Programme Manual for Childsmile Staff

June 2015

NHS Scotland

Development of and contributors to the Programme Manual

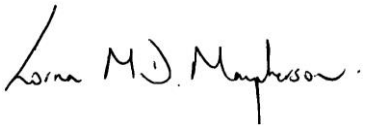
An evaluation of previous Childsmile manuals was undertaken by the North Regional Research Team to provide guidance on content for subsequent versions. Childsmile Programme Managers used this work to identify areas recommended for inclusion in the new manual. Childsmile Coordinators and NES Oral Health Improvement Team were invited to be part of an editorial group to comment and suggest revisions to drafts of the new manual. Following a number of revisions the final draft was circulated widely to Childsmile staff (Coordinators, Extended Duty Dental Nurses (EDDNs) and Dental Health Support Workers (DHSWs)), Childsmile partners and Stakeholders: NHS Health Scotland, NHS Education, Childsmile Executive, Childsmile Evaluation Team and Childsmile Board members for comments which were considered as part of the final revision of the manual.

Note:

The authors of this Programme Manual have endeavoured to ensure that it reflects relevant guidance and evidence, which is current at the time of the publication. All trainers and practitioners are advised to keep up to date with developments in this area. Websites are suggested but are not endorsed by Childsmile.

Foreword

Childsmile is Scotland's flagship child oral health improvement programme and this latest version of the Programme Manual is designed to support the range of staff that now work within the Programme. This edition combines elements from the previous two manuals, which were initially published to support the Demonstration Projects in the West and East of Scotland, which formed the basis of Childsmile. Since then the Childsmile Programme has developed as an integrated series of universal and targeted interventions and is being rolled out in all 14 NHS Board areas. Ongoing work to define a Childsmile Early Years Pathway will mean that more changes to the manual will be needed in the future and it is therefore our intention that future versions of the manual will all be published electronically on the Childsmile website.



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The Childsmile Programme Manual - Purpose and Use

The main purpose of this manual is to provide information to support frontline staff in implementation and delivery of the Childsmile Programme.

It provides clinical information to augment that provided through the NES Childsmile training.

It is a tool which complements application of local policies with which staff should be familiar e.g. data protection, confidentiality.

The manual will be available electronically on the Childsmile website at http://www.child-smile.org.uk/professionals/childsmile-manual.aspx for staff to download. Emails will be sent to coordinators informing them of any amendments to this (or future versions) of the manual when they are uploaded onto the website. Coordinators are expected to disseminate this information in their area.

The term “parent” is used throughout this manual and refers to parent/legal guardian.

Childsmile Programme

Childsmile

Childsmile is a national programme designed to improve the oral health of children in Scotland and reduce inequalities both in health and access to dental services.

It is funded by the Scottish Government and has 4 main components:

- Childsmile Core
- Childsmile Practice
- Childsmile Nursery
- Childsmile School

The vision

Childsmile combines targeted and universal approaches to tackling children's oral health improvement through the 4 programme components (Core, Practice, Nursery and School). This combination provides a comprehensive package of care tailored to the needs of individual children.

It is envisaged that every child in Scotland will have access to Childsmile.

At a population level, every child will have access to:

- a tailored programme of care within Primary Care Dental Services
- free daily supervised toothbrushing in nursery
- free dental packs to support toothbrushing at home.

In addition, directed support targeting children and families in greatest need through:

- additional home support and community interventions
- an enhanced programme of care within Primary Care Dental Services
- clinical preventive programmes in priority nursery and primary schools and facilitation into dental services as appropriate
- daily supervised toothbrushing in priority primary schools.

Policies and guidelines

The Childsmile Programme is underpinned by relevant guidance and Scottish Government public policy documents, and is supported by a robust evidence base.

Guidelines

The development of Childsmile was underpinned by SIGN Guideline 47 (2000) and SIGN Guideline 83 (2005). Between them, they presented the case for a programme which embraced the roles of a wide range of professionals in prevention of decay through evidence based activity. This included supervised toothbrushing, twice yearly fluoride varnish application, community based oral health promotion and regular visits to the dental team.

These guidance documents have been superseded by SIGN Guideline 138 (2014) which focuses on one to one interventions carried out by the dental team with children and young people aged 0-18 years. Key recommendations include twice yearly application of fluoride varnish in all children and application of fissure sealants to permanent molars as soon after eruption as possible. The guide also reinforces the importance of twice daily supervised brushing with fluoride toothpaste between 1000-1500ppm, subject to risk assessment.

Childsmile embodies these recommendations, incorporating oral health promotion and clinical prevention and utilising the support of professionally trained DHSWs working in local communities.

The Scottish Dental Clinical Effectiveness Programme Guidance, on the Prevention and Management of Dental Caries in Children (SDCEP 2010) presents clear and consistent advice to support dental professionals deliver preventive care and, where necessary, manage caries.

The latest Cochrane Systematic Review (Marinho *et al.* 2013) highlights the benefits of fluoride varnish extend to all children, if applied systematically across all age groups.

Public policy context

An Action Plan for Improving Oral Health and Modernising Dental Services in Scotland (Scottish Executive 2005)

The Action Plan outlined the Scottish Government's target for NHS Health Boards, stating that 60% of 5-year-old children should be decay free by 2010 and this target was met. It also promoted a shift in balance of care towards prevention rather than treatment by targeting the early years age group.

Better Health, Better Care: Action Plan (Scottish Government 2007)

Better Health, Better Care announced that Childsmile would be 'rolled out as a new schools based prevention dental service' incorporating fluoride varnish applications to children's teeth and fissure sealants applied as appropriate.

Equally Well: Report of the Ministerial Task Force on Health Inequalities (Scottish Government 2008)

Equally Well emphasises its commitment to children's dental health during the early years.

Getting it Right for Every Child (Scottish Government 2008b)

Getting it Right for Every Child (GIRFEC) places children's and young people's needs first. It ensures that they are listened to and understand any/all decisions affecting them and they receive more coordinated help where required for their wellbeing, health and development. It requires that all services for children and young people – social work, health, education, police, housing and voluntary organisations – improve how they work together to support children and young people.

The integration of Childsmile within mainstream national child health programmes helps ensure child dental health is part of normal offer of service.

Early Years Framework (Scottish Government 2009)

This framework seeks to shift the focus of service provision to early identification and early intervention; these philosophies fit well with the Childsmile Programme.

Health for all Children 4: Guidance on implementation in Scotland (Scottish Executive 2005)

Reflects a move away from a wholly medical model of screening for disorders towards greater emphasis on health promotion, primary prevention and targeting effort on active intervention for children and families at risk.

A New Look at HALL 4: The Early Years, Good Health for every Child (Scottish Government 2011)

Supplements Health for all Children 4 and reframes its commitment in light of subsequent policy commitments such as Getting it Right for Every Child, The Early Years Framework, Equally Well and Achieving our Potential. It has 3 main areas of focus; identification of need, delivery of early preventive advice and support and reintroduction of a 24 month review. This review will allow us to develop a complementary oral health review point on the Childsmile pathway.

Improving Maternal and Infant Nutrition: A Framework for Action (Scottish Government 2011)

Framework for Action focuses on improving the nutrition of mothers in pregnancy and infant nutrition in Scotland covering a minimum period of 10 years. Areas of focus include: supporting parents with information on infant feeding, complementary feeding and early eating patterns and supporting women to initiate and continue breastfeeding. A coordinated, multi-agency, multi-faceted approach is highlighted.

Oral Health and Nutrition Guidance for Professionals (2012)

The purpose of this guidance is to provide agreed, consistent, evidence-based guidance on oral health and nutrition for professionals. The guidance provides clear oral health and nutrition advice for the whole population. A special focus is given to the under-5s as intervention in the earliest years is vital for improved outcomes in the short and long term and will positively impact across the life course.

Setting the Table - Giving children the best nutritional start in life

'Setting the Table' is an update of the 'Nutritional Guidance for the Early Years: Food Choices Aged 1-5 years in Early Education and Childcare Settings' produced in 2006 and combines the content of 'Adventures in Foodland (NHS Health Scotland 2004)'.

The guidance promotes the importance of good nutrition in the early years offering advice on food standards, providing breakfast, pack lunches, snack guidance, sample menus and recipes. Further practical advice is offered on providing for: special diets, religious faiths and beliefs and children with additional needs. This revised edition includes guidance on the nutritional needs of children from birth to 1 year; and, offers helpful advice on topics such as breastfeeding, formula feeding, weaning, and menu planning for babies.

The Integrated Childsmile Programme

There are many opportunities for children to join the Childsmile Programme. The Childsmile Core Programme is universally available across Scotland, and is well established in most areas. Childsmile interventions are available in all NHS dental practices which register children as NHS patients and through targeted nursery and school programmes.

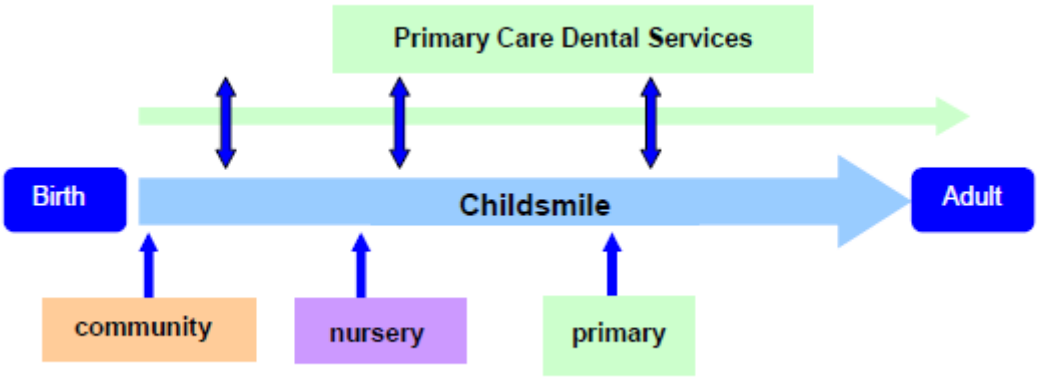


Figure 1: Integrated Childsmile Programme

Who delivers Childsmile?

Childsmile is delivered by a range of health professionals including:

Dental Health Support Workers (DHSWs) are employed by NHS Boards and are responsible for liaising with families, health visiting teams, nurseries, schools and dental practices.

Extended Duty Dental Nurses (EDDNs) may be employed by NHS Boards or independent contractors (family dentists) and provide preventive advice and regular fluoride varnish applications.

Dental Practice Staff (dentists, dental nurses, dental hygienists, dental therapists, and reception staff) who may be employed by NHS or work in independent contractor dental practices.

Health Visitors (HV) liaise with DHSWs and identify children and families who would most benefit from targeted direct Childsmile support.

Childsmile is managed through a network of NHS Board **Coordinators** and two **Regional Programme Managers** who in turn report to the two **Programme Directors**.

The Programme is commissioned by the **Chief Dental Officer**.

There is a range of early years practitioners from the NHS, education, the voluntary and community sectors who work collaboratively with Childsmile to promote and improve children's oral health.

Childsmile Core

The Childsmile Core Programme is available throughout Scotland. Every child is provided with a dental pack containing a toothbrush, a tube of toothpaste containing at least 1000ppm fluoride, and oral health messages on at least six occasions by 5 years of age. Children also receive a free-flow feeder cup by 1 year of age. These are distributed in different ways in each NHS Board area.

In addition, every 3 and 4 year old child attending nursery (whether local authority, voluntary or partner provider) is offered free, daily, supervised toothbrushing within their nursery establishment. The supervised toothbrushing closely follows national guidelines and the products are provided through a national contract to ensure consistency across Scotland. Since the publication of **An Action Plan for Improving Oral Health and Modernising Dental Services in Scotland (Scottish Executive 2005)**, the toothbrushing component of the programme has been made available to at least 20% of primary 1 and 2 classes of schools situated in areas with the highest level of need within NHS Boards across the country.

The Childsmile Core Programme promotes a holistic approach to healthy living, thus teaching children an important life skill. Children who attend nurseries, schools, childminders and after-school clubs should be offered healthy snacks and drinks as part of national initiatives to improve child oral health and help prevent obesity.

Childsmile Practice

Childsmile Practice is designed to improve the oral health of children in Scotland from birth. Childsmile Practice is introduced to families by the HV, who assesses the child's dental health support need at 6-8 weeks and reinforces key oral health messages to the family and the benefit of child dental registration by 6 months of age or refers them to a Dental Health Support Worker (DHSW). The DHSW contacts the family when their child is around 3 months old, provides advice on the importance of looking after first teeth and assists families to find a local Childsmile dental service for their child. Additional support is available through home visiting, community initiatives and primary care dental services. For the most vulnerable families, a longer period of home support may be required, prior to engaging with dental practice.

From 6 months of age, dental appointments are made for the child on a regular basis. The dental team provides a programme of Childsmile care, tailored to meet the needs of the individual child. Extended duty dental nurses (EDDNs) are trained in oral health promotion and fluoride varnish application to support the dental team to provide Childsmile care. This includes: oral health advice, for example, on healthy weaning; teething and toothbrushing instruction; provision of free dental packs; and regular dental check-ups from the age of 18 months, plus twice-yearly fluoride varnish applications to the child's teeth from 2 years of age.

The role of the DHSW is primarily to facilitate the family to participate in the Childsmile Programme through attendance at the dental practice. All members of the dental team should monitor progress. Where the family experiences difficulties in following preventive advice or attending a dental practice then the child's HV must be contacted and asked to reassess the mix of family support required.

Childsmile Nursery and Childsmile School

Childsmile Nursery and Childsmile School deliver preventive care interventions for children aged 2 and upwards who are at increased risk of dental decay. Childsmile Nursery and Childsmile School work with at least 20% of children from each Health Board. Educational establishments are targeted in order of those with the highest proportion of children living in the most deprived local quintile, as defined by SIMD.

Additional preventive care is provided in the form of twice-yearly fluoride varnish applications by Childsmile dental teams within these educational establishments. These teams usually comprise an EDDN, trained in the application of fluoride varnish, and DHSW. They may also promote good oral health behaviour and provide health education. DHSWs are attached to particular nurseries and schools and provide the main Childsmile contact point for teachers, parents and school nurses.

The dental team also promotes Childsmile to ensure that as many children as possible who would benefit from being in the Programme are given the opportunity to join. It is important that children are registered to attend primary care dental services. Children identified through Childsmile Nursery and School as not having a dentist will be offered help to find a dentist in their local area.

Children are able to join the Childsmile Nursery component of the programme when they start nursery and remain in the programme, receiving six-monthly fluoride varnish applications for the duration of their time at nursery, and often continuing in school.

At all stages in the Programme, children who require further assessment and dental advice are identified and their parents receive a letter informing them of their child's dental need. If need for advice from a dentist is immediate this should be followed up by direct contact with the parent instead of a letter.

Dental Public Health

Dental Public Health

Dental Public Health can be defined as the “science and practice of preventing oral diseases, promoting oral health and improving the quality of life through the organised efforts of society”. This was described by Downer *et al*. (1994) and also used by Acheson (1998) in his report to the ‘Inequalities in health’ conference.

The science of Dental Public Health is concerned with understanding a population’s health problems, establishing the causes and effects of those problems and planning effective interventions. Dental Public Health Practice is concerned with promoting the health of the population and therefore focuses action at a community level.

The determinants of health

All sorts of different factors determine health, or the lack thereof, from individual factors such as age and sex, through social and living circumstances to general socioeconomic, cultural and environmental conditions.

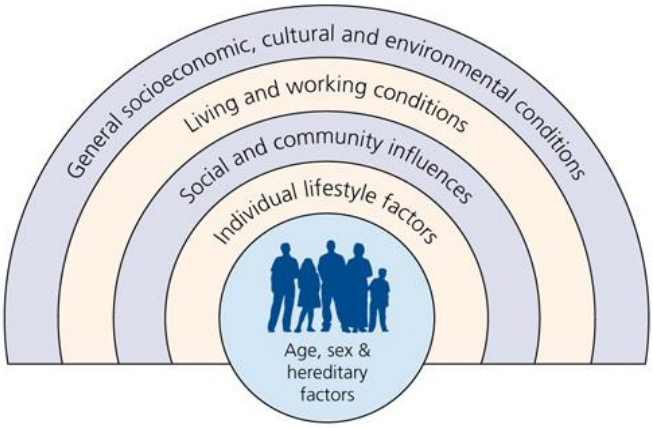


Figure 2: Determinants of Health
Source: Dahlgren G and Whitehead M (1991)

It is the role of professionals working in Dental Public Health to have an understanding of the factors that influence oral health and to work in partnership with organisations to improve oral health such as Community Health Partnerships, Councils, Education Departments and the Voluntary sector.

The current challenges to Dental Public Health in Scotland consist of high levels of dental decay associated with deprivation, increasing levels of tooth erosion, increasing incidence of oral cancer and an increasing population of older people – who are more at risk of conditions such as periodontal disease.

Dental decay

Dental decay, also called dental caries, is a widespread condition in the western world and a particular problem in Scotland. Dental decay is associated with social deprivation. Lower levels of caries occur in the more affluent areas.

