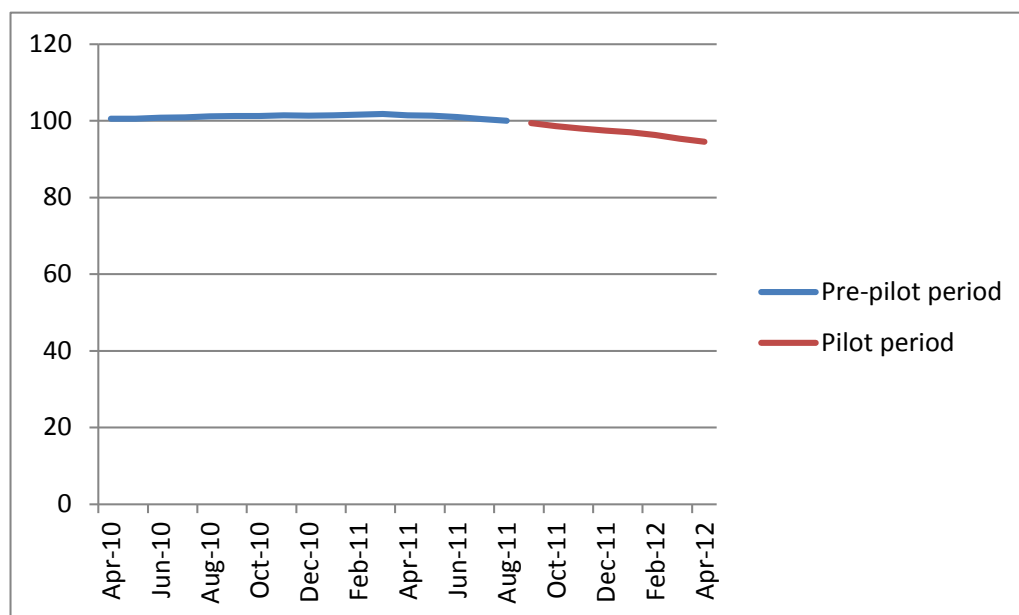
**Figure 4 – Average waiting times for existing patients (Source: Pilot online survey)**

Figures 5 and 6 show the total number of unique patients seen over a 3 month and 24 month period (in both cases for the period up to the end of the named month). Both show a reduction since the start of the pilots. Again, this is not unexpected and is in line with the other findings, but is important in terms of thinking through the pathway and the implications of different clinical conditions. They also show that the decline actually started in April 2011 which coincides with the preparation period for piloting, in which practices were undergoing training days and other activities which would have reduced their capacity to see patients.



**Figure 5 – Average number of patients seen in previous 3 months, indexed to April '10 (Source: FP17 data and DPMS data)**

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**Figure 6 – Total number of patients seen in previous 24 months across all pilots, indexed to April ‘10 (Source: FP17 data and DPMS data)**

The impact on access after the start of the pilots can be thought of as being caused by two contributing effects:

- i. “Background effect” – factors related to the long term impact of new working arrangements. These can be ameliorated by refining the care pathway to remove redundancy or ineffective stages and improving efficiency through (for example) improving the functionality of the IT systems. In addition, there is the additional time required for a shift in emphasis from operative interventions (which will still be necessary but there may be a clinically appropriate reduced level of intervention) to evaluation of risk and its management (for example the OHA compared to the previous “check-ups”). If patient throughput is to be maintained this will be an important step.
- ii. “Transition effect” – the impact of the additional time required to adjust to the new system before “steady state” is reached. Unlike the background effect, this is a temporary phenomenon related to a new way of working.

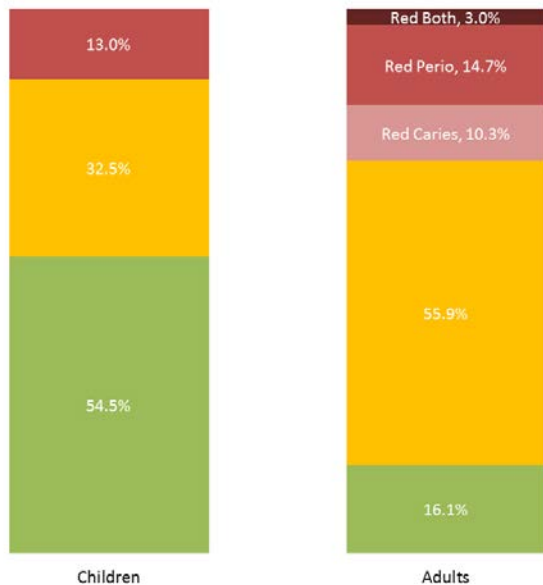
Both factors need to be addressed to avoid a reduction in patient access when practices transition to a new contract, but dealing with the former is critical if a new contract is to be sustainable for all concerned. In the case of the latter, there is a need for a transition plan that ensures that patient access is not impacted, even in the short term, if a new contract is put in place.

With the initial phase of the pilots now over and practices adjusting to the new way of working, further analysis will need to continue to monitor access and waiting times. However there will also need to be adjustments to the patient pathway to improve its utility for dentists and patients and to create some flexibility in terms of waiting and access.



**b) What about clinical risk? Is it measured and managed according to a pathway?**

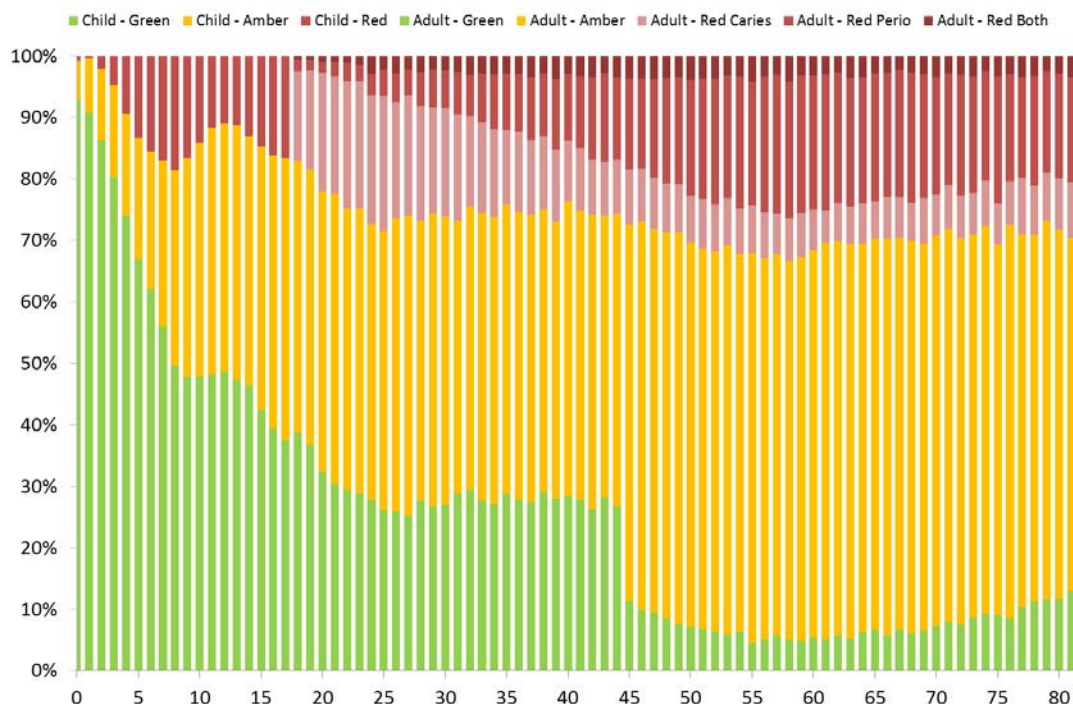
After the OHA, which includes data from the clinical charting and the patient’s lifestyle and medical history, the software uses an algorithm to generate a simple “RAG” (red, amber or green) rating to indicate the patient’s disease risk. This can then be fed back to the patient and used for appropriate advice and treatment. Figure 7 shows the basic breakdown of the RAG rating for adults and children and then Figure 8 shows the breakdown by age.



