Child Dental Surgical Services in Scotland

Dental Project Report
Action for Sick Children (Scotland)

July 2007

Helping sick children and young people meet their healthcare needs, in partnership with parents, carers and professionals
Introduction

Action for Sick Children (Scotland) (ASC (S)) is the campaigning name of the National Association for the Welfare of Children in Hospital (NAWCH), a Scottish Charity SC006016. ASC (S) is a voluntary organisation working in partnership with parents/carers, children, young people, health care professionals and other organisations working for improvements in the standard of paediatric healthcare provided in hospital and community settings.

The Dental Playbox Project

Stage 1
In 2003, Action for Sick Children (Scotland) was successful in securing funding for a two-year period from Boots PLC to develop and pilot a Dental Playbox, an adaptation to the charity’s popular Hospital Playbox. This is used as an awareness-raising and play-based preparation tool with young children in school, community and home settings. The dental playbox project had three aims;

• to encourage children to go to the dentist
• to remove/lessen fear or anxiety about dental treatment
• the promotion of oral health

The evaluation report of this project stated that the project had realised these aims.

Stage 2
Further funding from Boots PLC was secured for the period August 2006 to July 2007 for two distinct areas. The first area was to develop the dental playbox and a dental playbag for home use for children and young people with special needs. The second area was: to review what preparation is currently carried out for children and young people undergoing surgical dental treatment in hospital; to develop standards for preparation; and to develop a preparation resource pack for parents and professionals.

This report covers the second area of research which was carried out over a nine-month period and concentrates on the provision of appropriate preparation of children for surgical dental treatment.

The report covers:

• previous placement of Dental Playboxes in hospital settings
• one-to-one interviews with providers of dental services for children and young people
• one-to-one interviews with healthcare professionals in hospital settings where children and young people receive dental services
• a review of ASC (S) and other documents and standards on the care of children undergoing day surgery
• discussions with parents of children who have used hospital-based dental services in the previous year.

Due to time constraints and a difficulty in determining a consistent patient pathway across National Health Service (NHS) health board areas, this is not a comprehensive survey of the current provision across the whole of NHS Scotland of hospital-based dental services for children and young people. Equally, there are undoubtedly
additional services which could be considered ‘best practice’ which have not been mentioned in this report.

**Background: Shifting dental general anaesthetic services to a hospital setting**

On 5 April 2001, the Scottish Executive Health Department Letter (HDL) 29 detailed new guidance for general anaesthesia (GA) and sedation for dental treatment in Scotland. Previous to this date, children and young people had been treated in dental surgeries with a range of sedation techniques, including general anaesthesia if required. Due to several factors, including the death of a child undergoing dental treatment under a GA in a dental surgery, the letter advises NHS Trusts and Health Boards that ‘from 1 April, 2001, general anaesthesia for dental treatment must be undertaken in a hospital setting.’ It also advises that ‘hospital services for general anaesthesia for dental treatment should be reviewed, to ensure that they are designed and appropriate for children and those adults with incapacity.’ The HDL further states ‘Children requiring general anaesthesia for dental treatment should be offered treatment within a hospital which has a child friendly environment and where children are regularly treated for surgical procedures’.

SIGN¹ 58 (*Safe sedation of children undergoing diagnostic and therapeutic procedures*), published in April 2004 details the importance of assessing children’s ability to cope with dental treatment, identifying anxious children and only treating children requiring treatment under general anaesthetic in a hospital setting, as in HDL (2001)29. It also suggests ways to treat a child under a local anaesthesia before the decision to use dental sedation is made.

**Current Statistics**

‘In 2005/06 almost 35,000 planned operations/procedures were carried out for children aged under 15 and over a quarter (27%) were for operations on their teeth including simple extractions. For children in the 1-4 and 5-9 year age groups with rates of 10.9 and 19.2 per 1,000 population respectively, these are particularly high.’ (ISDScotland, December, 2006)

This equates to 9,450 planned dental operations/procedures on children under the age of 15 in a one year period in a hospital setting in Scotland. This represents a large number of children and young people attending a hospital for dental surgical services.

