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Evaluation Report

Keep Smiling Programme

London Borough of Hammersmith & Fulham 2012-13

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Contents

Acknowledgements

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The staff, pupils and parents at:

- Ark Bentworth Primary Academy
- Canberra Primary School
- Wormholt Park Primary School
- Sir John Lillie Primary School
- Normand Croft Community School
- Flora Gardens Primary School

Claire Robertson, Consultant in Dental Public Health, Public Health England

The Oral Health Promotion Team at Central London Community Healthcare NHS Trust

It should be noted that at the time of delivering Keep Smiling 2012/13, the staff coordinating the programme were based within NHS North West London but were in transition to the new NHS and Public Health organisations, including the London Borough of Hammersmith & Fulham. The project during 2012/13 was funded by NHS North West London (Oral Health Promotion Team, Dental Nurses and Therapists within Central London Community Healthcare NHS Trust Specialist and Community Dental Service capacity, commissioned by NHS North West London; and North West London Dental Public Health capacity, hosted by Inner North West London PCTs) and Inner North West London PCTs Public Health Department (provision of paperwork and toothbrushes).

1. Introduction and Background

Keep Smiling is an oral health improvement programme for 3-7 year olds, delivered in local primary schools. It consists of the application of fluoride varnish; toothbrushing sessions; delivery of evidence-based oral health messages and signposting to dental practices. Following the successful pilot of this outreach programme in the north of the borough of Hammersmith & Fulham (in the area around White City) during 2011-12, the programme has been expanded to other schools within the borough. During 2012-13, Keep Smiling was delivered in six primary schools within Hammersmith & Fulham.

This report outlines the evaluation and outcomes from the Keep Smiling Programme in Hammersmith & Fulham in 2012-13. The evaluation was conducted to understand the reach of the programme, the barriers and facilitators to its delivery, and to make recommendations for future programmes. Before discussing the programme's delivery in the next few sections, the remainder of the introduction provides some background as to why the programme is needed within the borough and the evidence base behind its design.

It should be noted that Keep Smiling is delivered as part of a wider programme of work to improve child oral health in the borough, which is aligned with both the key domains within the North West London Child Oral Health Improvement Strategy (2011)[i] and the recommendations made by the London Borough of Hammersmith & Fulham's Child Oral Health Task Group Report (2011).[ii]

The public health need

Tooth decay is an important public health problem within Hammersmith & Fulham. Nearly half (44.5%) of 5 year old children have or have had experience of tooth decay. Those children with decay experience have on average 4 decayed, missing or filled teeth (dmft) and the borough has the third highest average dmft amongst 5 year olds in London.[iii] Dental problems such as tooth decay cause pain and can impact on children's appearance, socialising, sleep and concentration, and children may require time off school for appointments. A not insignificant number of children end up in hospital having decayed teeth extracted or filled under general anaesthetic: dental caries are the top cause of hospital admissions for children aged 1-18 years in the borough; responsible for 22% of admissions in 5-9 year olds (2010/11 SUS (Secondary Uses Services) Hospital Admission Data for Hammersmith and Fulham). These figures are particularly shocking since tooth decay is a preventable disease, caused by poor oral hygiene, lack of exposure to fluoride and high consumption of sugary food and drink.

The evidence base

The Keep Smiling Programme was designed as an evidence-based programme to increase children's exposure to fluoride in two ways: delivery of toothbrushing sessions and the application of fluoride varnish. Fluoride varnish is a gel containing a highly concentrated level of fluoride, which is applied in small quantities to the surface of teeth by dental professionals.

There is strong trial evidence for the effectiveness of fluoride (toothpaste, tablets, drops, rinses and fluoride varnish) in reducing dental caries (both preventing caries from developing as well as reversing their initiation and progression):[iv,v,vi]

- Toothpastes are by far the most widespread form of fluoride usage. The decline in the prevalence of dental caries in children over the past thirty years has been attributed to regular home use of fluoride in toothpaste.[vii] A systematic review on the effectiveness of fluoride toothpaste conducted in 2003 included seventy studies.[viii] The review of trials found that children aged 5 to 16 years who used a fluoride toothpaste had fewer decayed, missing and filled permanent teeth after three years (regardless of whether their drinking water was fluoridated).
- A randomised control trial in the United States among young children found that the use of fluoride varnish prevented early childhood caries and reduced caries increment in very young children.[ix]
- A Cochrane Review of fluoride varnish concluded that the application of fluoride varnish by dental professionals was associated with a 46% reduction in decayed, missing, filled surfaces (DMFS) in children.[x]

Since 2007 the Department of Health has recommended that every child aged 3 years and over has fluoride varnish applied at least twice a year.[xi] Anecdotally we know that there is low awareness among parents about fluoride varnish. As part of Keep Smiling children receive a single application of fluoride varnish and are then signposted to dentists for subsequent six-monthly applications. In this way Keep Smiling is used to raise awareness of fluoride varnish amongst the local community (fluoride varnish, alongside other dental care is provided free for children from NHS dental practices).

In addition to increasing children's exposure to fluoride the Keep Smiling Programme is designed to impact on children's oral health in other ways: promoting dental access, improving diet and improving oral hygiene. Controlling sugar in the diet as well as using fluoride is key to dental health since the use of fluoride is not enough on its own to prevent dental caries if consumption of sugary foods and drink is maintained at a high level.

Similar to the social gradient in general health and wellbeing, there is a social gradient in oral health,[xii] with those living in more deprived parts of the borough experiencing greater levels of dental disease. As such, the Keep Smiling Programme was designed as a targeted programme, with schools selected according to the proportion of pupils eligible for free school meals (used as a proxy measure for deprivation and poor oral health).

Evidence reviews such as the Marmot review of health inequalities highlight the importance of the early years in affecting health and wellbeing throughout the life course.[xiii] The Keep Smiling Programme is offered to children aged 3-7 with the intention of reaching children at an early age to teach them good oral hygiene, the importance of a healthy, low sugar diet and encourage dental access for prevention, with the aim of developing good oral health behaviours which will last a lifetime. We know, for example, from surveys and dental access data that older children are more likely to be taken to the dentist on a regular basis and that some parents only take their children to the dentist when they are already symptomatic.[xiv] Keep Smiling aims to emphasise the importance of visiting the dentist regularly from a young age for prevention, such as fluoride varnish, rather than attending only when there is a treatment need.

There is added value for children's health in creating supportive environments and empowering parents to make healthy choices for their children, by partnership working among health and non-health professionals. The involvement of schools in the delivery of fluoride varnish and toothbrushing programmes is an example of this. The programme also fits with the wider agenda of developing 'health promoting' schools as part of the Healthy Schools Programme initiative which several of the schools taking part in Keep Smiling are signed up to.

Findings and Recommendations from the White City Pilot

During March 2012, Keep Smiling was piloted in five primary schools and one children's centre in and around White City, with promising results. Across the five primary schools 79% of pupils aged 3-7 years participated in toothbrushing sessions and 69% received an application of fluoride varnish by the dentist. In total 698 children across the five primary schools took part in the programme. Positive feedback about the programme was received from parents, school 'tooth champions', dental teams, oral health promotion teams and local community champions about the programme. It was felt that:

- The programme raised awareness of dental health among all stakeholders (including parents, children and school staff)
- It provided children with a unique experience of dental teams in a school setting thereby creating a positive image of dental teams (particularly important for children who had not been to the dentist)
- The children were seen to enjoy the programme and it was reported that the programme promoted positive health behavior.

Following the evaluation[xv] it was recommended that the programme should be expanded to other parts of the borough, following a similar model but with a few modifications. The recommended modifications included:

- The development of a protocol aimed at school staff identifying:
    - The aims and implementation of the programme

    - Roles and responsibilities expected of the school staff and the different dental teams delivering the programme
    - How to increase uptake and consent of the programme
    - The dates, timetable and location for the programme.
- Having two school contacts for the programme to facilitate greater communication with and within the school
- Having as long a time line as possible to plan and implement the programme, and ensure that all relevant staff are engaged in the process
- Amendments to the consent forms: for the consent form to have pictorial descriptions of what fluoride varnish looks like and how it is applied and for the questions about medical history to separate out more clearly children's previous hospitalisation for asthma and allergies and the description of children's allergies
- The separation of the delivery of the toothbrushing and fluoride varnish programmes so that the toothbrushing sessions are delivered before the fluoride varnish sessions and that the toothbrushing and fluoride varnish sessions are not scheduled for the same day.

These amendments were all implemented in the design and delivery of the 2012-13 Keep Smiling Programme.

The full evaluation report from the Keep Smiling pilot in White City during 2011-12 is available on request from the Tri-borough Public Health Team.

2. Outline of the Keep Smiling Programme 2012-13

What is the Keep Smiling Programme?

The Keep Smiling Programme has four components: toothbrushing, fluoride varnish, signposting to dental practices and the delivery of wider oral health messages to protect children's teeth. These are outlined in more detail in figure 1 below.

Figure 1: The key components of the Keep Smiling Programme

As part of the programme during 2012-13 each school was offered up to two toothbrushing sessions and one fluoride varnish visit. The toothbrushing sessions involved children coming out of class in groups of 6-8 to learn about the correct way to brush their teeth and practise brushing under the supervision of an Oral Health Promoter. This was then repeated in a second session on a different day. Children who participated were given a free toothbrush and toothpaste pack to use during the programme and take home afterwards. Children were only able to participate in this part of the programme if their parents had returned a signed consent form.