Dental decay is characterised by the loss of mineral ions from the tooth caused by the presence of bacteria in plaque and their acidic by-products. Early mineral loss (known as demineralisation) is only visible microscopically, but further loss becomes evident in enamel and can be seen as having a chalky appearance on the tooth – known as a white spot lesion.

The basic decay process can also be called an acid attack. Bacterial plaque builds up on the tooth surface. When sugars enter the mouth, they are absorbed by this layer of plaque, which breaks down (or metabolises) the sugar inside the bacterial cells to produce acid. These acids accumulate in the plaque layer and start to demineralise the tooth. Plaque rapidly reforms quickly after brushing and therefore acid attacks can happen minutes after consuming sugar.

Dental decay is a process that is preventable by following basic oral health messages (see page 17). In its early stages, there are effective treatments for preventing the decay from progressing, causing pain and requiring a filling or eventual tooth loss. However, sometimes dental extraction is the only treatment option.

Failure to prevent dental decay effectively in the pre-school child, through modifying poor dental related behaviour of both child and parent, can mean that affected children may have a lifetime cycle of dental treatment.

Progression of caries

Caries is a progressive disease - it starts with a healthy tooth, and progresses through small lesions to large cavities. It is possible to interrupt the process and to repair damage caused by decay. However, other than in the earliest lesions, it is not possible to regain tooth tissue, once it has been lost.

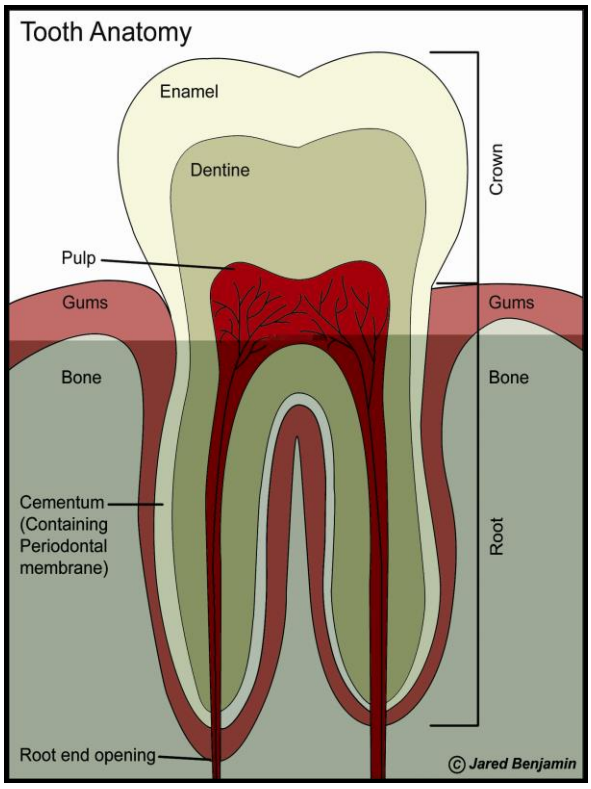


Figure 3: Tooth Anatomy

The earliest manifestation of the disease is **demineralisation of the enamel**. This stage, as mentioned before, can be reversible with meticulous cleaning, change in diet and fluoride treatment.

If the demineralisation phase is not reversed it will progress to **enamel decay**. The enamel layer is a very hard layer of the tooth and is designed to protect the softer, inner dentine layer. This stage can be interrupted either by fluoride treatment, fissure sealants or tiny, shallow fillings. If the process is not stopped, the decay will progress through the enamel layer, as an **established decay** process, until it reaches the dentine.

Once it has reached the dentine, the enamel is undermined and the outer enamel layer collapses forming a cavity. The dentine is destroyed at a greater rate because dentine is not calcified. As the dentine is lost in the decay process, the cavity deepens. At this stage the tooth can be very painful on eating and the caries rapidly progresses into the underlying pulp (which contains the nerves and vessels). If a dentist or therapist intervenes at this stage, the decayed enamel and dentine must be excavated or drilled out and a filling placed.

Once the disease process reaches the pulp, an **abscess** may form. This can give the child a continuous toothache, as well as intermittent pain on eating. At this stage the tooth would either need a root treatment or an extraction (Mount and Hume 2005; Levine and Stillman-Lowe 2014, 7th edition).

The Caries Process

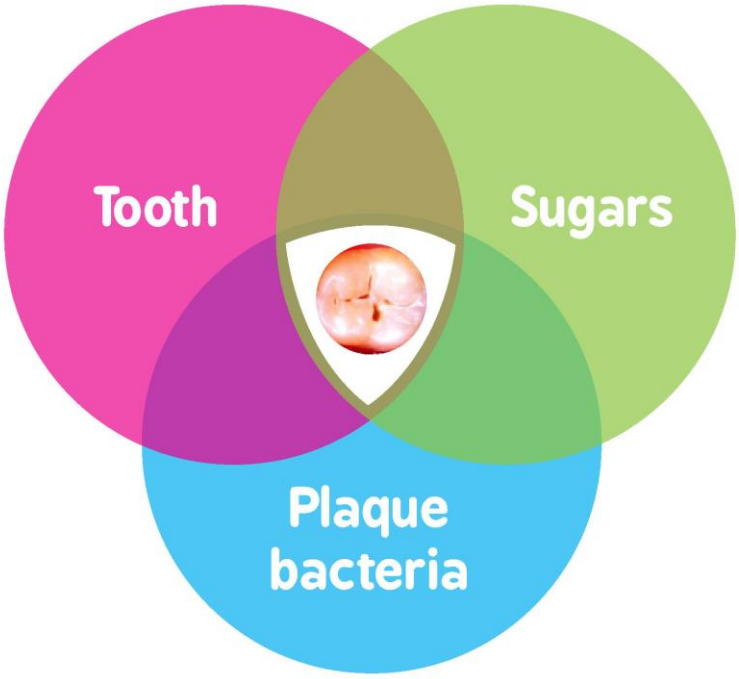


Figure 4: Caries Process

Demineralisation (loss of minerals) can be followed by remineralisation (gain in minerals) where the tooth takes up mineral ions. In some early stages this can be enough to reverse the early carious process. However, as this is a dynamic process (with remineralisation being followed again by demineralisation) it is only when the demineralisation occurs much more often than the remineralisation that the tooth surface is at risk of breaking down to form a cavity.

The terminology of the various stages of dental caries has been demonstrated with the use of the following ice-berg diagram, taken from NDIP 2010. The base of the ice-berg shows that dental caries is initially present as hidden disease, and it is only when the decay becomes more established that it is detectable by dentists – and even this may require the use of radiographs or other diagnostic aids in the very early stages. Parents and children may not become aware until dental caries has become extensive.

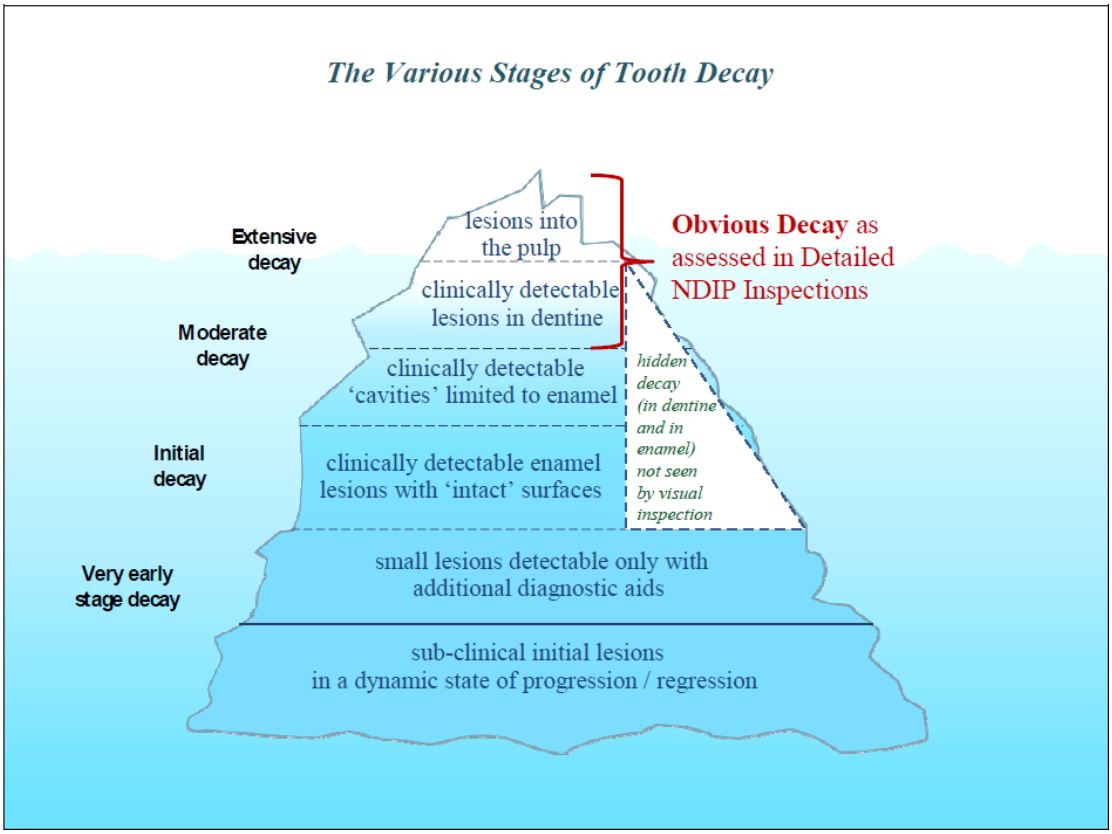


Figure 5: The Various Stages of Tooth Decay (NDIP 2010)

The "very early stage decay" includes a demineralisation phase and is very difficult to pick up without the aid of x-rays and trans-illumination lights. This stage of decay can be reversed.

The "initial decay" stage is visible to the examiner, and if picked up at this early stage can be treated very easily.

The "moderate decay" stage is the cavitation phase, where the tooth surface breaks down to form a cavity, and must be treated by either a filling or (later) by an extraction.

Less time spent in the demineralisation phase means that there is less damage by the acids and the teeth do not form cavities. It therefore follows that frequency of eating/drinking sugar should be kept to a minimum.

It is also important to note that dental surveys such as the National Dental Inspection Programme only record teeth and tooth surfaces with "obvious decay". This may well be less than the total number of teeth or tooth surfaces, which a clinician would decide to treat.

Preventing and managing caries

There are effective, evidence based strategies for the prevention of dental caries and for managing the disease if it does occur, SDCEP have produced a guidance document Prevention and Management of Dental Caries in Children (SDCEP 2010) where many of the recommendations are based on research evidence. This guidance works alongside the Childsmile Programme and seeks to present clear and consistent advice to support dental professionals to deliver care and when necessary, to manage caries. It provides advice on:

- the assessment of the child
- the delivery of preventive care based on caries risk
- choosing from the range of caries management options available
- delivery of restorative care, including how to carry out individual treatments
- recall and referral
- providing additional support
- management of suspected dental neglect.

Oral health key messages

Tooth decay (or dental caries) is not inevitable and can be prevented. Effective and evidence based messages to prevent dental disease are:

1. Reduce the consumption and especially the frequency of intake of foods and drinks containing sugar.
2. Brush teeth and gums at least twice daily, in the morning and last thing at night. Use toothpaste containing at least 1000 ppm (parts per million) fluoride. Spit, don't rinse – this gives fluoride time to work.
3. Visit the dentist regularly or as advised for oral examinations.
4. Participate in Public Health Programmes, which improve oral health such as Childsmile.

The National Dental Inspection Programme (NDIP)

NDIP was developed after 2002 from the Scottish Health Boards Dental Epidemiology Programme and undertakes detailed epidemiological examinations of a random sample of Scottish school children at age 5 (P1) and 11 years (P7). NDIP is split into two components - a Detailed Inspection, which provides epidemiological data for use by NHS Boards, Scottish Government etc, and a Basic Inspection, which provides a simple assessment of the dental status of every P1 and P7 child each year. The Basic Inspection places each child in one of three categories depending on the level of dental health and the treatment need and a letter is sent to each parent. Dental examiners who undertake the detailed examinations are calibrated and trained to make sure that the data they collect is robust and thus can be used for future service planning.

NDIP looks in further detail at levels of dental decay in children. In order to try to influence the levels of dental disease, it has to be able to be measured.

So how do we measure dental disease?

An Index is an instrument that allows a condition or disease to be measured.

Most indices measure disease and not health e.g.

- caries
- periodontal disease
- fluorosis
- orthodontic need.

Indices used to measure dental decay in children are:

- average dmft (decayed, missing, filled primary teeth)
  average DMFT (decayed, missing and filled permanent teeth)
- average dmfs (decayed, missing, filled surfaces in primary teeth)
  average DMFS (Decayed, Missing and Filled surfaces in permanent teeth)
- % free of obvious decay experience (“caries free”).

Childsmile and fluoride

Fluoride is a naturally occurring mineral. When fluoride is present in the saliva, the fluoride ions become concentrated in the plaque.

Even at very low levels, fluoride in the plaque and saliva is able to alter the balance between demineralisation and remineralisation, favouring the remineralisation process. As the remineralisation happens in the presence of fluoride, the new mineral crystals are stronger and less susceptible to acid attack.

As sugars (found in foods and drinks) enter the plaque, the presence of fluoride reduces the conversion of dietary sugars into acid by plaque bacteria and less acid is produced.

Fluoride can either be given to children systemically (in the form of drops or tablets; added to milk or water in Public Health Programmes) or be used topically in the form of gels, varnishes or mouthwashes. However, the most important way of delivering topical fluoride is by the twice daily use of fluoride toothpaste and this is a key part of the Childsmile Programme.

Fluoride varnish

The Childsmile Programme uses a Colgate fluoride varnish called Duraphat® which is painted onto teeth between two and four times per year. Duraphat® is the only fluoride varnish licensed for caries reduction and recommended by Childsmile. Many scientific studies from around the world have shown that fluoride varnish is effective in reducing the dental decay rate in children when used in addition to brushing teeth regularly with fluoride toothpaste. A Cochrane Systematic Review (Marinho *et al.* 2002) reported the statistically significant caries-inhibiting effect of fluoride varnish.

Fluoride Varnish works in three ways:

- it slows down the development of decay by stopping demineralisation
- it makes the enamel more resistant to acid attack (from plaque bacteria), and speeds up remineralisation (remineralising the tooth with fluoride ions, making the tooth surface stronger and less soluble)
- it can stop bacterial metabolism (at high concentrations) to produce less acid.

SIGN Guideline 138 (2014) finds fluoride varnish to be effective in the prevention of decay and recommends that it should be applied to the teeth of all children at least twice yearly. The benefit to all children is further supported by the latest Cochrane Systematic Review (Marinho *et al.* 2013).

Fluoride varnish is a very safe material to use. However, if children ingest too much fluoride over a prolonged period of time, during the period when their teeth are developing, they can develop fluorosis in these teeth. In most cases, dental fluorosis appears as barely visible pearly white flecks or lines on the surface of the affected tooth and is only detectable by a trained examiner. (There are more severe and unsightly forms of dental fluorosis but these are uncommon in the UK.) The Childsmile Programme supports the use of fluoride toothpaste from the time that the first teeth erupt and the professional application of fluoride varnish from the age of 2. All children should be offered fluoride varnish twice yearly, from the age of 2 in dental practices, with some being offered an additional two applications. From the age of 3, all children in participating nurseries and schools will be offered twice yearly fluoride varnish in their establishment, in addition to receiving two at their dental practice. Some areas will offer FV to children from the age of 2 in nursery. The Programme has been carefully designed to ensure that the possibility of a child developing fluorosis as a result of the Childsmile Programme is small and is balanced against the benefits of the prevention of decay.

The fluoride varnish applications in the Childsmile Programme are offered in targeted nurseries and schools twice a year and in Childsmile Practice from the age of 2 years. If the nursery or school children also receive fluoride varnish from their own dental practice, they will receive an additional benefit and their teeth will become stronger and healthier. The Programme does require that all the dentists in the regions that are taking part in Childsmile be informed so that they are aware of the programme. Furthermore, children involved in the nursery and school aspect of the programme receive an aftercare leaflet which should be given to the Dentist for information at their next dental appointment.

It is important that children should not be given fluoride drops or tablets for two days after fluoride application. After that, continue as directed.

Absorbable doses of fluoride

To reduce the risk of mild fluorosis and reinforce good oral health the amount of toothpaste used by children up to the age of 3 years should be supervised. In order to balance the benefits of preventing dental caries against the potential harms of fluorosis associated with ingesting fluoride toothpaste, children under 3 years of age should use no more than a smear of toothpaste.

Ingestion of excess amounts of anything can be toxic and fluoride is no exception.

The toxic dose of fluoride ingestion is estimated at 5 mg of fluoride per kg of child body weight (the average 3 year old weighs 11-20kg). The dose of 0.25 ml of Duraphat® contains 5.6mg of fluoride – well within safe levels.

