Paediatric Dentistry in the North of Scotland
Contents

Introduction/Background

Current Service
  NHS Grampian
  NHS Highland
  NHS Orkney
  NHS Shetland
  NHS Tayside
  NHS Western Isles

Risk Assessment

Options
**Introduction/Background**

**Definition**

Paediatric Dentistry is defined by the British Society of Paediatric Dentistry¹ as the practice, teaching, and research into the comprehensive and therapeutic oral health care for children from birth to adolescence, including care for children who demonstrate intellectual, medical, physical, psychological, and/or emotional problems.

Paediatric Dentistry is unlike any other dental specialty in that it covers all aspects of oral health care for children such as preventive care, restorative care (including endodontic treatment, periodontal treatment, advanced restorative and prosthetics), minor oral surgical procedures, and interceptive orthodontics. Primary care dentists are the main provider of dental services for children and are supported in this task by specialists in paediatric dentistry who are listed on the Paediatric Dentistry Specialist Register, held by the General Dental Council.

**Role**

The role of the specialist paediatric dentist is to provide care as part of a multi-disciplinary team to a wide range of medically compromised children, children with learning or physical disabilities, those with inherited anomalies of the dentition and those with complex trauma liaising with colleagues in secondary care, primary care, social care, education and child protection as required. Paediatric specialists offer a full range of oral health care to anxious children who are unable to accept treatment under local anaesthesia and require additional behavioural management including conscious sedation and general anaesthesia.

**Training**

Specialists in Paediatric Dentistry

The current requirement for entry onto the Paediatric Dentistry Specialist Register held by the General Dental Council (GDC) is a minimum of three years of specialist level training, or evidence of equivalence, and success in exit examinations. Some specialists undergo further training to become consultants.

Consultants in Paediatric Dentistry

An additional two years of training is required, followed by examination on the higher professional training. There are also Community-based consultants, but they may have limited access to hospital beds for some aspects of patient care.

**Workforce requirements**

The suggested number of specialists in Paediatric Dentistry required is based on the numbers of children between the ages of birth to 16 years. Referral data suggests that approximately 1% of a child population needs to see a Paediatric Dentist in any one year. In addition, based upon the known numbers of children with impairments, a guide is that one specialist Paediatric Dentist is needed for every 20,000 children.

<table>
<thead>
<tr>
<th>Region</th>
<th>Population (0-15 years)</th>
<th>No. specialists dentists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grampian</td>
<td>96,063</td>
<td>4.8</td>
</tr>
<tr>
<td>Highland (inc A&amp;B)</td>
<td>39,071 (53,386)</td>
<td>1.95 (2.7)</td>
</tr>
<tr>
<td>Orkney</td>
<td>3,488</td>
<td>0.2</td>
</tr>
<tr>
<td>Shetland</td>
<td>4,286</td>
<td>0.2</td>
</tr>
<tr>
<td>Tayside</td>
<td>68,384</td>
<td>3.4</td>
</tr>
<tr>
<td>Western Isles</td>
<td>4,440</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>North of Scotland</strong></td>
<td><strong>215,692 (230,007)</strong></td>
<td><strong>10.8 (11.5)</strong></td>
</tr>
</tbody>
</table>

¹ [http://www.bspd.co.uk/LinkClick.aspx?fileticket=ZIPuk0Nb8NM%3d&tabid=62](http://www.bspd.co.uk/LinkClick.aspx?fileticket=ZIPuk0Nb8NM%3d&tabid=62)
Current Service

NHS Grampian

The Department was established within The University of Aberdeen Dental School and Hospital in 2010 and aims to provide an undergraduate education in Paediatric Dentistry as part of the four-year, graduate-entry BDS degree programme. In addition, the Department will accept referrals for those patients whose practitioners require advice on treatment and where indicated, specialist treatment for children within the Grampian region. The appointment of a second specialist within the region is imminent with the recruitment of a Fixed Term Training Appointment/Development Consultant in Paediatric Dentistry post which should facilitate postgraduate educational opportunities in the discipline.

Currently links are being created with the Royal Aberdeen Children’s Hospital for multi-disciplinary dental care as follows:

- general anaesthetic for minor oral surgical procedures and comprehensive dental treatment of anxious- and medically compromised patients;
- cleft lip and palate and dento-facial anomalies;
- haematological and oncological patients, including organ transplant recipients.

Referrals

The Department will accept referrals for the following types of patient:

Children up to sixteen years at initial referral who have:

- Dental trauma;
- Dental anomalies, e.g. hypodontia and hypoplastic teeth;
- Advanced restorative treatment, e.g. discoloured non-vital teeth, tooth wear;
- Minor oral surgery for pathology and orthodontic treatment, e.g. non-erupted incisor teeth, impacted canine units, infra-occluded primary molar teeth;
- Restorative treatment of dental caries and pulpal therapy for children who are not medically compromised;
- Orthodontic extractions either with local anaesthetic or inhalation sedation;
- Individuals with intellectual, medical, physical, psychological and/or emotional problems.

Activity

[Text]

Workforce

Lead Clinician          Malcolm Stewart
Consultant / Senior Lecturer  Dr Jennifer Foley, University of Aberdeen Dental School & Hospital

Clinics

Consultant/Treatment Planning Clinics
All patient referrals will be triaged by the Consultant and subsequently assessed and treatment planned within 12 weeks of the initial referral on a Consultant/Treatment Planning Clinic. Arrangements will be made to see those patients who due to the nature of their referral require a more urgent consultation. A detailed report will be forwarded on to the referring practitioner within...
two weeks of each patient’s initial consultation. Where advice only has been sought, a detailed plan of treatment will be included within this letter.