In addition, schools were offered a single fluoride varnish visit by local dental nurses. This was arranged on a separate day to each of the toothbrushing sessions. During the visit children whose parents had returned a consent form had fluoride varnish applied to their teeth. They

were then signposted to dentists for future six-monthly applications of fluoride varnish, and it was emphasised that fluoride varnish can be applied free of charge for children in NHS Dental Practices. Children who had fluoride varnish applied were sent home with fluoride varnish aftercare instructions. In a few cases, children whose parents had consented were not able to have fluoride varnish applied at school. In some instances this was because the child was absent from school on the day or refused to have the fluoride varnish applied. In others, it was due to their personal medical history (due to a very small risk of allergy to colophony, one of the ingredients in the fluoride varnish, children with a history of hospitalisation for severe asthma or severe allergies were not given fluoride varnish in school but were signposted to dental practices to receive their fluoride varnish in a controlled environment). Children who the dental nurses felt would benefit from a more detailed dental examination were sent a letter home recommending that they visit the dentist.

All children (irrespective of consent) in the targeted year groups were given a leaflet, 'Healthy Teeth Healthy Smiles,' with tips for keeping children's teeth healthy, a 'Finding an NHS Dentist in Hammersmith & Fulham' leaflet, information about fluoride varnish and a toothbrushing chart to complete at home. Schools were also encouraged to organise 'tooth-themed' activities in the classroom to reinforce the messages delivered as part of the programme. A few of the targeted primary schools took up this suggestion and integrated oral health within their lesson plans.

Where was Keep Smiling delivered?

During 2012-13 the Keep Smiling Programme was delivered in six primary schools. In order to continue the momentum established as part of the White City Pilot, it was decided to offer to revisit the Nursery and Reception children in the five original pilot schools, with the idea of catching the majority of the new intake. Three of the five schools took up the offer. These were:

- Ark Bentworth Primary Academy
- Canberra Primary School
- Wormholt Park Primary School.

Since Ark Bentworth has recently become an Academy and is under new direction it was decided to offer the programme to all their classes up to Year 2 (rather than just Nursery and Reception) on an exceptional basis. Within this report these schools are grouped as the 'Keep Smiling 1' schools.

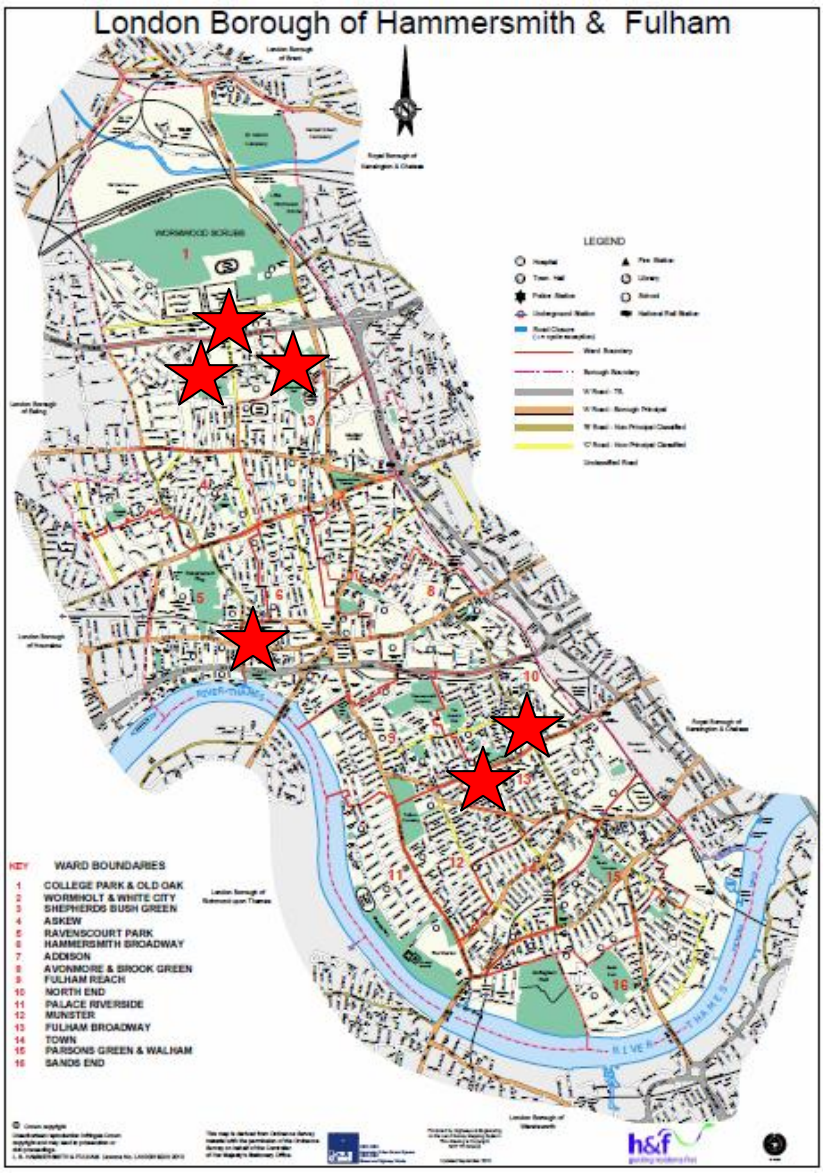
In addition to three of the original pilot schools, the programme was expanded to a further three schools located in the centre and south of the borough:

- Sir John Lillie Primary School
- Flora Gardens Primary School
- Normand Croft Community School.

Since this was the first year Keep Smiling was offered to these schools all children from Nursery to Year 2 were included in the programme. In one school, due to internal year group structures, the programme was also offered to their Year 3 pupils. Within this report these schools are grouped as the 'Keep Smiling 2' schools.

The programme was delivered between March and June 2013.

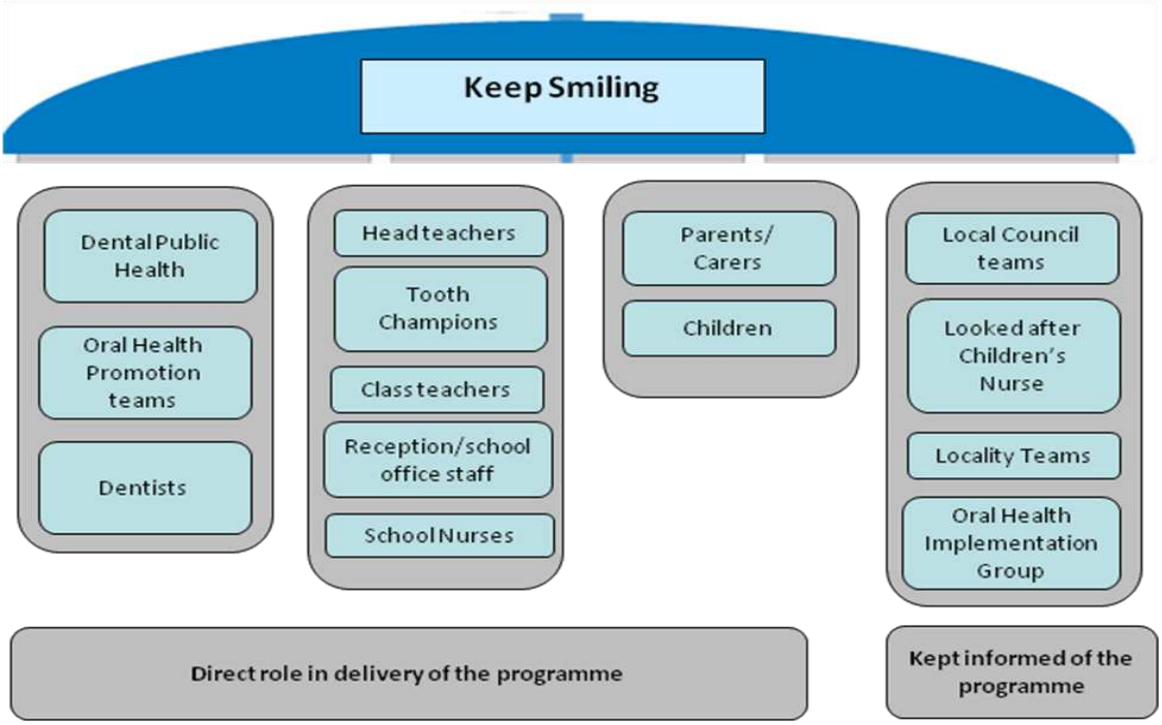
Figure 2: Map showing the location of the six primary schools where Keep Smiling was delivered in 2012-13



Who is involved in delivering the Keep Smiling Programme?

As the diagram in figure 3 shows, Keep Smiling is a multi-agency programme. The overall programme was coordinated within London Borough of Hammersmith & Fulham's (LBHF) Public Health Team (by staff who were formally part of NHS North West London Dental Public Health Team) and the fluoride varnish and toothbrushing sessions were delivered by Oral Health Promoters and Dental Nurses from Central London Community Healthcare NHS Trust (CLCH). It was delivered with support from the numerous school teams outlined in figure 3, as well as parents and children themselves. The programme as a whole was overseen by the Consultant in Dental Public Health for North West London at Public Health England (formally at NHS North West London), to ensure it followed the General Dental Council (GDC) scope of practice, and reported to the LBHF Child Oral Health Implementation Group.

Figure 3: The key individuals/teams involved in delivering Keep Smiling



Overview of the process for setting up the Keep Smiling Programme in each school

The process plan for setting up Keep Smiling is outlined in figure 4 below. One of the key components of the programme was for the Head Teacher to nominate a 'tooth champion' to act as a central point of contact within the school. The staff selected as 'tooth champions' varied across schools and included, SENCOs, Learning Mentors, PSHEE (personal, social, health, and economic education) leads, Nursery teachers, Assistant Heads and Head Teachers themselves. Where possible an additional contact from Early Years/Key Stage 1 was sought to

aid communication with wider staff in the school. Only one of the tooth champions in the Keep Smiling 1 schools was familiar with the programme from last year, due to changes of staff in the other two original keep smiling schools.