Table 1: Absorbable Doses of Fluoride

Product	**Volume**	**Amount of fluoride**	**Absorbable fluoride dose if swallowed** (per kg body weight of child weighing 15 kg)
one pre-5 dose Duraphat® Varnish	0.25 ml	5.65 mg	0.375 mg
one 5-12 years dose Duraphat® Varnish	0.4 ml	9.04 mg	0.6 mg
1 Duraphat® Varnish cartridge	1.6 ml	36.16 mg	2.41 mg
1 Duraphat® Varnish tube	10 ml	226 mg	15 mg
Smear of Toothpaste strength 1,000 ppmF	0.1 ml	0.1 mg	0.007 mg
Pea of Toothpaste strength 1,000 ppmF	0.25 ml	0.25 mg	0.02 mg
Tube of Toothpaste strength 1,000 ppmF	100ml	100 mg	6.67 mg
Smear of Toothpaste strength 1,500 ppmF	0.1 ml	0.15 mg	0.01 mg
Pea of Toothpaste strength 1,500 ppmF	0.25 ml	0.375 mg	0.025 mg
Tube of Toothpaste strength 1,500 ppmF	100ml	150 mg	10 mg
Smear of Toothpaste strength 2,800 ppmF	0.1 ml	0.28 mg	0.02 mg
Pea of Toothpaste strength 2,800 ppmF	0.25 ml	0.7 mg	0.05 mg
Tube of Toothpaste strength 2,800 ppmF	75ml	210 mg	14 mg
Smear of Toothpaste strength 5,000 ppmF	0.1 ml	0.5 mg	0.03 mg
Pea of Toothpaste strength 5,000 ppmF	0.25 ml	1.25 mg	0.8 mg
Tube of Toothpaste strength 5,000 ppmF	51 ml	255 mg	17 mg

A child weighing 15kg would need to swallow 75mg of fluoride to be considered to have ingested a toxic amount and a child weighing 20kg would need to ingest 100mg of fluoride. This means that a child weighing 15kg would have to swallow one third of a tube or two whole cartridges of Duraphat® fluoride varnish or three quarters of a tube of 1000ppm toothpaste to be considered to have ingested a toxic amount.

In the Childsmile Programme only one dose of Duraphat® should be available for a child at any one time. As only one dose is dispensed for each individual child and the remainder is locked away, there should be no opportunity for a child to ingest more than a single dispensed dose. In dental practices, the appropriate dose of Duraphat® should be dispensed for the age of the child and the remainder should be put in a closed cupboard or drawer to which the child should have no access. In nursery and school, once dispensed, the remainder of the Duraphat® should be locked in the Childsmile trolley box or equivalent.

Acute fluoride toxicity in small amounts causes stomach irritation, nausea and vomiting. In very high amounts/quantities, fluoride can cause serious systemic toxic signs and symptoms including the possibility of death. Fluoride is very quickly absorbed from the stomach; a child suspected of swallowing excessive levels of fluoride should be given a glass of milk to drink and then quickly transferred to the local A&E Department for further assessment.

The fluoride varnish application relies on the topical action of fluoride, although inevitably a little of the varnish will be swallowed. Fluoride varnish will be offered twice a year from the age of 2 years in NHS dental practices, with some children offered an additional two applications. Children in establishments carrying out Childsmile Nursery and Schools will be offered twice yearly fluoride varnish in addition to receiving two fluoride varnishes through their NHS dental practice. Theoretically, this means a child could receive fluoride varnish four times a year (twice in Childsmile Practice and twice in Nursery or School) - a dose still within the safe limits for either acute toxicity levels or chronic ingestion resulting in fluorosis. The optimum benefit would be if the child were to receive the four doses equally spaced throughout the year, but this may be difficult logistically. Even if the child were to receive the nursery dose and the practice dose on consecutive days (or even on the same day), there would be no risk of toxicity as two doses would give the child 11.3mg of available fluoride, still well within the dose safety margin. There would also be very little chance of fluorosis, even with two doses given in quick succession as, after the age of 4 years, most of the adult teeth will have already calcified.

Table 2: Calcification Average Dates

Tooth	Central incisor	Lateral incisor	Canine	1st premolar	2nd premolar	1st molar	2nd molar
Calcification begins	4 months	12 months	5 months	24 months	30 months	Birth	36 months
Calcification finishes (approx.)	2.5 years	3 years	3.5 years	4 years	4.5 years	2 years	5 years

As can be seen from Table 2, most of the teeth, and certainly the anterior teeth, will have calcified by the age of 3.5 years.

Childsmile
Programme Delivery

Programme delivery

This section describes the processes and protocols underpinning operational delivery of the Integrated Childsmile Programme.

Childsmile Core

Introducing the Core (toothbrushing) Programme within an establishment

Every 3 and 4 year old child attending nursery (whether local authority, voluntary or partner provider) is offered free, daily, supervised toothbrushing. In addition, the toothbrushing component of the Programme has been made available to P1 and P2 classes of at least 20% of schools situated in areas with the highest level of need within NHS Boards across the country.

The professional standards of care which apply to the Toothbrushing Programme are outlined in the National Standards for Nursery and School Toothbrushing Programmes Standards document available to download at http://www.child-smile.org.uk/documents/5040.aspx.

The Core Programme may be introduced to a nursery/school because of a request from the school or as the result of contact from the dental team. A member of the Childsmile team should meet with the Head Teacher to discuss what is expected of the school and what resources will be involved. A class list can be requested at this time, if appropriate, in a manner, which complies with local confidentiality and information sharing policies.

Core Programme training

Childsmile Toothbrushing Programme Guidelines for carrying out staff training are available in Appendix 7. These outline the minimum requirements of this training.

Consent

See page 26 for full details of the consent process.

Child education

Sessions can be arranged to assist the establishment to educate the children about good oral health.

Distribution of resources (packs)

Local arrangements are made within individual NHS Boards to ensure every child receives a dental pack and free flow cup in the first year of life, two dental packs a year at age 3 and 4 in nursery and one dental pack in Primary 1.

Distribution of dental packs can be logged on the ‘packs’ contacts page of the HIC database by establishment.

Establishing Nursery/School Programme

Health Boards are responsible for the application of Duraphat® through a protocol and ensuring that staff who apply it are competent to undertake this. The Protocol (Appendix 8) for the supply and application of Duraphat® varnish to children aged 2 years and upwards in the Childsmile Nursery and School Programme must be read, agreed to and signed by all dental healthcare staff involved in its use. The protocol must be easily accessible to all healthcare staff in the clinical setting.

Introducing Childsmile to the Head Teacher can be the role of either the Childsmile Coordinator or the DHSW. The DHSW should make the arrangements and accompany the Childsmile Coordinator (if applicable) to the visit.

To introduce Childsmile, the member of Childsmile staff should firstly telephone the Head Teacher and ask for an appointment to meet with them or the appropriate person in the nursery/school to explain more about the Childsmile Programme.

Head Teacher liaison

At the appointment with the Head Teacher, Childsmile staff should:

- provide your contact details – to enable them to contact you at a later date
- describe the Childsmile Programme – introduce members of the dental team and their role; and explain the role of Health Informatics Centre (HIC)
- give the Head Teacher an information pack - including a consent form, the aftercare instructions and current briefing sheets
- explain the consent process appropriate to that particular establishment
- agree suitable dates and times for the visit by the Childsmile Dental Team
- identify a suitable area in the nursery/ school where the fluoride varnish can be applied. This should be a quiet and safe area agreed with the nursery/school Head Teacher during this preliminary visit
- if toothbrushing is offered in the nursery or school then request that this be carried out before or not at all on the day of fluoride varnish application: as aftercare instructions advise that teeth are not brushed until the following morning following fluoride varnish application
- ask the Head Teacher if any snacks can be eaten prior to fluoride varnish application or be taken home on the day of the dental contact
- ask the Head Teacher for the number of pupils in each of the relevant classes.

Childsmile consent forms and process

There are two Childsmile consent forms:

Consent 1 – toothbrushing only

Consent 2 – toothbrushing and fluoride varnish

Class lists

Class lists are required to populate the HIC system. Local Education Departments may be happy to provide class lists for the nurseries/schools – if this information is provided electronically it can be forwarded directly to HIC to be added to the database. A letter is available on the Childsmile website from a Programme Director to help explain and facilitate this process.

If a local Education Department is unwilling to provide class lists, the total class numbers have to be obtained from the schools and added to the database to ensure that sufficient stocks of consent packs are given to the schools. It will also help to give accurate consent rates. If class lists are not available the children's data will need to be manually entered into the HIC system on receipt of the completed consent forms.

Toothbrushing consent

Consent is only required once for the Toothbrushing Programme and follows a child from nursery to school and if the child changes nursery or school establishments. Arrangements for obtaining consent are agreed locally. Once Toothbrushing consent forms are returned they are retained locally after the information has been entered into the HIC system.

Toothbrushing and fluoride varnish consent

On the first occasion that a child is offered Childsmile Nursery/School parents will receive a consent pack (the toothbrushing/fluoride varnish consent form, a consent letter and return envelope).

The consent form requires to be completed only once. For subsequent fluoride varnish applications, a fluoride varnish update information letter which asks for an update of medical history and other details (every 6 months) will be sent to the parent of the children via the nursery/school. Details/information obtained from these documents will be entered into the HIC database by the DHSW. All toothbrushing and fluoride varnish consent forms and returned fluoride varnish update information letters with changes to medical history are sent to HIC for scanning. Local procedures for sending confidential information should be followed.

Children whose parents have said no to fluoride varnish in the past should have the opportunity to access the programme on each occasion that it is offered in their nursery or school. The numbers of full consent packs for any class is the difference between the number of children in the class and the number who have a personalised fluoride varnish update information letter printed. A procedure and paperwork for parents who want to opt their child out of Childsmile is available.

Childsmile letters

Letters used to correspond with parents, and the User guide describing how the letters are generated from the HIC system, are available from the Childsmile HIC website help section. The HIC system can only be accessed from NHS computers. https://childsmile.tayside.scot.nhs.uk/help.aspx

Approach to consenting

The parents of children who have not previously joined the programme or any new children to the nursery/school can be approached in a number of ways to seek consent depending upon which programme/s is/are available in the local area and supported by the nursery school.

Class teacher

The consent packs should be collated by class and sent to the school. The consent form will then be distributed to all parents via the child's teacher. Consent form packs can be posted if arrangements are in place for establishments to receive them via this route.

Consent meetings

Meetings can be arranged with the nursery/school specifically for parents to attend and ask the DHSW any questions they have about the Childsmile Programme. This gives the DHSW an opportunity to make sure parents have read and understood the supporting information.

Playground approach

At the beginning or end of the school day, DHSWs can arrange with teachers to be present to discuss the programme.

Parent/Teacher events

Members of the Childsmile team can arrange with the nursery/school to attend events such as health education evenings, sports days, charity events etc where parents are already attending the nursery/school and Childsmile staff can take the opportunity to meet parents to explain the programme, seek consent and raise awareness of the programme.

When meeting with parents

Ensure that you explain all aspects of the Childsmile Programme to parents. Offer the parent the consent form to take away and consider, or offer to help them to fill it in at the time of meeting.

If completing the form with the parent:

- ask the parent to read the supporting oral health information (top part of the consent form) and check whether they have understood this
- ask if the child has any allergies (especially sticking plaster) or has ever been admitted to hospital for severe allergies or asthma. If they have, fill in the form noting the allergies and ticking the box regarding allergies and hospitalisation for allergies or asthma and keep in child's record. Remember, this child may not be eligible for the fluoride varnish part of Childsmile Nursery or Childsmile School. They should have a full individual risk assessment carried out by a dentist and a decision taken on whether it is clinically appropriate for fluoride varnish to be applied
- include in this box any other relevant information the parent provides
- ask the parent to sign and date the form
- if the parent wants help to find a dentist for their child follow local procedures for this.

If the parent wishes to take the consent form away to consider, arrange a suitable method of contacting them via the nursery/school or by telephone in order that the consent process can be followed up.

Returning consent

- the parent can complete the consent form and send the return envelope to the teacher for return to the local Childsmile team by post or collection as per local operational policy
- the parent can complete the consent form and post it back to the DHSW using the freepost envelope, if used
- the parent can come along to the consent meeting with the DHSW and fill it in at this meeting.

Following the return of the consent form the details should be entered into the HIC system as per HIC User Guide. Forms from children who have answered yes to any of the medical history questions should be forwarded to the dentist to decide whether they can/cannot have fluoride varnish applied in the nursery/school setting. Appendix 9 contains a paper providing information on Duraphat® safety. The completed toothbrushing and fluoride varnish consent form should be sent to HIC for scanning. Boards can retain photocopies/or scanned copies locally if they wish. Further details are available in the HIC User Guide.

HIC Flow Chart

The flow chart shown in Appendix 10 (Figure 8) provides guidance on the procedures for consent forms and update letters.

Interpretation/translation

Childsmile consent forms are published and printed in English.

If a parent needs language interpretation to help them to complete the consent form they are directed to contact Childsmile staff that will be able to help. Easy read formats are available on the Childsmile website for Toothbrushing at http://www.child-smile.org.uk/documents/4677.aspx and for Toothbrushing and Fluoride Varnish at http://www.child-smile.org.uk/documents/3711.aspx.

Local contact details must be affixed to the back of each consent form in the space provided.

If a parent contacts Childsmile for interpretation then local procedures should be followed to provide this support. Each NHS Board will have arrangements in place with organisations that provide interpreters.

The oral health information, which supports consent, is available in Chinese, Polish and Urdu at http://www.child-smile.org.uk/professionals/resources/orders_and_supplies.aspx

NHS Health Scotland is happy to consider requests for other formats, please contact 0131 536 5500.

Establishing Childsmile Practice

Childsmile Practice will operate at a population level (universal access) with additional support targeted towards children and families most in need. The following model is suggested:

Universal Programme

Oral health promotion, prevention advice and clinical care provided by an appropriately trained member of the dental team. Clinical prevention must include six-monthly fluoride varnish application from 2 years of age. This will be delivered by an appropriate member of the dental team.

Intensive Programme

Primary Care Dental Services: intensive programme of care delivered by an appropriately trained member of the dental team, incorporating dedicated oral health promotion sessions and clinical preventive care including six-monthly fluoride varnish application from 2 years of age.

Home support: provided via the DHSW in the home and community, working with families under the direction of the health visitor (HV) prior to facilitation into dental services. Facilitation into dental services or intensity of home support will be directed by the HV as the caseload holder.

All members of the dental team should also be aware that every child is provided with a patient held record, known as the “Red Book”, by the health visitor or midwife around 10 days old. This can and should be used for documenting interventions and support, either in practice or in the home.

The vision for a Childsmile Early Years Dental Health Surveillance Pathway can be seen in Figure 6 below. This near universal dental surveillance system draws on intelligence from national databases, the Childsmile Programme and the National Dental Inspection Programme so that children’s oral health needs can be tracked, reviewed and addressed at time points from near birth to the end of primary school. This will ensure children with poor dental health receive the treatment necessary to meet clinical needs and also preventative interventions to reduce future caries risk. The Pathway is integrated with the National Pre-5 Child Health Surveillance Programme.

