



THE TEETH TEAM PROGRAMME

An update of a collaborative working partnership on a school-based supervised tooth brushing programme, incorporating clinical dental assessments, applications of fluoride varnish and the subsequent signposting for accessing primary and secondary dental care.

Produced by **Teeth Team Limited**
543 Anlaby Road, Hull.
Teeth Team Limited
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Teeth Team is an incorporated company with charitable status. Company number 8833618



EXECUTIVE SUMMARY

The Teeth Team programme is now a well-established and nationally recognised child oral health improvement initiative which is facilitated within the City of Hull and the East Riding of Yorkshire.

The programme has been in existence since 2010, when local dental practices, the salaried dental service and a dental supply company, shared concerns relating to the extremely high incidence of dental decay (caries) in local children.

They joined forces to create a partnership where, by working together, they hoped they could make a difference to the oral health of young children living in their area.

The successful partnership continued until the autumn of 2013 when the salaried dental services had to reconsider their position as they felt they could no longer continue to support the programme due to service constraints therefore, they decided to leave the partnership.

The remaining partners continued to facilitate and develop the initiative and are delighted to report the programme has grown significantly over time and has gained increasing support from additional partners, individuals and independent organisations who have given their endorsement.

Those of you who are familiar with the Teeth Team

programme will recall the initiative was initially known as the "Brush Bus Partnership", but it was felt rebranding and relaunching the programme was a positive way forward. Every school involved in the initiative was invited to take part in a competition to rename the programme, hence our new name, "Teeth Team!"

Support for the programme has increased significantly over the years. We are delighted to report the following companies and organisations are partners in the initiative:

- 543 Dental Centre Ltd
- Adrian Beech, GDP in Louth
- Albertina Vulpoiou, GDP in Nottingham North
- Alpha Dental
- Associated British Ports (ABP)
- Associated Dental Groups (ADG)
- Carestream Dental
- Chris Ayer Dental Surgery
- Colgate
- David Bryden, GDP in South Humberside
- Florin Vulpoiou, GDP in Nottingham North
- Graham Allen, MP, Nottingham North
- Henry Schein Dental
- Hull Clinical Commissioning Group, Healthier Hull Community Fund
- KITS
- Michelle Wilson, GDP in South Humberside
- {my}dentist
- Rebalancing Foundation Charity
- Siemens
- Software of Excellence
- Transwaste

Together the partners support over 9,000 local children who attend nursery and primary

schools in the Hull and East Riding area. In addition to this we have expanded the programme in other areas of the United Kingdom. In Nottingham North there are initially four primary schools, a total of 1,840 children who will join the programme in September with a further eighteen schools scheduled to join in 2017.

Alpha Dental expressed a desire to set up a Teeth Team programme in North Yorkshire. There is one primary school with 200 children taking part at present. Alpha Dental has identified ten of their practices who will each support three primary schools, making a total of thirty schools in North Yorkshire.

In South Humberside there are two primary schools with a total of 600 children taking part. The aim is to have a total of seven primary schools taking part in this area of the country in 2017. Partnership working with the Local Dental Committee (LDC) has secured sustainable support for local schools joining the programme.

Teeth Team is delighted to have welcomed nine new partners who joined the programme during the past twelve months.

Teeth Team's focus is to reduce the inequalities in oral health among children. When you consider the determinants of oral health inequalities, the Teeth Team initiative addresses many of the issues and also targets those who are in greatest need, i.e. the most socially deprived electoral wards, where you will find



the highest proportion of disparities in health.

Dental caries still remains to be a common chronic disease affecting the teeth and has global distribution. Caries in children is specifically a major public health issue and has continued to be for some time.

In 2012 Public Health England commissioned a survey, Department of Health (2012) into the dental health of five-year-old children. This survey indicated 27.9% of 5-year-olds in England have tooth decay.

The survey also revealed:

- Children with decay have on average between 3 and 4 teeth affected by decay, treated or untreated.
- 24.5% of children have untreated decay.
- 1.7% of children have sepsis (infection) in their mouths.

Unfortunately, this national survey also confirmed that 43.4% of five-year-olds in Hull had tooth decay, compared with the national average of 27.9%. The same survey also revealed 39.2% in Hull and 20.1% for the East Riding suffered from untreated decay. Figures for the Yorkshire and Humber region showed 29.3% of children were not undergoing treatment to tackle the decay, which may suggest there is an issue of dental neglect.

A further survey was published in May 2016 by Public Health England, Department of Health (2015) again focusing on the dental health of five-year-old children. This latest report concluded that 24.8% of five-year-old children in England whose parents gave consent for participation in this survey had experience of

dental decay. Among these children with some experience of obvious decay, the average number of teeth that were decayed, missing or filled was 3.4

For the Yorkshire and Humber region, the survey also revealed:

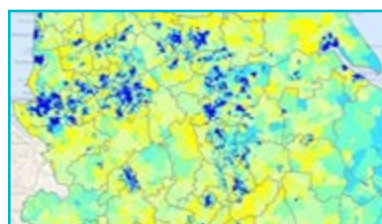
- 2.2% of children had sepsis compared with 1.4% of children nationally
- 11% of children had experienced fillings compared with 12% of children nationally
- 3.7% of children had one or more teeth extracted compared with 2.5% of children nationally.

These statistics highlight the fact that there clearly is a regional problem which most certainly needs to be addressed. If we want to break the cycle of poor oral health amongst generations of families in the Yorkshire and Humber region it is paramount there is a "joined-up" approach where a range of services work collaboratively in partnership, rather than in isolation, which is often the case.

The map below illustrates the levels of dental disease across England. (Courtesy of The British Dental Journal).



Levels of dental disease



Indices of deprivation

If we compare this to the map of the indices of deprivation, we can see direct correlation between the prevalence of disease and areas of deprivation.

Undoubtedly, encouraging parents to access routine primary dental care for their children should be high on the agenda, as should raising the awareness of the importance of regular tooth brushing with a fluoride toothpaste and the provision of dietary advice, including information on hidden sugars and the frequency of their consumption.

On a positive note, if we look at the specific figures pertaining to Hull, the same survey identified that 37.8% of five-year-old children had experience of dental decay. This is a significant improvement on the 2013 survey where 43.4% of five-year-olds had experienced decay, showing a reduction of 5.6%.

Although we cannot say with certainty the improvement in the dental health of five-year-old children in Hull is attributed to the Teeth Team programme, we can say with confidence we have made a contribution to this improvement, considering almost 50% of the primary schools in Hull are supported by the programme.

Continued support from health and social care professionals on educating parents and carers on the dangers of baby fruit juices/drinks given in feeding bottles over prolonged periods of time, should be encouraged if we are to address the "bottle culture" we have in our city. Improved partnership working with midwifery and health visiting teams is paramount if we

are to have any chance of preventing nursing/bottle caries in such young children.

Increasing the number of day nurseries involved in the programme, will ensure good oral health care starts as early as possible and will hopefully reduce the prevalence of general anaesthetic experience among infants and young children.

The dental health survey of three-year-old children conducted in 2013 (Department of Health 2013, revised 2015) highlighted that 12% of three-year-olds had experienced dental decay. On average, these children had 3.07 teeth that were decayed, missing or filled.

It is paramount additional intervention is provided for the parents of these young children if we are to have any success in reducing the prevalence of paediatric dental disease.

Graham Allen, MP for Nottingham North is currently working in partnership with Teeth Team to encourage an increase in the uptake of access to primary dental care in his constituency.

Statistics have identified only a small percentage of parents are taking their young children to the dentist for routine care and this has unfortunately led to high levels of disease. Mr Allen requested assistance from Teeth Team in a bid to tackle the poor dental health of children in his local constituency.

Funding from the Rebalancing Foundation Charity has ensured the programme can be rolled out in the Nottingham area which is scheduled to commence in

September 2016. Practical support from Florin Vulpoi and Albertina Vulpoi and {my}dentist will complete the partnership with Graham Allen and the Rebalancing Foundation Charity in Nottingham. Mr Allen acknowledged the support he had received from Teeth Team in a speech he delivered in the House of Commons on 21st July 2016. During his speech he said "By working closely with people from another constituency it happened to be Hull—I helped children in my own constituency to take up the free dental check that is there for all children. It was something that we had tried to do locally, but found that we could not do it as well as we wanted to, so we used an example of a practice called Teeth Team. Chris Groombridge and his team came to help us, and are still helping us."

It is hoped the 0-19 years integrated nursing service commissioned in Hull will address many of our local issues highlighted however, we are aware the budgets for some areas of the service have been reduced when compared to the previous service contract. Only time will tell if this current model of service provision will be able to adequately cope with the level of demand.

Even high income industrialised countries where 5-10% of public health spending is used

for oral health care, find treating dental diseases as an economic burden. Petersen et al (2005). Moreover, decay levels are highest in the more deprived local authorities.

As detailed in the previous Teeth Team reports, the cost of providing dental treatment is considerable. Treatment of dental caries in children, particularly at the younger cohort, often results in general anaesthesia for multiple dental extractions.

This is an expensive treatment, (estimate £719 per secondary care episode) NICE (2010), with high levels of emotional and physical distress for the children and the parents, and is not without risk to life.

Based on NICE (2010) guidelines, a general anaesthetic session provided for a child costs in the region of £719, we can assume the expense of providing these sessions locally would undoubtedly exceed the annual running costs of the programme.

Even in the older cohort, management in primary care can be difficult, especially in an irregular attender who may present late in the caries process. They may require extraction or endodontic treatment, with local anaesthetic or sedation, or even general anaesthesia where anxiety or treatment complexity indicates. In 2013 the number of

“ By working closely with people from another constituency—it happened to be Hull—I helped children in my own constituency to take up the free dental check that is there for all children.... Chris Groombridge and his team came to help us, and are still helping us.”

Graham Allen, MP for Nottingham North



children who experienced a GA for dental extractions in the Hull and East Riding area was 693. In the time period from January 2014 to December 2014, 579 children were referred for a General Anaesthetic (GA) for dental extractions, with the highest cohort (112 children) being 5 years old. Although this was still a significant number, we saw a decrease, showing a reduction of 16.5%.

In 2015 the number of children experiencing a GA locally had fallen yet again, to 560 indicating a further reduction of 3.3%. Therefore, in just two years we have seen a reduction in the number of paediatric GA's for exodontia in our local children by 19.8%.