**Making services ‘child-friendly’**

Government documents produced since 2001 have called for dental services to be child-friendly. In 2005, the Scottish Executive’s *Action Plan for improving oral health and

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¹ The Scottish Intercollegiate Guidelines Network (SIGN) was formed in 1993. Their objective is to improve the quality of health care for patients in Scotland by reducing variation in practice and outcome, through the development and dissemination of national clinical guidelines containing recommendations for effective practice based on current evidence. Since 1 January 2005 SIGN has been part of NHS Quality Improvement Scotland.
Modernising National Health Service (NHS) dental services in Scotland stated that NHS Scotland will work to 'ensure dental teams are responsive to the needs of children and that all dental services are child friendly.'

Community dental services have also been encouraged to make their service more child-friendly. A news release on 21 November, 2001 stated that Health Minister Susan Deacon announced £3.8 million 'is being made available to improve Scotland’s dental surgeries, including the creation of child-friendly areas to encourage more children to regularly visit their dentist.' This was combined with other preventative measures to combat tooth decay. (Scottish Executive, 2001)

What is meant by ‘child-friendly’ is not described in detail in the above documents. However, a possible definition could be developed from the following points from the Millennium Charter for Children’s Health Services, Action for Sick Children (Scotland):

- Health services for children and young people should be provided in a child centred environment separately from adults so that they are made to feel welcome, safe and secure at all times.
- Parents should be empowered to participate in decisions regarding the treatment and care of their child through a process of clear communication and adequate support.
- Children should be informed and involved to an extent appropriate to their development and understanding.
- All staff caring for children shall be specifically trained to understand and respond to their clinical, emotional, developmental and cultural needs.
- Every service admitting children overnight should provide accommodation for parents, free of charge.
- Every child in hospital shall have full opportunity for play and recreation.
- Adolescents will be recognised as having different needs to those of younger children and adults. Health services should therefore be readily available to meet their particular needs.

In December, 2006, Quality Improvement Scotland (QIS), a special health board charged with clinical and non-clinical standard-setting for the NHS created National Standards for Dental Services. Standard 15 is devoted to children and young people. It states that 'The care and treatment that children and young people receive from their dental service take account of their special physical, psychological and social needs, and are provided in partnership with parents or guardians.’ The QIS standards provide further guidance on the dental team being aware of the law on informed consent for children and young people as well as the need for the team to have procedures for child protection.

SIGN 83 (Prevention and management of dental decay in the pre-school child) November, 2005, contains some information for parents/carers, although it is mostly prevention-based and does not give responsibility to dental practices or services for provision of written materials to parents, carers, children or young people. It does, however, highlight the importance of dental education from pregnancy for the oral health of the child.
During visits detailed later in this report, the project worker looked at whether the services visited had child-friendly environments and whether physical space had been made available for accepted practice such as separate waiting areas for child and adult patients.