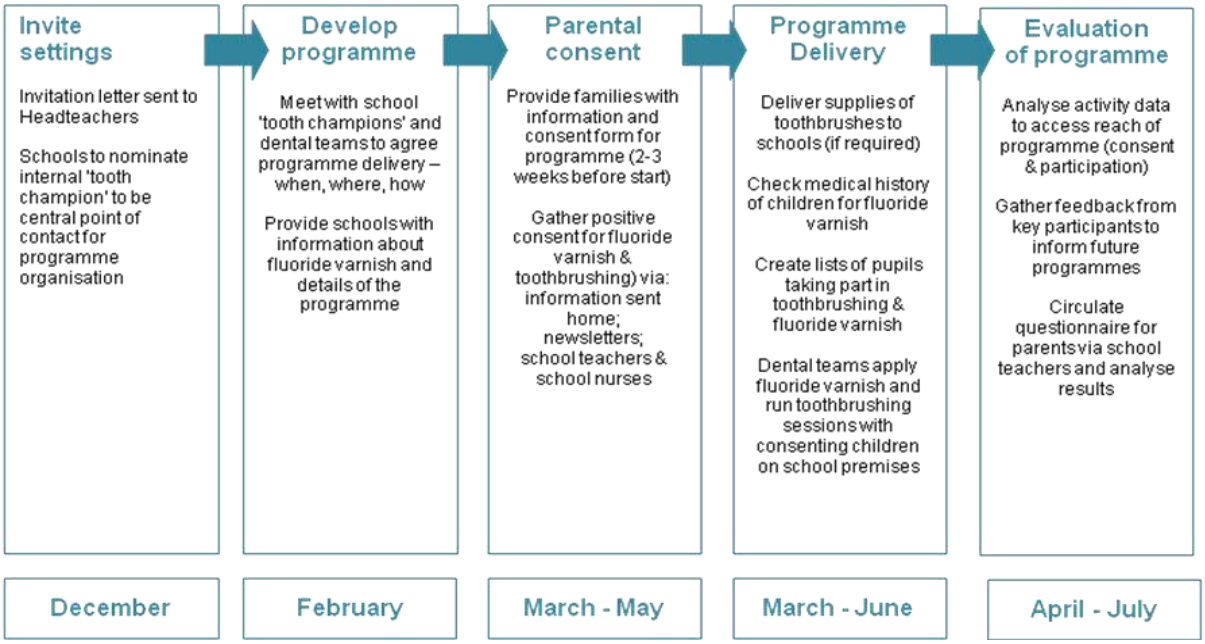
The first stage of delivery was to arrange a programme planning meeting in each school between the tooth champion, the programme coordinator and the dental teams delivering the programme, to provide an opportunity to discuss the programme in more detail and answer any questions. Following the recommendation made in the White City pilot, a protocol and briefing for staff was also given to each tooth champion to provide additional information about the programme, which could be shared as appropriate with wider school staff.

Each programme was tailored to fit with the arrangements in individual schools. Schools were offered newsletter inserts to advertise the programme and posters to display in classrooms and corridors. In one school, following requests from the tooth champion, the Oral Health Promotion (OHP) Team and programme coordinator attended a parents meeting to discuss the programme, which the school arranged. In another school the OHP team were asked to set up a stall in the playground one day at pick-up time and the tooth champion signposted parents who had not signed consent forms or who had questions about the programme. Schools were encouraged to keep a list of children who had returned consent forms, and follow up with parents who had not, to ensure maximum consent rates.

The location of the toothbrushing and fluoride varnish programmes varied by school. Most frequently, the children's toilets were used for the toothbrushing sessions and empty classrooms, parents' rooms or medical rooms were used for the fluoride varnish. To best accommodate the younger children in some schools the fluoride varnish was delivered to nursery children within their classroom.

Photo of Fluoride Varnish session, during 2011-12 Keep Smiling Pilot in White City

Figure 4: Process plan for Keep Smiling in school settings



3. Evaluation Methodology

The methodology used to evaluate the Keep Smiling Programme in 2012-13, included both outcome evaluation (looking at the impact of the programme) and process evaluation (looking at the delivery of the programme).

The outcome evaluation consisted of collecting and analysing the following data for each participating school to understand the reach of the programme:

- Consent and participation rates (numbers and proportions) for the toothbrushing programme by school (the consent and participation rates for this part of the programme were seen as the same, since all children took part in at least one toothbrushing session and took home a free toothbrush and toothpaste pack)
- Consent and participation rates (numbers and proportions) for the fluoride varnish programme by school
- The proportion of children with a dentist (taken from information provided on returned consent forms). Although this is not an 'outcome' of the programme it is included in this section since the data collected relates to the pupils who consented to the two programmes.

The process evaluation consistent of the following methods of data collection:

- Questionnaires sent to parents/carers in the target classes
- Interviews with school tooth champions about the delivery of the programme
- Reflections collected via email from the dental teams delivering the programme and the programme coordinator.

Parent/carer questionnaires

Agreement to conduct the parent/carer survey was sought from the school tooth champions prior to preparing the paperwork. Every school agreed to take part. Pre-prepared surveys were distributed to each child in the target year groups and envelopes to collect responses were given to each class teacher. Parents were given approximately two weeks to respond to the survey. Personal details were not collected and, unlike in the White City pilot, no incentive was given to parents to return questionnaires. (For the White City pilot slips returned with questionnaires were entered into a prize draw to win £30 *One 4 All* shopping vouchers).

Following a request from two schools an online version of the questionnaire was set up using Survey Monkey. This was advertised to parents in three of the six schools alongside the paper questionnaire but no responses were received online.

The questionnaire consisted of 9 short questions, asking for a mixture of tick-box (quantitative) and free-text (qualitative) responses (see appendix a for a copy of the questionnaire). It was designed to capture feedback as to whether:

- Parents/carers received adequate information about the programme
- If and where parents had heard about fluoride varnish prior to the programme
- Whether children were happy with the fluoride varnish
- Whether parents were satisfied with the programme
- Whether parents felt their child benefited from the programme and whether they have made/ noticed any changes to their child's toothbrushing/ attending the dentist
- Any suggestions for improvements to the programme.

The responses to the survey were entered into an Excel spreadsheet for analysis.

The response rate to the quesionnnaire was low: in total 911 pupils were sent a questionnaire and only 61 responses were received across the six schools (6.7% response rate). The majority of responses came from one particular school (30 responses), which represents a 37% response rate in that school. In some schools this poor response rate may reflect the time gap between the delivery of the toothbrushing and the fluoride varnish components of the programme, and the fact that the questionnaires were given out a few weeks after the end of the programme when momentum may have been lost.

Due to the low response rate, the responses from all six schools were analysed together. The results for the quantitative questions are presented as numbers rather than proportions since, due to low numbers, the responses cannot be seen as representative of all parents of children taking part in the programme. During analysis, answers to free-text questions were grouped and key themes were drawn out, which are presented here as quotes.

Recommendation 1: If the decision is made to run the parent/carer questionnaire in future programmes, it should be scheduled so that questionnaires are distrubuted on the day of the fluoride varnish applications to ensure that the programme is still fresh in parents' minds and to gain maximum feedback.

Interviews with school tooth champions

Each tooth champion was approached to take part in a brief face-to-face interview about the programme. Five of the schools agreed to participate but one tooth champion asked to be sent the questions in a survey format via email instead of being interviewed, due to time pressures. Each interview took place in the relevant school and lasted no longer than 30 minutes. In one school the tooth champion also brought along two class teachers who she felt had been more

involved in the programme 'on the ground'. A copy of the question sheet is provided in appendix b.

The aims of the interviews were to:

- Explore the views and experiences of school staff in the Keep Smiling Programme in terms of the communication about the programme; the information and resources provided; the enjoyment of the children; the organisation and delivery of the different elements of the programme; the time required to organise the programme within the school; and any challenges arising
- Understand how schools promoted the programme and recruited children
- To identify areas for improvement to the programme.

The interviews were conducted by the project coordinator. Notes were handwritten during each interview (not digitally recorded) and transferred directly afterwards to an Excel spreadsheet for analysis. The tooth champions' responses were examined by school (to establish internal consistency within each respondent's answers) and as a collective, by question, to establish key themes.

4. Results: Outcome Evaluation

Six schools took part in the Keep Smiling Programme during 2012-13: this comprised three schools which had taken part in the White City pilot (Keep Smiling 1) and three new schools (Keep Smiling 2). In total, eight schools within Hammersmith & Fulham have taken part in Keep Smiling to-date. In order to understand the reach of the 2012-13 programme, the programme consent data is presented in this section in three ways: a summary of the programme as a whole (all six schools), uptake of toothbrushing by school and uptake of fluoride varnish by school. In the graphs in figures 5 and 6 below, showing the uptake of the toothbrushing and fluoride varnish sessions, the schools are anonymised, however the horozontal axis labels indicate whether they are Keep Smiling 1 or Keep Smiling 2 schools.

Summary

632 children across the six schools participated in the programme out of a possible 911 (69%). This reflects the children's participation in toothbrushing, which was more popular than the fluoride varnish. 448 children had fluoride varnish applied to their teeth which represents 54% of the target children (although the consent rate for fluoride varnish was higher, at 64%, something explained in more detail below).

The reach of the programme within the targeted schools was similar but slightly less than the 2011-12 pilot in White City. In White City, 79% pupils across the five pilot schools took part in the toothbrushing sessions and 69% took part in the fluoride varnish. As will be shown, however, these overall programme figures mask the variety between schools: uptake varied between individual schools taking part in 2012-13, as it had done for the 2011-12 pilot. The overall figures from Keep Smiling 1 and Keep Smiling 2 are compared in appendix c.