On 15th April 2016, the Local Government Association (2016) stated the main cause for hospital admission for children aged between five and nine was for exodontia under general anaesthesia with nearly 26,000 children in 2013 / 2014 - making dental extractions 8.7% of all admissions.

Over the last five years there has been a 25% increase in paediatric general anaesthesia for exodontia at a cost of £140 million, Local Government Association (2016).

We know from experience many children who reside in the most socially deprived areas have an increased tendency to be "symptomatic attenders" meaning they only access dental care when they are in pain or have experienced dental trauma. This is also often the case with their parents too.

Within this population group undoubtedly a strategy for prevention is paramount to

reduce the caries risk and the inequalities in oral health.

In previous years we have mainly focused on children aged between three and eleven years where we have reported on their dental health throughout their time at primary school. Over the next two years, Teeth Team aims to demonstrate how the initiative can reduce the risk of dental disease in very young children who reside in deprived communities.

Details of the current level of dental disease in these children are given further in this report.

The aim of the Teeth Team programme is to reduce the inequalities in oral health among children. This is addressed by facilitating a supervised daily tooth brushing programme, with the addition of annual dental assessments and bi-annual applications of fluoride varnish. Parent and child oral health education sessions play an important role in increasing knowledge of the risk factors of dental disease and how it can be prevented.

Unfortunately, for many of the children who are supported by the programme, the only time they do actually brush their teeth is when they are at school. Often tooth brushing does not take place in the home environment at any other time i.e. at bedtime, weekends or during school holidays which demonstrates a clear need for the initiative to be expanded to include more children, particularly targeting those who are considered at high risk of dental neglect between the ages of 3-11 years.

There are currently just over 9,000 children who are

supported by the programme. A proportion of these children attend independent day nurseries. These children have not been included in the clinical assessments detailed in this report.

For the purpose of this years' report, a total of 7,507 children attending primary schools supported by Teeth Team have been included in this study.

6,682 (89%) of children in these schools currently participate in the supervised daily tooth brushing sessions, which increases access to fluoride. 5,521 (73.5%) of parents consented to the dental assessments. 4,883 (88.4%) of children with parental consent received dental assessments between February 2016 and July 2016.

Children with parental consent were assessed by one of our General Dental Practitioners. Any child who was identified as requiring further dental intervention was offered an appointment at one of the participating practices or asked to contact their own General Dental Practitioner for further investigation, if they had one. The 2017 Teeth Team report will provide information on the uptake of dental services for these children.

The differential between the consent rate and the actual assessments carried out is a result of 638 children being absent from school at the time of the assessments.

Fluoride varnish applications were first introduced into the programme in November 2012, when a pilot study was implemented at Francis Askew Primary School. The positive data collated resulted in a phased programme of implementing fluoride varnish



into the dental assessment process at all schools in the programme.

Those children whose parents have provided positive written consent have fluoride varnish applied to their teeth, if the examining dentist feels it is clinically necessary, following the guidelines set out in the Delivering Better Oral Health Toolkit, PHE (2014).

3,723 (67.4%) parents consented to their children receiving applications of fluoride varnish. In total 4,571 applications of fluoride varnish were administered over the time period from October 2015-July 2016 to children in the programme who are considered to be at increased risk of dental caries.

1,505 of these applications were administered between October and December 2015 and 3,066 applications were administered between February and July 2016.

All supported schools receive fluoride varnish applications bi-annually.

Numerous trials have been conducted on the effectiveness of fluoride varnish. Cochrane conducted a review of data available relating to fluoride varnish applications in 2013, Marinho VCC, Worthington HV, Walsh T, Clarkson JE. (2013).

In the thirteen trials that focussed on children and adolescents with permanent dentition, the review found that the young people treated with fluoride varnish experienced on average a 43% reduction in decayed, missing and filled tooth surfaces.

In the ten trials looking at the effect of fluoride varnish on

deciduous dentition, the evidence suggests a 37% reduction in decayed, missing and filled tooth surfaces.

The Department of Health (2014) also recommends the application of fluoride varnish bi-annually and up to four times per year for those children giving concern in their "Delivering Better Oral Health Toolkit".

Teeth Team maintains the view that applications of fluoride varnish is an essential element of the programme as those children who do not access routine primary dental care for whatever reason, will at least benefit from the preventative action of the topical fluoride.

There is a slight difference of opinion between some public health advisors and clinicians as to whether fluoride varnish should be part of such an initiative, but the evidence speaks for itself.

The cost implications of implementing the applications of fluoride varnish into the programme need to be considered. Limited or inconsistent evidence is available regarding monetary benefits of fluoride varnish preventative programmes.

Klock (1980) states reviews by Davies and Horowitz & Heifetz showed fluoride prevention programmes have more favourable CEA, reduced treatment cost and dentist hours. A systematic review by Kallista et al (2003) showed

limited evidence of cost effectiveness of fluoride varnish programmes, but Lindhe (1973) reported the cost of varnish as half that of treatment, though details of CEA were not given.

Many studies on cost benefit and cost effectiveness were short term, but prevention programmes using fluoride varnish might be cost effective in the long run (Weintraub, 2003). Long term studies are needed to validate this.

As stated by Cochrane (2013), "The prevention of dental caries in children and adolescents is regarded as a priority for dental services and considered more cost effective than its treatment."

Over the years Teeth Team has maintained concise records of the clinical data collated at each of the dental assessments. This data enabled us to identify the level of treatment need, be it primary or secondary care, dmft levels and the number of children who have accessed dental care.

The analysed data demonstrated the efficacy of the programme and has been detailed in our previous annual reports.

On analysis, our findings supported Weintraub's theory. The cost effectiveness of fluoride varnish applications within a prevention programme, compared to the cost of providing dental treatment is undoubtedly more favourable.

“The prevention of dental caries in children and adolescents is regarded as a priority for dental services and considered more cost effective than its treatment.”

Cochrane (2013)



Additionally, consideration should also be given to the reduction of the emotional and physical distress experienced by the children themselves when undergoing dental treatment, especially a general anaesthetic for dental extractions.

As discussed earlier we aim to demonstrate the effectiveness of the programme in reducing dental disease in very young children over the next two years.

During this round of dental assessments we have collated data on the current dmft levels of three and four year-old-children attending foundation stages one and two in Teeth Team primary schools.

Going forward, we will continue to monitor these children through the annual dental assessments to confirm if we can have the same level of success with early years' children as we have found with Key Stage 1 & 2 children.

Over the past four and a half years, the programme has gained national recognition and support from a number of organisations and individuals.

In 2012 the programme was awarded the Patron's Prize for Innovation from the National Oral Health Promotion Group. In 2013, Dr Nigel Carter, OBE BDS LDS (RCS), Chief Executive of the Oral Health Foundation, fully endorsed the programme whilst visiting a

local primary school.

In 2013 and 2014, the Rt. Honourable Alan Johnson MP, Graham Stuart MP, Karl Turner MP and Diana Johnson MP, all pledged their support and offered to assist in the expansion of the programme to enable more children to participate.

On 24th January 2014, the programme was awarded the national prize for the "Best Child Dental Health Initiative" at the Dental Hygiene & Therapy Awards at the Barbican Centre, London.

In December 2015 Teeth Team was presented to dental commissioners at the request of Sara Hurley, Chief Dental Officer, in the hope its' foundations may be considered as a basis for the development of a national programme. Hull Clinical Commissioning Group (CCG) very generously awarded £5,000 to Teeth Team as part of their Healthier Hull Community Fund scheme in February 2016, whereby voluntary groups had to present to members of the public in a "Dragon's Den" style, in a bid to secure funding. Teeth Team is very grateful to Hull CCG for their continued support of the programme.

On 10th March 2016 Teeth Team held a Bondholders event which was hosted by Rt. Hon. Alan Johnson, MP. Local businesses were invited to attend a breakfast meeting


where Teeth Team delivered a presentation on how the programme has had a positive effect on local children and how their support in the local community could further expand the programme.

As a result of this event an additional six businesses joined the partnership offering financial support by way of sponsorship. Each partner has been allocated a school to support.

It is hoped this will encourage stronger links between local communities and businesses and early indications suggest this is the case. Many schools have worked with their sponsor on other projects within the school curriculum and this in turn has been mutually beneficial to all concerned.

The British Society of Paediatric Dentistry (BSPD) invited Teeth Team to present at their Stakeholders Event at the Foundling Museum, London in May 2016. Robin Mills, President of the BSPD praised the work undertaken by Teeth Team in a bid to reduce the inequalities in child dental health.

In July 2016 Teeth Team produced its own promotional video. Claire Stevens, Paediatric Dental Consultant within the Central Manchester Hospitals NHS Foundation Trust and Vice President Designate to the British Society of Paediatric Dentistry said "Teeth Team have made an excellent video in which children deliver important messages around good oral health and healthy eating and drinking. They succeed in conveying in a fun way that dental decay is preventable. All children should acquire the skills to help achieve lifelong

 **All children should acquire the skills to help achieve lifelong dental health and Teeth Team is helping make that a reality. We would like to think that this video goes viral."**

Claire Stevens, Paediatric Dental Consultant, Central Manchester Hospitals NHS Foundation Trust and Vice President Designate to the British Society of Paediatric Dentistry



dental health and Teeth Team is helping make that a reality. We would like to think that this video goes viral.”

As previously mentioned Graham Allen, MP Nottingham North has requested assistance from Teeth Team in a bid to tackle the poor dental health of children in his local constituency. Funding has been identified for the programme to be rolled out in the Nottingham area. This will come from the Rebalancing Foundation Charity.

Support from Florin Vulpoi and Albertina Vulpoi and {my}dentist has been secured. Implementation of the programme is scheduled to commence in September 2016. Mr Allen acknowledged the support he had received from Teeth Team in a speech he delivered in the House of Commons on 21st July 2016. During his speech he said “By working closely with people from another constituency—it happened to be Hull—I helped children in my own constituency to take up the free dental check that is there for all children. It was something that we had tried to do locally, but found that we could not do it as well as we wanted to, so we used an example of a practice called Teeth Team. Chris Groombridge and his team came to help us, and are still helping us.”

Teeth Team currently supports 26 nursery and primary schools in the Hull and East Riding area. This equates to approximately 9,000 children taking part in the programme.

We are delighted to announce four additional schools will be joining the programme in September 2016 taking the

total number of schools in the local area to thirty.

Additionally four primary schools in Nottingham North, one in North Yorkshire and two in South Humberside will be joining the programme.