**Figure 7 – Breakdown of RAG status (Source: DPMS Data)**

Broadly speaking, the RAG status reflects what we may expect epidemiologically. For example, the Adult Dental Health Survey in 2009 suggested that around 15% of adults had very healthy mouths with virtually no evidence of disease, corresponding to the findings for adults with green status. Figure 8 shows risk by age and the peak in caries risk in the late 20s is also evident in the national epidemiology. The overall prevalence of people with red ratings seems broadly what may be expected (though there is no direct epidemiological equivalent) whilst the effect of the algorithm is evident as different elements of risk enter the algorithm at age 16 and age 45.

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**Figure 8 – RAG status by age (Source: DPMS data)**

Whilst the red ratings may be of an appropriate order of magnitude, the amber rating affects a very large proportion of the population and the sudden jump in prevalence at age 45, which is related to the algorithm, may need attention. Given the potential impact of the rating and the pathway, it is important to review these two factors together to ensure that patients get the care and attention they need, whilst ensuring that resource and time is not spent where it is not likely to have the maximum impact.

### **c) Is the new system acceptable to patients and aligned with the professional aims of dentists?**

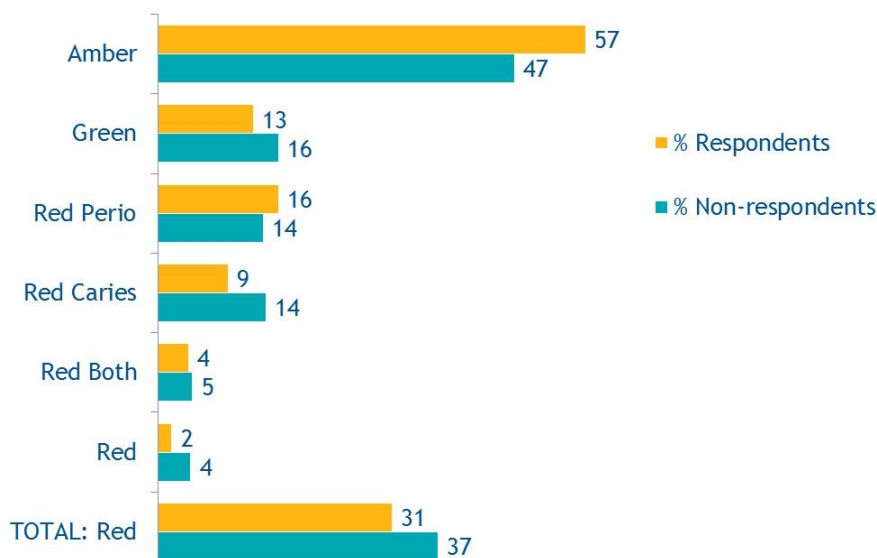
Dentists and their teams are health professionals; their first responsibility is to the health of their patients. It is of fundamental importance that any system of care makes clinical sense to those who provide it.

When dealing with dental disease, the partnership with the patient is also critical. The patient needs to feel the benefit of the advice and “do their bit” if health is to improve. Establishing this mutual acceptability is not easily done through treatment or performance data, so ICM Research were commissioned to undertake some qualitative and quantitative research, both with patients and with dental teams and some of the key findings are presented here.

The response rates to the surveys are relatively low (27% for the patient survey; 24% for the staff survey overall and around 34% for dentists specifically), an issue identified by the evidence and learning group as potentially problematic because the larger the proportion of people that does not send back the questionnaire, the greater the risk of systematic error leading to bias in the sample. The actual response rate here is not unusual for surveys of this type, but is still low enough to make this a risk. Our recommendation generally is that

emphasis on the detailed comparisons of percentages is unwise where the differences are minor.

In view of the low response, the evidence and learning group asked ICM to return to the data and provide some basic comparisons between responders and non-responders in the patient sample to identify whether there was any evidence of systematic bias. Reassuringly, the differences were very minor. There was a bias towards respondents being older than non-respondents, which was not a major surprise but might be taken into account when interpreting the data. Gender showed only very minor differences according to response but more importantly RAG status and IMD (the Index of Multiple Deprivation status of the patient's home postcode) showed only minor differences as well. Red RAG status patients were only a little more prevalent amongst non-responders, whilst the reverse was true for those with an amber status. Overall these do not suggest that the low response rate should have had anything other than a minor impact on the generalisability of the data. Whilst it is feasible that there is a response bias towards, for example, more enthusiastic patients or professionals, this cannot be measured. However, there is no reason to suspect that the basic trend would be substantially changed with a higher response rate. Figure 9 shows the data for RAG status.



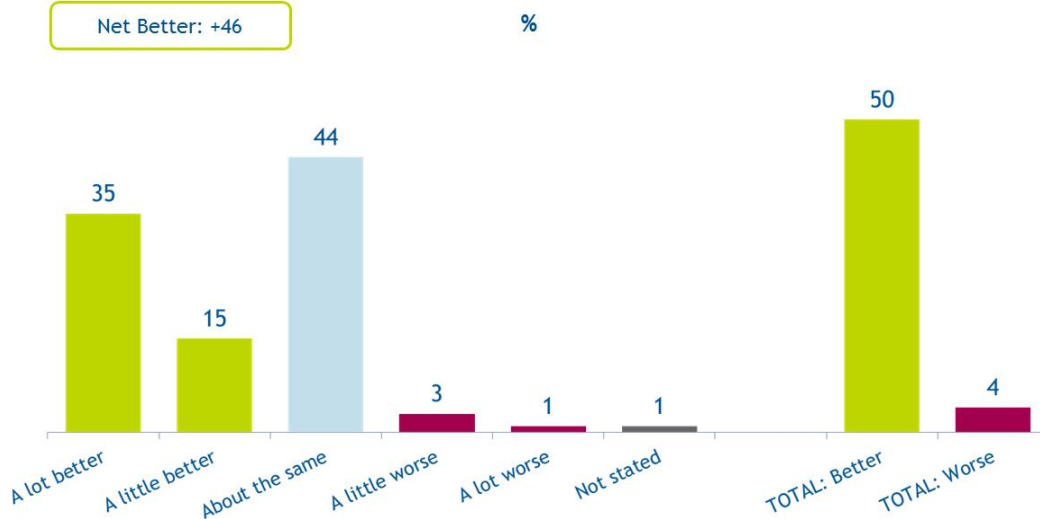
**Figure 9 – Illustration of how patients survey respondents vs non-respondents with respect to RAG status**

