

PATHWAY 3-6

Visit 1

Discuss with parent/child reasons for inclusion in the scheme:

- IPP is a programme aimed at reducing dental decay
- Oral Health can be improved by adopting healthy life practices

Perform a:

- Caries risk assessment - assess baseline
- Plaque score
 - No Plaque visible
 - Plaque visible on the gum margins of anterior teeth
 - Plaque visible on the mid third of anterior teeth.

Please refer to Scottish Dental Clinical Effectiveness Programme (SDCEP) Prevention and Management of Dental Caries in Children Dental Clinical Guidance page 17 - http://www.sdcep.org.uk/wp-content/uploads/2013/03/SDCEP_PM_Dental_Caries_Full_Guidance1.pdf

Advise parent and child on:

Toothbrushing and toothpaste advice

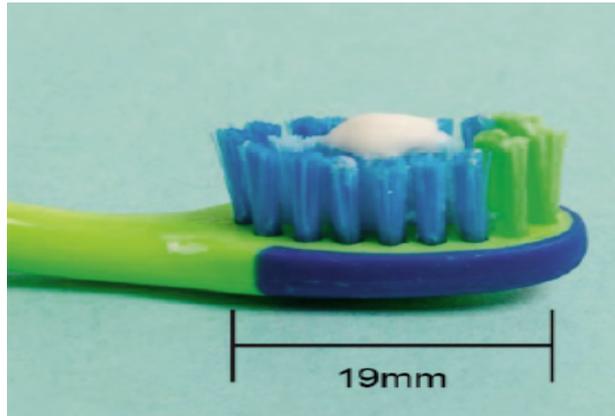
Questions to ask parent

Ask about tooth brushing:

- How many times each day does the child brush?
- How long does the child brush for each day?
- What toothpaste does the child use?

Advice to provide to parent and patient

- Parents/carers should supervise brushing (DBOH)
- Brush at least twice daily, last thing at night and at least one other occasion, with a fluoridated toothpaste containing more than 1000ppm Fluoride (DBOH)
- As the child is at high risk recommend use of fluoridated toothpaste containing 1,350-1500ppm fluoride (DBOH)
- It is good practice to use only a pea sized amount of toothpaste (DBOH)



- Encourage your child to spit out after brushing and do not rinse, to maintain fluoride concentration levels (DBOH) (try to avoid swallowing)
- Use a small headed toothbrush (DBOH)
- Systematically clean all tooth surfaces – demonstrate on model, no method has been shown to be more effective than another one (DBOH)
- Disclosing tablets can be used to help identify areas that have been missed (DBOH)
- Don't allow children to lick or eat toothpaste from the tube (keep out of reach) (DBOH)

Diet advice in line with DBOH

Give brief advice on the following:

- The frequency and amount of sugary food and drinks should be reduced (DBOH)
- Avoid sugar containing foods and drinks at bedtime (DBOH)
- Sugar free medicines should be recommended (DBOH)

Application of Fluoride Varnish in-line with Childsmile Guidelines

(Childsmile Staff Programme manual updated July 2016)

Pre-application instructions:

These instruction 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 if the patient is taking Fluoride supplements they should not be taken for 2 days after the fluoride varnish application. After that continue as directed.

- Advise that patient's teeth may appear discoloured temporarily after Fluoride Varnish application and not to brush until the following morning.

Duraphat Varnish application can be undertaken:

- By a dentist or under the prescription of a dentist by a dental therapist, dental hygienist, or an IPP extended duties dental nurse currently registered with the General Dental Council.

The dose of Fluoride varnish (Duraphat Varnish 50mg/ml Dental Suspension 2.26% (22,600 ppm) Sodium Fluoride) for children is:

- 0.25ml per child aged 3, 4 or 5 years of age.
- 0.4ml per child aged 6 years or older

Consent and Medical History

- The IPP extended duties dental nurse (EDDN) should be familiar with the 'Childsmile protocol 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
- 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 hospitalization
- If there are any changes to the medical history or concern regarding consent refer back to the dentist.

Preparation

- Place your equipment so that it is accessible for yourself but away from the child.
- Dispense 0.25ml of Duraphat Fluoride varnish and ensure that the remaining varnish remains inaccessible to the child.
- Welcome the 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 protocols.

Risk assessment

The extra-oral assessment:

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

The intra-oral assessment:

- Check the inner cheeks and the inside 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 acclimatize the patient to dental treatment. However, fluoride varnish should not be applied to exposed pulps, in case it is uncomfortable.

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 cheek with your finger or mirror and dry the upper right canine and molars with a cotton wool 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, palatal and approximal 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 including ***modified friends and family form to record numbers of visits for IPP***
- If any immediate allergic reaction, remove product by toothbrushing and rinsing and following local protocol. Complete and submit a yellow BNF card as per local procedure.

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 0.25ml Duraphat contains 5.6mg 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 and E department for assessment.

Post application instructions

Ensure that all patient details have been recorded. Each child should be given an aftercare instruction leaflet.

- 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.
- Advise that if the patient is taking Fluoride supplements they should not be taken for 2 days after the fluoride varnish application. After that continue as directed.
- Advise that the patient's teeth may appear discoloured temporarily.
- The dental chair should be cleaned with a detergent wipe and the application area left 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 would have had a question asked regarding asthma and a history of allergies.

In addition children in the **IPP programme** will have had their medical history taken and updated at each appointment. Children that have severe asthma or

allergies, categorised by a serious hospital admission for either asthma, allergies or certain allergies such as colophony, will initially be excluded from Duraphat application and will be referred to the dentist for full assessment.