**One patient’s experience:**

Liam* is a four-year old boy who developed a sore tooth. After visiting the community dental service in his health board area he was referred to a dental clinic in a dental school in a nearby city. It was determined that he would need to have a tooth extracted and it was decided to do this under a general anaesthetic in a children’s hospital setting. His mother described the visit to the dental school clinic as ‘scary’; entering a large building with many seats lined up, full of adult patients. It was a big, older building and quite imposing to a young boy. Although Liam’s parents agreed to all the treatment suggested, they were not given any written information about the course of the treatment, or suggestions for talking with their child about the procedure. In the letter from the children’s dental service with the date for Liam’s appointment, his mother remembers only general information about arrival time, fasting and travelling to the hospital being detailed. On the day, she was very pleased to find the environment to be much nicer for a young child than they had experienced at the clinic. There was a playroom for Liam, so he was not expected to sit in a chair the whole time. He was welcomed by a friendly nurse who explained the ‘magic cream’ that was to be put on his hand and the procedure was explained in simple terms. Liam’s father accompanied him to the anaesthetic room, as his mother felt she was too anxious. He was provided with a bed to recover in as he was sick from the anaesthesia when he woke up. Due to this, the family were advised that he would need to remain in the clinic a little longer. Liam’s mother found the experience ‘most distressing when the nurse arrived with the jar of teeth’ as they were only expecting him to have one tooth extracted and there were three in the jar. The dental team were unable to take the opportunity to communicate this with the parents, although Liam’s mother remembered the dentist saying that they sometimes removed more teeth once they could do a more thorough examination. When Liam was ready to go home, he was ‘quite chuffed’ to receive a teddy bear and a certificate from the nurse. His mother felt the written aftercare information was very helpful. Two weeks later, Liam needed to have some blood drawn at his local hospital paediatric clinic for another medical concern and the blood was taken with great difficulty, resulting in Liam screaming, crying and being held by one of his parents. He had developed a fear of having a ‘needle’ put in his hand. His parents were advised by his consultant paediatrician to contact a play specialist with a children’s charity who could provide them with information and a family playbox to help Liam understand and overcome his fear. After several months of support, encouragement, liaison with the local hospital and child-friendly hospital (and dental) play to help him, he was able to overcome this fear and have a successful experience for grommet day surgery. Liam was able to tell his anaesthetist that he preferred to use the ‘smelly gas’ to go off to sleep for his operation. This was important information that the medical staff took on board and helped to make the experience successful for this child.

* name has been changed to protect confidentiality.
Preadmission programmes for children having general surgery

What is a pre-admission programme? For the purposes of this report, a pre-admission programme is considered to be an opportunity for a child or young person to have a friendly visit with a paediatric-trained nurse and/or play staff; a chance to ask questions; be given age-appropriate answers and to see the physical environment where they will be admitted for medical/dental treatment.

In the publication *Play for Health* (Walker, 2006) there is a detailed recommended standard for preparation for investigations, surgery and medical procedures in an outpatient setting (such as the hospital-based dental services currently provide):

The objective for this preparation is stated as:

- Patients are able to understand, at a developmentally appropriate level, the procedure they are to experience.
- To enable patients to develop adaptive coping strategies.
- To enable patients to participate in the consent process.

The document additionally outlines the structures and processes needed to achieve the outcomes by utilising age appropriate play, play specialists and especially the child’s parents/carers. There are further standards recommended for creating and maintaining an age appropriate environment, providing recreational and therapeutic activities and safe-guarding children. All these could be successfully adapted to the dental services.

Children and young people and their parents/carers need preparation to help them cope emotionally with what for many people can be an anxious and worrying time. Lansdown (1996) states that ‘patients who have been well prepared are reported to be less anxious, require less medication, exhibit fewer maladaptive behaviours and cope more effectively with medical procedures.’

One of the key points in the document, *Meeting the needs of children and young people undergoing surgery* is that ‘preparing parents and children for the experience of hospital and surgery is important to help them and their family cope. Parents need to know what is happening, what their role is and how they can best help the child’. (Action for Sick Children, 2004). Children and young people who are undergoing sedation or general anaesthetic have the right to know what to expect and to be able to fully understand and consent to the treatment. One study found that 8-13 year old children who were given information and were able to give verbal consent for the treatment felt they were more involved in their dental treatment. (Adewumi, Hector and King, 2001).

**Current Situation in General Surgery**

Pre-admission programmes for **general surgery** vary across NHS Board areas. All Scottish children’s hospitals and most children’s units provide these either at set times or by appointment at a time to suit the individual. Children, young people and their families are given notification that the programme is available with their appointment/admission letter. Most pre-admission programmes are group sessions designed to be age-appropriate and some are condition-specific, such as a special version for children undergoing heart surgery at one paediatric hospital. Common
practice welcomes visits by children, young people and their families. If they are unable to attend a planned session or one is not available, this should be detailed in admission letters, with contact details.