Figures 10 to 12 demonstrate very clearly that there is a widespread perception that services have improved for patients and that they like the new arrangements; half had noticed an improvement and only a very small number thought it was not as good as before. Furthermore, nearly three-quarters said they had a better understanding of their oral condition following their recent visit under the new system and a similar proportion said they had actually changed their oral hygiene habits as a result of their visit. Of course, to what extent they were doing this well or appropriately and whether this was sustained over many months we do not know, but both the increased awareness and the willingness to act on advice is hugely encouraging. At this

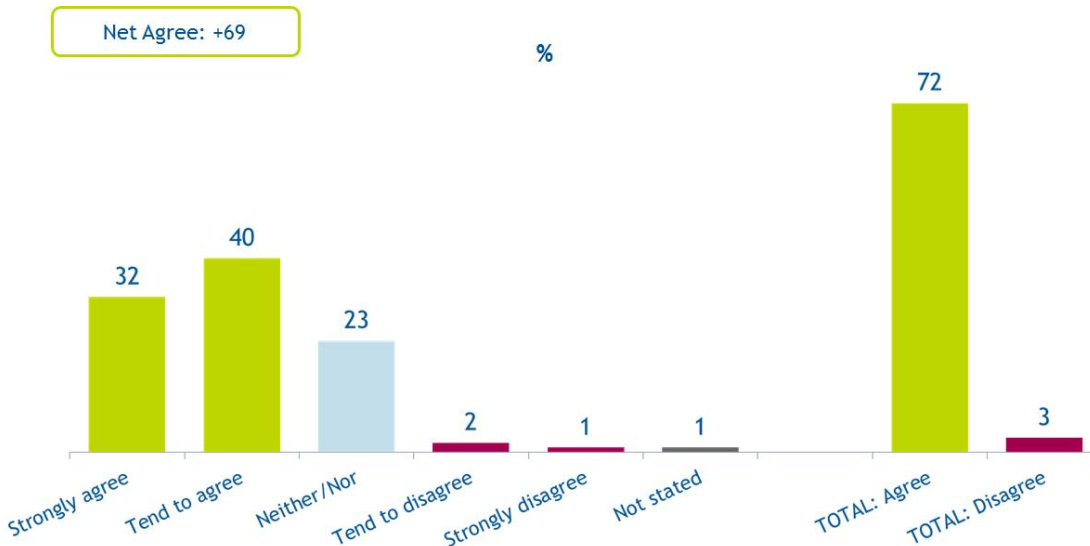
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stage, the practices working within the new system appear to be doing for patients exactly what was intended.

**Figure 10 – Patients views on their experience of dental care during the pilots compared to their previous**

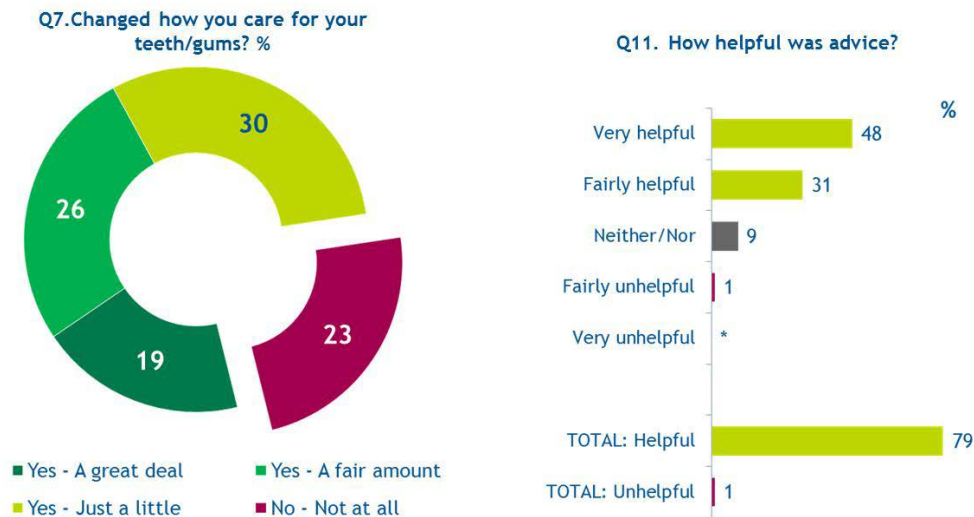


experience (Source: ICM patient survey, Q. Generally speaking, how does your overall experience of NHS dental care at this practice in the last 9 months compare with your previous experience of NHS dental care?)



**Figure 11 – Patients views on whether they now had a better understanding of how to look after their teeth and gums (Source: ICM patient survey, Q. To what extent do you agree or disagree with the following statement? Compared to previous NHS dental care, I now have a better understanding of how to look after my (or my child's) teeth and gums.)**

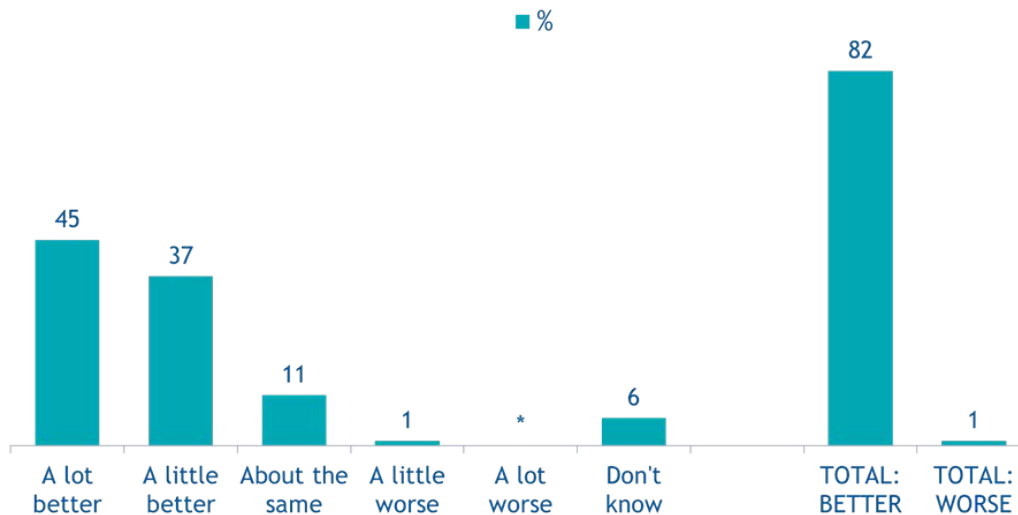
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**Figure 12 – Patient's views on whether the advice they had been given on how to care for their teeth and gums was helpful and whether they had actually changed their behaviour (Source: ICM patient survey)**

A feeling that advice has been useful is only of real value if those that need it most recognize its value, so the impact of self-care was analysed by RAG status (see Appendix 5). Reassuringly it was those who had red ratings who were most likely to report that the advice was of value.