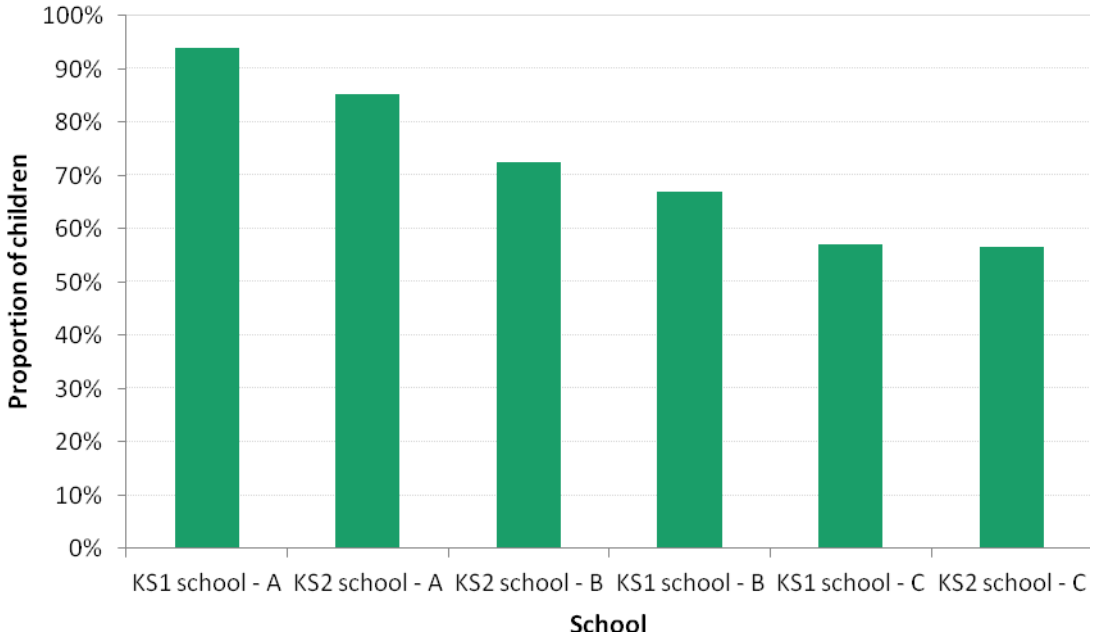
Toothbrushing

As the graph in figure 5 shows, the uptake for the toothbrushing programme varied across the six participating schools. The proportion of children taking part in each school ranged from 57% to 94% (average of 72%). The school with the greatest uptake was one of the original pilot schools for the Keep Smiling Programme. The level of uptake does not however appear to relate to whether the schools had previously taken part in the programme: two of the new Keep Smiling 2 schools had the second and third highest uptake.

The variation in uptake across the six schools displayed in figure 5 masks the fact that within some schools consent rates varied by class. For instance, in one school (KS1 school B in figure 5), only 7 pupils out of a maximum of 29 consented for toothbrushing in one particular class. If that class was removed from both the numerator and the denominator (the consent and target pupils nubmers) then the school's toothbrushing uptake would rise from 67% to 83%.

The majority (four) of the schools were offered two toothbrushing sessions (two of the schools were offered only one toothbrushing session due to scheduling decisions). Data was collected on the number of consents received after each toothbrushing session. Three of the schools saw a significant rise in consents between the two toothbrushing programme highlighting the importance of holding more than one session with the children, not only to enable the Oral Health Promotion Team to reinforce the messages given at the first session but also to increase the uptake of the programme. One school, for example, had a 20% increase in consents and another saw a 17% increase between the two sessions.

Figure 5: Proportion of children in the target year groups taking part in toothbrushing sessions by school, Keep Smiling Programme 2012-13



Fluoride varnish

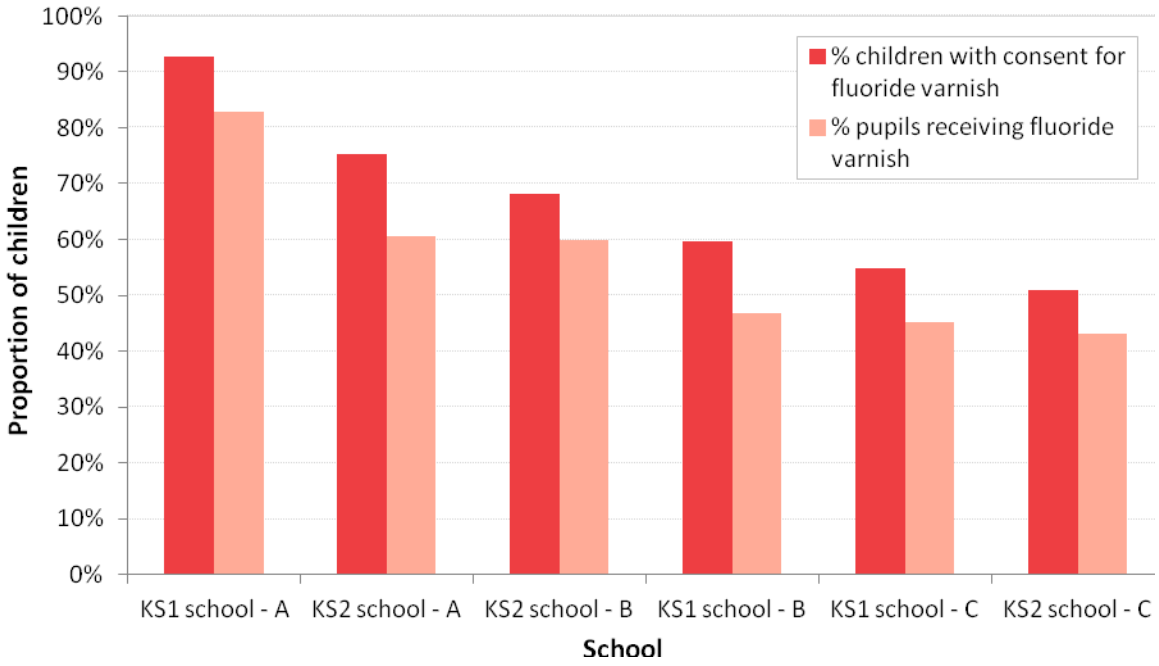
Overall, across all six schools 64% pupils received consent for fluoride varnish. Consent ranged from 51% to 93% in individual schools (average 67%). The consent by school for the fluoride varnish mirrored toothbrushing consent, with schools ranked in a similar order in terms of uptake.

Consent was lower across all schools for the fluoride varnish compared to the toothbrushing, although in some schools the figures were very smiliar. As the graph in figure 6 shows, not all children who had consent for fluoride varnish were able to receive it in school. This was due to a combination of factors, including reasons of the child's medical history, [1] the child being

[1] Medical reasons why a child might not be given fluoride varnish as part of an outreach programme include, having severe asthma and/or severe or multiple allergies for which they have been hospitalized; or in cases where

absent or refusing to have it on the day or the parental consent section of the consent form being incomplete. The proportion of targeted children receiving fluoride varnish varied from 43% to 83% (average 56%).

Figure 6: Proportion of children in the target year groups with consent for and receiving fluoride varnish by school, Keep Smiling Programme, 2012-13



The full data for both parts of the programme is summarised in the table in figure 7 below.

Recommendation 2: Share class level data for the uptake of the programme with each school at the end of the programme and ahead of future visits to help improve uptake of future programmes in individual schools, particularly where consents were low for specific year groups.

asthma and allergies were identified on the consent form but the severity was not clear from the information the parents provided (and therefore the potential risk was unknown).

Figure 7: the overall reach of the programme by school

Reach of the programme		Keep Smiling 1 schools			Keep Smiling 2 schools			TOTAL coverage - all 6 schools
		School A	School B	School C	School A	School B	School C	
Target population	Total pupils targeted (aged 3-8 years) *	82	109	93	170	160	297	911
Consent for fluoride varnish	Total children with consent for fluoride varnish	76	65	51	128	109	151	580
	% Target children with consent	93%	60%	55%	75%	68%	51%	64%
	Total number without consent for fluoride varnish	6	44	42	42	51	146	331
	% Target children without consent	7%	40%	45%	25%	32%	49%	36%
Reach - fluoride varnish	Total number of consenting children who did not have fluoride varnish on the day (absent/ refused/ medical history/ other)**	8	14	9	25	13	23	92
	Total number receiving fluoride varnish	68	51	42	103	96	128	488
	% Target children receiving fluoride varnish	83%	47%	45%	61%	60%	43%	54%
Reach - toothbrushing	Total children with consent for toothbrushing	77	73	53	145	116	168	632
	% Target children participating in toothbrushing	94%	67%	57%	85%	73%	57%	69%

* Note, as discussed in section 2, in some schools the programme was offered to children aged 3-5 years; in some schools to 3-7 year olds; and in one school to 3-8 year olds

** In a couple of cases the child had left the school at some date between the toothbrushing and the fluoride varnish sessions (these children have been counted as absent on the day).

Promoting dental access

One of the main aims of the Keep Smiling Programme is to signpost families and children to dental services. For the first time in 2012/13, the Keep Smiliing consent form asked parents if their child had a dentist and to provide the name of that dentist. In total, 636 pupils returned a consent form and 65% of forms recorded that the child had a dentist. Of those, 55 (13%) did not provide the name of their child's dentist. This data is provided by year group in figure 8 below.