**Information/preparation given: current practice in dental services reviewed**

Of the six hospital-based dental services for children reviewed by ASC (S), none provide a standard pre-admission programme such as is available for other general surgery admissions where children will be operated on under a general anaesthetic. Children and their parent/carers have an appointment in their community dental setting before the decision is made to attend the hospital-based service. All services contacted during this project report some support for children identified as anxious or who previously did not have a successful treatment due to non-compliance. This support ranges from desensitisation visits with a dental nurse to referral to a hospital play service. Patients with more severe anxiety or phobia can be referred to psychological services. All community dental services in Scotland have specialist provision for children with identified medical problems or special needs, and provide a consultant-led paediatric dental service for children and young people who are inpatients due to other medical concerns (such as in oncology services).

No hospital-based community dental service reported that their pre or post-procedure information for parents/carers was given in written form. The project worker was, however, provided with one information leaflet provided to paediatric patients that is sent with their letter of admission. It provides general information, although nothing in particular for parents/carers to help their child understand what it going to happen. Aftercare information provided should be appropriate to the age of the patient. However, one information sheet given to a parent in a community setting detailed instructions after an extraction were not child-specific - one instruction could be described as dangerous for young children ie “use a hot salt mouthwash” to keep the mouth clean. It also recommends “pain may be relieved by normal painkillers” without detailing child-specific medications or other methods for pain relief.

In the case study already described, the importance of recognising the need for a child to play and talk about their fears and anxieties after the intervention cannot be underestimated.

In the course of this review, hospital-based dental services have reported input from Hospital Play Services to meet the need for preparation of children and young people:

- In one district general hospital, children identified as anxious or who did not comply with treatment on a previous occasion are referred to the paediatric ward-based Hospital Play Specialist (HPS) by the community dental service. The HPS coordinates an individual plan involving play and desensitisation to help the child achieve a positive experience when needing dental treatment in a hospital or clinic setting. Due to time and workforce constraints, the HPS is not able to provide play preparation services to all children attending the hospital to undergo dental general anaesthetic treatment.
• On the project workers visit to a major children’s hospital in 2006, children coming to the hospital for dental treatment under a general anaesthetic were prepared on the day of admission by a pre-operative play specialist, often only given a few minutes before they are taken through for their general anaesthetic and treatment. Some were admitted to the hospital day unit based on medical or special needs. Since this visit, however, the dental nurse who previously worked in the paediatric service at the local dental institute has been relocated to the dental suite. All children attending the Dental Institute that require dental treatment under a general anaesthetic are now referred to the service at the children’s hospital.

• The ASC (S) dental playbox coordinator visited the dental services at another paediatric hospital in spring, 2007 and reported that the consultant in paediatric dentistry has instituted a number of child-friendly practices, including a special needs service. Children are assessed according to individual needs and play staff are involved in supporting the service when referred. Previous contact with the play services manager highlighted that they are already stretched to provide a comprehensive inpatient service and are only able to take referrals from the dental service rather than providing a full pre-admission preparation programme, at this time.

• In one district general hospital setting for community dental services, children undergoing a general anaesthetic for dental treatment are referred through the community dental service and assessed locally. They are sent an admission letter and appointment, including a leaflet (pre-operative advice) which gives information about contacting the hospital-based unit if desired. No pre-admission information for preparing the child, specifically, is given, although the dental nurse welcomes questions and pre-visits if requested. This could be made clearer to families on the leaflet. National safety guidelines call for appropriate paediatric personnel to be available on site in case of an emergency with a paediatric dental patient so sessions are only to be carried out when Paediatricians are on site for clinic sessions in a paediatric day unit down the corridor. Children requiring extra support (such as children or young people with special needs or additional medical concerns) are admitted to a bed in this unit when attending for dental treatment under sedation or a GA, and are supported by paediatric-trained nursing staff.

• A final district general hospital setting for community dental services visited had a similar dental service to the one described above. However, the play specialist who used to help meet the play and preparation needs of paediatric patients has since left her post and has not been replaced. The children referred to this service may have preparation at a local health centre where community and dental nurses have the use of two ASC(S) dental playboxes.