Figure 13 shows data from staff and suggests that they are aligned with patients in feeling that they are better able to offer appropriate care to patients.



**Figure 13 – Staff views on whether the OHA enables better care to be provided to patients (Source: ICM staff survey)**

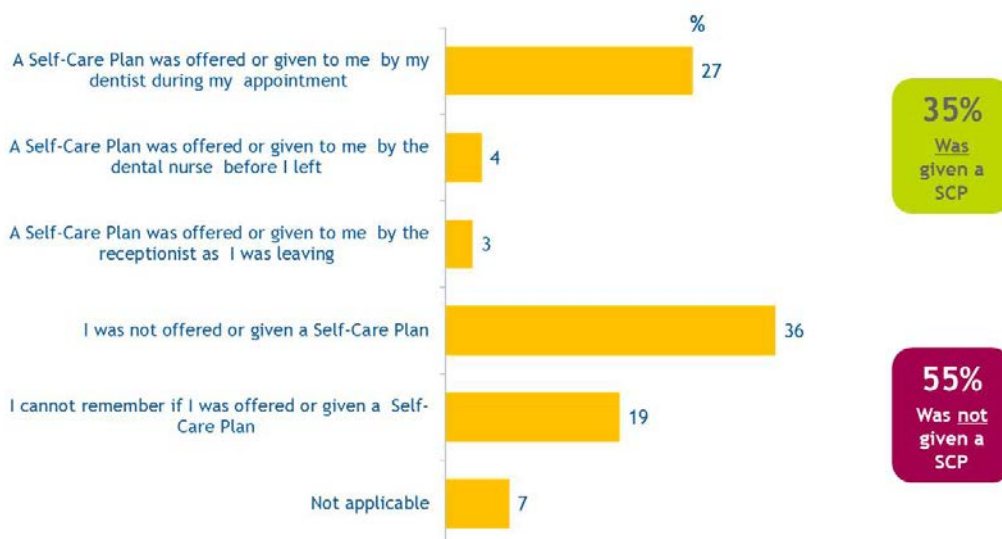
Figures 14 to 16 show that patients really liked the concept of the RAG rating and found it useful, and when they received a self-care plan they appreciated this and found it useful too. However, quite a high proportion of patients could not recall having received a self-care plan. Whether this was because it was not provided, or because it was provided but immediately disposed of, or was simply not memorable, cannot be determined but clearly there is some

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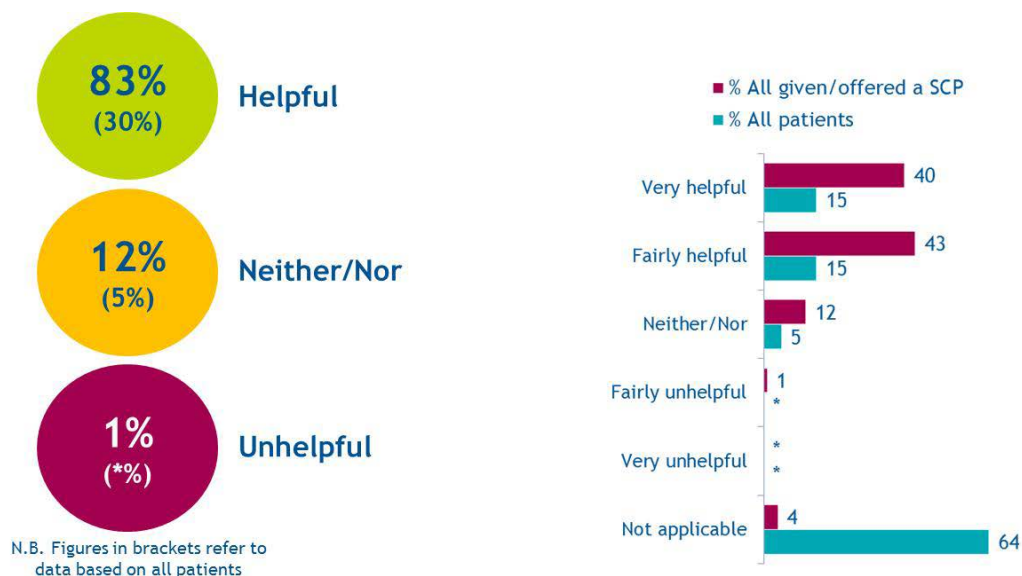
work to do around the optimum self-care plan format and presentation. Furthermore, the variation between practices was very large indeed. Whilst the average percentage of patients who recalled being offered a self-care plan was 35%, this varied from 3% in one practice to 82% in another. Understanding this variation is important if the concept of self-care plans is one that is to be utilised.



**Figure 14 – Patient views on how helpful they find the RAG status in understanding the health of their teeth and gums (Source: ICM survey)**



**Figure 15 – Patients' recollection of whether they were offered or given a self-care plan (Source: ICM patient survey)**



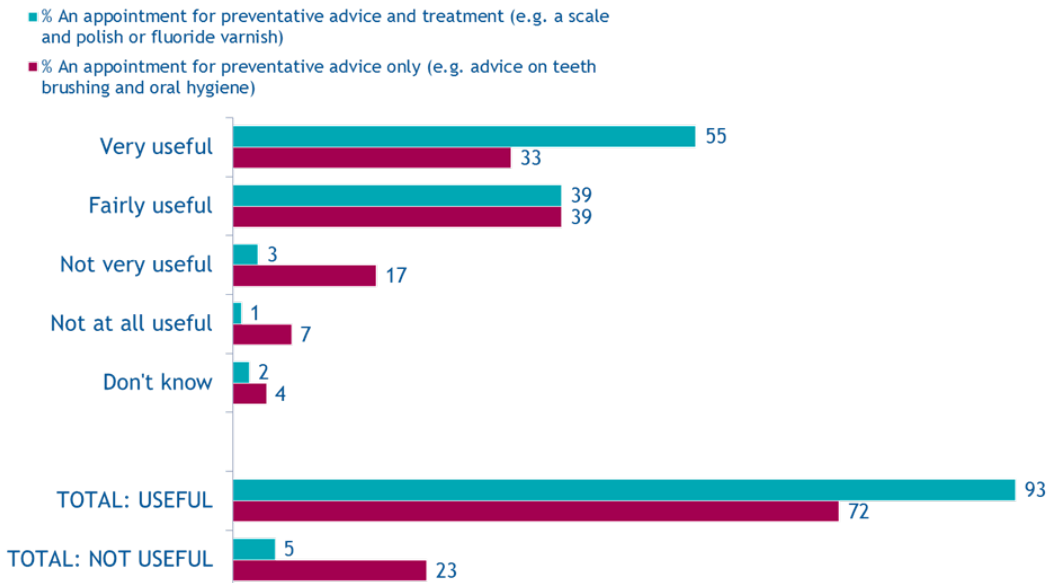
**Figure 16 – Patient views on the helpfulness of the self-care plan (Source: ICM patient survey)**

Dentists were asked to make interim care management appointments (ICM appointments, not to be confused with ICM the research agency that conducted the research) where risks needed active management (Fig 17). On the whole dentists thought that such appointments were useful where treatment was included. However, this support was not absolutely universal, and where treatment was not included and the ICM was for advice alone, there was a substantial minority who did not perceive this approach as helpful. Patients who had attended an ICM appointment were positive with 82% considering the appointment helpful in maintaining or improving their oral health and 83% advising they would continue to attend preventative care appointments in the future. There was no significant difference in patients’ views depending on whether the appointment was preventative advice and treatment or preventative advice only. The uptake of ICM appointments and their value is an important area to monitor. There is a risk of variation of uptake depending on social group. This may occur for a number of reasons, but if the ICMs prove to be successful in reducing risks and such a social bias occurs, there is a risk of increasing inequalities, even in the context of improving oral health. This is an area that may need further monitoring.