The financial donations we have received from our new partners and Hull CCG has enabled us to expand the programme to additional schools in the city of Hull.

Every partner in the programme is fully committed to ensuring Teeth Team remains sustainable. The partners have formed a limited company which has been registered at Companies House. In addition to this Teeth Team’s application for charity status was approved in June 2014 by HMRC.

Teeth Team Limited has two Directors and a Company Secretary. The Board of Trustees consists of:

- Dental practice owners
- Head Teachers from local schools participating in the programme
- Dental Care Professionals
- The owner of a Public Relations company

In September 2015 the Trustees took the decision to approach the schools to see if they would be in a position to help to assist in the funding of the programme. We are delighted to report every head teacher felt it was vital the programme remains in their school and has pledged to fund the cost of the toothbrushes and toothpaste for each child who takes part.

This equates to £2.50 per child per annum. This is a clear indication of how the schools value the programme and the

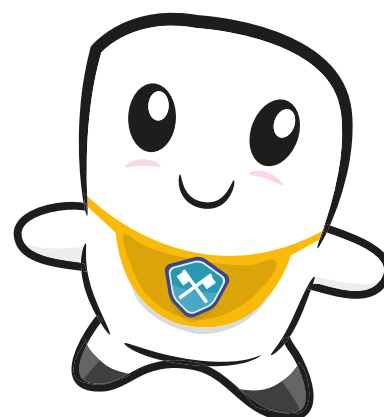
service it delivers. Every one of the trustees and partners play a vital role in the success of the programme and they are all valuable stakeholders in the company.

At the 2016 BDA annual Conference held in Manchester in June Alistair Burt MP, Minister for Health said “The number of children going to hospital for dental extractions is a ‘national scandal’

He stressed, progress would only be made through working together, in partnership, including the profession. He praised the achievements of Childsmile in Scotland and similar initiatives in England.

“ The number of children going to hospital for dental extractions is a ‘national scandal’

Alistair Burt, MP for North East Bedfordshire and Minister for Health



SUPERVISED TOOTH BRUSHING PROGRAMME WITH CLINICAL DENTAL ASSESSMENTS & APPLICATIONS OF FLUORIDE VARNISH

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INTRODUCTION

Despite some improvement in the dental health of children in England during the past few decades, inequalities continue to exist between and within different regions of the country. The Royal College of Surgeons: The state of children's oral health in England (2014), stated in its overview "Almost a third of five-year-olds are suffering from tooth decay, there are significant regional inequalities, and it is the most common single reason why five- to nine-year-olds are admitted to hospital. In some cases children are admitted for multiple tooth extractions under general anaesthetic, despite tooth decay being almost entirely preventable."

The oral health inequalities found in dental caries levels are pronounced amongst school children. The greatest inequalities are predominantly in areas of severe social deprivation where the highest disparities in health inequalities exist. It is well documented children from socially deprived areas have almost twice the incidence of dental disease as children of the same age living in more affluent areas.

The oral health of children in Hull and the East Riding is similar to England and Wales as a whole, however within the area there are significant inequalities.

The document, Local Authorities Improving Oral Health: Commissioning Better Oral Health for Children and Young People (PHE 2013) states on page 11, second paragraph: "60,272 children under the age of 19 were admitted to hospital for tooth

extraction, 50% of these children were under the age of 9 years."

The prevalence of dental caries among children in England remains to give cause for concern and continues to be a significant public health problem. Alistair Burt MP, Health Minister referred to the number of children experiencing general anaesthesia for exodontia as "a national scandal".

According to the 2015 dental survey for five year old children, 24.8% of five-year-olds in England have experienced tooth decay. The survey also told us that 37.8% of five-year-olds in Hull have experienced tooth decay when previously in 2013, this figure was 43.4%. This suggests a reduction of 5.6% in local children.

The number of children experiencing a general anaesthetic locally has also reduced, but this will be explained in more detail further in this report.

The Teeth Team programme, now entering its sixth year, has seen the programme develop from a small community based project to a nationally recognised, award winning programme.

There have been a number of requests from teams across the country for assistance in setting up similar programmes in a bid to tackle poor child oral health.

The annual dental assessments in particular continue to be very popular with 73.5% of parents giving positive consent for their children to be included.

Parents of those children who were identified as requiring dental treatment were notified and information was given on where and how to access dental treatment for their child.

This element of the programme was intended to encourage children and their parents to bring about a positive attitude to oral health, the subsequent establishment of good oral hygiene habits and regular dental attendance.

Although more children who are involved in the programme are now accessing primary dental care than at the beginning, there still remain a high proportion of children not accessing dental services and some of these children now require urgent dental care.

“ Almost a third of five-year-olds are suffering from tooth decay, there are significant regional inequalities, and it is the most common single reason why five to nine-year-olds are admitted to hospital.”

The Royal College of Surgeons



BACKGROUND INFORMATION

Almost seventeen years ago the Oral Health Strategy (DoH 1999) stated by the year 2003, 70% of 5-year-old children should have no decay experience. Furthermore, on average 5-year-old children should have no more than 1.0 decayed, missing or filled primary teeth.

The most recent epidemiological survey confirms these objectives were not achieved locally. Department of Health (2015).

Tooth decay among 5-year-old children in Hull still continues to be a major health problem. There is some evidence to suggest there has been a slight improvement in the situation over the last two years although, the dental health of 12-year-olds has improved slightly, but Hull is still behind the national average.

37.8% of five-year-olds in Hull have tooth decay, compared with the national average of 24.8%. This not only impacts significantly on the individual child, but also the costs to society are high in terms of days lost at work for parents, the actual monetary cost of carrying out the treatment required and of course the impact on the general health of the nation as a whole.

The incidence of tooth decay in the primary dentition is measured using the dmft index (decayed, missing, filled teeth). A five year old child normally has 20 teeth therefore, the dmft value can range from 0 to 20.

Within Hull in 2015, the average dmft for five-year-

old school children was 1.6. This places Hull joint first with Wakefield in the Yorkshire and Humber region of 15 cities for tooth decay among its five year olds. Department of Health(2015). The table below is taken from data supplied in the 2015 dental survey of five-year-olds.

Data from the Oral Health Needs Assessment (OHNA) for North Yorkshire and Humber, PHE (2015) stated children in Hull aged from 6 to 11 years are being neglected.

543 Dental Centre currently holds the contract for dental extractions under General Anaesthesia (GA) in the city of Hull.

For auditing purposes, 543 Dental Centre has collated specific data from the GA sessions for analysis and evaluation of the service provided and has kindly shared this information with the Trustees of Teeth Team so that it can be included in this report.

LOCAL AUTHORITY	MEAN dmft
Barnsley	1.1
Bradford	1.5
Calderdale	1.1
Craven	0.6
Doncaster	1.1
East Riding Yorkshire	0.6
Hambleton	0.7
Harrogate	0.5
Kingston upon Hull, City of	1.6
Kirklees	1.1
Leeds	1.1
North East Lincolnshire	1.1
North Lincolnshire	0.5
Richmondshire	0.7
Rotherham	1.0
Ryedale	0.5
Scarborough	0.7
Selby	0.6
Sheffield	1.1
Wakefield	1.6
York	0.5



In the time period from October 2012 and December 2013, 693 children between the ages of two and 16 years, experienced a GA for dental extractions in the Hull and East Riding area, with the highest cohort (131 children) being five years old.

In the time period from January 2014 until December 2014, 579 children between the ages of 2 and 16 years experienced a GA for dental extractions, with the highest cohort (112 children) being just 5 years old. Although these figures were still high, we did see a reduction of 16.5%.

In 2015 the number of children experiencing a GA locally had fallen yet again, to 560 indicating a further reduction of 3.3%. Therefore, in just three years we have seen a reduction in the number of paediatric GA's for exodontia in our local children by 19.8%.

The average number of children attending the Day Care Unit at Hull Royal Infirmary for dental extractions each month under GA is 46.

After analysis, we can again confirm that the highest proportion of children who experienced a GA reside in the HU6, HU7, HU8 and HU9 postcode areas of the city.

These communities are situated within some of the most socially deprived electoral wards of the city where health inequalities exist.

In April 2016 The Local Government Association (15th April 2016) provided statistical data relating to the prevalence of children experiencing GA's for exodontia.

The following details were released:

- 2010 / 2011 – 32,457 children experienced a GA at a cost of £21,889,070
- 2011/2012 – 35,187 children experienced a GA at a cost of £23,691,471
- 2012/13 – 36,833 children experienced a GA at a cost of £27,264,657
- 2013/14 – 39,175 children experienced a GA at a cost of £30,926,165
- 2014 / 2015 – 40,970 children experienced a GA at a cost of £35,299,504

The above indicates an increase in GA procedures of more than 25% at a total cost of £140 million in the last five years.

Dental decay is the top cause for hospital admission for children aged between five and nine years – making it 8.7% of all admissions. The figures provided by The Local Government Association make the figures collated by Teeth Team look favourable. This illustrates how a programme of early intervention, equal access and prevention can positively impact on children's dental health.

Unfortunately, the loss of these teeth potentially could have been prevented if the children had accessed routine primary dental care when the early decay could have been treated, rather than emergency dental care at a later stage when the only option available is extraction. It is safe to assume that some of these children's parents are dental phobic and have a reluctance to visit dental practices due to personal dental experiences as a child.

Dental caries is largely a preventable disease, but is often considered insignificant in comparison to other diseases.

The oral health of five-year-old children in Hull does show a slight improvement, but more can be done to further this improvement.

It is well documented that the main cause of dental caries is sugar in the diet. Fluoride is the only factor that has been showed beyond doubt to decrease susceptibility to decay and that the single most important oral hygiene measure is tooth brushing (Scottish Health Education Group 1986).

Teeth Team fully supports water fluoridation. This systemic means of access to fluoride has been proved to reduce the incidence of dental decay in all ages, but has been shown to be particularly effective in children.

We will continue to work with the Local Authority, Local Dental Committee (LDC), Local Dental Network (LDN) and Public Health England in an attempt to reach a successful outcome for the campaign to fluoridate the local water supply. PHE (2014) Commissioning Better Oral Health clearly recommends water fluoridation on page 29, table 3.3 Summary of the Oral Health Improvement Programmes Overall Recommendations.

There have been some concerns voiced by a small minority of local councillors regarding water fluoridation, but it is hoped through education and consultation with the relevant parties a positive outcome can be reached in the near future which will benefit these children.