Childsmile/National Dental Inspection Programme (NDIP) Dental Health Surveillance Pathway

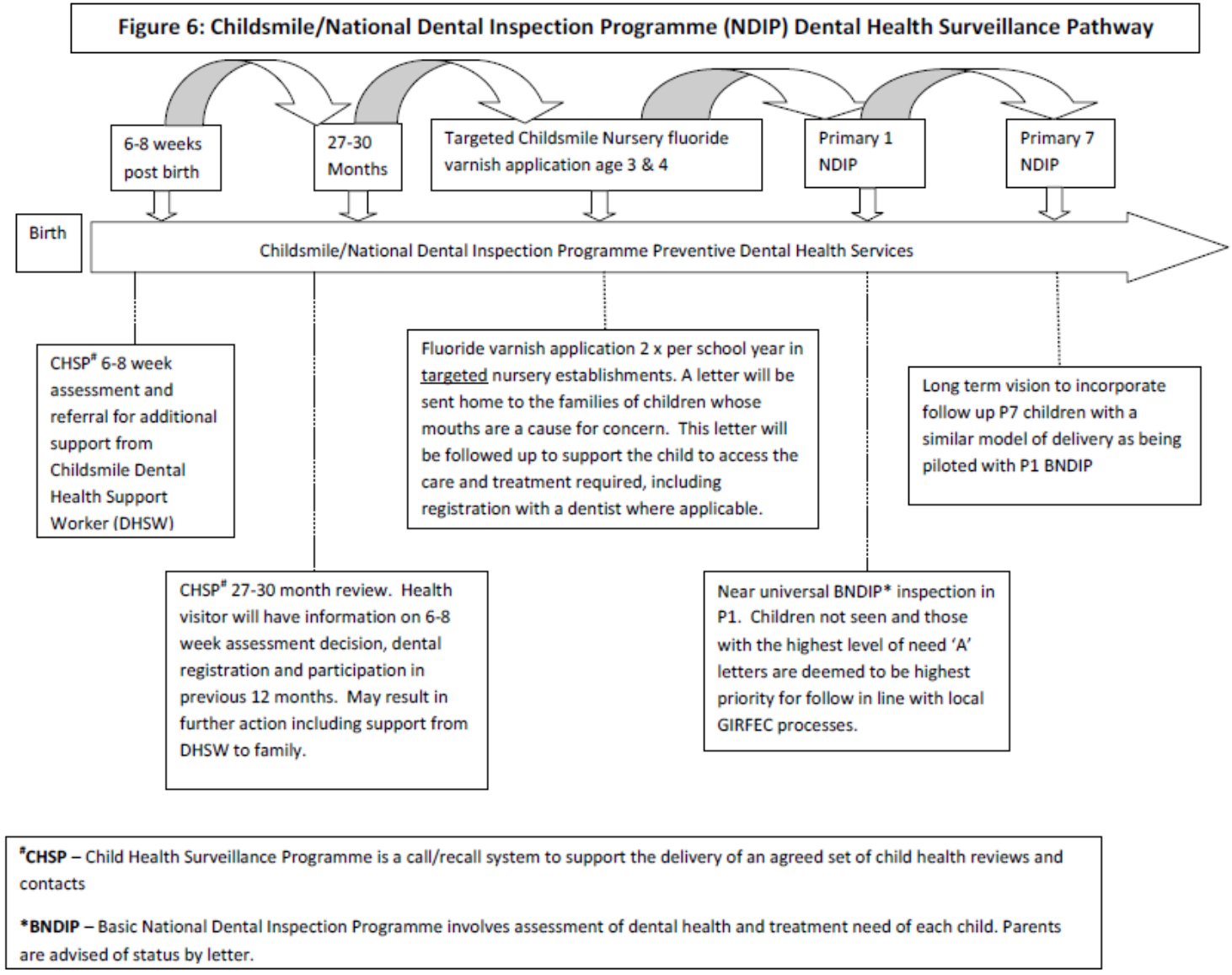


Figure 6: Childsmile/National Dental Inspection Programme (NDIP) Dental Health Surveillance Pathway

A child's first step on the Childsmile Early Years Dental Health Surveillance Pathway commences with the 6-8 week dental health assessment (Appendix 11) conducted by the health visitor. Following this, the family will be offered an appropriate level of dental health support by a range of professionals, working in partnership. Where parents are experiencing difficulty engaging with Childsmile, or adopting and maintaining positive dental health behaviours, this must be fed back to the health visitor by the DHSW, the EDDN and/or the dental care team members to initiate a reassessment of their needs and levels of multidisciplinary support provided.

The next stage of the Childsmile Early Years Dental Health Surveillance Pathway is the 27-30 month review (Appendix 12). Again, this is integrated with the National Pre-5 Child Health Surveillance Programme and national dental databases. This review will provide the health visitor with key information to support decisions regarding oral health needs. The review form will be pre-populated with dental registration status, whether a child has attended for routine care in the previous 12 months and the Childsmile referral status of the child at 6-8 weeks old.

The health visitor will then decide if further support with oral health needs is required.

Role of dental health support worker in Childsmile Practice

The role of the DHSW is primarily to facilitate the family to participate in the Childsmile Programme through attendance at the dental practice. The aim is to link the child to a dental practice as early as possible. It is important that the child becomes accustomed to visiting the dental practice, and its sights, sounds and smells, from an early age.

The HV will make the initial decision re families who can be directed straight into dental practice and those who require to be seen by DHSW.

During their initial contact with the family the DHSW should:

- explain the benefits of joining the Childsmile Programme
- explain the reasons for registering with and attending the dental practice even before the child has teeth
- explain what will happen at dental practice during appointments.
- link the child into a local dental practice
- contact the dental practice for the family and arrange an appointment in consultation with the family at a time that is suitable for them
- make sure that the family knows how to get to the dental practice
- attend the dental appointment with the family if they are anxious
- communicate oral health messages to parents
- link the family into other local activities in their community that support good oral health e.g. weaning groups, cookery classes
- work closely with the child's HV, where required, to ensure appropriate support is available at the right times.

Suggested good practice:

- contact e.g. send a text message to the family a couple of days before appointment to ensure that they are remembering and that it is still suitable
- contact the family after the first visit to the dental practice to discuss how it went.

Home support provided by the DHSW should be a short term measure. If the parent is not persuaded to attend the dental practice following the first visit then they can continue visiting the family. During these visits they should continue to encourage the family to attend practice and discuss the important oral health messages appropriate to the age of the child. These engagements are also a valuable opportunity to encourage and support participation in community based services and programmes (e.g. weaning fairs, parenting groups).

If a child fails to attend practice on two occasions the practice will inform the DHSW who will decide the best course of action in collaboration with the HV. Where applicable follow local fail to attend policy.

Oral health promotion sessions

All contacts within Childsmile Practice offer the opportunity to inform families of key preventive oral health messages. These are required to be carried out by the member of the dental team who sees the family (dentist, dental therapist, dental hygienist, EDDN or DHSW) in whichever setting the contact takes place, i.e. dental practice, home or community setting. The information given should take account of the age of the child and the circumstances of the family.

Information given should include the following topics

- **dental decay** - explain why first teeth are important and what can be done to prevent decay
- **teething**
- **toothbrushing** - when to brush, types of brush and toothpaste to use, amount of toothpaste to use, methods and demonstration of brushing, parent brushing child's teeth to demonstrate skill acquisition
- **nutrition** - breastfeeding, weaning, healthy snacks, healthy recipes
- **drinks** - tooth friendly drinks, use of bottles and cups.

Where possible the dental team member should agree a plan/key action for the parent to focus on until the next session.

The resource section of this manual outlines available resources provided by Childsmile and details how to obtain them.

The Childsmile website www.child-smile.org.uk/parents-and-carers/index.aspx provides useful information in the Parents and Carers section with regard to these topics. Another useful resource is First Teeth Healthy Teeth (2010) which has been distributed to all dental practices for use by the full dental team. This is available at First teeth, healthy teeth or contact 0131 536 5500 to obtain a hard copy.

Appendices 1 - 6 of this manual also include information sheets for use during these sessions.

Monitoring

Monitoring processes for Childsmile are necessary.

For Childsmile Core, Nursery, School and DHSW visits within Childsmile Practice the system used is HIC (Health Informatics Centre). For all other elements of Childsmile Practice this information is obtained through GP17 forms.

Childsmile @ HIC system

HIC supports the following processes via the Childsmile patient management system:

1. Clinical delivery of Childsmile.
2. Monitoring and evaluation of the programme by Local and National Managers and the Central Evaluation and Research Team (CERT), including Regional Researchers.

It is important that information is entered accurately onto the HIC system to allow close monitoring and reporting of the Core, Practice, Nursery and School aspects of the programme.

Childsmile Coordinators will usually provide training locally to EDDNs and DHSWs on use of the HIC system. A user guide and other advice is also available from the HIC website in the Help section.

GP17s: recording Childsmile activity

GP17s are required to be completed by Public Dental Services and General Dental Practices for payment and monitoring purposes.

GP17 Guidance has been developed by Practitioner Services Division (PSD) to ensure that the GP17 forms can be processed appropriately for Childsmile monitoring and payment purposes. This is available at: http://www.psd.scot.nhs.uk/professionals/dental/Childsmile_gp17_guidance_v8web.pdf

Fluoride varnish application procedure

Pre-application instructions:

These instructions could be written and/or verbal.

- advise patient on the purpose, benefits, process, possible side effects and answer any queries
- recommend the patient eats and drinks normally before attending
- advise that fluoride supplements should not be taken for two days after the fluoride application. After that, continue as directed
- advise that the patients' teeth may appear discoloured temporarily after fluoride varnish application and not to brush until the following morning.

Duraphat® fluoride varnish application can be undertaken:

In Practice: by a dentist or under the prescription of a dentist by a dental therapist, hygienist or Childsmile trained EDDN, currently registered with the General Dental Council.

In nursery/school: by a Childsmile-trained EDDN in participating establishments, without an individualised prescription, as long as they are working under a Childsmile protocol for supply and application of treatment.

The dose of fluoride varnish for children is:

0.25 ml per child in Nursery and Primary 1

0.4 ml per child in Primary 2 and above

Consent and medical history:

- EDDNs should ensure they are familiar with the 'Childsmile protocol for the supply and application of Duraphat® varnish to children aged 2 years and over', and have signed it
- check that you have valid consent for the application.

- **In the Practice setting** – check that you have a valid prescription for the fluoride varnish application. Check medical history with the parent, specifically check for allergy to sticking plaster or severe allergy or asthma that has required hospitalisation.

- if there are changes to the medical history or concern regarding consent refer back to dentist.

Preparation:

- place your equipment so that it is accessible for yourself but away from the child

- dispense 0.25ml or 0.4ml Duraphat® of and ensure that the remaining varnish remains inaccessible to the child
- welcome each child and explain the procedure in simple terms
- ensure you and the child are comfortable and the child is wearing safety glasses and bib
- apply your own safety glasses, and follow local hand hygiene policies.

Risk assessment

The Extra-Oral Assessment:

- check the skin of the face and around the mouth for abnormalities (spots, inflammation, swelling etc)
- check the lips for lesions/infections.

The Intra-Oral Assessment:

- check the inner cheeks and the insides of the lips
- check the upper and lower surfaces of the tongue.

Children showing obvious signs of systemic illness (e.g. colds, flu) or any abnormality of the face, lips or soft tissues of the mouth should be excluded on the day from fluoride varnish application.

- check the teeth and gums in a systematic order for signs of decay and/or infection.

If everything appears normal the fluoride varnish may be applied. If the child has signs of decay the fluoride varnish may be applied as it may help protect from further decay and it will acclimatise the child to dental treatment. However, fluoride varnish should not be applied to exposed pulps, in case it is uncomfortable.

In the nursery/school setting - If the child has any abnormality of the lips or mouth, or has dental caries identified in the risk assessment, send appropriate letter to parents advising that their child should be seen by a dentist. If the child is in pain follow local procedures to ensure the child is seen as soon as possible.

The application procedure:

A systematic approach is more important than adopting a specific order or technique. However, the following represents one method, which could be followed. If a child gets upset or protests during any part of the procedure, then the procedure should be abandoned.

- gently retract the right cheek with your finger or mirror and dry the upper right canine and molars with a cotton roll
- place the cotton roll in the upper right buccal sulcus

- holding the roll in place, apply a small amount of fluoride varnish to the buccal, palatal, approximal and occlusal surfaces of the molars
- remove the cotton roll
- retract the upper lip with a finger. Dry the incisor teeth with a cotton roll
- apply varnish to the buccal, approximal and palatal surfaces of the canines and incisors
- repeat for upper left.
- repeat process for whole lower arch
- if there is insufficient varnish for full lower arch give priority to buccal, approximal and occlusal surfaces of molars on both sides of the mouth
- ensure all equipment is removed from the mouth. Count four cotton rolls, one brush, gloves, and one mirror and place all disposable equipment in the clinical waste bag
- complete patient record (on paper or electronically). In dental practice ensure relevant code is included on GP17 claim form or electronic equivalent. In nursery/school ensure the visit record is completed on the HIC system
- if any immediate allergic reaction, remove product by toothbrushing and rinsing and follow local protocol. Complete and submit a BNF yellow card as per local procedure.

Post application instructions:

- advise the patient not to eat or drink for 30 minutes following the procedure
- advise to eat soft food for the rest of the day
- advise that teeth should not be brushed that day but toothbrushing with fluoride toothpaste should resume the following morning
- fluoride supplements should not be taken for two days after the fluoride application. After that, continue as directed
- advise that the patients' teeth may appear discoloured temporarily.

- **In the nursery/school setting -** provide the 'Fluoride varnish aftercare instructions' leaflet.

The beanbag or chair must be wiped with a detergent wipe after each child. At the end of the session leave the application area clean and tidy.

The collapsed child protocol

Duraphat®, when applied at the correct dose, is not normally associated with any adverse reactions. Every child in the Programme will have had a question asked regarding asthma and history of allergies.

In addition, children in Childsmile Practice will have had their medical history taken and updated at each appointment. Children who have severe asthma or allergies, categorised by a previous hospital admission for either asthma, allergies, or certain allergies such as colophony, will initially be excluded from Duraphat® application in the Nursery and School Programme and be referred to dental practice for a full assessment.

DHSWs and EDDNs are required to undertake Basic Life Support Training in their local area. Paediatric life support training should also be considered.

In the unlikely event of an adverse reaction, the protocol for dealing with a child who collapses whilst undergoing treatment is:

- stop the procedure immediately and summon help from the rest of the dental team and/or class teacher
- send someone to call 999 and note the time
- remove all equipment from the vicinity of the child
- put the child in the recovery position, ensuring that the chin is elevated
- make sure a member of the team keeps all the other children safe and away from the incident.

In nurseries and schools

It is possible that a child may, for reasons not associated with the fluoride varnish, collapse while the dental teams are in the nursery or school. It is hoped that children with a medical history consistent with collapse are flagged up through the medical history form in Childsmile Practice or by the nursery or school teacher.

As the dental teams are visitors in nurseries and schools, it is reasonable to expect that the nursery or school will have their own protocols for dealing with such a situation. It is important that, in the extremely unlikely event of a collapse, the teachers in the classroom and the dental team work together.

In dental practices

Each dental practice will have its own protocol for collapse and all employees working in the dental practice should be trained to follow this.

When a trained assistant is not available

In October 2009, the GDC published "Principles of Dental Team Working" (GDC 2006) which states in paragraphs 3.7 and 3.8 "When treating patients, make sure there is someone else – preferably a registered team member – present in the room, who is trained to deal with medical emergencies. There may be circumstances in which it is not possible for a trained person to be present - for example, if you are treating a patient in an out-of-hours emergency or on a home visit. If this is the case, you are responsible for assessing the possible risk to the patient of continuing with treatment in the absence of a trained person."

In a dental practice, while it is important that this GDC standard is followed for EDDNs, it is accepted that there is not always an assistant available. On the occasions when an assistant is not available, the EDDN is responsible for assessing the possible risk to the patient of continuing with the Childsmile session in the absence of a trained person. They should also ensure that the GDC principles are met, namely that:

- at least 2 people are always available to deal with medical emergencies when treatment is planned to take place
- all members of staff (not just the registered team members) know their role if a patient collapses or there is another kind of dental emergency
- all members of staff who might be involved in dealing with a medical emergency are trained and prepared to deal with such an emergency at any time, and practice together regularly in a simulated emergency so that they know exactly what to do.

If the decision is to proceed, an "open door" policy should be adopted. This should be carried out as follows:

- the EDDN should inform the receptionist that they are seeing a patient and family member, and let them know which room will be used. This room should be within calling distance of another staff member AT ALL TIMES
- the door should be kept open at all times when the family is with the EDDN.

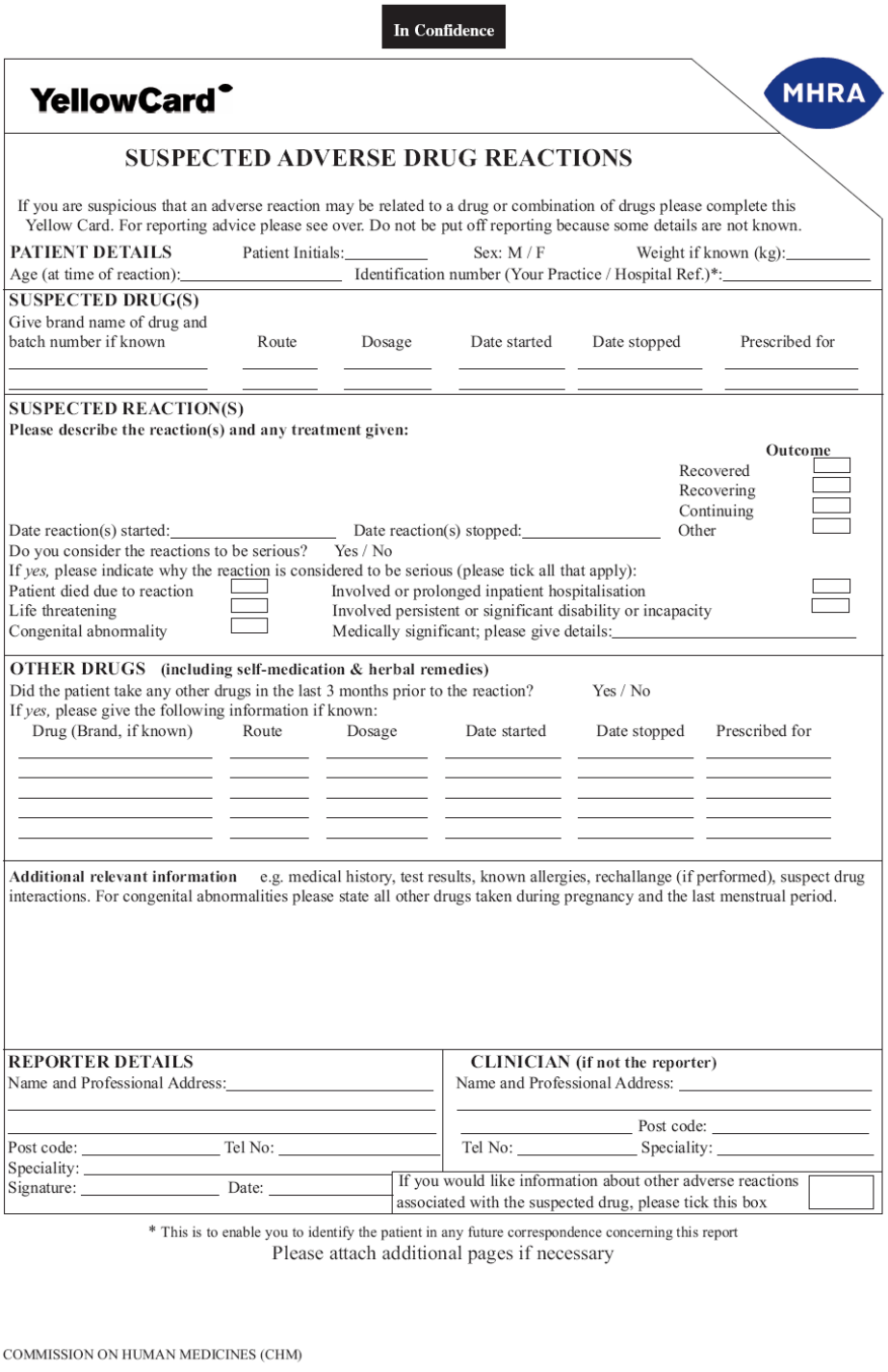
Reporting adverse reactions protocol

If there are any adverse reactions to the fluoride varnish (e.g. mucositis, allergy etc.) remove product by toothbrushing and rinsing and follow local protocol. Complete and submit a BNF yellow card as per local procedure. The yellow card system is described below. This is the system used for any adverse reaction to any medicine in the British National Formulary (BNF). The web address is http://yellowcard.mhra.gov.uk/

NHS Education for Scotland (NES) in conjunction with the Yellow Card Centre Scotland has developed six e-learning modules to support healthcare professionals in identifying and reporting Adverse Drug Reactions (ADRs). These modules are available on learnPro.