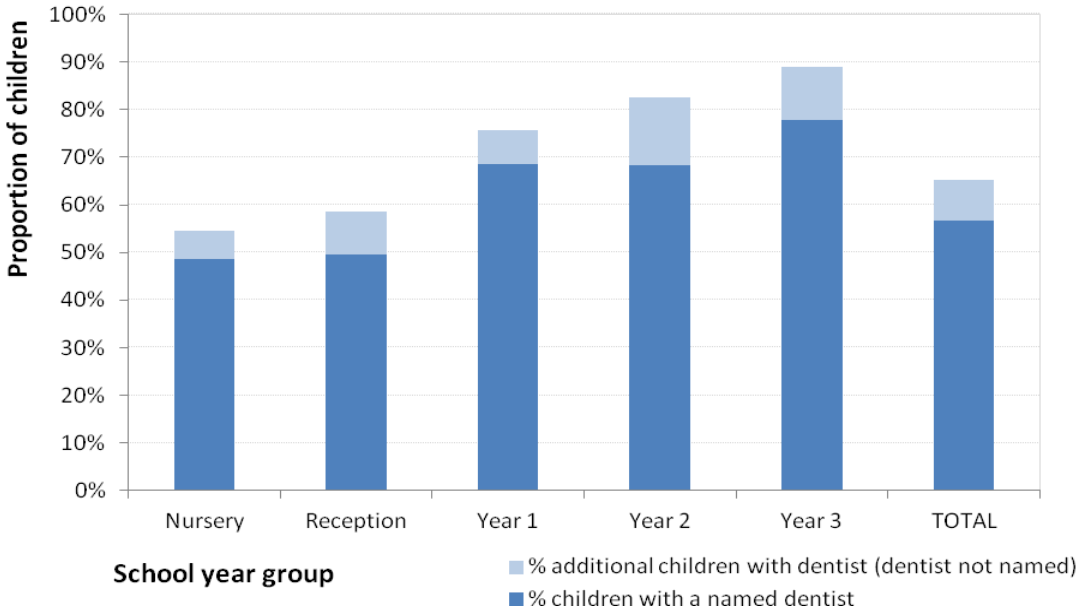
This information should be interpreted with caution since different parents may have interpreted the question 'does your child have a dentist' in different ways: for example some parents may take their child to the dentist regularly; some children may only have attended

once/ when symptomatic for treatment. The children with a named dentist are separated out from those whose parents ticked the box confirming their child had a dentist but did not provide a dentist's name. Although providing the name of a dentist does not necessarily mean that children definitely have a dentist and regularly attend, it may be that some parents who ticked the 'does your child have a dentist' box misread the question or have only taken their child to the dentist once/ on occasion.

Another caveat to interpreting the data in figure 8 is that only 636 out of 911 pupils returned a consent form. These may represent the children whose parents are keen on oral health and who are more likely to take/have taken their child to the dentist. As such, the proportion of children shown to have a dentist may be inflated.

As the graph in figure 8 shows, the proportion of children with a dentist appears to increase as the age of pupils increases, with 55% of Nursery children reportedly having a dentist compared to 89% in Year 3 (although it should be noted that the Nursery and Reception data is based on information from 400 consents, compared to only 27 consents from Year 3 pupils, reflecting how the programme was delivered in each school).[2] The figure for children with a named dentist ranged from 47% in Nursery to 78% in Year 3.

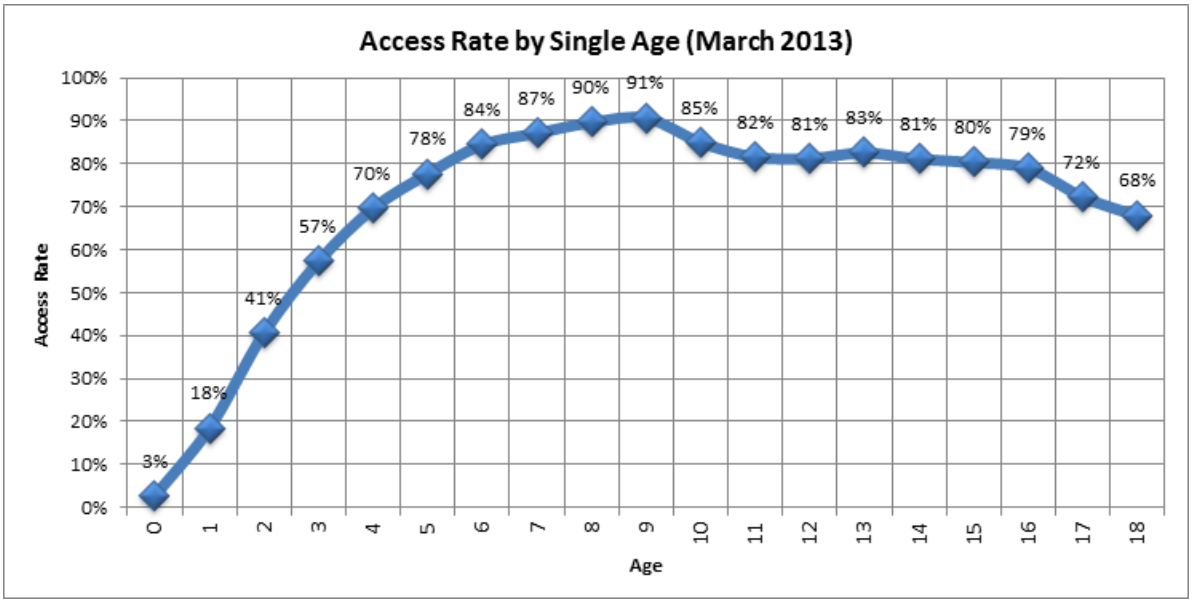
Figure 8: The proportion of primary school children participating in Keep Smiling 2012-13 recorded as having a dentist, by year group (data pooled for all 6 schools)



[2] It should be noted, however, that no tests for statistical significance were applied to this data, therefore there may be no true difference between the proportions of children with a dentist in different year groups.

These findings corroborate what we know from other sources: a much higher proportion of children of school age attend the dentist, compared to pre-school children and dental access tend to show attendance rates for children increasing steadily with age of child up to the age of 8/9 (when they plateau) (see figure 9 below, showing data for England as a whole).[xvi]

Figure 9: Proportion of children who had been to an NHS dentist in the 24 months prior to March 2013



Source: Graph produced by NHS Business Services Authority, April 2013, using dental access figures from NHS Business Services Authority and mid-2011 population estimates for England

Although the quality of the information collected as part of the Keep Smiling Programme as to whether children have a dentist is not perfect, it does provide a useful impression of dental access amongst young children locally, to supplement other data sources. During the evaluation of the 2012-13 programme a few of the tooth champions were asked whether their school currently collects information about whether children have a dentist on school entry. The responses varied by school but it was clear that this data was not collected uniformly and could be a valueable trigger point for parents in registering their children with a dental practice.

Recommendation 3: Speak to the 'Tooth Champions' in each of the schools taking part in the Keep Smiling Programme to find out whether they collect information on their school starter forms as to whether children have a dentists and, if not, see if it could be added to existing templates. This would act as a prompt to remind parents to take their children to the dentist on a regular basis for prevention. Schools could be provided with information about finding an NHS dentist locally to share with parents.

Across the six schools, 126 children were given letters from the Dental Nurse recommending that they visit the dentist for a detailed dental examination, following the fluoride varnish sessions. (The school examination is only a screening because the Dental Nurses are unable to diagnose – GDC Scope of practice). Of those who received a letter, 63% were recorded as having a dentist (52% a named dentist). This leaves 47 pupils who were possibly being referred to the dentist for the first time (indicating that potentially without this scheme it may have been only when a child complained of pain that there was a prompt for parents to seek dental care for their child). Although no formal process has been drawn up to-date to follow up the pupils who received such a referral letter, in a few cases the Dental Nurses delivering this programme in 2012-13 did alert school staff where they had particular concerns. It was agreed by the dental teams and project coordinator that a more formal process should be drawn up for this ahead of next year's delivery of Keep Smiling.

Recommendation 4: Establish a protocol for following up the children who are given a letter at school as part of the fluoride varnish programme recommending that they attend a dentist for a dental examination, to check that they made and attended an appointment.

5. Results: Process Evaluation

As outlined in section 3, the process evaluation had three components, which will be summarised here in turn: a questionnaire conducted with parents; interviews with school tooth champions; and reflections of the dental teams delivering and coordinating the programme.

Feedback from parents/carers

As indicated in section 3, the response rate to the parent survey was very low. Due to the poor response rate (61 questionanires) the responses cannot be taken to be representative of all parents in the target schools. They do, however, provide some feedback on the delivery and impact of the programme, in particular the benefits seen in some families to their children's oral health behaviours. A copy of the questionnaire is included in appendix a. A similar questionnaire was used in the evalution of the Keep Smiling 1 pilot (White City).

The responses to the questionnaire have been grouped below into three sections: satisfaction and peceived benefits; knowledge about fluoride varnish; and comments about the parental information provided and improvements to the programme

- ***Satisfaction and perceived benefits***

60 out of the 61 parents who returned a questionnaire responded as to their satisfaction with the programme. Of these, 33 were *satisfied* and 20 were *very satisfied*. The remaining 7 were *somewhat satisfied*.

The majority (53) of the parents felt that their child benefited from the programme, with only 3 parents reporting that they did not think their child benefited (5 left the question blank). The benefits and changes to children's behaviour regarding oral health that were cited by parents can be grouped in four ways: general benefits, toothbrushing, visiting the dentist and diet. These are indicated by the comments quoted below, which each reflect sentiments expressed by several parents.