We are however, mindful the implementation of water fluoridation will not come



to fruition within a short timescale. The consultation process can be lengthy. In reality it could be two to three years before it is implemented if there was an agreement to proceed.

Therefore, we consider a targeted approach of fluoride varnish applications for children aged 3-11 years in areas of severe social deprivation, as an interim solution to tackle the high decay rates amongst children in the city, could be an appropriate measure to take.

The Public Health Outcomes Framework (2013-16), and the Children and Young People's Health Outcomes Framework and Strategy(2014) recommend an integrated and partnership approach to improve health outcomes for children and young people they both include "tooth decay in five year old children" as an outcome indicator.

Previous studies involving teacher supervised tooth brushing programmes, using fluoridated toothpaste aimed at primary school children, have shown a significant reduction in dental caries especially among caries-susceptible children (Jackson RJ and Newman HN et al 2005).

(NICE 2014) provided guidance for local authorities and their partners on how to improve the oral health of their communities. Recommendations 15 & 16 on pages 20 & 21 of the document refer to the implementation of tooth brushing schemes and fluoride varnish applications in nurseries and early years' settings in areas where children are at risk of poor oral health.

However, Recommendations 18 & 19 on pages 23 & 24 suggest tooth brushing schemes and fluoride varnish applications are facilitated in primary schools for children up to at least the age of 7 years in areas where children are at risk of poor oral health.

Unfortunately, the opinion of some is to focus on purely 3 to 6 years but Teeth Team feels 3 to 11 is the appropriate age range given the fact that Hull's significant current child oral health situation is giving cause for concern.

The evidence we have collated relating to the prevalence of

GA experience in the area shows the largest cohort of children experiencing a general anaesthetic in 2015 were between the ages of 7 and 11 years, clearly illustrating the need to ensure the programme includes children up to the age of 11 years.

Over the years, acknowledgement for the work Teeth Team undertakes has been received from a number of sources. We have detailed some of them below.



In June 2012 the programme was awarded the Patron's Prize for Innovation by the National Oral Health Promotion Group.



In March 2013, Dr Nigel Carter OBE BDS LDS (RCS), Chief Executive of the Oral Health Foundation endorsed the programme.



Below are endorsements from local Members of Parliament who have all given their support to the programme.

“ This is a superb, marvellous programme. Fluoride is key for children and their teeth, so this programme added with water fluoridation will give poor kids’ rich kids’ teeth. I fully support the programme and will help in whatever way I can to expand.”



Rt. Hon. Alan Johnson, MP for West Hull and Hessle



“ I was delighted to visit Griffin Primary School today to see the excellent work that the Teeth Team does in educating local children in dental health and hygiene. This is an essential programme sponsored by local dental practices which I am keen to help promote. We suffer poor dental health in East Hull and this initiative will help prevent poor dental health in the future.”

Karl Tuner, MP for Kingston upon Hull East



“ The Teeth Team programme is creating good habits at an early age. By instilling the right techniques of brushing your teeth, including dry brushing, at an early age it’s going to make a difference for the future and these children’s teeth. It’s great; all the children looked to be really enjoying brushing their teeth in school. Teeth Team is a no brainer, not only do I fully support this programme. I want it to go out further and wider and certainly I would like to get this programme into every nursery and primary school in my constituency.”

Graham Stuart, MP for Beverley and Holderness



“ The one thing that really struck me was how enthusiastic the children were about brushing their teeth. The whole programme is so well put together and it seemed perfectly natural to all the children to brush their teeth. “I think the Teeth Team programme is excellent and is instilling good habits at such a young age. This will have a cost benefit for their teeth for later in life. Teeth Team is a ‘win-win’ programme.”

Diana Johnson, MP for Hull North



In our 2015 report we detailed information on how the implementation of the application of fluoride varnish was piloted at Francis Askew Primary school in November 2012 and how gradually a phased programme of implementing fluoride varnish into the dental assessment process at all schools in the programme was to take place. We can now confirm that all Teeth Team schools are benefitting from this element of the programme on a bi-annual basis.

The protocol for educating parents on the benefits of having fluoride varnish applied to their children's teeth has been repeated to ensure that parents are able to make an informed choice as to whether or not to provide consent for their child to take part. It also reassures the children that there is nothing to worry about and that it is simply a case of painting their teeth!

Teeth Team colleagues have continued to attend numerous parents' evenings and other social events such as school fairs and open days where parents are expected to be present.

Our team provide information on the risks and benefits of the application of the varnish and demonstrate how the applications are carried out using tooth models.

Information leaflets, consent forms and medical and dental history forms are also given to the parents for completion. Information training is regularly provided to members of the schools administration teams so that they are equipped to answer parents' concerns at a later date should the need arise.

All completed consent forms are carefully screened, ensuring only those children who are suitable to receive an application of fluoride varnish, are in fact the only recipients. Any child with contra-indications will not receive an application of fluoride varnish and the child's parents are informed of the reasons why their child is unable to be included on this occasion.

4,571 applications of fluoride varnish were applied to children carried over the time period of October 2015 and July 2016.

In accordance with Teeth Team protocol, aftercare instructions were provided for the children to take home to their parents which included the contact details of the Teeth Team should any parent feel it necessary to contact us in the event of a query or a concern.

Additionally, if during the dental assessments it was felt there was a need to contact the parent of a particular child to discuss any concerns we had regarding their child, the schools proved to be extremely efficient and acted as a facilitator, ensuring vital communication with parents took place.

Occasionally, fluoride varnish applications were not carried out on some of the very young children in Foundation Stage 1. The examining dentist considered that if this was likely to be the first time these children had been seen by a dentist, it was in the best interest of the children to only have an assessment on this occasion and to apply the fluoride varnish at the next dental assessment in a year's time.

The remaining children whose parents had provided positive consent, but did not receive applications of fluoride varnish were either absent on the day of assessments or there were contra-indications relating to the child's general health or recent dental history.

631 children were considered to be unsuitable to receive the fluoride varnish due to their medical or previous dental history. In the main it was because they had previously been hospitalised for an asthma attack or a severe allergic reaction in the past.

In order to remain compliant with current guidelines, the Teeth Team programme continues to re-issue consent forms annually to all schools to ensure that we have access to current medical and personal contact information relating to each child taking part, should the need arise.

Unfortunately 2,003 children were unable to be included in the dental assessments and fluoride varnish during the past twelve months due to parents not returning the appropriate consent forms to school in time. This issue has already been addressed with the schools and steps have been taken to ensure there is a higher consent rate next time.



AIMS AND OBJECTIVES

Aim:

To evaluate the programme in order to highlight successful areas and improve current resources.

Objectives:

- To confirm whether the Teeth Team programme is having a positive effect on the oral health of the children.
- To identify children requiring dental treatment and to assist parents in accessing necessary treatment for their child.
- To provide applications of Fluoride Varnish for those children where it is deemed clinically necessary as a preventative measure, in line with guidance from the Delivering Better Oral Health Toolkit, 3rd Edition, PHE(2014).

METHODOLOGY

The excellent relationship between the schools and Teeth Team continue to strengthen as time goes by. Many schools consider the partners in Teeth Team part of their school community. This partnership is fundamental in attempting to reach 100% of the target group.

Teeth Team has a Board of Trustees, all of whom are stakeholders in the programme.

They include four Head Teachers representing the primary schools, two dental practice owners, two Dental Care Professionals and a Public Relations Consultant. Regular updates are given to all stakeholders to ensure communication and consistency of service.

Written parental consent was obtained for all children within the programme. In order to reduce administration time for the schools, the vast majority of schools involved in the programme now include the Teeth Team consent documents into their "new starters admission pack."

These packs usually contain consent forms for photographs, field trips and medical checks etc. It makes complete sense to include Teeth Team consents in this pack as it enables each school to obtain the majority of consents required for each child from the onset of their time at the school.

Once the consents have been returned to the school, the child's UPN (unique

pupil number) or their name is entered onto a school database to enable the school to cross reference which children have parental consent to take part in the different elements of the programme.



DATA COLLECTION

As is now standard procedure with the dental assessments, each child would present wearing a sticker displaying their UPN/name if they are new to the programme, or if they had previously been assessed, the child would be holding their dental record card.

The dental assessments were carried out by a General Dental Practitioner from one of the dental practices and the clinical data detailing a full mouth charting was recorded on the dental record card by a Dental Nurse, which was later transferred to a database.

In addition to this the dmft of all children aged three and four years was recorded separately so that a comparison can be made

in years to come which will demonstrate the efficacy of the programme.

Those children, for whom parental consent had been obtained for the application of fluoride varnish, had Duraphat Varnish applied by a Dental Nurse who had undertaken specific training in the application of fluoride varnish, only if the examining dentist considered it to be clinically necessary and if there were no contra-indications.

Verbal and written post-operative instructions were given to the child to take home. The teaching staff who accompanied the children were also advised the children should refrain from eating and drinking for one hour after the application of the varnish.

After completion of the dental assessments, reference details i.e. UPN/name, of any child who was identified as requiring dental treatment was entered on to a letter for parents and the school administration staff completed the remainder of the child's details.

The letter informed parents their child required a further dental assessment and/or dental treatment. Contact details were included of where dental treatment could be accessed locally for their child, if they did not already have a family dentist.

The letter also has a tear off section which is to be completed and returned to school to acknowledge they had received the letter.

TARGET POPULATION AND SAMPLE SIZE

The target population was identified as 7507 primary school children from Foundation Stage (aged 3) up to Year 6 children (aged 11) attending 23 Primary schools in Hull and the East Riding of Yorkshire.

The sample size is 5521 (73.5%) children whose parents consented for their child/children to take part in the dental assessments. This shows a decrease of 2.8% in the consent rate for

assessments compared with 2015 where the consent rate was 76.3%.

The actual number of children who received dental assessments during the period of February 2016 and July 2016 was 4,883.

491 of the children in the sample group fulfilled the criteria to be included in the additional study which recorded the dmft of each child. Eleven of the children

aged between three and four years required urgent dental treatment in secondary care i.e. extractions under a general anaesthetic.

The difference in the sample size and the target size was due to 638 children being absent from school and some children had also left the school in the interim period between the parents providing consent and the assessments actually taking place.



RESULTS

Clinical Data.

A total of 4,883 dental assessments were undertaken during the past year. A record of each child's full mouth chart was recorded.