The adverse reaction may be noticed immediately by the dental team or later by the parents. The parents may ring the dental practice, the nursery or school, depending on where the fluoride varnish was applied. In either case, it is unlikely that the dentist will be informed in the first instance but the EDDN in dental practice or the DHSW in nursery or school are more likely to be informed. It is good practice for the EDDN to inform the dentist who prescribed fluoride varnish in the dental practice. EDDNs /DHSWs should inform a dentist who is responsible for validating in Nursery and School Programmes.

Details required for reporting through the Yellow Card system are described in **Figure 7**.



In Confidence

YellowCard

MHRA

SUSPECTED ADVERSE DRUG REACTIONS

If you are suspicious that an adverse reaction may be related to a drug or combination of drugs please complete this Yellow Card. For reporting advice please see over. Do not be put off reporting because some details are not known.

PATIENT DETAILS Patient Initials:_____ Sex: M / F Weight if known (kg):_____

Age (at time of reaction):_____ Identification number (Your Practice / Hospital Ref.)*:_____

SUSPECTED DRUG(S)

Give brand name of drug and batch number if known | Route | Dosage | Date started | Date stopped | Prescribed for

SUSPECTED REACTION(S)

Please describe the reaction(s) and any treatment given:

Outcome

Recovered ☐
Recovering ☐
Continuing ☐
Other ☐

Date reaction(s) started:_____ Date reaction(s) stopped:_____

Do you consider the reactions to be serious? Yes / No

If *yes,* please indicate why the reaction is considered to be serious (please tick all that apply):

Patient died due to reaction ☐ Involved or prolonged inpatient hospitalisation ☐

Life threatening ☐ Involved persistent or significant disability or incapacity ☐

Congenital abnormality ☐ Medically significant; please give details:_____

OTHER DRUGS (including self-medication & herbal remedies)

Did the patient take any other drugs in the last 3 months prior to the reaction? Yes / No

If *yes,* please give the following information if known:

Drug (Brand, if known) | Route | Dosage | Date started | Date stopped | Prescribed for

Additional relevant information e.g. medical history, test results, known allergies, rechallange (if performed), suspect drug interactions. For congenital abnormalities please state all other drugs taken during pregnancy and the last menstrual period.

REPORTER DETAILS

Name and Professional Address:_____

Post code:_____ Tel No:_____

Speciality:_____

Signature:_____ Date:_____

CLINICIAN (if not the reporter)

Name and Professional Address:_____

Post code:_____

Tel No:_____ Speciality:_____

If you would like information about other adverse reactions associated with the suspected drug, please tick this box ☐

* This is to enable you to identify the patient in any future correspondence concerning this report

Please attach additional pages if necessary

COMMISSION ON HUMAN MEDICINES (CHM)

Figure 7: BNF Yellow Card

Child protection

As a person involved in dental treatment you have an obligation to inform the appropriate authorities if you suspect a child may have been the subject of a non-accidental injury. Child protection covers wider issues than non-accidental incidents. All staff must be familiar with their local policy.

National child protection guidance recently published by Scottish Government and are available at: www.scotland.gov.uk/Resource/Doc/334290/0109279.pdf

A core competency framework for the protection of children, produced by NES, has been developed in line with the national guidance through direct discussion with Scottish Government and is available at: http://www.nes.scot.nhs.uk/education-and-training/by-discipline/nursing-and-midwifery/resources/publications/core-competency-framework-for-the-protection-of-children.aspx?accept=true

Remember, the implications and sensitivity of child protection are serious and must be dealt with carefully and correctly.

The nursery and school staff tends to know the children and their families well and, in the first instance, any concerns should be discussed with them. You must then report any concerns to your manager in the public dental service and document this as soon as possible after the event.

Your manager will advise you of the most suitable way of follow-up with the school authorities.

In dental practice, the Child Protection Policy should be followed for that practice; **The Scottish Dental Clinical Effectiveness Programme documents** SDCEP 2010a; SDCEP 2010b) include potential indicators of dental neglect, advice on making careful judgements, and information and support on the importance of contacting the child's named health visitor and/or doctor to share concerns.

Childsmile Resources

Resources

Resources are available to NHS Boards for Childsmile Core and Childsmile Practice. These are funded nationally and NHS Boards have an agreed yearly allocation, which they are able to draw down from the approved national supplier. Following a rationalisation of these resources from 1st November 2010 distribution is based on the following criteria:

- dental packs: oral health pack containing toothbrush and toothpaste distributed to all children on six occasions by the age of 5. First by HV, two in each years on nursery and one in Primary 1
- free-flow cup: distributed by HV at around 6 months
- Toothbrushing Programme in all nurseries and for 20% of schools in Health Board for P1s and P2s. Allowance for five toothbrushes, and one tube of toothpaste per child per year
- Practice: oral health packs distributed to most vulnerable (enhance care) children 0-3 years. Suggested distribution would be every six months, i.e. at ages of 6 mths, 12 mths, 18 mths, 2 yrs, and 2.5 yrs. This could be in practice, via HV or by DHSW depending on whether the child is attending practice or not at each of these stages. One toothbrush per year for all children aged 3, 4 & 5 for toothbrushing demonstration.

Printed and online resources

Printed resources are available to order by Childsmile Coordinators only via NHS Health Scotland. Please contact your local Childsmile Coordinator if you require more Childsmile resources.

This excludes equipment, uniforms and stationery which should be ordered and funded locally.

NHS Health Scotland are happy to consider requests for other languages (excluding consent form section) or formats please contact 0131 536 5500 or email nhs.healthscotland-alternativeformats@nhs.net

Toothbrushing Consent Form

For obtaining parental consent to allow their child to take part in toothbrushing in the Toothbrushing Programme in nursery or school.

Target audience: Parents with children aged from 3 years.
Translation: Consent form section – No
Oral health Information – Yes.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic version for viewing online via www.child-smile.org
Distribution routes: Via Childsmile staff to nurseries and schools.
Criteria for distribution: One to enrol every child in participating establishments as they begin nursery. (There is no need to enrol again when they begin school if they have been enrolled in nursery)
Allocation based on: Birth cohort plus one third.

Toothbrushing and Fluoride Varnishing Consent Form

For obtaining parental consent to allow their child to take part in the Toothbrushing Programme and Fluoride Varnish Programme in nursery or school.

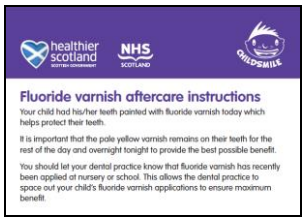
Target audience: Parents with children aged from 3 years.
Translation: Consent form section – No
Oral health information – Yes.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic version for viewing online via www.child-smile.org
Distribution routes: Via Childsmile staff to nurseries and schools.
Criteria for distribution: One to enrol every child in participating establishments at the start of nursery. (There is no need to enrol again when they begin school if they have been enrolled in nursery.) Small number of children will not return initially, and you may wish to give out another copy - suggested maximum of 2 copies per child per round of fluoride varnish application. Children who have refused or not returned in the past - suggested only 1 per round fluoride varnish application.
Allocation based on: 60% of birth cohort.

Fluoride Varnish Update Information Letter

For parents to complete twice a year to make sure their child's most up-to-date medical history is obtained.

Target audience: Parents with children aged from 3 years who have previously consented to fluoride varnish application in nursery and school.
Translation: No.
Format: Printed hard copies distributed through HIC system. Electronic version for viewing online via https://childsmile.tayside.scot.nhs.uk/help.aspx
Distribution routes: Via Childsmile staff to nurseries and schools.

Fluoride varnish aftercare instructions



A leaflet given to parents after their child has received fluoride varnish. For use in the Childsmile Nursery/School Programmes, this is an essential resource providing the aftercare instructions relating to fluoride varnish application. It provides a reminder to parents that they will be given an opportunity twice a year before varnishing to update their child's medical history and personal details.

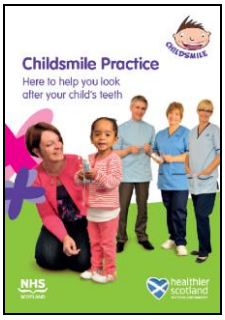
Target audience: Parents with children aged from 3 years.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic version for viewing online via www.child-smile.org
Distribution routes: Via EDDN or DHSW to child to take home following fluoride varnish in nursery/school.
Criteria for distribution: One to every child after receiving a fluoride varnish application in nursery and school.
Allocation based on: Previous years fluoride applications plus 30%.

Fluoride Varnish for Children

A leaflet for parents providing up-to-date, accurate and reassuring information on fluoride varnishing in nurseries and schools and in dental practices.

Target audience: Parents with children aged up to 12 years.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators to channel out to dental practices for the whole dental team and by HVs and DHSWs (before 2 years).
Criteria for distribution: One to every child before 2 years of age. Small amount of enhanced care children may require at a later date for reinforcement of message.
Allocation based on: Birth cohort plus 30%.
I

Childsmile Practice



A leaflet for parents providing an introduction to Childsmile Practice, the wider Childsmile team and their roles. (This one leaflet replaces three earlier information leaflets, i.e. the 'Programme Map', 'Introduction to Childsmile Practice' and 'Visit the Dental Nurse Appointment Card'). A link to the Red Book for appointments is provided along with space for DHSW or dental practice stamp contact details.

Target audience: Parents with children aged up to 5 years.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators to HVs and DHSW (from 3 months).
Criteria for distribution: One to every child from health visitor. Small number may be required for distribution by DHSW as reinforcement or because lost.
Allocation based on: Birth cohort plus 30%.

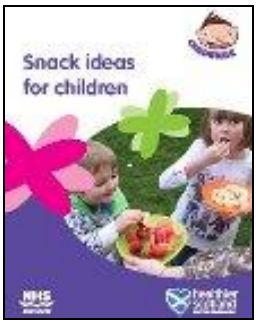
Drinks for babies and young children

A leaflet for parents about tooth-friendly drinks. Messages promote breastfeeding, milk and water as safe drinks for teeth, free-flow cups, reading labels and advice on other drinks (e.g. cow's milk, flavoured waters, baby drinks and juices, flavoured milk, milk shakes and milk based smoothies).

Target audience: Parents with children up to 5 years of age.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators to channel out to dental practices, HVs (at 0-8 weeks), and DHSW (from 3 months in Practice and nurseries and schools). Also via other professionals such as childminders, dietitians, nutritionists and infant feeding coordinators.

Criteria for distribution: One to every child at around 6 months of age. Small amount of enhanced care children may require another at a later date for reinforcement of message.
Allocation based on: Birth cohort plus 30%.

Snack ideas for children



Ideas to help you provide a variety of healthy, safe snacks for both you and your children to enjoy at home and at school or play.

Target audience: Parents and children over 1 year.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators to channel out to dental practices, HVs and DHSW. Also, via other professionals such as childminders, dietitians, nutritionists and infant feeding coordinators.

Posters

Two versions are available

Nursery and School Poster - targeted at Childsmile Nursery/School settings (A3 size only).

Target audience: Parents.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators to channel out to nurseries and schools, dental practices and other community settings e.g. health centres etc.
Criteria for distribution: One to every participating establishment every year
Allocation based on: Number of establishments recorded on the HIC system

Practice Poster - Targeted at dental practice settings (A3 size only).

Target audience: Parents.
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via Childsmile Coordinators dental practices and other community settings e.g. health centres etc.
Criteria for distribution: One to every participating establishment every year
Allocation based on: One to every dental practice

Stickers

Mini Childsmile stickers available for all Childsmile staff to give to children. The concept is that the sticker is a reward for participation in fluoride varnish application

Target Audience: Children.
Translation: No.
Format: Printed 20 per sheet ordered by Childsmile Coordinators from NH Health Scotland. Electronic for viewing online via www.child-smile.org
Distribution routes: Via DHSWs, dental practice staff
Criteria for distribution: Following fluoride varnish application in nursery, school, practice.
Occasionally at events or to reinforce toothbrushing.
Allocation based on: Previous year fluoride varnish application in nursery/ school plus birth cohort times 12.

Food and drinks diary

Food and drinks diary promote and encourage healthy food and drinks. Children/parents complete five day food and drink diary, which is reviewed by professionals who provide specific and individualised dietary advice to help them look after their child's teeth.

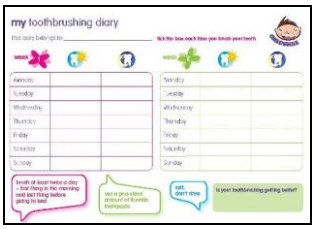
Target Audience: Children/families who require advice about healthy food and drinks
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online and downloading via www.child-smile.org
Distribution routes: Via DHSWs, dental practices.
Criteria for distribution: As per SDCEP primarily for enhanced children one initially (maybe 2 per year).
Allocation based on: Birth cohort times 4 (50% of birth cohort times 2 times 4 years).

Toothbrushing chart 3-6 years

A four week diary for the child and parent to record each time the child's teeth are brushed. To act as a reminder about brushing frequency, and as a tool to focus discussion with professionals.

Target Audience: Children age 3-6 years
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online and downloading via www.child-smile.org
Distribution routes: Via DHSWs, dental practices.
Criteria for distribution: As per SDCEP primarily for enhanced children one initially (maybe 2 per year).
Allocation based on: Birth cohort times 4 (50% of birth cohort times 2 times 4 years).

Toothbrushing chart 7-10 years



A four week diary for the child and parent to record each time the child's teeth are brushed. To act as a reminder about brushing frequency, and as a tool to focus discussion with professionals.

Target Audience: Children age 7-10 years
Translation: No.
Format: Printed hard copies ordered by Childsmile Coordinators from NHS Health Scotland. Electronic for viewing online and downloading via www.child-smile.org
Distribution routes: Via DHSWs, dental practices.
Criteria for distribution: As per SDCEP primarily for enhanced children one initially (maybe 2 per year).
Allocation based on: Birth cohort times 4 (50% of birth cohort times 2 times 4 years).

Childsmile Briefing Sheets

What is Childsmile?

An overview of the Childsmile Programme.

My nursery and Childsmile

A briefing sheet explaining what Childsmile offers in nursery.

My school and Childsmile

A briefing sheet explaining what Childsmile offers in school.

My dental practice and Childsmile

A briefing sheet explaining the practice component of Childsmile.

Target Audience: Professionals.
Translation: No.
Format: Electronic via www.child-smile.org
Distribution: Via Childsmile staff to dental practice staff, nursery and school staff and health visiting teams.

National Standards for Nursery and School Toothbrushing Programmes

National Standards for nursery and school toothbrushing programmes have been developed which outline national recommendations and accountability arrangements. An **abbreviated version** is also available.

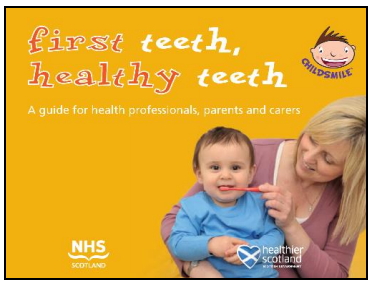
Target Audience: Professionals.
Translation: No.
Format: Electronic via www.child-smile.org
Distribution: Via Childsmile staff, nurseries and schools.