- Overall benefits of the programme
  - *'Child is more aware of the importance of brushing and dental care'*
  - '*It helps him learn the importance of brushing regularly and eating less sweets'*
  - *'It was an experience my child enjoyed talking about.'*

- Changes to toothbrushing
  - *'He talks about brushing his teeth in a positive way now and it has encouraged him to remember to do it'*
  - *'She is aware of why we brush and does it happily'*

- *'He particularly liked the 'toothbrushing' chart and we gave him a little reward for completing it'*
- *'She understands more about brushing her teeth at night as well as in the morning'*
- '*Brushing more than usually'*
- *'Changed fluoride toothpaste'*
- *'Now she just goes and brushes her teeth at bed time. Before had to make her'*
- *'We don't wet the toothbrush.'*

- Changes to visiting the dentist
  - *'Have booked an appointment for a check-up'*
  - *'Our child seems less anxious about visiting a dentist now'*
  - *'We have been to the dentist as a result.'*

- Changes to diet
  - *'He likes to eat sweet food. Now he can reduce that habit by looking at the pamphlet from the keep smiling programme'*
  - *'Don't have as many sweets and started buying sugar-free drinks.'*

A few parents commented that they have made/seen no change to their children's behaviour as a result of the programme, but these tended to reflect that good practice was already taking place at home. Parents for example replied:

- *'None as already keeping a close eye on my child's toothbrushing'*
- *'My child visits [the dentist] every 6 months anyway.'*

- ***Knowledge about fluoride varnish***

Parents were asked if they had heard about fluoride varnish before the Keep Smiling Programme. 41 of the 61 parents had not heard about fluoride varnish. Of the 20 who had heard about fluoride varnish previously, 16 cited where they had heard about it. The places named included:

- 7 – at a local school/nursery
- 2 – through a sibling having it previously
- 3 – at the dentist
- 4 –other miscellaneous places, including in the news (media).

Many of the schools/nurseries which were named as places where parents had heard about fluoride varnish previously were those involved in the Keep Smiling 1 pilot.

- ***Comments on parental information provided and improvements to the programme***

Of the 61 parents who responded, the majority (55) felt they received enough information about the programme. Those who commented on why they felt they did not receive enough information (2) said it was because they felt the information was received too last minute.

49 of the children whose parents responded, were those who had fluoride varnish applied at school. One of the parents whose child did not commented that their reason for not consenting to the programme was that they wanted to have more information about fluoride varnish.

When asked if they felt the programme needed improving, 24 felt it did not and 24 responded that they did not know. 10 parents felt it did need improving. Of those who felt it needed improving, one mentioned that they felt it was important that the programme is entertaining for children so that they enjoy brushing their teeth and are not afraid to visit the dentist (although it was not clear as to whether this was a statement of fact or a criticism of the programme that it did not do these things). Another felt the programme should be extended to include children up to year 6 since they felt older children are also still learning and children listen to professionals about matters such as oral health.

Overall parental feedback was very positive indicating that the programme was well received. Many of the parents who responded noted postive changes to their child's oral health behaviours/ attitudes towards oral health and visiting the dentist.

Feedback from the school tooth champions

As indicated in section 3, interviews/surveys were conducted with tooth champions in five of the six schools. The themes coming out of the interviews have been grouped and summarised below according to key themes and questions. Selected quotes from interviews are provided as relevant. Since the interviews were not tape recorded the quotes have been paraphrased as accurately as possible from notes made during the interviews.

The themes have been grouped into the following seven sections: information and resources received about the programme; communication about the programme; recruitment of the children and promotion of the programme; organisation and delivery of the programme; appropriateness of the programme and impact for school and community; continuation of the programme; and improvements to the programme.

- ***Information and resources received about the programme***

All the tooth champions felt they were given adequate information at the start of the programme. The initial, project planning meeting was felt to be a useful opportunity to find out out more about the programme and ask any questions. One tooth champion felt that although they received a lot of information about the programme, it maybe did not filter down enough to class teachers due to time pressures within the school.

The resources for children provided such as the toothbrushing charts were found to be useful, as well as the sample newsletter extracts about the programme, the staff briefing paper and

posters to advertise the programme within school. One teacher commented that children in her class brought their toothbrushing charts into school to show her.

The first meeting was really good, it established everything. I was surprised to get written information but found that really useful. The newletter exceprts were useful, the posters were useful. The information pack was very clear and useful to understand what the programme was about to inform parents (TC 5).

The briefing for staff was useful to share with staff so they knew the reasons behind the programme. I put a copy on the bill board so teachers had something to read in advance (TC 1).

Recommendation 5: Review the briefing paper for staff about the Keep Smiling Programme and ensure it contains all information needed in a user-friendly format. Consider leaving a printed copy for each class teacher when the dental teams first come to the school to deliver the toothbrushing programme, to supplement internal communication with the school.

The tooth champions felt that parents received enough information about the programme. Some parents asked teachers for help with completing the consent form and also discussed the programme with/helped each other. It was felt, however, that some parents may have struggled with the form due to low literacy levels and having English as a second language.

Parents talk to each other in the playground, they told each other about the programme e.g. families who had siblings in different year groups (TC 5).

The parents leaflets were perhaps too wordly. They may be a bit daunting particularly for EAL [English as an additional language] parents. The literacy leavel of some parents is low. Parents however had plenty of opportunities to ask questions at school. It may be that parents are not confident to ask questions (TC 3).

It might have been useful to have some information available in Arabic and Somali for those families with little English (TC2).

- ***Communication about the programme***

Comments on the communication between the school and the teams coordinating the programme were positive. The tooth champions found it useful for the schools to have a central point of contact (the programme coordinator). Email was felt to be the most useful means of communication with school staff and tooth champions commented that responses to emails were prompt on the whole.

Everyone was very helpful. There was good, rapid respones by email. Helpful to have one person to communicate with (TC 5).

Although communication about the programme overall was good between the tooth champoin and the project coordinator, there was less communication noted between the class teachers and the dental teams delivering the programme. Some of the teachers felt that they and their classes were not as prepared as they might have been for the programme, mostly due to time pressures, although this was not the case for all schools. They acknowledged this was a two way process and felt this could be improved through having an assembly with children/meeting with staff and/or for the dental teams to have a brief discussion about the programme with the teachers before the start of the toothbrushing and fluoride varnish sessions.

The Oral Health Promoters came in, said hello, gave me the lists of children they wanted to see and took the children. The children were aware of the programme because they were involved in sending forms home and bringing them back but they maybe weren't prepared for the programme on the day. Maybe hold an assembly about the programme so the children are aware, maybe invite all relevant staff to the initial planning meeting (TC 4).

Children were exicted about seeing the dentist. Staff let children know, talked about it in class before so it wasn't a shock. Teachers reminded children about what would be happening (TC 1).

The staff were not so good at explaining to children about the fluoride varnish. The children recognised it as important for thier teeth. In school we've placed most emphais on daily brushing but have talked to parents about fluoride vanrish and the fact it is free at the dentist (TC 5).

Recommendation 6: Consider having a brief talk with class teachers on the first morning of the the toothbrushing programme so that staff and children understand what to expect in the programme. As per recommendation 5, consider leaving a briefing note with class teachers about the programme to provide additional information and guidance.

- ***Recruitment of the children and promotion of the programme***

Teachers who had also been involved in the programme during 2011-12 reported finding the recruitment of children easier this year, as the school was familiar with the programme and there were only two year groups to worry about. Schools reportely took different approaches in recruiting children to the programme, including:

  - The tooth champion standing in the playground at pick-up and drop-off time with a list of parents who had returned consent forms, reminding and chasing parents who had not returned theirchild's form.

- Phoning/texting parents to remind them to return their forms
- Photocopying consent forms
- Sending reminder letters to parents
- Helping parents fill out forms
- Promoting the programme in assembly
- Speaking to parents who were harder to reach.

Talked to parents and teachers about the programme. School has weekly business meeting with teachers, which used to tell them about the programme (TC 5).

Helps where staff involved are enthusiastic about the programme [as they were in our school] (TC 1).

Next year would get more children, would be easier as programme would not be new and staff would not be new to the programme (TC 5).

Another time, teachers could keep a check list themselves to track who has handed their form back so we can target specific families (TC 2).

To supplement recruitment to the programme and also reinforce messages delivered as part of the programme several schools organised complementary oral health activities in the classroom/ linked the programme to the curriculum. Some of the schools who were not able to do this due to the timing of the programme (during SATs), reflected that this was something they would like to do in the future.

Teachers held sessions during PHSE with children asking them about oral health and getting children engaged so they asked their parents about it (TC 5).

Some ideas around healthy eating linked into what was on the year 1 and year 2 curriculum in school at the time (TC 3).

- ***Organisation and delivery of the programme***

The organisation and delivery of the programme was felt to run smoothly. Tooth champions commented that overall the programme did not inconvenience the schools or disrupt classes as teachers could plan around it. The support provided by the programme coordinator and the dental teams in timetabling the programme was felt by the tooth champions to be useful. Although help with timetabling was appreciated, two schools reflected that at times the timetable slipped slightly from the schedule.

Ran smoothly, the format works (TC 1).

There was no negative feedback from staff at the school; someone would have said something if there had been. The only thing was running late the first day. Next time maybe have a clear

deadline with teachers when forms need to be back and chase parents up to that date to avoid last minute confusion (TC 3).

The first day was quite chaotic because of late consents, chasing parents, desperately trying to get new forms or finding copies to photocopy (TC 3).

The team were not prepared for how many children had signed up so there was a bit of to-ing and fro-ing on the first today. We had ticked off names on class lists as to who had returned forms but the team double checked them and transfered names which was a bit confusing and the programme ended up starting late. Although it was useful to check the names as there were a few forms that were incomplete (TC 3).

Recommendation 7: Encourage schools to keep a list of who has and has not returned consent forms and point out to the school tooth champions which sections of the consent forms are sometimes filled out incorrectly. Ensure the tooth champions understand that the dental teams will need to double check the forms and lists before starting the programme (to ensure forms accurately completed and to check children's medical history).

Recommendation 8: Share the draft class toothbrushing and fluoride varnish timetables with schools as far in advance as possible so that class teachers have plenty of notice and know what to expect in terms of programme delivery.

The tooth champions did not feel that their part in organising the programme in their school represented a significant burden on their time: many reported only spending a couple of hours, for example to respond to a few emails, attending meetings, sharing information with teachers and speaking to parents.

We didn't need too much time to organise this. On the morning of the visits by the Oral Helath Team I helped them get settled in but then they managed themselves (TC 2).