In addition, one service described how it had taken time to identify funding and space to make the corridor to the treatment room less clinical, and to decorate it with themed wallpaper. There is much more to be done. Two specialist children’s hospitals have designed dental suites and have equipped them with the child’s emotional needs considered. In one, they are also careful to use terminology that is less frightening, such as ‘hand piece’ instead of ‘drill’.
Good Practice Examples:

Royal Aberdeen Children’s Hospital includes a Hospital Play Specialist (HPS) in the dental team for the sessions when children will be coming for a general anaesthetic (GA). The HPS has the opportunity to visit with the children for up to 10 minutes before their dental GA session, often using items from the Action for Sick Children (Scotland) dental playbox for play preparation. The HPS is also available to children after their treatment or extractions and offers special services such as a ‘tooth fairy’ letter, as children are not allowed to take their teeth home. The dental service for children and young people with special needs is also being developed, with sensory equipment helping to provide a more relaxing and familiar environment.

Eastman Dental Hospital, London has employed a Hospital Play Specialist (HPS) to create a child and young person friendly environment and to introduce therapeutic hospital play since 2004. In June, 2005, the service introduced an audit to “evaluate the impact of directed dental play with regard to reducing patient anxiety and aiding cooperation for dental treatment.” All patients audited were identified as anxious and were referred by the dental team. They hoped to reduce the number of children requiring treatment under a general anaesthetic (GA), a service provided in another hospital. In all but one patient, the findings showed the play programme had a positive impact in reducing anxiety and aiding cooperation with dental treatment. The one patient showing an increase of anxiety when returning for treatment was, however able to complete treatment without the need for sedation or GA.

The HPS is also part of the dental team serving children in a special needs clinic. (Fawcett, 2006)

Hospital placements of the ASC(S) dental playboxes

In June, 2006 there were six dental playboxes still placed in various hospital-based services from the two year Action for Sick Children (Scotland)/Boots project. The project worker either made contact with or visited these six services between June, 2006 and March, 2007. Two of the original boxes placed currently remain in the care of Play Specialists in hospital settings: Royal Aberdeen Children’s Hospital and Royal Victoria Hospital, Fife. The other four boxes were used inconsistently or kept in a cupboard and not used at all. Two of these have been moved to other identified and more appropriate services and two have been retrieved and replaced in other settings, both community-based.

Of the four dental playboxes that were removed, all staff with responsibility for them stated lack of staff expertise and time as factors in not utilising the dental playbox resource for play preparation with children coming in for dental treatment under a general anaesthetic. In these services, the children arrive 10-15 minutes before their appointment, having been given pre-admission information and consent in the community setting (none of the services were able to say if this is written information or just verbal directions). They are given a short recovery time in the waiting area, unless medical factors require that they are given a bed to recover in on a day unit (a shared resource with the hospital paediatric service).
One dental playbox:

The project worker was contacted by a Communication Development Worker (CDW) within a respite centre for children and young people with special needs. The CDW was researching communication plans for difficult topics, such as a visit to the dentist or having dental treatment in hospital. She had seen the ASC (S) Dental Playbox when visiting her local hospital paediatric unit and was impressed by the communication and preparation opportunity it would present for her clients. A dental playbox placement was organised and is being evaluated separately by the Dental Playbox Worker.

Good Practice Example:

At Ninewells Hospital in Dundee, the Hospital Play Service have, since March, 2007, been utilising one of the dental playboxes in a space created as a ‘dental corner’ with children in the oncology service. This has been an identified need by the play team for some time. They currently create this space one afternoon a week, coordinated with the dentist and use play to allow children to talk about teeth, tooth brushing and to give the dentist an opportunity to check the children’s teeth and watch and listen to their experiences in a friendly and non-clinical environment.

Conclusion/recommendations

The Scottish Executive ChildSmile programme was introduced in Scotland in 2007 to address the oral health needs of the most vulnerable children, from 0-3 in the west and nursery-aged children in the east. Both programmes are devised to be child-friendly, to encourage children and families to attend the dentist regularly and to identify dental caries early, in hopes of avoiding the need for intensive dental treatment and extraction. Giving the children an early, positive experience of dental care will also reduce their overall anxiety of the dentist.