Finally, the change in arrangements presents a business challenge. Without the security of knowing what it is to come, practices were generally cautious about making changes to the workforce. However, there were some strongly expressed opinions related to how this might operate. Figure 18 suggests that only 8% would not be inclined to change the practice workforce, whilst a huge majority were clear that they would give this serious consideration. This would only be quantifiable in a real contract setting but the practices have clearly looked at this possibility as a business proposition. If a new contract were to be introduced, the capacity of the market in hygienists and therapists to meet demand may cause medium term concerns. Workforce planning is already taking place under the auspices of Health Education England and the views of pilot practitioners on this contractual arrangement should inform that debate.



## NHS dental contract pilots - Early findings



**Figure 17 – Staff views on the usefulness of preventative care appointments (Source: ICM staff survey)**



**Figure 18 – Practice owner views on whether and how they would consider changing their practice skill mix in future (Source: ICM staff survey)**

There is the potential for a great deal of learning here for the whole service if a new contract is to be introduced. The pilot practices would be well placed to help and advise on the optimum business models for the future, and how this may be managed across a transition.



# Summary

This is the first public report from the NHS Dental Contract Reform Pilots. Clearly the volume of data coming out of the pilot process is enormous and the data reported here can only start to answer some of the many questions that need to be addressed. The data shown are those which capture the big picture of what is happening, but there are clearly many important details below the surface that will require on-going analysis.

Of the initial “a priori” questions this report provides some answers to the following:

## **Whether dentists are able to make the transition (expecting difficulties)**

The transition was made and practices survived, but there was a temporary change in practice that had major impacts within the practices over several months, particularly early in the process. The time taken for the OHA at the first stage in the pathway was considerable, but reduced with time as did the proportion of OHA appointments. These changes were expected and provide important learning for any future implementation. It has taken a year to see the balance of activities starting to settle down so we are only now approaching a point of steady state where it may be possible to evaluate the sort of services that are delivered.

There has been an impact on access which is not unexpected but does need to be addressed. Some of this will be related to the additional time resulting from transition, but there is also some evidence of a background effect which may affect access even in steady state. Whilst the scale of this will need to be investigated, it looks likely that, as expected, the pathway model, as it stands, takes longer to operate, per patient, than the previous model. For the pilot process, the OHA, the risk algorithms and the pathway were set to cover every risk eventuality. Only by running this live is it possible to identify where efficiencies can be made (for example, by reducing the mandatory domains for data collection in some patient groups).

The process of streamlining the pathway to make it quicker and easier to operate without losing the very clear value which is demonstrated in the response from patients and dentists is now well underway and there is considerable capacity for such streamlining. This is a critical step in the pilot process.

## **Whether disease risk is consistently captured and communicated for patients**

This has clearly happened and RAG ratings are being generated. The distribution of the ratings is broadly as one might expect from the epidemiology, particularly for those at greatest risk. There are some anomalies around the boundaries of the amber ratings which would be worthy of investigation further as part of the pathway review. However, risk is being measured and appears to be appropriate. Whilst not all patients recall being advised of their RAG status, those that do are very positive about how helpful this is in understanding the health of their teeth and gums.

### **Whether disease risk is managed through a pathway**

There also appears to be evidence that this is happening. At this stage we cannot show whether risks are reducing, but it is possible to see that interim care management appointments are happening across the board as they should, though with some variation.

### **To what extent patients approve of the new arrangements**

The patients who responded to an extensive survey clearly were very positive about the change, they received care plans (though not always) and responded well to the advice they were given, at least insofar as they were receptive to the information provided. Whilst we do not know how well retained or effective the care plans are yet, they are definitely being received and acted upon. There is now some work to do around the presentation of the care plans and a need to investigate why some people did not recall receiving them. It is unreasonable to expect every patient to be universally enthusiastic about a service, but the data from patients are very encouraging.

### **Whether the new arrangements make clinical sense to dentists and the dental team**

There is also clear evidence that this is the case; the dental teams felt the pathways made professional sense. However, further work to look at different professional groups and practices may be advisable. The arrangements will have been operated in different ways in different places, perhaps sometimes more effectively or efficiently than others. Whilst the pathway model was very popular, there were some areas where clear differences between respondents were evident, for example the utility of ICMs and the issuing of care plans. These are important areas to follow up as part of the pathway review.

## Next steps

The volume of data now emerging is immense. Further detailed analysis of the current data for example, to drill down to look for example at patient responses according to risk, will be required. At the same time, this is an iterative process, so the findings so far should allow some changes to be made based on emerging data, particularly to the assessment and pathway process to streamline them further.

The next major stage, when there are clinical data that are clean and reliable, will be to investigate the sort of care that is being provided and whether it is appropriate to needs. This will be a challenging process from an analytical point of view but is necessary. As patients circulate back through the system it will be important also to look at the net changes in risk status, to tell us whether the receptiveness and good intentions of patients and dentists translate to prospects for better health.

# Appendix 1: Terms of reference

## Dental Contract Pilots Evidence and Learning Reference Group – Terms of Reference

### Purpose

The primary purpose of the Reference Group is to support the capture of evidence and learning from the dental contract pilots that have been established as part of the Department of Health's Dental Contract Reform Programme.

The Dental Contract Reform Programme is seeking to develop a new contract model and way of working which shifts the focus of NHS dentistry from treatment and repair to prevention and oral health. Seventy dental contract pilots are underway in practices across the country. The pilots are testing a new clinical pathway and new remuneration models. The aim of the pilots is to inform a new contract model where remuneration will be based on capitation (paying based on number of patients cared for and their needs) and quality of care (clinical outcomes, patient experience and patient safety) rather than paying based on units of activity.

The evidence and learning from the pilots will be sought in two broad ways:

- Conducting focus groups and surveys with stakeholders including patients, dental practitioners, practice managers and commissioners. The areas the focus groups and surveys will explore will include the clinical pathway being tested in the pilots, the practicalities of delivering the pathway and the potential remuneration models for a new contract. An external research agency is being appointed to conduct focus groups and surveys.
- Conducting data analysis and modelling to explore the impact of the pilots on clinical activity, oral health and access. The data analysis and modelling will also explore finance issues in terms of the factors upon which a weighted capitation model would need to be based and the affordability of the care pathway model being tested.