Couple of hours, not a huge amount, given how effective it would be. It was time well spent. There is nothing more hte oral health teams could have done (TC 3).

- ***Appropriateness of the programme and impact for school and community***

All the tooth champions felt that the programme was important and necessary for the community they work in. Some mentioned that teachers had raised the issue of the the poor oral health of their pupils, prior to the programme being offered.

The year 2 teacher commented that she found the programme very welcome as had previously identfied that children's oral hygiene was of a poor standard (TC 5).

[This programme is] very appropriate and necessary (TC 2).

Need doing. Parents who spoke to teachers about it were really positive about it (TC 4).

Incredibly important. The oral health of some children is absolutely shocking. If we could get children into good habits when they are younger would be important. Need to educate adults as well as children, although the best way can be through children (TC 3).

Feedback about the impacts of the programme on both the school and the community were positive. One tooth champion commented that it was good for schools to take part in wider programmes on offer within the local community. Benefits cited included raising awareness about fluoride varnish, children being more involved in their oral hygiene and influencing their parents and that the children enjoyed it.

Good that children got things to take home to show their parents (TC 4).

Parents did not know that fluoride varnish is free from the dentist (TC 5).

[The school learned] the need to educate some of our families on basic hygiene (TC 2).

Got the school to focus on oral health, think about oral health for a week or so afterwards when the children were coming into school (TC 3).

The children liked the packs of toothpaste and toothbrushes. It is good because children took ownership over it [their oral hygiene]. The toothbrushing teams were good, used appropriate language with the children. The fact that children were talking about it is good evidence that they liked it (TC 5).

The staff asked the year 2 classes about it. They thought it was useful. Children were telling other children how to brush their teeth properly (TC 5).

- ***Continuation of the programme***

All the staff interviewed wanted to see the programme continue. They commented on the importance of children having toothbrushing skills and getting children thinking about the value of oral health and healthy teeth and having a role in their own oral hygiene, as well as parents.

All of it. It is good for nursery and reception to see friendly dentists in a friendly environment (TC 1).

Definitely the toothbrushing should continue. Children need to know how to brush properly. Even though some are young they need to be given the responsibility. The way some families function it is likely that no adult plays an active role in supporting oral hygiene. Need to get children thinking about the importance of good teeth (TC 3).

- ***Improvements to the programme***

At the end of the interviews, the tooth champions were asked to suggest any improvement which could be made to the programme. In a couple of the schools part of the programme was delivered in the summer term when some year groups (2 and 3) were involved in SATs. A few of the tooth champions commented on the timing of the programme, saying that if it had been held at another time of year they may have been able to give more attention to oral health within school.

It would be nice to run it at a different time of year so the school could make more of it e.g. link to science and other parts of school curriculum. Have a themed week (TS C).

Other suggestions included:

- Producing a DVD about the programme which teachers could use in an assembly/ in class to explain the programme to children
- Start planning and advertising the programme early, e.g. start engagement from September time to remind parents
- Where there is a children's centre on site engage them also in the programme to catch children when younger
- Return to the school after the programme to reinforce the messages and check what children have learned
- Simpify the evaluation form for staff feedback
- Produce a Keep Smiling certificate to help schools applying for Healthy Schools acreditiation
- Share copies of the class level data with the tooth champion in each school.

Before the end of the programme a couple of these suggestions were put into place: each school was given a certificate acknowledging their involvement in the programme and the class level data for toothbrushing and fluoride varnish was shared with each tooth champion (this was also noted above as recommendation 2).

Recommendation 9: Consider commissioning a DVD outlining the key components and messages in the programme which could be used with children, teachers and parents.

Recommendation 10: Contact schools being offered the programme as soon as possible at the start of the school year to ensure maximum planning and promotion time for each school programme.

Recommendation 11: On completion of the programme send each school a certificate acknowledging their participation and the uptake of the programme in their school.

Recommendation 12: Review the school tooth champion evaluation form and consider ways to shorten the questions and adapt it for use as a survey rather than an interview schedule.

Reflections from the dental teams

At the end of the programme the reflections of the dental teams who delivered the toothbrushing and fluoride varnish components of Keep Smiling and the Programme Coordinator were collated via email. Overall the programme was felt to work well in its current model, although a few areas for improvement were noted. The comments and suggestions for improvements to the programme can be summarised as follows (the recommendations which were also brought up by the school tooth champions, or are otherwise drawn out in the recommendations above are not repeated here as new recommendations):

Consent forms

- It would be useful for the team to bring spare copies of the consent form to school on the days of the programme in case of last minute consent requests.
- It would be a good idea to remove the request for children's addresses from the consent form and replace with just their postcode to reduce the sensitive data being collected.
- With different dentists/therapists/dental nurses delivering the programme in different schools it would be useful to have a flow chart to guide the decisions as to in which cases to include/exclude a child from the outreach fluoride varnish based on their medical history record.

Timetabling

- The team felt it was useful to have a clear timetable set in advance to follow for the programmes in each school, even if there may be last minute changes requiring a flexible approach.
- At the initial planning meeting with schools ask for the school roll broken down by class, detailing the name of the class/ the name of the class teacher, to aid timetabling.
- Set a deadline for the return of consent forms a few days before programme to allow adequate time to draft a timetable and share with class teachers.

Promotion of programme

- In one school the Oral Health Promotion Team attended a parents meeting to discuss the Keep Smiling Programme, which on the day was not as well attended as anticipated. In another school the Team had a stall in the playground at pick up time and the tooth champion signposted parents to enable the Team to answer any questions and provide help with signing forms, which helped reach some of the 'harder to reach' parents. The school tooth champion should be asked to advise on the best way to reach parents at their school and schools should be offered one support activity to help increase consent.

Communication about programme

- In one school several class teachers gave children their toothbrushing packs to take home at the end of the first toothbrushing session rather than keeping them for the next time the Oral Health Promotion Team visited to do the follow up toothbrushing session. In another school one class teacher kept hold of the toothbrushes from the toothbrushing session until the Team came to run the fluoride varnish session, rather than giving them out after the second toothbrushing session; as such the brushes had to be discarded for hygiene reasons, due to the time delay between the two sessions. This highlights the need to improve communication with teachers directly, in person and possibly through leaving them with a note with clear information about the programme (rather than relying on the tooth champion to disseminate all key messages to relevant staff).

Following up children

- It is valuable as part of the programme to contact the parents of the children who the dental team feel would benefit from a detailed dental examination, following the fluoride varnish session. There is currenly no mechanism in place for checking that those parents who are signposted do in fact take their child to the dentist/ to find out if the children are currently receiving treatment under the care of a dental practice. A protocol for this should be developped ahead of future programmes.
- Although dental teams delivering the programme have safeguarding training, a protocol should be developed to provide greater clarity for the dental teams as to the processes they should follow if they see something of concern while examining children in the school setting as part of the Keep Smiling Programme.
- It was questioned whether there is any process by which children whose parents consent for toothbrushing but not fluoride varnish, who the dental team identify as needing to see a dentist, can be recommended to see a dentist, even informally via their teacher.

Evaluation

- Currently the evaluation process for the Keep Smiling Programme captures feedback from parents and school tooth champions but it does not collect any feedback from children or any assessment as to the impact of the programme on children's knowledge/ behaviour at home as a result of the programme (other than that reported by parents).

Could a mechanism be developed to test children's knowledge pre and post programme?

Recommendation 13: Set a deadline for the return of consent forms a few days before the start of the programme. Arrange to attend the school at least one day before the first toothbrushing programme to check consents, confirm the timetables and follow up any outstanding questions about children's medical history in preparation for the fluoride varnish.

Recommendation 14: Offer each school one parent session to help support schools increase consents for the programme, such as meeting with parents, promoting the programme at school drop-off, collection etc.

Recommendation 15: Produce a decision-tree to guide interpretion of the medical history section of the consent forms for fluoride varnish, from which decisions are made as to whether it would be safe to apply the fluoride to the child at school or whether the child should be signposted to a dental practices to receive the fluoride varnish. This would only be intended as a guide and decisions should still allow room for personal clinical judgement of risk as necessary, by the dental processional applying the fluoride varnish.

Recommendation 16: Develop a protocol to provide greater clarity for the dental teams as to the processes they should follow if they see something of concern, which may be a safeguarding issue, whilst examining children in the school setting as part of the Keep Smiling Programme.

6. Summary and Conclusions

The feedback from the Keep Smiling Programme was overwhelmingly positive. The delivery of the programme went smoothly and built on the experiences and lessons learned from the 2011-12 pilot in White City. The teachers and parents reported that children enjoyed taking part and had benefited from the programme and all the tooth champions interviewed were keen that the programme continues. Where schools were receiving the programme for a second year, staff reported that the programme was easier to deliver this year since everyone involved knew what to expect.

The key outcomes from the 2012-13 programme can be summarised as follows:

- Six primary schools took part in the 2012-13 programme, bringing the total number of schools which have participated in the programme to-date up to eight.
- 911 children across the six schools were offered the Keep Smiling Programme and each child received a 'Healthy Teeth Health Smiles' leaflet with tips for looking after children's teeth; a 'Finding an NHS Dentist in Hammersmith & Fulham' leaflet; information about fluoride varnish; and a toothbrushing chart. In some schools pupils were also involved in classroom activities on oral health which schools organised to reinforce the messages delivered in the programme.
- 632 children overall took part in either the toothbrushing or fluoride varnish programme (or both).
- The consent rate was 69% for the toothbrushing and 64% for the fluoride varnish, which is higher than the anecdotal feedback we have from other similar programmes elsewhere in the country (which have a 40-50% consent rate for fluoride varnish).
- 65% of the 636 consent forms which were returned by parents reported that their child had a dentist. The proportion of children recorded in this way as having a dentist rose with age, with only 55% of nursery children reportedly having a dentist.
- 47 of the 126 children who received a letter after the fluoride varnish application suggesting that they visit a dentist for a dental examination were not recorded as having a dentist, and were possibly being signposted to the dentist for the first time.
- 41 of the 61 parents who responded to the parent evaluation questionnaire had not heard about fluoride varnish prior to the programme. Of those who had heard about it, 7 had heard about it at a school or children's centre where Keep Smiling was previously delivered. This indicates the role Keep Smiling has in raising awareness of fluoride varnish. It also highlights that there are potentially large numbers of parents who are not aware of fluoride varnish and whose children are not benefiting from it.
- Feedback from some parents indicated the following changes to some children's oral health behaviours:

- A few parents had taken their child to the dentist as a result of the programme and reported that their children were less scared of the dentist
- Children were brushing twice a day and taking more ownership over brushing themselves (without prompting)
- Some also noted an impact on diet and sweet consumption.