Fun First Foods: An Easy Guide to Introducing Solid Foods

Fun First Foods provides information on the different stages of weaning - offering tips, advice and recipes.

Target Audience: Parents.
Translation: Yes – Polish.
Format: Electronic via www.child-smile.org
Distribution: Via Childsmile staff, HVs.

First teeth, healthy teeth



Practical guide for health professionals to provide clear, up-to-date oral health information for parents of babies and children up to the age of 5 years. Information supports, and is consistent with the Childsmile Programme.

Target Audience: Parents.
Translation: No.
Format: Printed hard copies obtained from NHS Health Scotland tel: 0131 536 5500. Electronic via www.child-smile.org
Distribution: Via Childsmile staff and dental teams across Scotland.

DVDs

How to protect your children's teeth

A free ten minute DVD available to all parents in Scotland to help them protect their children from tooth decay.

Target Audience: Parents.
Translation: English transcriptions are available.
Format: DVD, electronic clips are available for viewing on www.child-smile.org
Distribution: Via Childsmile staff, HVs and others.

Toothbrushing Programme DVD

Free to pre-school, primary school and other childcare settings. It shows how to set up a Toothbrushing Programme wherever childcare is provided and outlines the help and support Childsmile can offer. To obtain a copy contact childsmile@nhs.net

Target Audience: Parents.
Translation: English transcriptions are available.
Format: Electronic clips are available for viewing on www.child-smile.org
Distribution: Via Childsmile staff

Useful Information

Websites

Childsmile

Provides information for parents, and professionals on the Childsmile Programme.

http://www.child-smile.org

British Dental Association

Gives facts about dental services from looking after your teeth to how to find a dentist.

http://www.bda.org/

National Dental Inspection Programme (NDIP)

The NDIP provides an essential source of information for keeping track of any changes in the dental health of Scottish children.

http://ndip.scottishdental.org/

The Scottish Dental Clinical Effectiveness Programme (SDCEP)

SDCEP is an initiative of the National Dental Advisory Committee (NDAC) in partnership with NHS Education for Scotland (NES).

http://www.sdcep.org.uk/

Scottish Intercollegiate Guidelines Network (SIGN)

Includes a key guideline document for dental health.

http://www.sign.ac.uk/

SIGN 138: 'Dental Interventions to Prevent Caries in Children'.

http://www.sign.ac.uk/pdf/SIGN138.pdf

Education Scotland

Curriculum area: Health and wellbeing

http://www.ltscotland.org.uk/learningteachingandassessment/curriculumareas/healthandwellbeing/

Food and Nutrition

British Dietetic Association

The British Dietetic Association is the professional association for dietitians.

http://www.bda.uk.com/

The Food and Health Alliance supports the implementation of national food and health policy in Scotland.

http://www.fhascot.org.uk/Home

The British Nutrition Foundation

The British Nutrition Foundation has free leaflets on preparing healthy breakfasts and snacks.

http://www.nutrition.org.uk/

Eatwell

The Eatwell Campaign from the Food Standards Agency stresses the importance of a healthy diet and safe storage and preparation of food.

http://www.nhs.uk/Livewell/healthy-eating/Pages/Healthyeating.aspx

Food Standards Agency (Scotland)

The Food Standards Agency has a variety of publications including booklet, leaflets and posters.

http://www.food.gov.uk/scotland/

Survey of Sugar Intake Among Children in Scotland

A Food Standards Agency Scotland (FSAS) report which looked at the sugar intake of 1,700 Scottish children aged between 3 and 16 years of age. Download the full report from the **Food Standards Agency** website.

http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/surveyofsugarscotland0308.pdf

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Appendices

Appendix 1: Acid Attack Cartoon

Appendix 2: Hidden sugars

Some of the sweeteners found on labels which **cause tooth decay**.

Appendix 3: Reading Labels – Toothpaste

Reading Labels – Toothpaste

This is to help you to explain to the parent/carer how to interpret toothpaste labels. Below are some examples of toothpastes that you can buy in Scotland. Each example has a different concentration of fluoride. Please note that while the product may say that it is the 'right' toothpaste for children, some examples contain lower levels of fluoride than is recommended for young children in Scotland. [In Scotland we recommend at least **1000ppm** fluoride]

Example 1

- Ingredients: Sorbitol, Aqua, Hydrated Silica, PEG-32, Cellulose Gum, Sodium Lauryl Sulfate, Sodium Saccharin, Aroma, Sodium Monoflurophosphate, Sodium Hydroxide, Cl 16035, Cl 17200
- Suitable for children up to 6 years old
- Contains 0.2% Sodium Monoflurophosphate (260ppmF)

Example 2

- Ingredients: Sorbitol, Aqua, Hydrated Silica, Xylitol, PEG-32, Cellulose Gum, Propylene Glycol, Sodium Lauryl Sulfate, Sodium Monoflurophosphate, Aroma, Sodium Saccharin, Calcium Glycerophosphate, Aluminium Hydroxide, Cl 77891, Cl 42090, Cl 47005
- Suitable for children 6-12 years old
- Contains 0.4% Sodium Monoflurophosphate (525ppmF)

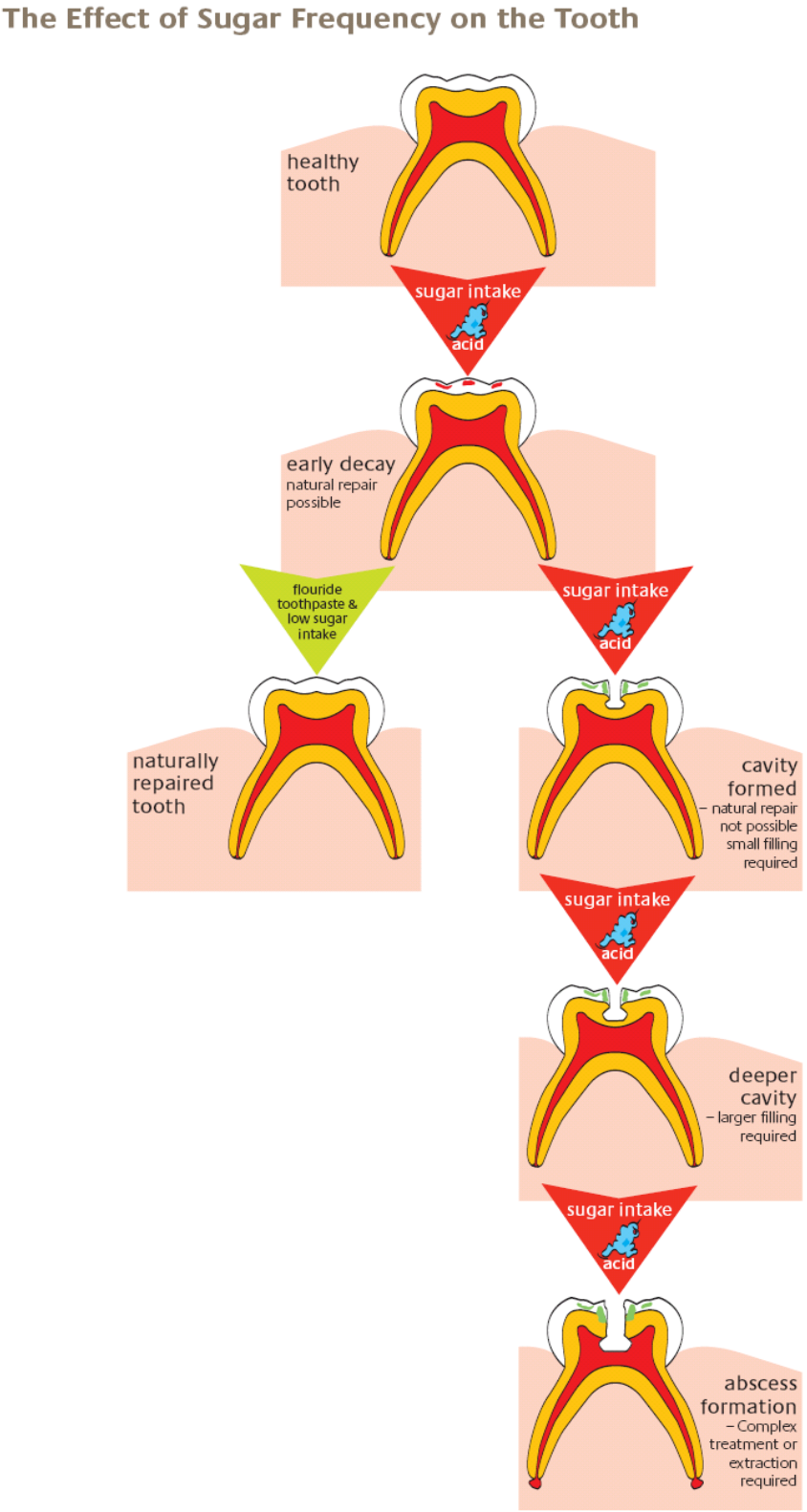
Example 3

- Ingredients: Sorbitol, Aqua, Hydrated Silica, Glycerin, Sodium Lauryl Sulfate, Aroma, Xanthan Gum, Carbomer, Sodium Saccharin, Limonene, Sodium Hydroxide, Sodium Fluoride, Cl 42090
- Content Sodium Fluoride (0.11%) 500ppmF

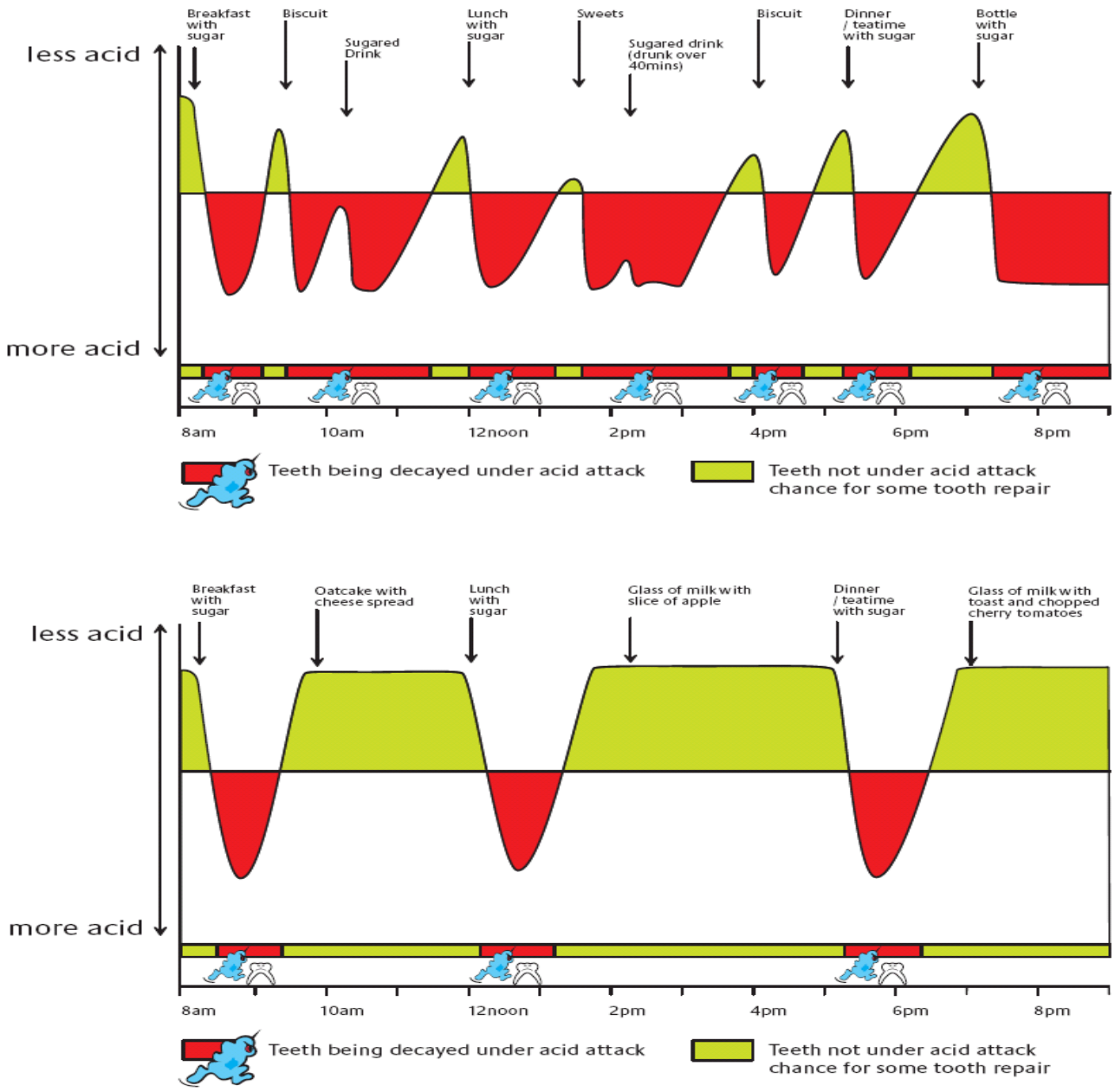
Example 4

- Ingredients: Sorbitol, Aqua, Hydrated Silica, Sodium Lauryl Sulfate, Aroma, Xanthan Gum, Carbomer, Sodium Saccharin, Benzyl Alcohol, Limonene, Sodium Hydroxide, Sodium Fluoride, Cl 45410
- Content Sodium Fluoride (0.248%) 1100ppmF

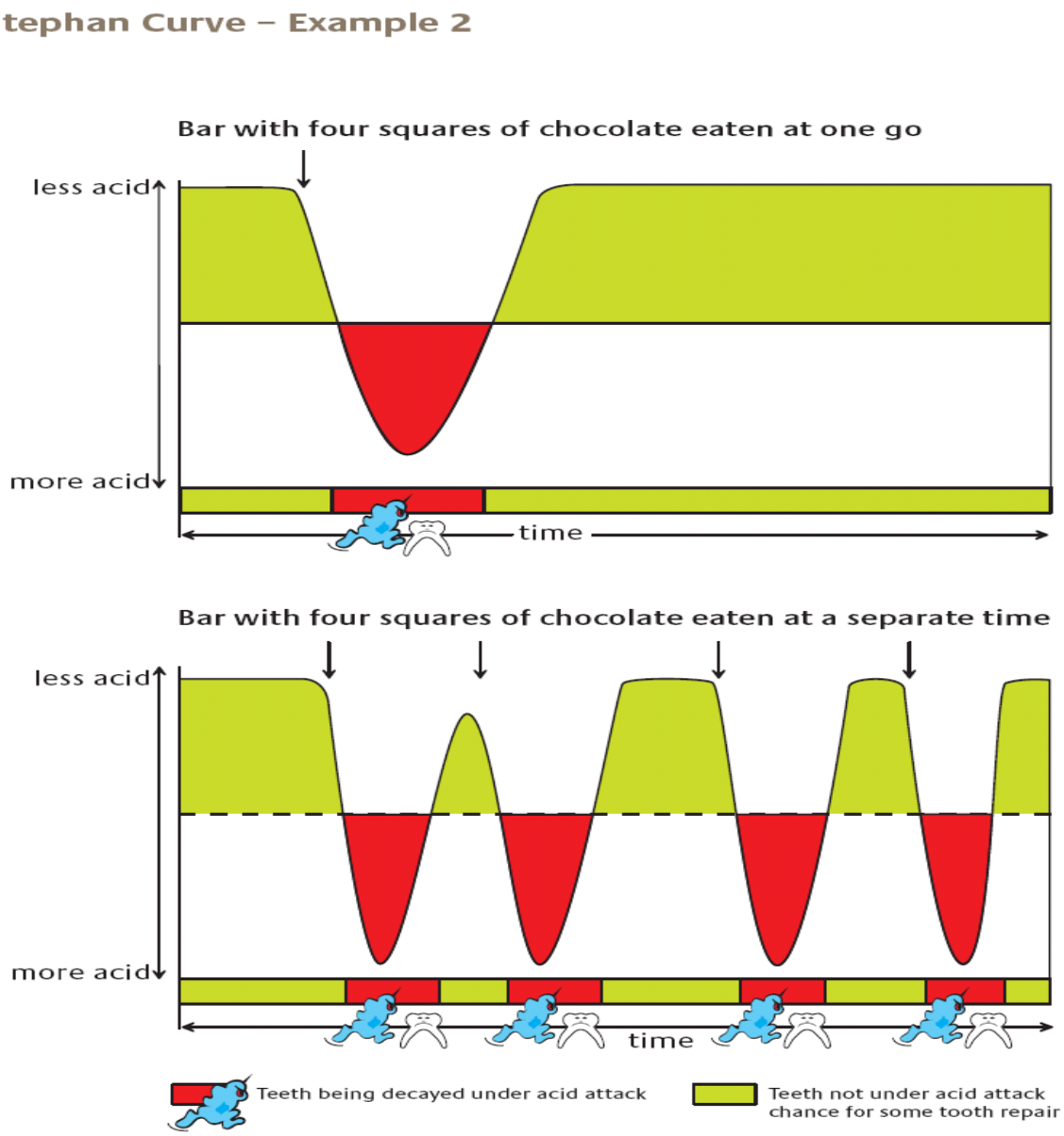
Appendix 4: The Effect of Sugar Frequency on the Tooth



Appendix 5: Stephan Curve – Example 1



Appendix 6: Stephan Curve – Example 2



Appendix 7: Childsmile Toothbrushing Programme guidelines for staff training

CHILDSMILE

Briefing Sheet

Childsmile Toothbrushing Programme: guidelines for staff training

The purpose of the training for the Toothbrushing Programme is to enable staff in participating establishments to be able to understand the 'National Standards for Nursery and School Toothbrushing Programmes' document produced by Childsmile in 2011, and implement in their establishment.