The evidence and learning reference group will:

- act as an independent source of expertise upon which the programme can draw to help shape the approach to capturing evidence and learning – individual members may be engaged to provide expertise in relation to specific areas of work
- provide an independent overview of the process of evaluation
- provide independent advice around interpretation of emerging results
- provide challenge to ensure the approach to capturing evidence and learning is robust and findings are representative.

### Membership

The following are being invited to be members of the reference group:

<b>Professor Jimmy Steele (Chair)</b>	<b>NIHR Oral and Dental Specialty Group</b>
Sue Gregory	DH Clinical Lead
Helen Miscampbell	DH Policy Lead
Daisy Wild	DH Data Analysis
Marianne Scholes	DH Data Analysis
Mark Shackell	BDA
Jane Moore	BDA
Philippa Risely Prichard	Dental Contract Pilot practitioner
Andrew Jackson	Health economist
John Wildman	Health economist
Cam Donaldson	Health economist
Ruth Gasser	NHS Dental Services
Darren Williams	NHS Dental Services
Eric Rooney	Care Pathways and Advance Care
Rebecca Harris	Oral Health Behavioural Sciences
Fiona Erne	NHS commissioner
Anna Ireland	Consultant in Dental Public Health
Keith Ellis	DCR Programme - Project management

### **Governance and Accountability**

The Reference Group will be chaired by Professor Jimmy Steele. The Reference Group will report to the National Steering Group for the Dental Contract Reform Programme. Reports will be provided by Professor Steele who is a member of the National Steering Group.

**Frequency of meetings**

The working group will meet as and when necessary to fulfil its role.

**Conduct of meetings**

Actions arising from working group meetings will be issued within seven days of the meeting.

**Review of terms of reference**

The terms of reference for the working group will be reviewed at any time deemed necessary by the Chair.

## Appendix 2: An overview of the different pilot types

Whilst all the dental contract pilots are adopting the clinical pathway (see Appendix 3), there are three different remuneration models being applied. How these remuneration models differ is illustrated below.

For all pilot types, the provider no longer needs to deliver a given number of Units of Dental Activity (UDAs) - payment based on delivery of UDAs is the standard remuneration model currently used for NHS dentistry.

For all pilot types, an element of their remuneration is weighted based on their performance in relation to the Dental Quality and Outcomes Framework (DQOF). More details of the DQOF can be found in the document “Dental Quality and Outcomes Framework” published in May 2011.

### Type 1 pilots

Type 1 pilots are remunerated for delivering an expected level of NHS commitments (time spent providing care for NHS patients). In essence the pilots are expected to deliver the same level of NHS commitment as they were delivering prior to the pilots commencing.

The purpose of the Type 1 pilots is to explore how many patients can be cared for when adhering to the new care pathway when any financial incentives relating to activity levels or patients seen numbers are removed.

### Type 2 pilots

Type 2 pilots are remunerated based on a model of weighted capitation payments. Remuneration levels are adjusted depending on the pilot's capitation payments, with capitation payments for individual patients varying depending on their age, gender and the deprivation status of their home postcode.

For Type 2 pilots, the capitation payment relates to all care – preventative care, routine treatment and complex treatment.

The purpose of the Type 2 pilots is to explore the impact of applying a remuneration model based on weighted capitation where remuneration is adjusted based on a patient's demographic details (with remuneration intended to compensate for the average cost of care for an individual in that patient cohort) and remuneration is effectively dependent on the number of patients for whom care is provided.

### Type 3 pilots

Type 3 pilots are also remunerated based on a model of weighted capitation payments. Remuneration levels are adjusted depending on the pilot's capitation payments with capitation payments for individual patients varying depending on their age, gender and the deprivation status of their home postcode.

For Type 3 pilots, however, the capitation payment relates to preventative care and routine treatment only. The element of a Type 3 pilot's contract value associated with complex care (generally "band 3" treatments requiring laboratory work) is fixed and guaranteed and not subject to any adjustment associated with capitation.

The purpose of the Type 3 pilots, like Type 2 pilots, is to explore the impact of applying a remuneration model based on weighted capitation. The aim of the Type 3 pilots is to also explore the impact of separating out the remuneration for complex care.

Of the 70 pilots, 46 are Type 1 pilots, 12 are Type 2 pilots and 12 are Type 3 pilots.

More details of the different pilot types can be found in the document "NHS Dental Contracts – Proposals for Pilots" published in December 2010.



# Appendix 3: Comparison of practice characteristics – pilot practices compared to all NHS dental practices

This appendix compares the current 70 pilots with the national distribution of practices to identify the extent to which the pilots are representative (or otherwise) of all NHS dental practices in England.

This includes a comparison of the following:

- 1) Number of performers per location
- 2) Distribution of patients' age
- 3) Urban/rural split

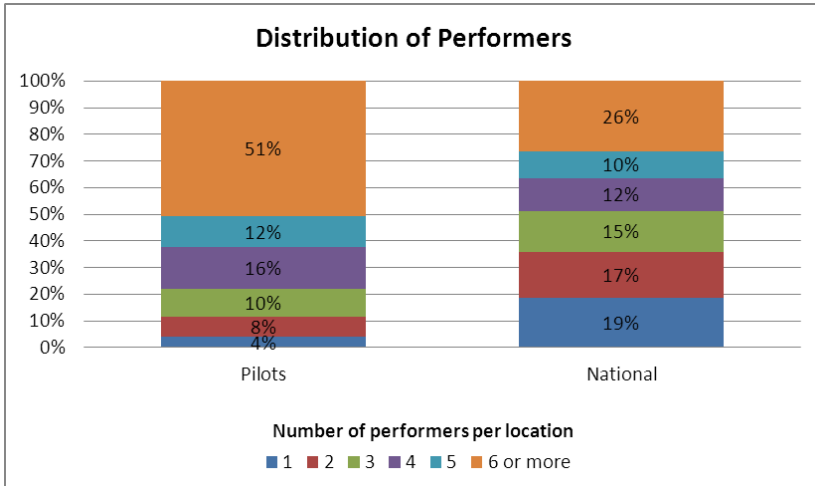
## 1. Number of performers per location

This compares the pilots' distribution of the number of performers per location to the national distribution.

- Pilot practices have more performers per location when compared to a national average, with 51% of the pilot locations having six or more performers, compared to 26% nationally.
- Single handed practices are under-represented in the pilots, with only 4% (three practices) being single handed compared to 19% nationally.

One reason for the discrepancy in distribution of performers may be that the selection process required practices to have a contract value of at least £100,000 which would presumably exclude some single handed practices. It also required a certain level of chair-side IT which is likely to be more prevalent in larger practices.