Many local oral health promotion and education programmes are also emerging throughout Scottish communities. School health weeks are giving more opportunities for local dental teams to spread the oral health message, especially the link with a healthy diet. Focussing promotion and education messages to parents and carers with children at higher risk of developing dental disease is to be encouraged.

The British Dental Association (BDA) Scotland, 2007 manifesto for dentistry outlines 12 key actions to effect improvements in the dental services by

- Improving patient access to NHS dentistry
- Securing funding and creating stability
- Tackling health inequalities and improving public health.

These initiatives will support the desired outcomes in the Scottish Executives 2005 document, *An Action Plan for Improving Oral Health and Modernising NHS Dental Services in Scotland*. This will hopefully have an impact on the large number of children who
currently require a general anaesthetic for dental treatment, especially for dental extractions, in a hospital setting.

Although oral health promotion will hopefully reduce the number of patients requiring hospital services for tooth extraction, there is likely to continue to be a need for this service. Medications that are damaging for teeth and children with special needs who have difficulty maintaining oral health are just two other causes of tooth decay. Good preparation and providing emotional support for children will help them cope with dental anxiety and will contribute to good dental health.

Although many professional and government organisations are responsible for providing dental surgical services for children in a hospital environment, Action for Sick Children (Scotland) believes more could be done, financially and professionally, to make those services better able to meet the emotional needs of children, young people and their families who use them. This could be done by

- supporting paediatric patients and their families with better written information. Some suggested areas are included as Appendix A.
- providing play preparation and post procedure support for paediatric patients
- providing a child and young people friendly environment with staff trained to meet the needs of these age groups.
- reviewing the general dental training given in dental schools and to all professions allied to dentistry regarding the care of children and young people.
References/Resources


Hogg and Cooper (2004), Meeting the needs of children and young people undergoing surgery. Action for Sick Children (NAWCH Ltd), http://www.actionforsickchildren.org

http://www.child-smile.org

http://www.isdscotland.org

http://www.nhshealthquality.org


Appendix A

While visiting dental services, hospital play workers and specialists shared difficulties that they felt had caused more anxiety in the children that they were asked to prepare. Some suggestions, therefore, that they feel should be included in printed information for parents/carers includes:

<table>
<thead>
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<th>What parents/carers can do:</th>
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<tr>
<td>• Be positive. Try not to promote anxiety in children by ‘passing on’ previous bad experiences with dentists or dental care. Dentistry and our understanding of how to care for our teeth has changed for the better. Dentists and others working in dental surgeries welcome families and the opportunity to meet children from the time they begin to show their first tooth. This early visit can help a child get used to the dentist’s office, opening their mouth, developing trust and making it a normal part of their overall health.</td>
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<td>• Be honest and prepare your child. If your child needs dental treatment, ask what will be involved and share this information in a way your child will understand. Visit the dentist’s surgery or the hospital before the treatment to allow your child to ask questions and see that it isn’t a scary place. They might have developed a fear from stories or television programmes that can be sorted before they come for treatment. Be truthful if the treatment might hurt as you will only lose your child’s trust if you don’t tell them, or they are ‘surprised’ and traumatised. There are several good books about visiting the dentist. Your child’s school, playgroup, nursery or your local library can help you find or borrow these.</td>
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<td>• Try not to use a visit to the dentist or the fact that your child has to have teeth extracted as a punishment for not taking care of their teeth. This might give the child a reason to fear going to the dentist. Help your child learn to take good care of their mouth and teeth.</td>
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<tr>
<td>• Help your child learn the proper way to brush their teeth. If you are unsure about how to do this, there are many people who can help you with this information, such as your health visitor, dentist, doctor, practice nurse, nursery or family centre staff. Be a good example to your child by showing them how you brush your own teeth.</td>
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<tr>
<td>• Provide your child with ‘teeth friendly’ food and drink. Fizzy drinks and juices and too many sweets have been proven to be very hard on children’s teeth and are especially bad for very young children. Seek more information about what food and drink is best for your child’s teeth from your health visitor, dentist, doctor, practice nurse, nursery or family centre staff.</td>
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