Staff members should be trained before the toothbrushing programme starts in their establishment. Any new members of staff require to be trained before carrying out the programme. All existing staff should receive yearly updates.

Every establishment will be monitored once a term by NHS staff who will update individual class Health Informatics Centre (HIC) monitoring visit screens after each visit, for every establishment.

Childsmile staff contact details should be available to every establishment.

The following is what has been agreed as the minimum information that should be included in training sessions.

ORGANISATION

Explain background - Why are we doing the Toothbrushing Programme?

- Childsmile Programme developed from the Dental Action Plan 2005;
- Childsmile elements;
- National figure show a reduction in tooth decay since the introduction of the toothbrushing programme (local NDIP stats);
- Documents to support programme include: Nationals Standards for TB programme, abbreviated standards and DVD;
- Promote dental registration via consent form;
- Promote behaviour change;
- Emphasise links for education e.g. curriculum for excellence.

Date: October 2012

www.child-smile.org

NHS Scotland

CHILDSMILE

Briefing Sheet

Discuss consent

- A single Childsmile consent is require for participation – local information of arrangements and retention of consents
- Information regarding data protection and that the NHS have sharing information policies in place with councils to obtain class lists.

Advice on infection control

- Using the 'National Standards for Nursery and School Toothbrushing Programmes', cover topics including – storage; hand washing; infection control; cross contamination

Explain toothbrushing procedure and effective practice

- Practicalities and demonstration if required

Date: October 2012

www.child-smile.org

NHS Scotland

Appendix 8: Protocol for the supply and application of Duraphat® varnish to children aged 2 years and upwards in the Childsmile nursery and school programme.

NHS Board

Signatory	Name	Signature	Date
Clinical Dental Director			
Consultant in Dental Public Health			

Contact details for Clinical Dental Director or other responsible person

Management of Protocol

This protocol must be read, agreed to and signed by all dental healthcare staff involved in its use. The protocol must be easily accessible to all healthcare staff in the clinical setting.

LOCAL AUTHORISATION **(eg Childsmile Coordinator/Oral Health Improvement Manager/Team Leader)**

Authorised by ……..

On behalf of ……..……..

Signed ……..……

Date of implementation ……

I have read and understood the protocol and agree to use it.

Healthcare professional:

Name …….	Name …….
Signature ……	Signature ……
Profession …….	Profession ……..
Date ……..	Date ……
Name ……	Name …….
Signature …….	Signature ……...
Profession ……	Profession …….
Date ……	Date ……..
Name ……...	Name ……
Signature …….	Signature …….
Profession ……	Profession ……
Date ……	Date ……
Name ……..	Name ……
Signature ……	Signature …….
Profession …….	Profession ……
Date ……	Date ……

This protocol covers the supply and application of Duraphat® for caries prophylaxis to children aged 2 years and over, who meet the selection and treatment criteria.

1. Patient selection

Criteria for inclusion	• Child is at least 2 years old and attends a target Childsmile nursery or school • A Childsmile consent form has been completed and signed by a parent or legal guardian • In the case of a repeat procedure – a letter has been sent to the parent or legal guardian informing them of the planned Childsmile visit at least a week in advance. The letter will also have asked for any updates to the relevant medical history or personal details
Criteria for exclusion	• History of allergy to colophony (pink sticking plaster) • Previous admission to hospital for severe allergies or asthma **Action**: Refer patient for assessment by a dentist or dental therapist (local pathway) • Parent or legal guardian refuses on consent form **Action:** Record refusal but continue to offer fluoride varnish at subsequent visits. • Parent or legal guardian refuses further participation **Action**: Record refusal, complete procedure for permanent opting-out then record permanent refusal

2. Patient Treatment

Name, form and strength of medicine	Duraphat® Varnish 50 mg/ml Dental Suspension 2.26% (22,600 ppm) Sodium Fluoride
Legal status	POM
Doses	0.25 ml per child in Nursery and Primary 1 0.4 ml per child in Primary 2 and above
Criteria for exclusion	Children should be excluded from Duraphat® application if, on examination, they have: • Obvious signs of systemic illness (eg colds, flu) • Any abnormality of the face, lips or soft tissues of the mouth

Adverse reactions/side effects	In subjects with a tendency to allergic reactions, oedematous swelling of the oral mucosa has been observed in exceptional cases, especially after extensive application. If necessary the Duraphat® layer can be easily removed from the mouth by brushing and rinsing. Ulcerative gingivitis and stomatitis have been reported by sensitive individuals. In rare cases, asthma attacks may occur in patients who have bronchial asthma. In patients with gastric sensitivity, retching may exceptionally occur after a high dosage and extensive application.
Overdose	The toxic dose of fluoride ingestion is estimated at 5mg/kg child body weight. (The dose of 0.25 ml Duraphat® contains 5.6 mg fluoride.) Acute fluoride toxicity in small amounts causes stomach irritation, nausea and vomiting. In very high amounts/quantities, fluoride can cause serious systemic toxic signs and symptoms including the possibility of death. Fluoride is very quickly absorbed from the stomach; a child suspected of swallowing excessive levels of Duraphat® should be given a glass of milk to drink and then quickly transferred to the local A&E department for further assessment.
Follow up	Ensure that all patient details have been recorded. Each child should be given a Childsmile Aftercare Instruction leaflet.

3. Staff

Qualifications required	Extended Duties Dental Nurses (patient selection and treatment) Dental Hygienists (patient selection and treatment) Dental Therapists (patient selection and treatment; reviewing patients referred for assessment) Dental Health Support Workers (patient selection only) Dentists (reviewing patients referred for assessment)
Training requirements	All staff to have undertaken NHS Education for Scotland Childsmile training (Dentists, Dental Hygienists and Therapists excluded) and CPD as appropriate.

Appendix 9: Information on Duraphat® Safety

Duraphat® - Safety Issues

Introduction

Fluoride varnishes are generally considered safe and well accepted. A Cochrane review[1] identified no evidence of adverse effects and recommended that future studies should actively record adverse effects. The safety information provided by Colgate (see Panel) indicates that their use is contraindicated in patients with ulcerative gingivitis or known sensitivity to colophony. However concerns have been raised regarding their use in allergic individuals[2]. This short paper summarises the available published literature on adverse effects related to fluoride varnishes.

Safety information provided on Colgate professional website at:

http://www.colgateprofessional.co.uk/products/Colgate-Duraphat-Varnish-50mgml-Dental-Suspension/specifics

Contraindications:

DURAPHAT® is contraindicated in patients with ulcerative gingivitis or stomatitis or known sensitivity to colophony (kolophonium) or other ingredients. Not for ingestion during application (not for systemic treatment).

Interactions with other substances:

On the day of DURAPHAT® application, other fluoride preparations, such as fluoride gels, should not be administered. Routine regimens of fluoride tablets should be suspended for several days after treatment.

Adverse Reactions:

In case of disposition to allergic reactions, edematous swellings have been reported only in rare instances, especially after application to extensive surfaces. In extremely rare instances, attacks of dyspnea have occurred in asthmatic children. Patients known for sensitive stomach may occasionally experience nausea with extensive applications. In any case of intolerance, the varnish layer can easily be removed by brushing and rinsing.

Method

Searches of the Medline, Embase, Cochrane Library and TRIP database were undertaken using the following search terms:

Fluoride varnish
Fluorides, Topical
Duraphat®
Allergy

Hypersensitivity
Asthma

Only four directly relevant articles were identified[3-6] none of which involved children. The most recent paper[3] involved in a 29-year old male being treated for hypersensitive teeth who suffered from swelling and redness of the tongue and lip within 24 hours of treatment, requiring treatment with antihistamines. Subsequent testing confirmed an allergy to colophony.

Colophony is a known contact sensitiser being a complex mixture of over 100 compounds derived from pine trees and has countless applications e.g.

- Cosmetics (e.g. mascaras, lipsticks, eye shadows, concealer creams, nail varnish)
- Adhesives (e.g. sticking plasters and tapes, glues)
- Medicines (e.g. wart removers, cold sore creams, ostomy products, nappy creams, haemorrhoid creams, sprays)
- Toiletries (e.g.. transparent soaps, hair removing wax, dental floss, sunscreens, blister creams and first-aid ointments)
- Household items (e.g. grease removers for clothes, shoe wax, polish for floors, cars and furniture, laundry soaps, fly strips)
- Recreational (e.g. sport racket handles, athletic grip aids, golf club grips, bows for stringed instruments, fireworks, ski wax)
- Chewing gum
- Firewood and pine trees in the garden
- Paper products: one of the largest single uses of colophony is in the manufacture of paper and paperboard**

A review by Downs and Sanson[7] found prevalence rates for colophony allergy to range from 1-7% with a paper by Husain[8] indicating a rate of 6.3% in the West of Scotland. The Scottish study was conducted in the 1970s and a recent paper from Sweden[9] has shown falls in the prevalence of colophony allergy which may be linked to decreased exposure.

To date there have been no published reports linking the use of fluoride varnishes to asthma episodes. Weintraub in a 2-years study[10] of fluoride varnish applications involving 376 children which specifically recorded adverse events only noted 1 (a cheek ulcer) with no adverse events being recorded in known asthmatic children.

A recent adverse event was recorded within the Childsmile programme[11] during which a child (with a reported elastoplast allergy) was inadvertently provided with a Duraphat® varnish application and suffered an allergic contact dermatitis type response.

Conclusions

There is clear evidence of allergic reactions to Duraphat® in patients with known colophony allergy so it is important to follow the manufacturers' recommendations regarding this.

As there are no published reports linking the use of fluoride varnishes with asthma attacks there is no obvious reason to avoid using fluoride varnishes in this group of

patients. However, in view of the number of ingredients in Duraphat® varnish and the fact that colophony is a complex mixture of over 100 compounds derived from pine trees, the current advice not to apply fluoride varnishes to those patients who have been hospitalised with an asthma attack seems justified as these are potentially the most atopic children.

It is also worth noting that the most common allergic response reported in the literature is the allergic contact dermatitis type response and that dentists assessing children's medical histories should take this into account when making recommendations for Duraphat® use.

Following that recent adverse event recorded within the Childsmile programme it is recommended that formal recording of all adverse events should be maintained.

Derek Richards
Director, Centre for Evidence-based Dentistry

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10. Weintraub JA, Ramos-Gomez F, Jue B, Shain S, Hoover CI, Featherstone JD, Gansky SA.

11. Childsmile Programme adverse event report – May 2013

**** Further information on colophony containing products can be found on the New Zealand Dermatological Society Incorporated website http://www.dermnetnz.org/dermatitis/rosin-allergy.html**

Appendix 10: HIC Flow Chart

The flow chart below provides guidance on the procedures for consent forms and update letters.

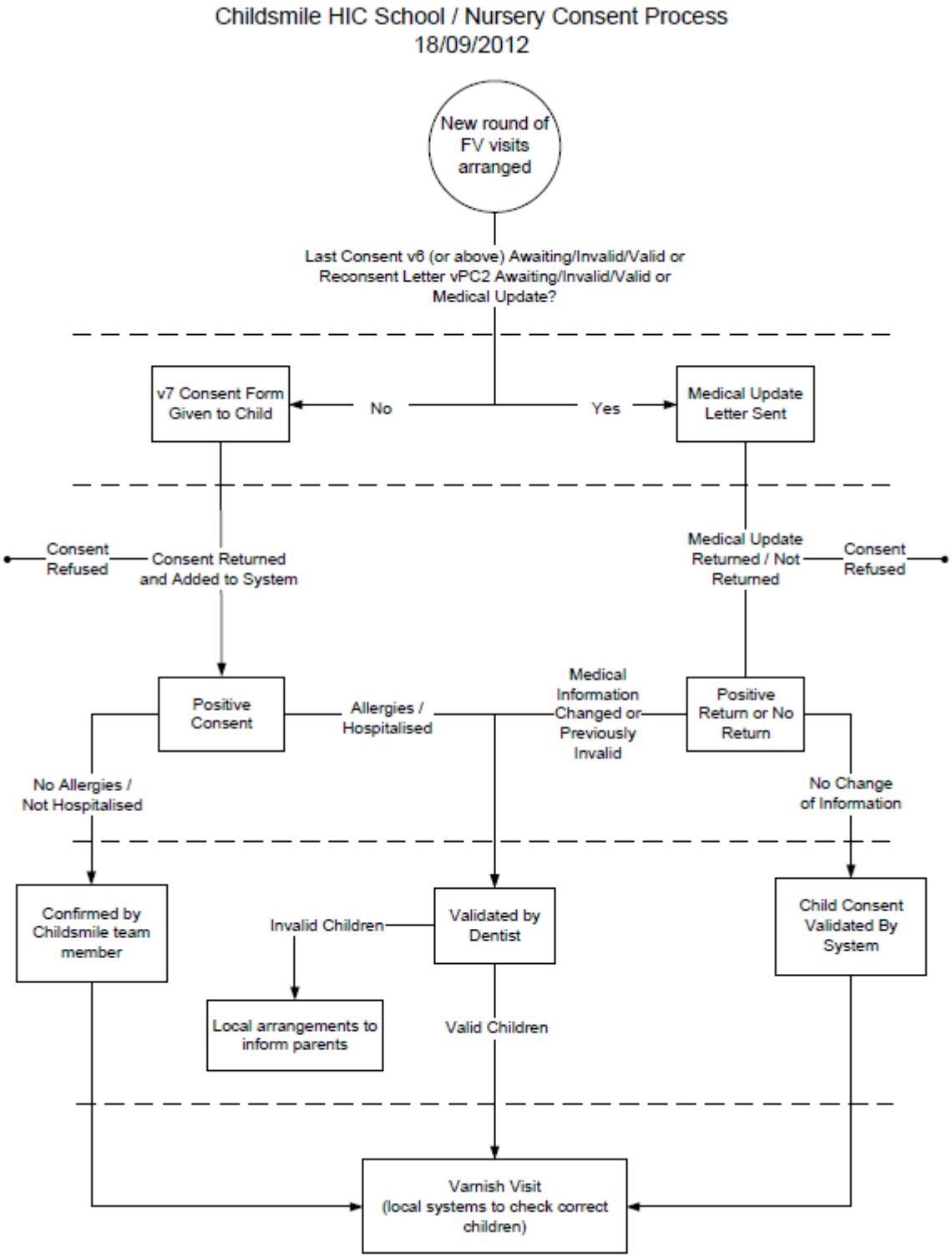
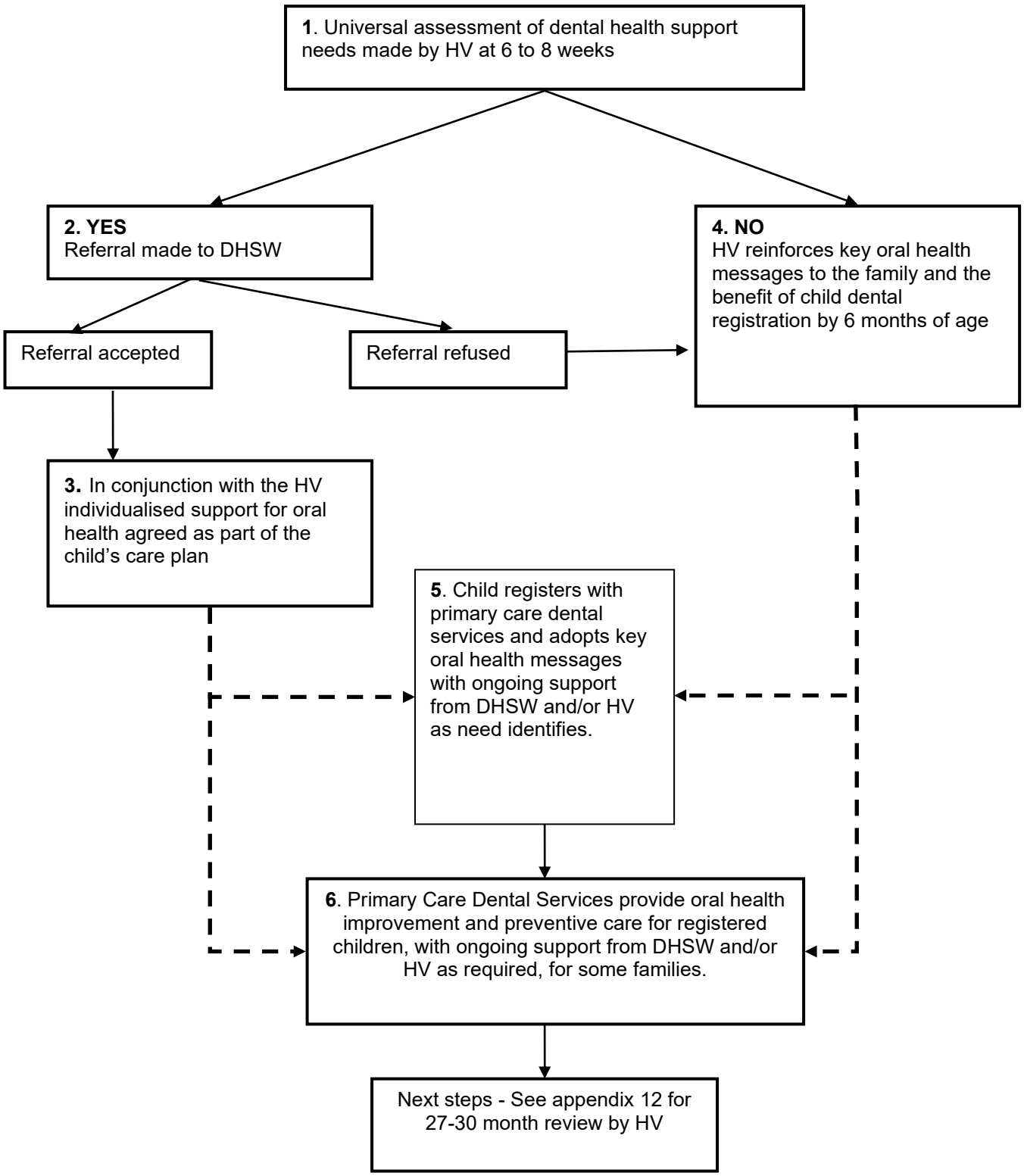


Figure 8: HIC Flow Chart

Appendix 11: Childsmile Early Years Pathway



Childsmile Early Years Pathway

Guidance notes to inform pathway diagram

Box 1

Universal assessment of Dental Health Support needs at 6–8 weeks

As an intrinsic aspect of a child's overall health needs assessment, as described in HALL 4, all children should be assessed at 6-8 weeks old by HV for their oral health support needs.