The data collated from the dental assessments has been entered on to a data base to enable comparisons between results year on year.

As mentioned earlier in the executive summary, the

purpose of data collation is to evaluate the efficacy of the programme.

Figure 1 details the mean dmft from each of the schools with children aged three and four years.

NAME OF SCHOOL	MEAN dmft	NUMBER OF CHILDREN AGED 3/4 YEARS
Bude Park	0.33	27
Christopher Pickering	0	5
Craven	1.58	12
Francis Askew	0.71	38
Gillshill	0.32	25
Greenway Academy	0.83	6
Griffin	0.27	44
Highlands	0.86	36
Leven	0	2
Longhill	0.33	6
Maybury	0.81	33
Mersey	0.16	6
Neasden	0.42	21
Newington	1.86	21
Newlands	0	13
Paisley	1.33	6
Sidmouth	1.4	32
Sproatley	0.38	13
St Georges	0.8	10
St Mary Q of Martyrs	1	26
St Richards	1	5
Stockwell	0.44	36
Wheeler	0.75	56
Hedon Inmans	0.41	12

Figure 1

The overall average dmft of three and four-year-olds attending the 23 schools is 0.69

As you can see 12 of these schools had above average dmft for the Teeth Team schools.

Figure 2 shows a comparison between each school.

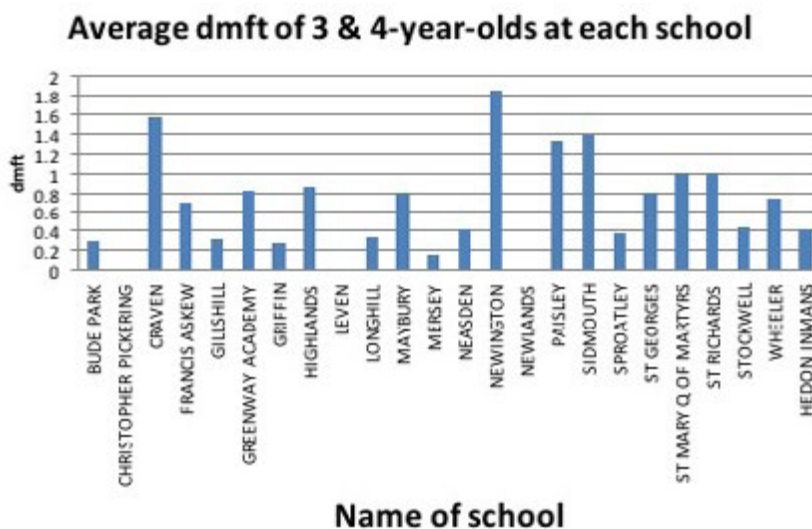


Figure 2

During this round of dental assessments for all children included in the study 1,314 children (26.9%) required primary dental care in the way of restorations and prevention treatment. Under the current dental contract, each episode of care would attract three units of dental activity (UDA).

Taking into consideration the average UDA value in the UK is £26.00, we can assume the cost of providing treatment for these children will be in the region of £102,492.00

3 x UDA = £78.00

£78.00 x 1,314 = £102,492.00

We will continue to monitor these children and will detail in next years' annual report if

they have accessed primary dental care.

As reported, we have seen a decrease in the number of children experiencing secondary dental care in the local area for exodontia. From the recent round of annual dental assessments 208 children have been identified as requiring a general anaesthetic.

The potential cost implication for this treatment is significant, in comparison to providing primary care at the appropriate time.

Based on NICE guidelines (2010), where the suggested fee for undertaking dental extractions under GA is £719, we can assume the cost of providing secondary care

for these children would be £149,552.00

208 x £719 = £149,552.00



Figure 3a below illustrates the levels of treatment need in all children assessed from the

recent round of annual dental assessments from February 2016 – July 2016.

Figure 3b below shows a comparison with the findings of 2015.

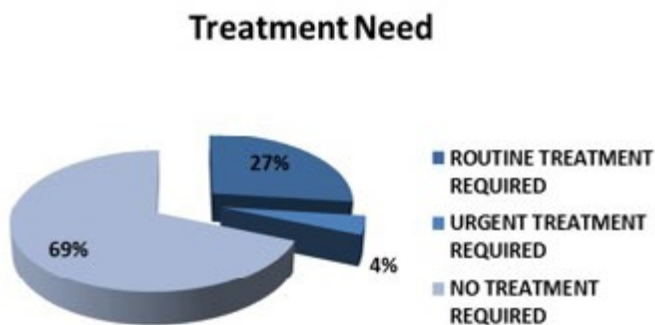


Figure 3a

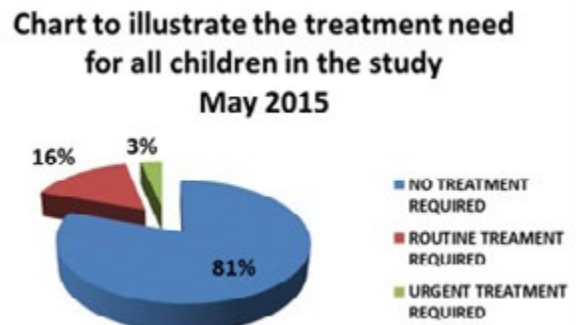


Figure 3b

When comparing the results with the previous year we can see the number of children requiring routine and urgent treatment has increased. However, we must remind ourselves that a large number of older children who had been taking part in the programme for a number of years have now moved on to secondary school and have been replaced by very young children in foundation stages 1 & 2.

We have also seen an increase in the number of schools who are including younger children in the programme where previously only children from the Reception class upwards were taking part.

The evidence from the 2015 child dental health survey, Department of Health (2015) which confirms the high level of disease in five-year-old children supports our findings. It is our intention to show an improvement in the dental

health of these particular children over the course of the next few years.

Our data demonstrates the schools with the greatest need for urgent care are situated in the most deprived electoral wards of the city, which has been consistent for the duration of the time we have been collating data.

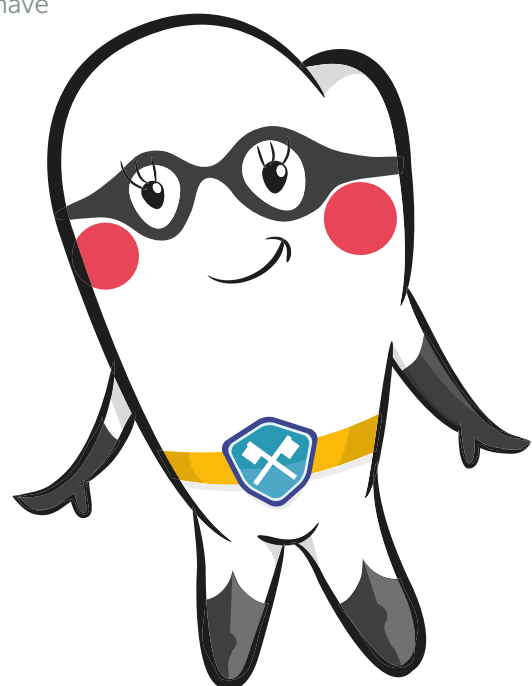


Figure 4 illustrates the percentage of children who require urgent care at each individual school.

NAME OF SCHOOL	NUMBER OF CHILDREN ASSESSED	NUMBER OF CHILDREN REQUIRING URGENT CARE	PERCENTAGE OF CHILDREN REQUIRING URGENT CARE
Bude Park	205	7	7
Christopher Pickering	140	4	4
Craven	158	6	6
Francis Askew	248	11	11
Gillshill	311	0	0
Greenway Academy	206	16	16
Griffin	383	13	13
Highlands	407	41	41
Leven	78	0	0
Longhill	285	17	17
Maybury	212	5	5
Mersey	53	3	3
Neasden	147	2	2
Newington	184	14	14
Newlands	26	0	0
Paisley	304	26	26
Sidmouth	281	19	19
Sproatley	99	0	0
St Georges	154	2	2
St Mary Q of Martyrs	239	1	1
St Richards	137	1	1
Stockwell	219	7	7
Wheeler	323	12	12
Hedon Inmans	84	1	1

Taking into consideration the data collated by 543 Dental Centre for GA in Hull, we can clearly identify where the highest area of need exists.

One has to acknowledge there is an issue of child dental neglect locally and this is predominantly present in areas of severe social deprivation where you will find the most vulnerable children.

Simons, D., Pearson, N., and Evans, P. (2013) recently carried out a pilot study on the effectiveness of using mobile dental units at schools in order to address dental neglect. The pilot aimed to demonstrate that:

- The use of a community – based mobile dental unit has the potential to remove barriers to dental care access.

- A mobile dental unit can be a cost effective means of providing dental care compared to alternatives.
- If all vulnerable children are to be reached local community networks and target populations' cultural and language issues must be considered.



Perhaps the reintroduction of mobile dental units utilised in schools in areas of severe social deprivation in Hull should be considered by the local authority in an attempt to address the issue of access and dental neglect.

The schools in the programme have worked extremely hard to increase the level of positive parental consent for both the dental assessments and the application of fluoride varnish.

78.8% of parents consented to both the dental assessments and applications of fluoride varnish. 26.6% of parents failed to return the form updating the child's medical history and/or consent for the two elements of the programme which resulted in 2,003 children being unable to receive the annual dental assessment and/or application of fluoride varnish.

67.4% of parents consented to the fluoride varnish applications in the spring/summer of 2016 compared with 59.2% in 2015, showing an increase of 8.2%.

Of those children whose parents had returned the consent forms 14.4% of children were identified as being unsuitable to have the fluoride varnish applied due to contra-indications in either their medical history or previous dental history.

There are now procedures in place to ensure all children are signed up to the programme when they start the school and that annual consent is received from parents in time for the assessments and fluoride varnish applications to take place.