7. Recommendations

Recommendation 1: If the decision is made to run the parent/carer questionnaire in future programmes, it should be scheduled so that questionnaires are distrubuted on the day of the fluoride varnish applications to ensure that the programme is still fresh in parents' minds and to gain maximum feedback.

Recommendation 2: Share class level data for the uptake of the programme with each school at the end of the programme and ahead of future visits to help improve uptake of future programmes in individual schools, particularly where consents were low for specific year groups.

Recommendation 3: Speak to the 'Tooth Champions' in each of the schools taking part in the Keep Smiling Programme to find out whether they collect information on their school starter forms as to whether children have a dentists and, if not, see if it could be added to existing templates. This would act as a prompt to remind parents to take their children to the dentist on a regular basis for prevention. Schools could be provided with information about finding an NHS dentist locally to share with parents.

Recommendation 4: Establish a protocol for following up the children who are given a letter at school as part of the fluoride varnish programme recommending that they attend a dentist for a dental examination, to check that they made and attended an appointment.

Recommendation 5: Review the briefing paper for staff about the Keep Smiling Programme and ensure it contains all information needed in a user-friendly format. Consider leaving a printed copy for each class teacher when the dental teams first come to the school to deliver the toothbrushing programme, to supplement internal communication within the school.

Recommendation 6: Consider having a brief talk with class teachers on the first morning of the the toothbrushing programme so that staff and children understand what to expect in the programme. As per recommendation 5, consider leaving a briefing note with class teachers about the programme to provide additional information and guidance.

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Recommendation 10: Contact schools being offered the programme as soon as possible at the start of the school year to ensure maximum planning and promotion time for each school programme.

Recommendation 11: On completion of the programme send each school a certificate acknowledging their participation and the uptake of the progarmme in their school.

Recommendation 12: Review the school tooth champion evaluation form and consider ways to shorten the questions and adapt it for use as a survey rather than an interview schedule.

Recommendation 13: Set a deadline for the return of consent forms a few days before the start of the programme. Arrange to attend the school at least one day before the first toothbrushing programme to check consents, confirm timetabling and follow up any outstanding questions about children's medical history in preparation for the fluoride varnish.

Recommendation 14: Offer each school one parent session to help support schools increase consents for the programme, such as meeting with parents, promoting the programme at school drop-off, collection etc.

Recommendation 15: Produce a decision-tree to guide interpretion of the medical history section of the consent forms for fluoride varnish, from which decisions are made as to whether it would be safe to apply the fluoride to the child at school or whether the child should be signposted to a dental practices to receive the fluoride varnish. This would only be intended as a guide and decisions should still allow room for personal clinical judgement of risk as necessary.

Recommendation 16: Develop a protocol to provide greater clarity for the dental teams as to the processes they should follow if they see something of concern, which may be a safeguarding issue, whilst examining children in the school setting as part of the Keep Smiling Programme.

8. Appendices

Appendix a: Parent/carer questionnaire

Parents/Carer Evaluation

NHS North West London

Keep Smiling - programme to improve dental health of young children

The dental team recently visited your child's school to apply fluoride varnish (coating) on children's teeth and run tooth brushing sessions, as part of the Keep Smiling Programme. We would like your opinion on this programme to improve children's dental health, **even if your child did not take part**.

Completing this form is important as it helps us to evaluate our service and find ways of improving it. Your help is appreciated. All the information you provide is anonymous and will be stored confidentially.

Please tick the answers which best reflect your views and, where relevant, provide more detail in the boxes below the questions. Once finished, please return the questionnaire to your child's class teacher by the 28th June.

If you would prefer to complete the questionnaire online, a version of the form can be found at http://www.surveymonkey.com/s/YTDZZ7M

Q1. Were you given enough information on the Keep Smiling Programme?

Yes ☐ No ☐

If no, what further information would you have liked?

Q2. Had you heard about fluoride varnish before the Keep Smiling Programme?

Yes ☐ No ☐

If yes, where?

Q3. Did your child have fluoride varnish applied to their teeth at school?

Yes ☐ If yes, go to question 4 No ☐

If no, why not?

Then please go to question 5

Q4. Was your child happy with the application of the fluoride varnish (coating)?

Yes ☐ No ☐ Don't know ☐

If no, what did not go well?

Q.5 How satisfied were you with the Keep Smiling Programme?

Very satisfied	Satisfied	Somewhat satisfied	Dissatisfied	Very dissatisfied
☺☺ ☐	☺ ☐	😐 ☐	☹ ☐	☹☹ ☐

Q.6 Do you feel your child benefited from the Keep Smiling Programme?

Yes ☐ No ☐

Please comment....

Q7. What changes, if any, have you made to your child's tooth brushing habits as a result of the Keep Smiling Programme?

Q8. What changes, if any, have you made in terms of your child visiting a dentist, as a result of the Keep Smiling Programme?

Q9. Do you think the Keep Smiling Programme needs to be improved?

Yes ☐ No ☐ Don't know ☐

If yes, how?

Thank you for filling in this questionnaire.

Appendix b: Staff questionnaire

Keep Smiling Programme
Staff Member Evaluation

Staff member:

Date:

Thank you very much for agreeing to take part in this evaluation about the Keep Smiling Programme. Your answers will help us evaluate this programme and improve the dental public health services offered in the borough. The evaluation will examine the fluoride varnish and toothbrushing programmes in your school, and your engagement with the teams involved in delivering the programme.

Please be as full and as frank as you can in your answers. We want your honest feedback on the programme.

The information you share with us will be kept confidentially according to data protection legislation.

Information and resources

1. Do you feel you were given adequate information at the start of the Keep Smiling Programmes?

2. What additional information would be helpful if we were to run this programme in the future?

3. Were you given adequate resources during the Keep Smiling Programme?

   What was particularly useful?

4. Do you feel that parents received adequate information about the Keep Smiling Programme?

   If so, explain in what ways?
   If not, what would have been useful?

Collaboration

5. How would you rate the quality of your communication with the different teams running the programme?

   Why do you say that?

6. What more could the teams do in the future in terms of communication?

7. When, or if, difficulties arose, how did you collaborate with the dental teams on those issues?

Support from the setting in organising the programme

8. How did you (and wider staff) help with the recruitment of children for the Keep Smiling Programme?

9. How else was the programme promoted within school?

10. Would you do anything differently?

11. How much of your time was dedicated to organising the programme, why and in what ways?

Organisation

12. What did you think of the organisation of the toothbrushing?

    How could it be improved?

13. What did you think of the organisation of the fluoride varnish programme?

    How could it be improved?

Attitudes and perceptions about the oral health programme

14. Did the children enjoy the experience of the toothbrushing programme and why?

15. Did the children enjoy the experience of the fluoride varnish programme and why?

16. How appropriate do you think this programme is for your school and the wider community here?

17. Why do you think some groups did not access the programme?

18. How do you think this could be improved (consent)?

    Are there ways we could organise/promote the programme differently?

19. What do you feel that the school has learned from its involvement with the Keep Smiling Programme?

    Any positives, challenges, obstacles, impacts and how could these be overcome?

20. Which aspects of the programme would you like to see continue in the future?

21. Would you make any changes to the Keep Smiling Programme (that you haven't already mentioned?)

    And how?

22. Do you have any other comments and suggestions?

Thank you very much for your time and for your generous feedback on the Keep Smiling Programme.

Appendix c: Comparison data from Keep Smiling 1 and Keep Smiling 2

Year delivered	Programme	Number of children taking part	Proportion of children taking part	Range of uptake of consent across schools
Keep Smiling 1 (2011/12)	Toothbrushing	698	79%	62% to 97%
	Fluoride varnish	604	69%	53% to 82%
Keep Smiling 2 (2012/13)	Toothbrushing	632	69%	57% to 94%
	Fluoride varnish	488	54%	43% to 83%

The overall reach of the Keep Smiling 1 programme (2011-12) by school

		School A	School B	School C	School D	School E	TOTAL coverage - all 5 schools
Target population	Total pupils aged 3-7 years	216	146	199	217	103	881
Proportion consenting for fluoride varnish	Total children with consent for fluoride varnish	194	119	153	131	55	652
	% target children with consent	**90%**	**82%**	**77%**	**60%**	**53%**	**74%**
	Total number without consent for fluoride varnish	22	27	46	86	48	229
	% target children without consent	**10%**	**18%**	**23%**	**40%**	**47%**	**26%**
Children reached (fluoride varnish)	Total number of consenting children who did not have fluoride varnish on the day (absent/ refused/ medical history)	16	4	19	4	5	48
	Total number receiving fluoride varnish	178	115	134	127	50	604
	% target children receiving fluoride varnish	**82%**	**79%**	**67%**	**59%**	**49%**	**69%**
Children reached (toothbrushing)	Total children consenting for toothbrushing	211	129	155	139	64	698
	% target children participating in toothbrushing	**97%**	**88%**	**78%**	**64%**	**62%**	**79%**

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