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.
- 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 other children safe and away from the incident.

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

The EDDN is responsible for assessing the possible risk to the patient of continuing with an **IPP session** particularly fluoride application in the absence of a trained person who is able to deal with medical emergencies. They should ensure that the GDC principles are met namely:

- 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 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. The room should be within calling distance of another member of 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 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).

The adverse reaction may be noticed immediately by the dental team or later by the parents. The parents may ring the dental practice. It is unlikely that the dentist will be informed in the first instance but the EDDN in the dental practice is more likely to be informed. It is good practice to inform the dentist who prescribed the fluoride varnish in the dental practice.

Preparation for visit 2:

- Distribute diet sheet or alternatively ask the patient's parent/guardian to photograph all food and drink that the patient consumes over a 2-3 day period
- Ask patient to bring in own toothbrush and toothpaste for demonstration next visit

Visit 2

- 1) Reinforce previous oral hygiene (including a check to ensure Fluoride content of toothpaste is appropriate)
- 2) Conduct a plaque score and record

Enquire regarding patient's toothbrushing habits:

- How many times each day does the child brush?
-At least twice per day last thing at night and at least one other occasion (DBOH)
- How long does the child brush for each day?- Ideally 2 minutes
- What toothpaste does the child use? – Reinforce at least 1000ppm F ideally 1350-1500ppm F. Reinforce the 'spit don't rinse philosophy' (DBOH)
- Advice systematic brushing, cleaning all of the surfaces, demonstrate the Modified Bass technique using the models
- Patient should have brought own toothbrush and toothpaste and demonstrate to the IPP provider their brushing technique

How To Brush

Modified Bass brushing technique:

- Hold the head of the toothbrush horizontally against your teeth with the bristles part-way on the gums
 - Tilt the brush head to about a 45-degree angle, so the bristles are pointing under the gum line.
 - Move the toothbrush in very short horizontal strokes so the tips of the bristles stay in one place, but the head of the brush waggles back and forth. Or use tiny circular motions. This allows the bristles to slide gently under the gum. Do this for about 20 strokes. This assures that adequate time will be spent cleaning away as much plaque as possible. Note: this is a very gentle motion. In healthy gums, this should cause no pain. Brushing too vigorously or with large strokes can damage gum tissue.
 - Roll or flick the brush so that the bristles move out from under the gum toward the biting edge of the tooth. This helps move the plaque out from under the gum line.
 - Repeat for every tooth, so that all tooth surfaces and gum lines are cleaned.
 - For the insides of your front teeth, where the horizontal brush position is cumbersome, hold the brush vertically instead. Again, use gentle back and forth brushing action and finish with a roll or flick of the brush toward the biting edge.
 - To clean the biting or chewing surfaces of the teeth, hold the brush so the bristles are straight down on the flat surface of the molars.
 - Gently move the brush back and forth or in tiny circles to clean the entire surface. Move to a new tooth or area until all teeth are cleaned.
- 3) Provide personalised diet advice based upon responses from diet sheet/photographs

For personalised advice look at the food diary provided and examine:

- Number of intakes of food per day
- The number of intakes that contain added sugars and the numbers of times these were consumed between meals, discuss strategies to reduce these to 4 or less.
- Consider demonstrating the sugar app and encouraging the parent to use this <https://www.nhs.uk/sugar-smart/home>

Potentially cariogenic foods and drinks include (DBOH):

- Sugared soft drinks
- Sugar and chocolate confectionary
- Cakes and biscuits
- Buns pastries and fruit pies
- Sponge puddings and other puddings
- Table sugar
- Breakfast cereals
- Jams, Preserves and honey
- Ice cream and sorbets
- Fruit in syrup or canned in juice

- Fresh fruit juices (one 150ml glass of fresh fruit juice can count towards 5 per day)
- Sugared milk based beverages
- Sugar containing alcohol drinks
- Dried fruits
- Syrups and sweet sauces
- Fruit smoothies

Added sugars are defined as sugars or syrups added to by manufacturers, cooks or consumers plus sugars present in honey, fruit juices and fruit concentrates (DBOH).

Added sugars do not include sugars found in whole fresh fruit, vegetables and those naturally present in milk and milk products (DBOH).

Added sugars should provide less than 10% of total energy each day, for young children this equates to 30g per day (one teaspoon equates to 5-6g) (DBOH).

Key messages (DBOH):

- The frequency and amount of sugary food and drinks should be reduced (DBOH)
- Avoid sugar containing foods and drinks at bedtime (DBOH)
- Sugar free medicines should be recommended (DBOH)
- Briefly describe the eatwell plate



Visit 3

- Record a plaque score
- Advise patient regarding risks of erosion if relevant to diet analysis:
 - Avoid frequent intake of acidic food and drinks (DBOH)
 - Keep acidic drinks to mealtimes and limit the number of fruit drinks (less than one per day) (DBOH)
 - Reduce consumption of acidic soft drinks and sports drinks both sweetened and non-sweetened.
 - Carbonated drinks are potentially more erosive than non-carbonated drinks including non sweetened carbonated drinks.
- Reinforcement of toothbrushing technique and tailored personalised diet advice in-line with messages from DBOH (see visit 2).
- Apply fluoride varnish in-line with protocol outlined in ChildSmile (see notes in visit 1). Ensure that the time period between the application on visit 1 and visit 3 is at least 1 week.