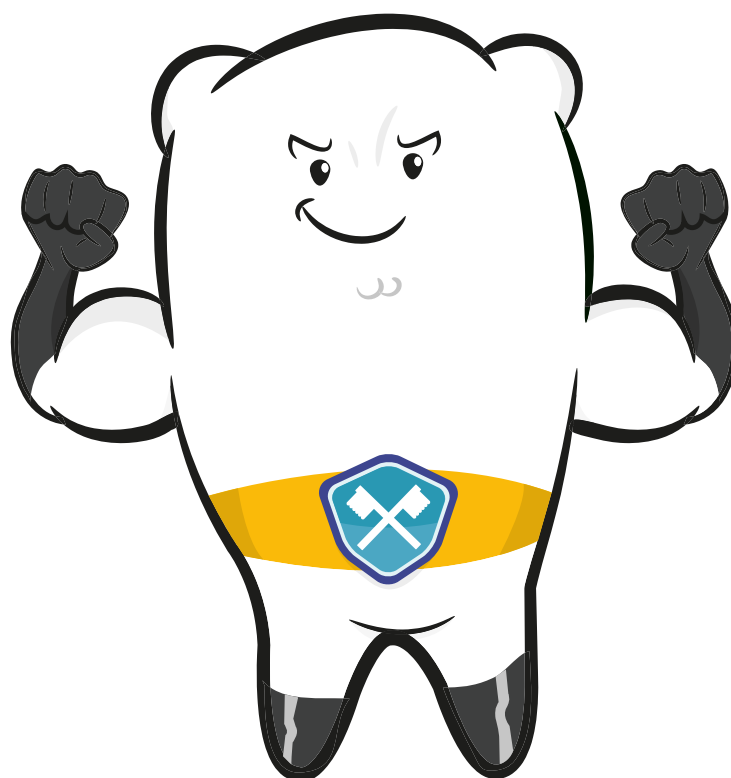
In previous reports we have provided details of the level of treatment need in all children involved in the programme. Comparisons have been made on each previous years' figures to ascertain if the level of disease has increased or decreased.

We have also previously collated data on whether there were indications to suggest the children in the original sample group who were identified as requiring dental treatment at a previous assessment had actually accessed dental care.

The children from the original sample group were monitored from 2011-2015, during their time at primary school. The children who were in year three at the onset of the study have now moved on to secondary school and therefore can no longer be monitored.

On a positive note this allows Teeth Team to monitor children for the whole of their time at primary school from the age of three to eleven years.

Hopefully we will be able to identify the influences that impact on child dental health and the roles schools and dental professionals can play in reducing the risk and incidence of dental disease in children.



PROGRESS UPDATE FROM JULY 2015 – SEPTEMBER 2016

Oral Health Advisory Group

Teeth Team were invited to join the Oral Health Advisory Group (OHAG) Committee for Hull in 2014. The aim of the group was to develop an oral health plan for the city.

We contributed towards the plan and emphasised that in our opinion, a community based fluoride varnish programme be implemented in the city, targeting areas of severe social deprivation given the evidence available from recent research confirming its' effectiveness in reducing dental caries in children.

Hull City Council approached Teeth Team in 2015 to ascertain if it was feasible to implement such a programme. Teeth Team confirmed we would be happy to implement such a programme at a cost of £5,000 and submitted a business case at their request confirming this.

The business case detailed the predicted expenditure and confirmed there would be no remuneration for Teeth Team, we would deliver the service at cost price. Schools in the ten most socially deprived electoral wards of the city that are not currently supported by Teeth Team would be targeted. Unfortunately, after a series of meetings between Teeth Team and Hull City Council the decision was taken by Hull City Council not to go ahead with the programme.

The oral health plan was submitted to the health and

Well-being Board for further discussion and has now been confirmed. Community based fluoride varnish is not an actioned part of the plan but what Teeth Team does. Fluoride varnish is considered a possible option for the future.

Presentation to Dental Commissioners in London

On 10th December 2015 Teeth Team delivered a presentation with Simon Hearnshaw, Chair of the Local Dental Network (LDN).

The presentation was delivered at the request of Sara Hurley, Chief Dental Officer for England. Its' purpose was to demonstrate how easily a national programme can be implemented with the support of dental practices by linking practices to primary schools & nurseries within their local community.

A series of alternative methods of delivery were highlighted reflecting possible avenues of funding and remuneration packages for dental practices who engage.

The presentation was very well received with positive comments coming forward during the question and answer session. It was hoped the outcome would be the implementation of the national child oral health improvement programme that had the foundations of the Teeth Team programme incorporated into it.

On 7th September 2016 at the Health and Care Innovation Expo 2016, the Office of the Chief Dental Officer will be launching Smile for Life – a national programme to co-ordinate and sustain oral health improvement.

Her team will be offering practical advice on how to integrate good oral health into care programmes so that all children can benefit from good oral health. The programme will support innovative approaches to ensure children have access to a dental care professional as soon as teeth first appear, continue to visit their dental team regularly for age-appropriate preventive advice and to ensure any problems are identified early.

Teeth Team wishes the programme every success for the future.

Financial Support from Schools

After much deliberation at a Trustee's meeting in September 2015 it was decided if we were to expand the programme in order to accommodate the requests from additional schools wanting to join the programme, we needed to source additional funding.

As it appeared there was no funding available from the Hull City Council we had to consider the possibility of a proportion of the funding needed coming from the schools themselves. The proposal put forward was for



the schools to pay for the consumables i.e. toothbrushes and toothpaste at a cost of £2.50 per child per annum. Our Trustees who are also Head Teachers took the proposal to a meeting of head teachers and it was unanimously agreed that the schools would happily contribute the proposed amount.

This would ease the pressure on the dental practices who were already contributing significant amounts to the programme for the consumables in addition to providing staff to facilitate it. A service level agreement was drawn up for each individual school and invoices were distributed accordingly.

The schools in question have identified different ways of funding this. Some are utilising Pupil Premium funds whilst others have funded it from their Parent Teacher Association (PTA). Some have simply asked the parents for a contribution.

Encouragingly this highlights the high regard in which the programme is held in the Teeth Team schools. It also shows the commitment the schools have to the programme.

Healthier Hull Community Fund

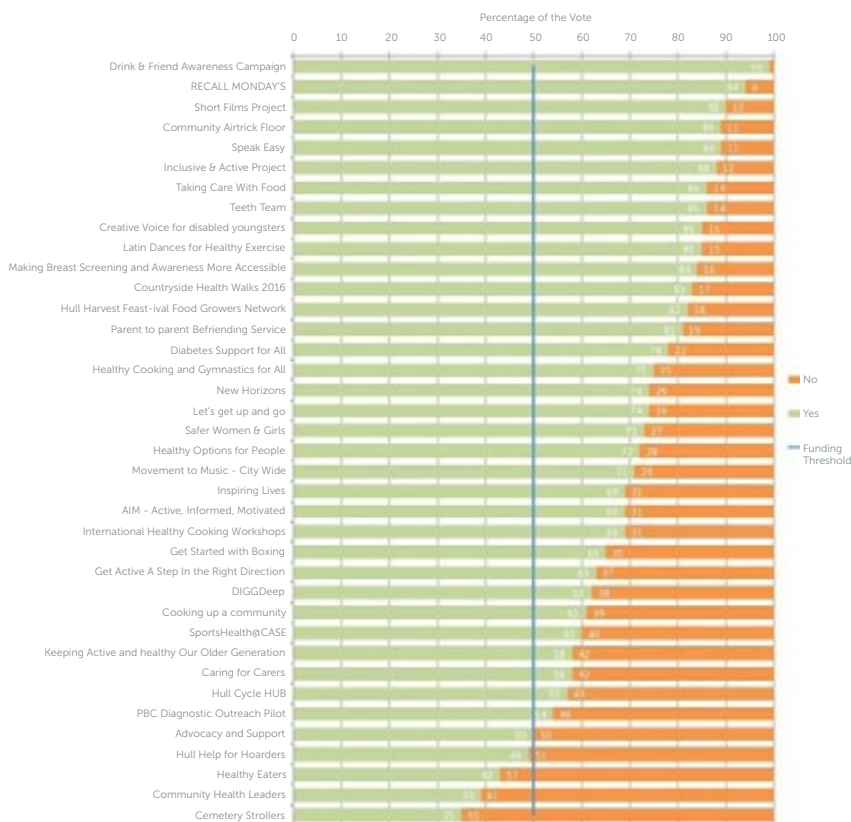
On 27th February 2016 Teeth Team took part in a bidding event facilitated by Hull Clinical Commissioning Group. (CCG)

Submissions were invited from community and voluntary groups to bid for a maximum of £5,000 each which was available through the Healthier Hull Community Fund. Groups meeting the criteria were

invited to the next round where they had to deliver a short presentation to members of the general public who would vote yes or no if they considered your project was worthy of the funding. Over £438,772 was awarded to 99

support we could expand the programme further across the city.

Alan Johnson emphasised how the programme had grown over the years and highlighted the positive results that had



groups across Hull to help create a healthier city. We are delighted to announce Teeth Team received 86% of the public vote and was awarded the maximum allocation of £5,000.

Hull Bondholders Event

On 10th March 2016 Teeth Team held a Bondholders event which was hosted by Rt. Hon. Alan Johnson, MP. Local businesses were invited to attend a breakfast meeting at Francis Askew Primary School, where Teeth Team delivered a presentation on how the programme has had a positive effect on local children and how with their company's

been achieved in terms of significantly improving the oral health of so many under-privileged children in our community.

He stressed his belief that water fluoridation was the most obvious route, but this would not be implemented for some considerable time if and only if the plan was approved by all stakeholders. Also in attendance were local Councillors, representatives from Carestream UK, Software of Excellence, Henry Schein and Dentaid, who are all supporters of the programme.

As a result of this event an additional six businesses joined the partnership offering much needed financial support.





Rt. Hon. Alan Johnson, MP for West Hull and Hessle



L-R: Julie Fountain, Head Nurse at 543 Dental Centre, Chris Groombridge, Managing Director of 543 Dental Centre and Chair of Teeth Team, Ingrid Perry, Secretary of Teeth Team and Rt. Hon. Alan Johnson, MP for West Hull and Hessle.

British Society of Paediatric Dentistry (BSPD)

The British Society of Paediatric Dentistry (BSPD) invited Teeth Team to present at their Stakeholders Event at the Foundling Museum, London on 9th May 2016. Dentistry.co.uk reported in their press release dated 16th May 2016 "Delegates were clearly inspired by the afternoon presentations from a panel of innovators who spoke about their work in reaching the hardest to reach children. Representatives of pioneering projects included Ingrid Perry of Teeth Team in Hull, Ben Underwood who has devised the BrushDJ app, dentist Jason Wong who is introducing accreditation in Leicestershire for colleagues with successful child-focused programmes and Andy Evans of DentaId."

In addition to this Dentistry.co.uk went on to say "Martin Fallowfield, head of professional relations for Denplan said he "felt proud to be part of the profession of dentistry having heard about the work of the four panelists which was all undertaken on a voluntary basis."