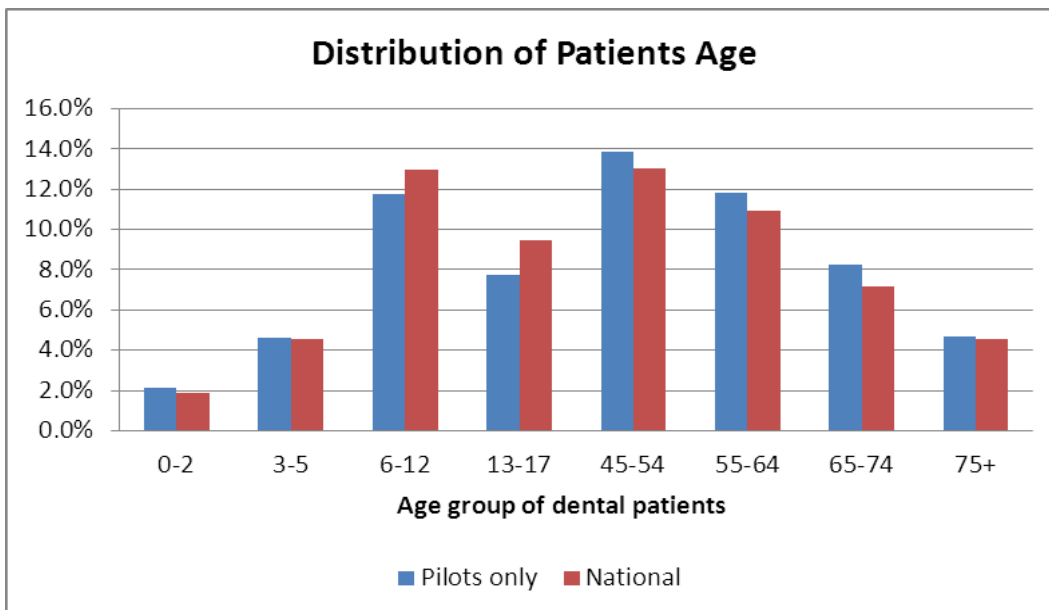
## NHS dental contract pilots - Early findings



**Figure A1 – Illustration of variance between pilot practices and the broader practice population with respect to number of performers**

### 2. Distribution of Age

Generally, the age distribution of patients seen in pilot practices is similar to trends seen at a national level. Pilot practices did see slightly more over 45's, three per cent higher than the national average of 36%.

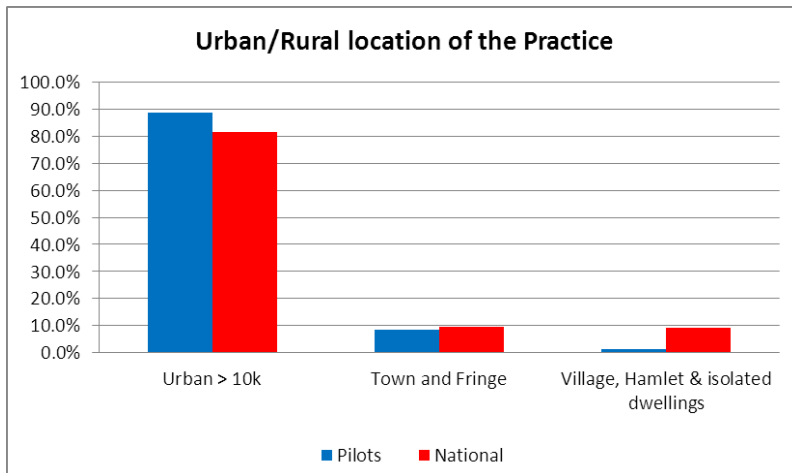


**Figure A2 – Illustration of variance between pilot practices and the broader practice population with respect to patient age**

### 3. Urban/Rural

Urban practices are well represented in the pilots, but there is very low representation of rural (village, hamlet and isolated dwellings) practices. This could be due to the restrictions on applying practices to have contract values over £100,000 and to have chair-side IT.

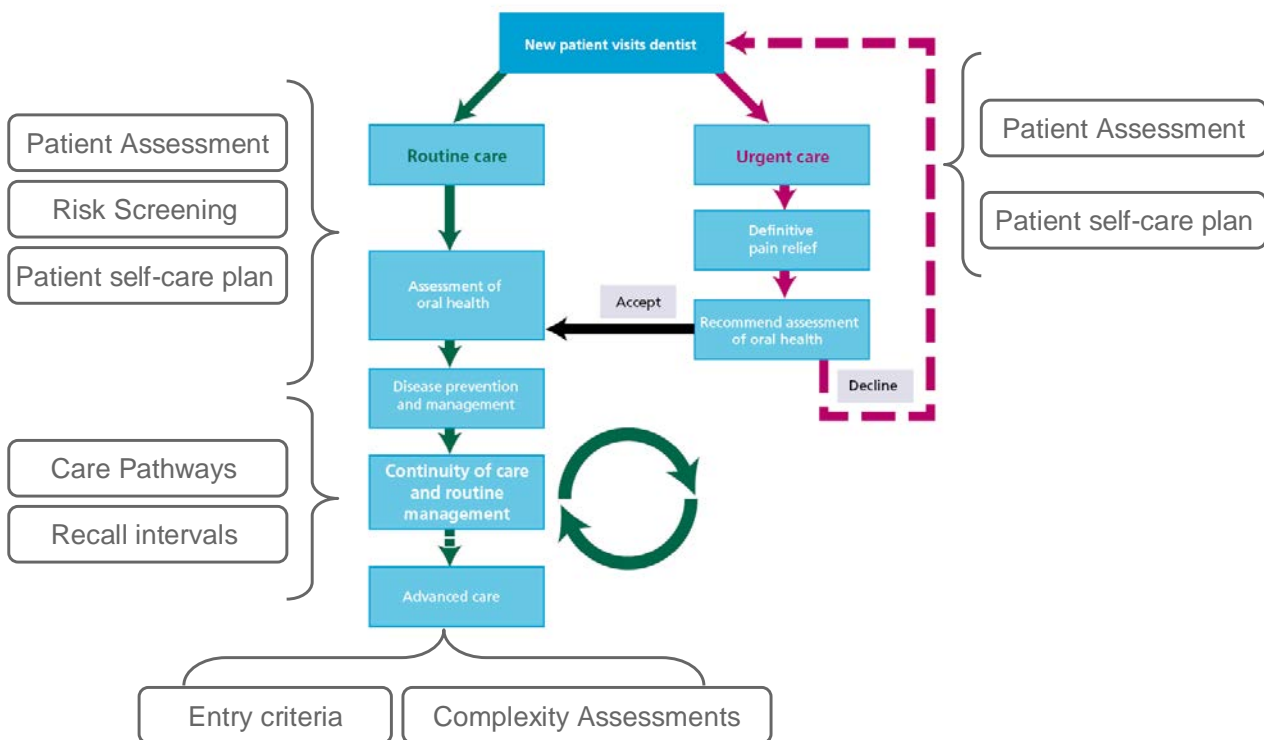
## NHS dental contract pilots - Early findings



**Figure A3 – Illustration of variance between pilot practices and the broader practice population with respect urban/rural status of practice**

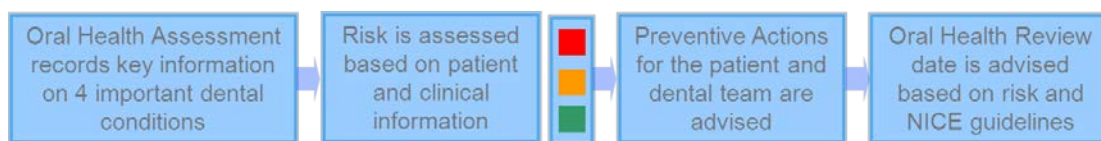
# Appendix 4: An overview of the care pathway being used in the dental contract pilots

Figure A4 below illustrates the overall care pathway showing how the pathway differs depending on whether patients choose to engage with continuing care or choose only to attend for urgent care.