The indicators for assessment and identification of the need for oral health support requirement are as follows:

- The parent states that the family is not registered with a dentist.
- The parent states that the family do not attend a dentist for ongoing maintenance and preventative dental care.
- The parent and child's siblings have a history of symptomatic dental care and attendance to services prompted by dental problems or pain.
- Professional judgement leads you to believe that provision of oral health support would be beneficial.

Guidance for completing the Pre-5 Child Health Programme 6-8 week assessment form:

Should any of the above indicators be identified when child is assessed, complete ”Y” for Yes in the ”Childsmile Ref? (Y/N)“ box.

If none of the indicators are identified when the child is assessed, complete with an ”N” for No in the ”Childsmile Ref? (Y/N)“ box.

If it is left blank Child Health office staff will input ”I” for incomplete and the form will be returned to the HV for completion with Y/N.

In cases where a child is identified as needing support but the parent refuses, ”R” (refusal) should be entered in the ”Childsmile Ref? (Y/N)“ box.

Box 2

Referral made to DHSW? 'Yes'

- The Y/N referral outcome of the assessment of oral health support need will be recorded by the HV in the Child's Plan.
- When the "Childsmile Ref? (Y/N)" box is completed as "Y" then HV referral to the DHSW is made using a locally agreed process e.g. a copy of the HV's 6-8 week assessment clinic list, as currently generated by the local Child Health Department, is given to the DHSW with each child's oral health assessment outcome recorded on the list with a "Y" or an "N", after the clinic session. An additional copy of the attendance register could be provided by Child Health Office staff. Other local systems could be used to facilitate transfer of notification and contact details.
- Following this notification and transfer of contact details to the DHSW, the DHSW will then have the responsibility of contacting the HV (if not already instigated by the HV) before visiting the family to ensure any further appropriate background information is obtained.

Box 3

Individualised support for oral health agreed between DHSW and HV

- Some families will require minimal oral health support, whilst others will require ongoing, continuous support.
- The HV and the DHSW therefore must agree oral health improvement actions for the referred child. This may be done either before the first DHSW family visit and reviewed again after, if required, or may be deferred until after the first DHSW family visit and then agreed – the timing and nature of this will be undertaken in accordance with locally agreed processes.
- The method of DHSW contact with the HV after referral can be agreed locally as appropriate, given the local geography and Childsmile Practice Programme working model.
- The agreed actions will be recorded by the HV/PHN in the Child's Plan and also by the DHSW on the Childsmile HIC system. In some Board areas one or both these records may be electronic whilst in others they may be paper.
- The DHSW will deliver the agreed oral health support actions through home visits or at community venues and participation in community development activities.
- In the majority of cases, DHSW provision of prevention in the home setting will be ongoing from 3 months of age at the appropriate level and duration to promote oral health improvement/dental health and facilitate the child's registration with Primary Care Dental Services by 6 months of age.
- Where DHSW oral health support delivery does not start by 3 months or child dental registration has not occurred by six months, the HV and DHSW will liaise as required to ensure the child receives the appropriate level of oral health support at the most appropriate time.

- HV and their line managers can receive retrospective reports of their DHSW caseload referrals to assist them monitor and manage their delivery of the Childsmile Practice Programme. These Boxi reports can be generated by local Child Health offices.
- Where a child is referred to a DHSW from a source other than a HV/PHN it would be good practice to liaise with HV colleagues to make them aware and provide opportunity for sharing of relevant information.

Box 4

Referral not required to DHSW for tailored dental health support

- The HV/PHN reinforces the key oral health improvement/prevention messages and the benefit of registering the child with a dentist by 6 months of age ensuring ongoing oral health support:
    - reduce the consumption and especially the frequency of intake of foods and drinks containing sugar
    - brush teeth and gums at least twice daily, in the morning and last thing at night. Use toothpaste containing at least 1000ppm (parts per million) fluoride. Spit, don't rinse – this gives fluoride time to work
    - visit the dentist regularly or as advised for oral examinations
    - participate in Public Health Programmes which improve oral health such as Childsmile
- Resources are available to support HV/PHNs in the delivery of key oral health messages e.g. First Teeth, Healthy Teeth.
- Repeat advice at any subsequent, ad hoc contacts.
- Should circumstances change the HV subsequently feels that additional support provided by the Dental Health Support Worker would be beneficial a referral can be made at any point. This can be recorded by the HV on an unscheduled CHSP form for childhood surveillance purposes.
- See guidance for Box 3 for further information on provision of support by the DHSW.

Box 5

Family adopts key oral health improvement/prevention messages in home and registers the child with primary care dental services

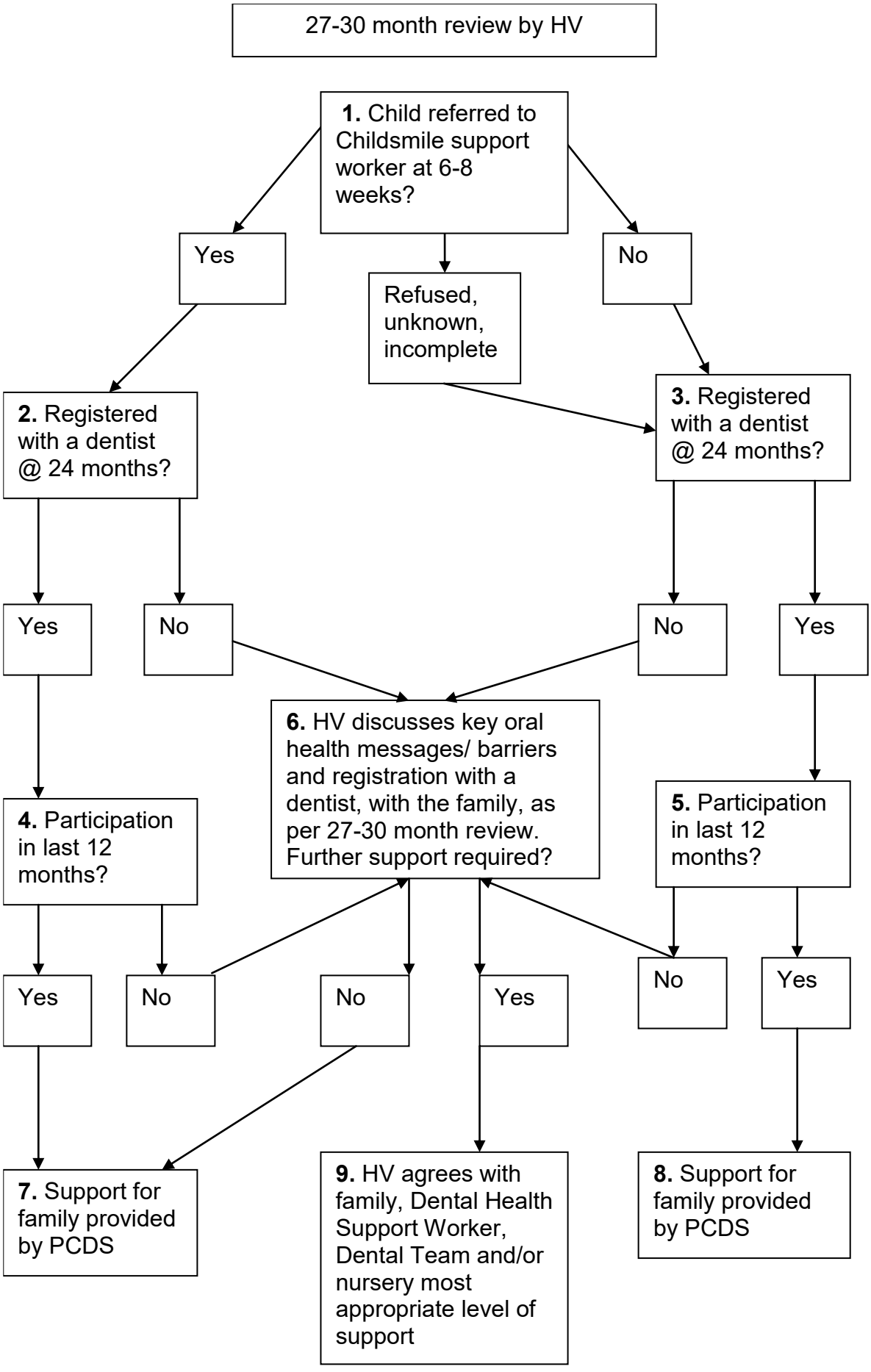
- In all cases public health nurses are informed about the outcome of referrals to Childsmile
- In cases where child dental registration has not occurred by 6 months, the HV/PHN and DHSW will liaise as required to ensure the appropriate ongoing oral health support is being provided for the child and family.
- In cases where child dental registration has occurred by 6 months but the child does not attend for scheduled care as advised by Primary Dental Care Services Team, then the team member providing the care must liaise with the named person (HV) to discuss and agree the appropriate ongoing oral health support provided for the child and family.

Box 6

Primary care dental services provide oral health improvement/preventive care for registered children.

- Primary Care Dental Services provide appropriate oral health improvement/preventive care in accordance with Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance.
- Aspects of prevention will be provided by Childsmile trained EDDNs and/or DHSWs where appropriate.
- In cases where child dental registration has not occurred by 6 months, the HV and DHSW will liaise as required to ensure the appropriate ongoing oral health support is being provided for the child and family.
- Where a child fails to attend a practice appointment on more than one occasion the practice should contact the DHSW to inform them of this.
- Where practice staff identify factors potentially indicative of dental neglect (e.g. repeated non-attendance, emergency pain relief on more than one occasion) they should contact the child's named person as per section 13 of the SDCEP Guidance: Prevention and Management of Dental Caries in Children http://www.sdcep.org.uk/wp-content/uploads/2013/03/SDCEP_PM_Dental_Caries_Full_Guidance1.pdf

Appendix 12: 27-30 Month Review



Childsmile and the 27-30 Month Review

Guidance Notes to Inform the 27-30 Month Pathway Diagram

Introduction

The following guidance has been created to help staff make the best use of the information in the review in order to reduce inequalities in oral health and improve the oral health of children in the target group.

Childsmile included in the 27-30 month review will help support early, targeted intervention to provide access to preventive care. In turn, this will reduce the likelihood of a child attending emergency dental services and/or hospital for multiple extractions in later childhood.

Each numbered section of the accompanying pathway has a correspondingly numbered guidance note. The pathway and guidance should be read together to ensure better understanding.

Specifically, there are three pre-populated fields. These are:

1. record of referral decision at 6-8 week assessment – this will be Yes (Y), No (N), Incomplete (I) or Refused (R)

2. record of dental registration status – Yes (Y) or Unknown (blank)

3. record of 'participation' – this will show whether a child, albeit registered with a dentist, has attended for an appointment in the previous 12 months – Yes (Y), No (N) or Unknown (blank)

Where a field is blank it is important to note there is **no need to complete it**. Reviewers need not gather any information in these fields. They are pre-populated to provide information to support review.

Box 1 – Was the child referred to Childsmile staff at 6-8 week assessment?

The purpose of this is field is to inform the HV carrying out the assessment what the referral decision was in the early weeks of life. This can be used to gauge change in status over time.

Whilst the majority of values recorded in this field will be drawn from the 6-8 week assessment, in a small number of cases the value may have come from a more recent unscheduled form.

Box 2 & 3 – Dental Registration Status at 24 Months

On considering the pre-populated entry in the dental registration field, this will give an indication of whether a child registered independently with a dentist or registered as a result of support from the Childsmile team.

There is a limitation to the entry in this field as a result of having to download dental registration data from ISD in advance of the assessment to allow for pre-population of the field. This time lag means that the field will be pre-populated for the assessment but there is the possibility that a child may have been registered with a dentist in the intervening period.

If the child is registered the field entry will be (Y) for yes. Otherwise the field entry will be (blank) for unknown.

Where the entry is (blank) for unknown this could mean the child is not registered or may have registered after the field was pre-populated. In either case a (blank) is an opportunity to engage with the parent/carer to explore dental registration status.

Box 4 & 5 – Dental attendance between 12 and 24 Months

This field tells the reviewer whether or not the child being reviewed has been taken by their parents/carers to their dental practice in the 12 months prior to the ISD data being downloaded to pre-populate the review form.

The purpose of this is to help the reviewer understand whether or not the child, in addition to being registered with a dental practice, is attending for appropriate advice, support and treatment.

This field will be pre-populated with Yes (Y) or No (N) for children who are registered. For children with unknown (blank) registration status it will show as unknown (blank).

As with the dental registration field it is important to note that the field will be pre-populated with data at a set point. Consequently, an attendance in the period between the data being processed and assessment being completed will not register.

It is important this information is used to explore involvement with dental services and is not seen as a definitive position. It is an opportunity to explore recent attendance patterns and enquire about reasons for most recent attendance where appropriate e.g. pain relief, preventive advice, regular check up where applicable.

Box 6 – Discussion of key oral health needs and support with parents

Key Oral Health Messages

Tooth decay (or dental caries) is not inevitable and can be prevented. Effective and evidence based messages to prevent dental disease are:

1. Reduce the consumption, and especially the frequency of intake, of foods and drinks containing sugar
2. Brush teeth and gums at least twice daily, in the morning and last thing at night. Use toothpaste containing at least 1000ppm (parts per million) fluoride. Spit, don't rinse – this gives fluoride time to work.
3. Visit the dentist regularly or as advised for oral examinations.
4. Participate in Public Health Programmes, which improve oral health such as Childsmile.

Explore benefits and barriers to engagement with Primary Care Dental Services. Where appropriate discuss additional support available. This could include:

- Advice and information
- Help finding a local dentist
- Support from a Dental Health Support Worker
- Support from local NHS Primary Care Dental Services

Box 7 & 8 – Support for family provided by primary care dental services

Where a child is registered with a dental practice and has attended for routine treatment there is no further current requirement to take action unless in response to a specific issue raised by the parent. In this scenario the family is engaging with services and the child is supported as required.

Box 9 – Action planning for ongoing needs

It is expected that any needs identified, and actions required, should be addressed through practice and principles enshrined in Getting it Right for Every Child.

All actions should be recorded as appropriate in the child's record and will form a part of the child's plan where required.

Should a decision be made to refer to a Dental Health Support Worker this action will be an available field on the 27-30 month review. However, it should be noted this is a record of the decision to make a referral and not a referral in itself. Consequently referrals should be made through local protocols.

Where a child is not registered with a dentist and/or has not engaged with routine care, referral to a Dental Health Support Worker should be considered as an option in discussion with the parent/guardian.

Where a child is registered with a dentist, and there are concerns that require further discussion, contacting the child's dentist to gather more information and/or discuss actions to benefit the child's oral health may be another option to consider.

Where a child is attending a nursery, consideration should be given to support options within this environment in conjunction with education colleagues. Are there opportunities through nursery to improve oral health? Is there further information available through nursery which may add to intelligence e.g. history of absence with dental pain, non-participation in oral health activity?