In preparation of the event we had produced USB sticks which contained the latest 2015 annual report and copies of the presentation delivered on the day together with a number of presentations delivered to varying audiences over the past two years.

These were distributed to delegates so that they could review the content at leisure. A large number of delegates congratulated Teeth Team on its' achievements and were clearly in awe of the fact we are a charity and do not receive any financial assistance from public funding.



Ingrid Perry, Secretary of Teeth Team at the BSPD Stakeholder's Event, Foundling Museum, London.



Speakers (L-R): Jenny Harris, Richard Welbury, Jason Wong, Ben Underwood, Lorna Machperson, Andy Evans, Ingrid Perry and Jenny Godson.

“ Martin Fallowfield, head of professional relations for Denplan said he "felt proud to be part of the profession of dentistry having heard about the work of the four panelists which was all undertaken on a voluntary basis." ”

Dentistry.co.uk



Request for financial information

In May 2016, Professor Nigel Hunt, Dean of faculty of Dental Surgery at The Royal College of Surgeons, requested financial information be made available to the Mayor of London's Office and Jamie Oliver's Food Foundation to see if we can help in the creation of Teeth Team style programmes in the London boroughs.

Local Dental Committee Annual Conference

On Friday 10th June, the Chief Dental Officer (CDO) Sara Hurley, acknowledged the work Teeth Team is carrying out to improve children's oral health, in her speech to the Local Dental Committee Conference in Manchester.

She stressed the need for a national programme to be implemented as a vehicle for tackling the poor oral health of children in England.

Nottingham North

Early in 2016 Graham Allen, MP for Nottingham North contacted Teeth Team. He was concerned about the low number of children in his constituency who were accessing dental care at local dental practices, which resulted in high disease levels.

After meeting with Mr Allen it was agreed Teeth Team would offer their support. A series of planning meetings took place and funding has been identified to roll out the programme in deprived areas in Nottingham.

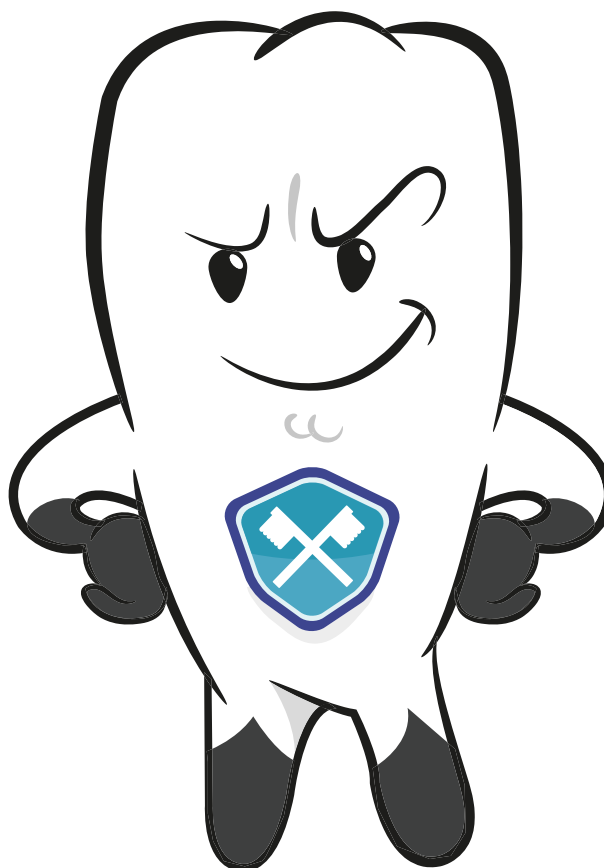
Boots the Chemist, who are based in Nottingham have offered their assistance with the programme.

The programme will initially be funded by The Rebalancing Charity for the first year thereafter, the schools will fund the cost of the consumables.

Four schools have been identified and implementation will commence in September 2016. Support with the facilitation of the programme will be provided by {my}dentist (IDH) and local independent dental practices.

Mr Allen acknowledged the support he had received from Teeth Team in a speech he

delivered in the House of Commons on 21st July 2016. During his speech he said "By working closely with people from another constituency—it happened to be Hull—I helped children in my own constituency to take up the free dental check that is there for all children. It was something that we had tried to do locally, but found that we could not do it as well as we wanted to, so we used an example of a practice called Teeth Team. Chris Groombridge and his team came to help us, and are still helping us."



Teeth Team Video

In July 2016 Teeth Team produced its own promotional video. We felt it was important to share the good work and to acknowledge the ongoing commitment from the schools in the programme.

Using the technical skills of John Murray from Francis Askew Primary School, we produced our very own promotional video. We have to say we are extremely proud of it, but the real stars are the children!

To take a look please [click here](#). Alternatively follow the link below:

<https://www.facebook.com/543DentalCentre/videos/vb.138407926177272/1328931323791587/?type=2&theater>



Claire Stevens, Consultant within the Central Manchester Hospitals NHS Foundation Trust and Vice President Designate to the British Society of Paediatric Dentistry said "Teeth Team have made an excellent video in which children deliver important messages around good oral health and healthy eating and drinking. They succeed in conveying in a fun way that dental decay is preventable. All children should acquire the skills to help achieve lifelong dental health and Teeth Team is helping make that a reality. We would like to think that this video goes viral."

CURRENT POSITION

Since the introduction of fluoride varnish into the programme and the addition of new partners, the number of children now participating has increased.

The implementation of fluoride varnish applications has enabled more children to benefit from the programme, not only from the preventative action of the fluoride itself, but also the opportunity to identify more children who may be in need of dental treatment.

Teeth Teams' continued commitment to these children is to make sure they keep their permanent teeth healthy and caries free, reducing the need for restorative dental treatment.

We have also assisted in the roll out of similar programmes in other areas of the country.

Lincolnshire

Teeth Team helped Lincolnshire County Council and LDC found Healthy Smiles in Lincolnshire. The programme currently has 20 General Dental Practitioners, supporting 25 local schools.

Lincolnshire County Council and Lincolnshire LDC met with Teeth Team on 13th June 2016 to discuss the introduction of the next phase which is the implementation of fluoride varnish applications.

Teeth Team provides active support for Lincolnshire and takes on an advisory role when requested.

North Yorkshire

Teeth Team is assisting a team in North Yorkshire by sharing their expertise and knowledge. Training for the North Yorkshire team in Northallerton commenced in June.

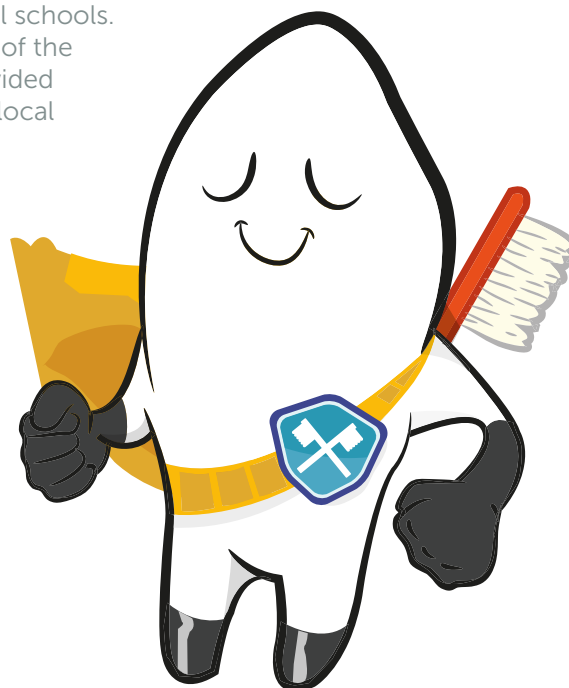
The core standards, guidelines and protocols were delivered along with all of the appropriate documents relating to consent.

At present one GDP practice is piloting the programme for the other nine practices. Phase one of the programme will be implemented in September 2016 with the first GDP practice supporting with one school.

Phase two – the roll out to the other nine dental practices will commence in April 2017. At present ten General Dental Practices have been identified, each adopting 3 local schools. Funding for this area of the country is being provided by Alpha Dental and local schools.

South Humberside

From September 2016 Teeth Team is implementing the programme in two primary schools which will be supported by three general dental practices.



ACTIONS FROM PREVIOUS RECOMMENDATIONS

1. Broaden the range of dental professionals involved in the programme.

We are pleased to report Dental Therapists and Foundation Dentists have been involved in the programme within the last twelve months. We have been working closely with Yorkshire Deanery who has requested we attend one of their study days.

On 27th January 2017 Teeth Team will deliver a series of presentations to Foundation Dental Students at Pinderfield's Hospital in Leeds. The Deanery

would like to encourage its' students to undertake voluntary work with Teeth Team by carrying out the annual dental assessments at a primary school as part of their training. This will not only give the students valuable experience of working within a local community, but will also give them an insight into the level of disease there is in children living in deprived areas.

2. Further support for the schools.

All partners continue to support the schools they are responsible for in the

programme. The Teeth Team are happy to provide oral health education sessions within the school environment to coincide with specific aspects of the national curriculum.

We will continue to attend parent/carer sessions as this gives rise to the opportunity to discuss any oral health issues or concerns they may have. Members of the team over the last year have also delivered oral health talks and presentations to some of the local youth groups. This is enabling the oral health message is delivered to a wider audience and benefiting both children and young adults.

ACTIONS IMPLEMENTED FROM RECOMMENDATIONS IN THE ANNUAL REPORT OF 2015

Teeth Team Annual Report stated in 2015 "Many of the children from the original study group will soon be due to leave primary school and move on to secondary education.

With this in mind we propose to conduct a new study which will include all schools in the programme, but will focus purely on children from the Foundation Stage i.e. 3 and 4 year olds for a period of two years."

As detailed earlier in this report we have undertaken the initial steps to fulfil the above recommendation. 491 children were included in the study and we will continue to collate data from the same children for the next two years. It is hoped we will be able to demonstrate the efficacy of the programme and the results will confirm this.

We will continue to monitor the level of treatment need in the remaining children in the programme, so that a comparison can be made on a yearly basis.

We will be able to identify the levels of treatment need and access to services.



RECOMMENDATIONS FROM EXTERNAL SOURCES

Public Health England published "Local authorities improving oral health: commissioning better oral health for children and young people" in June 2014. This document stated the Government has made a commitment to oral health and dentistry with a drive to improve the oral health of the population, particularly children and increase access to primary dental care services.