**Figure A4 – An illustration of the care pathway**

Figure A5 overleaf provides an illustration of the overall care pathway being used in the pilots for patients that choose to engage continuing care.



**Figure A5 – An overview of the care pathway for patients engaging in continuing care**

## NHS dental contract pilots - Early findings

The care pathway begins with an oral health assessment (OHA), a comprehensive assessment of the patient's current oral health and medical and lifestyle factors that will impact the risk of disease in the future.

Informed by the OHA, patients will be advised of their oral health risk status based on a red/amber/green (RAG) rating and given advice on what they can do prevent disease. Patients will also be issued with a self-care plan which provides advice on what they can do to maintain or improve their oral health.

As well as attending follow-up appointments for any necessary treatment, where appropriate patients will also be advised to attend follow-up appointments focused on providing preventative advice (such as advice on teeth brushing and oral hygiene) or preventative advice and treatment (such as a scale and polish or fluoride varnish). These preventative care appointments are called interim care management appointments (ICMs).

Patients will also be advised when they should return for their next oral health review (OHR) based on their risk status and NICE guidelines.

# Appendix 5: Patients' views

Patients' views on whether the advice they had been given on how to care for their teeth and gums was helpful and whether they had actually changed their behavior – by RAG status

> RAG STATUS: GREEN

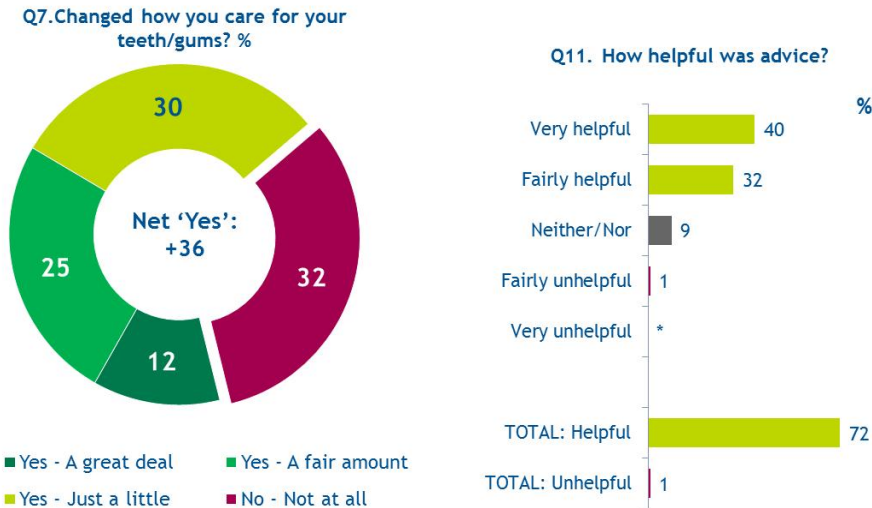


Figure A6 – The views of patients with a Green RAG status on whether the advice they had been given on how to care for their teeth and gums was helpful and whether they had actually changed their behaviour (Source: ICM patient survey)

> RAG STATUS: AMBER

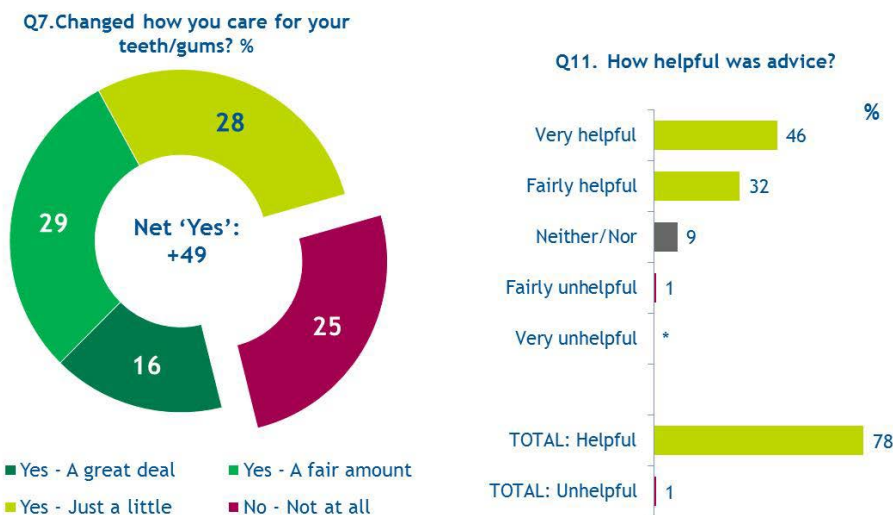
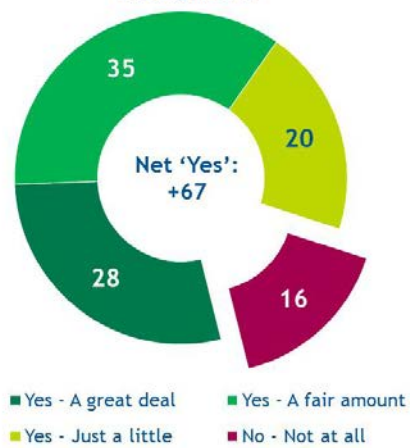


Figure A7 – The views of patients with an Amber RAG status on whether the advice they had been given on how to care for their teeth and gums was helpful and whether they had actually changed their behaviour (Source: ICM patient survey)

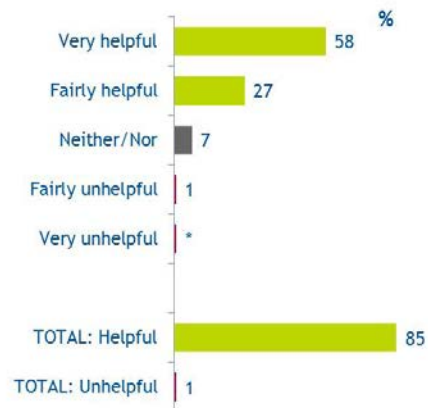
## NHS dental contract pilots - Early findings

> **RAG STATUS: RED**

Q7. Changed how you care for your teeth/gums? %



Q11. How helpful was advice?



**Figure A8 – The views of patients with a Red RAG status on whether the advice they had been given on how to care for their teeth and gums was helpful and whether they had actually changed their behaviour (Source: ICM patient survey)**