In relation to improving oral health outcomes for children and young people and reduce oral health inequalities, recommendations were listed as:

- Put children and young people (CYP) at the heart of commissioning.
- Adopt an integrated approach with partners for oral health improvement, including NHS England, Public Health England and Clinical Commissioning Groups. Ensuring all local authority services for CYP have oral health embedded at a strategic and operational level.
- Use, share and develop information and intelligence.
- Support CYP through their families, early years, schools and community settings to maintain good oral health, adopting a place based approach.
- Lead and advocate a clear local vision for oral health improvement and addressing oral health inequalities.
- Provide access to quality local dental services focused on improving oral health.

- Also to commission specific oral health programmes based on the evidence base and needs of the population.

A further report published by NICE in October 2014 "Oral Health: approaches for local authorities and their partners to improve the oral health of their communities", states:

Recommendation 4: Develop an Oral Health Strategy.

- Address the oral health needs of the local population as a whole (universal approaches).
- Address the oral health needs of groups "high risk" of poor oral health (targeted approach).
- Address any oral health inequalities within the local population and between the local population and the rest of England.
- Identify and work in partnership with people who are in a position to improve oral health in their communities. This includes those working in adult, children and young people's services, education and health services and community groups.

Recommendation 15: Consider supervised tooth brushing schemes for nurseries in areas where children are at high risk of poor oral health.

Consider commissioning a supervised tooth brushing scheme for early year's settings (including children's centres) in these areas. The

scheme should include:

- Arrangements for getting informed consents from parents/ carers.
- Supervised daily tooth brushing with fluoride tooth paste on the premises.
- Collaborative working with parents and carers to encourage tooth brushing both at home and at the nursery.
- Provide free toothbrushes and fluoride toothpaste.
- A designated lead person for the scheme at all establishments.
- Access to a dental professional for advice if needed.
- Support and training for staff to deliver the scheme.

Recommendation 16: Consider fluoride varnish programmes for nurseries in areas where children are at high risk of poor oral health.

- Consider commissioning a community-based fluoride varnish programme for nurseries as part of early year's services for children aged 3 years and older. The programme should provide at least 2 applications of fluoride varnish a year.
- Ensure early years services work in collaboration with parents and carers to gain parental consent for as many children as possible to take part in the fluoride varnish programme.
- Ensure families of children who do not visit the dentist regularly are encouraged and helped to use dental services.



- Monitor up take and seek parental feedback on the fluoride varnish scheme.
- If resources are available, consider commissioning both a supervised tooth brushing scheme and a fluoride varnish programme.

Recommendation 19:
Consider supervised tooth brushing schemes for primary schools in areas where children are at high risk of poor oral health.

- Consider commissioning a supervised tooth brushing scheme for primary schools in these areas.

Recommendation 20:
Consider fluoride varnish programmes for primary schools in areas where children are at high risk of poor oral health.

- If a supervised tooth brushing scheme is not feasible consider commissioning a community based fluoride varnish programme

for primary schools. This should provide at least 2 applications of fluoride varnish a year.

- Consider commissioning both a supervised tooth brushing scheme and a fluoride varnish programme, if resources are available.

In January 2015, The Royal College of Surgeons Faculty of Dental Surgery published a report which states:

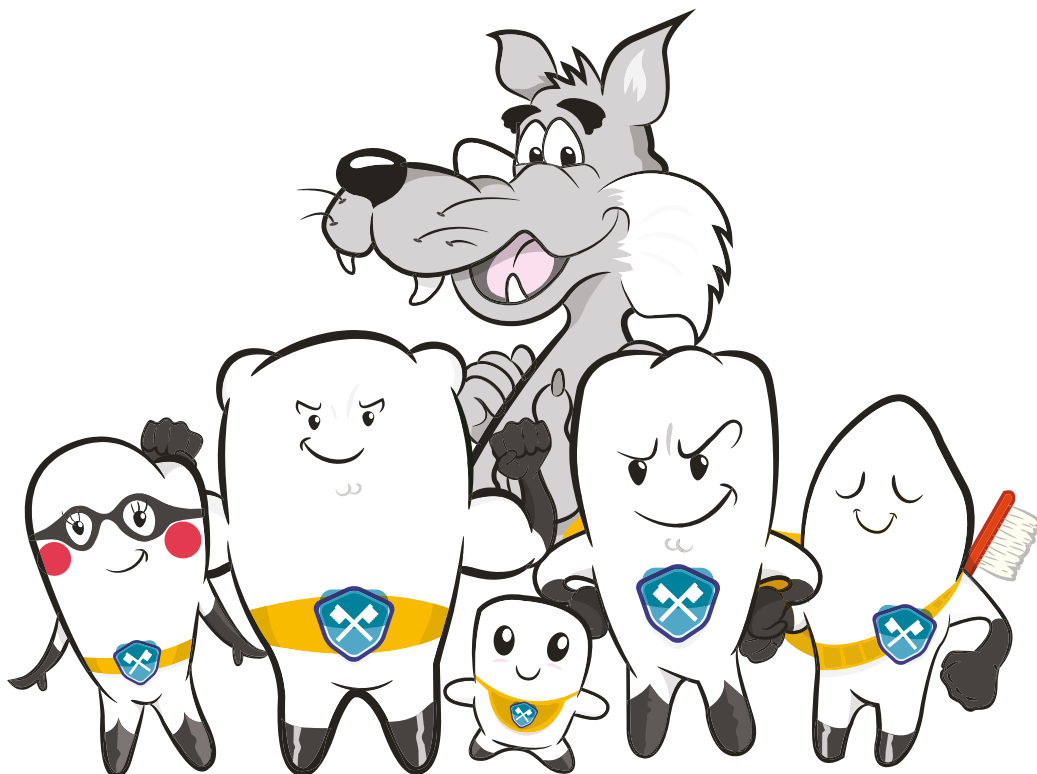
- Children’s access to NHS dental services must be improved so that they can visit a dentist regularly for preventative advice and receive early diagnosis for any problems so that appropriate treatment can be instigated promptly.
- It is vital that NHS England and the profession work together to ensure that preventive care in primary care dentistry is adequately resourced and delivered.
- Parents and children should be educated about the risks of tooth decay and the importance of good

oral health and prevention. We urge the government to invest in a national oral health programme to drive improvements in children’s oral health in England, as these have proved successful in Scotland and Wales.

- Efforts should be made to raise awareness of the impact of sugar on tooth decay and explore ways to reduce sugar consumption.

Teeth Team are already implementing a high proportion of these recommendations and are striving towards implementing the remaining recommendations where practically possible.

Our ultimate aim is to work in a collaborative partnership with Public Health England, Hull City Council and the Clinical Commissioning Group to deliver a comprehensive and consistent programme which will reduce the child oral health inequalities that exist within our city.



CONCLUSION

Teeth Team has proved year on year beyond any shadow of doubt that partnership and collaborative working is most definitely the only way forward if we are to succeed in reducing the inequalities in child oral health.

When the prevalence of GA's for children is rising nationally, in Hull it is reducing added to the reduction in the dmft of five-year-olds is proof that things are improving for our local children.

By continuing to work closely with schools we have further succeeded in breaking down barriers to accessing routine dental care and in the process improving oral health.

The department of Health published a report by Professor Jimmy Steele (2014) on the NHS dental contract pilots- "Learning after first two years of piloting". This is the second report from the dental contract pilot's evidence and learning reference group.

The report stated: "The data shows that large numbers of "red" adults are returning for their reviews later than expected recall intervals whilst large numbers of "green" adults are returning earlier than expected. Many "red" children are also returning for reviews later than expected". This only provides further evidence that those who have the greatest need are usually the ones who actually access care less, confirming the theory of the inverse care law. During the last few years we have seen the number of children in the programme accessing routine dental care increase significantly. We are

hopeful we have changed the mind set of some parents who now realise the importance of good oral health for their children which will potentially break the cycle of generations of poor oral health in families.

It is imperative we all continue to work together in order to ensure parents are involved and for relationships and trust to be built between local providers of primary dental care and the families who are supported by the schools.

Teeth Team aims to follow some of Marmot's principles – giving every child a healthy start. By working closely with parents, providers of education and wrap around care providers we can help the most vulnerable children in our society.

The trustees of Teeth Team Limited are very proud of the achievements the programme has gained. These include:

- Over 5,500 children are now having regular dental assessments.
- 4,571 applications of fluoride varnish have been administered, with more children to benefit from this simple, non – invasive procedure in the months to come.
- Over 9,000 children are now participating in the programme, with potentially a further 1,000 children joining the programme in September 2016.
- The Teeth Team programme has the endorsement of the Oral Health Foundation.
- All of the local Members of Parliament fully support the programme and have pledged to assist in its expansion.

- Teeth Team has won two national awards "Best Child Dental Health Initiative" from DH&T Awards and the "Patron's Prize for Innovation" from the National Oral Health Promotion Group.
- Teeth Team has the support of the British Society of Paediatric Dentistry (BSPD).

Only by continuing along this path with our evidence based programme will we see the inequalities in oral health amongst the children of Hull and East Yorkshire reduce.



ACKNOWLEDGEMENTS

The Trustees of Teeth Team Limited wish to personally thank all of the partners for their continued support of the programme.

These include:

- 543 Dental Centre Ltd
- Adrian Beech, GDP in Louth
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- Alpha Dental
- Associated British Ports (ABP)
- Associated Dental Groups (ADG)
- Carestream Dental
- Chris Ayer Dental Surgery
- Colgate
- David Bryden, GDP in South Humberside
- Florin Vulpoi, GDP in Nottingham North
- Graham Allen, MP, Nottingham North
- Henry Schein Dental
- Hull Clinical Commissioning Group, Healthier Hull Community Fund
- KITS
- Michelle Wilson, GDP in South Humberside
- {my}dentist
- Rebalancing Foundation Charity
- Siemens
- Software of Excellence
- Transwaste

We would very much wish to also acknowledge the continued support of our local MPs, in particular the Rt. Hon. Alan Johnson, MP who has given a huge amount of his personal time attending our events.

Also, we wish to extend our heartfelt thanks to John Murray from Francis Askew Primary School, for his excellent technical skills which have enabled Teeth Team to produce our first promotional video.

And finally, but by no means least, we would like to say a very big thank you to the schools, their pupils and parents who continue to support the programme. Without you all Teeth Team would not be the success it is today!

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