**Joint Paediatric/Orthodontic Clinic**
The Department will accept patients who require a joint paediatric and orthodontic opinion for patients with the following dental problems:

- Supernumerary teeth
- Non-erupted teeth, e.g. central incisors
- Impacted teeth, e.g. canine units
- Dilacerated teeth
- Infra-occluded primary molar teeth
- Hypodontia

The clinic is run jointly by Drs J Foley and Dr K Khalaf, Senior Lecturer/Honorary Consultant in Orthodontics.

**Dental Trauma Clinic**
The Department has established a monthly trauma clinic which will accept referrals for patients who have sustained oro-dental trauma which may either be for advice or treatment.

**Treatment Clinics**
If indicated and deemed necessary, treatment will be organised as follows:

- Treatment will be undertaken on the student teaching clinic under staff supervision;
- Specialist treatment will occur within either the Aberdeen Dental School and Hospital or the Royal Aberdeen Children’s Hospital;
- Referral of a patient to the Salaried Dental Service.

At the end of a course of treatment within the Hospital Dental Service, each patient will be returned to their referring practitioner and a letter indicating all treatment which has been undertaken will be sent within two weeks of patient discharge. Where a patient is no longer registered with their referring practitioner, arrangements will be made for a patient’s recall either within Aberdeen Dental School and Hospital or the patient will be referred to the Salaried Dental Service.

**Referrals**
All referrals are submitted in writing to the Children’s Dental Primary Care Service via the Dental Advice and Referral Centre.

The salaried primary care dental service accepts child patients for

- routine care by self referral
- where a child has a special need or medical issue which makes it inappropriate to have care provided in a general practice setting.
- care requiring anxiety management including anxiety management, inhalation sedation and general anaesthetic.

All patients should receive an initial referral within 12 weeks.

**NHS Highland**
The only paediatric referral pathway within NHS Highland is through the salaried Dental service. Emergent pathways exist in Northern Highland where patients are referred into the salaried and community dental service with a range for problems and are seen by dentists, some of whom have developed an interest in paediatric dentistry over the years.
Referrals

Referrals are received as follows:

- Treatment under GA
- Anxious patients requiring sedation
- Trauma
- Special care
- Cleft Lip & Palate
- Medically compromised
- Children with exceptional health care needs

Activity

The introduction of a single referral Hub from April 2012 will facilitate reporting of referrals into the salaried/community dental service. The numbers referred into the service from April 2012 to date are illustrated in the Table below:

<table>
<thead>
<tr>
<th>Referral Type</th>
<th>Number (Complete, Current)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Anaesthetic</td>
<td>119 (82 complete, 37 current)</td>
</tr>
<tr>
<td>Anxious child</td>
<td>156 (100 complete, 56 current)</td>
</tr>
<tr>
<td>Other</td>
<td>60 (43 complete, 17 current)</td>
</tr>
</tbody>
</table>

Table 1

On average 410 children per year are treated under GA the majority requiring extractions but in the region of 22 children requiring comprehensive care.

Historically, there has been no Consultant Paediatric Dentistry input in Highland but due to continuing governance concerns, NHS Tayside agreed to provide an outreach Consultant service for a fixed term pilot of 12 months supporting the Senior Dentist in Paediatric dentistry.

Indicative Need

NHS Highland has undertaken two scoping exercises to assess the needs of children in Highland.

The first was completed as part of a North Highland Dental Services project – Maximising Access to Primary Dental Care Services. This work aims to ensure that dental care is available to all population groups including, children and that the services provided are accessible, affordable, available, and appropriate.

A number of groups of children and young people were identified (Appendix 3) who may require additional support to access appropriate dental care – this might be the result of: socio-economic factors, complex medical and/or dental conditions, anxiety, learning or physical disability.

The second exercise was undertaken in May 2012 by NHS Highland’s Epidemiology and Health Science Team and adds to the work above by providing indicative numbers of children who may be affected by a particular condition or group of conditions. The conditions and numbers are presented by broad type and Lead Agency area.

NHS Orkney

NHS Shetland
**NHS Tayside**

There is one full time NHS Consultant (Dr K Blain) and one academic.

**NHS Western Isles**

There are no Consultants in the Western Isles. Appropriate referrals are made to Glasgow Dental Hospital and Yorkhill Hospital. There is one dentist with a special interest in paediatric dentistry, although not on the specialist list, working in Stornoway as a salaried Senior dentist.

**Clinical benefits**

**Contribution to multidisciplinary Paediatric care**

Children with significant medical and dental needs will benefit from specialist paediatric dentistry input to their multidisciplinary management through enhanced clinical outcomes.

**Contribution to education and training**

Clinical teams will benefit from enhancement of skills and knowledge through locally available training opportunities.

**Support and advice to primary care dental services**

In addition to providing a consultation service for dentists in primary care, Paediatric Dentists offer professional leadership, promoting children’s oral health and enabling the development of clinical care networks for the effective and efficient provision of care for children.

**Working with other professionals**

Offering advice and support to health professionals in other disciplines, including physicians, surgeons, medical practitioners, health visitors and other health professionals, with the aim of contributing to effective holistic care of children.

**Clinical Leadership**

Clinical leadership at Consultant level would ensure the development of effective, patient centred pathways for children with the highest needs.

Through clinical leadership, regular review of clinical outcome and benchmarking data, highlight variances in practice and make recommendations for improving consistency across primary and secondary care.

**Accessibility of service**

Children and their families will benefit from a local service and this will reduce the need to travel to other regional centres.

**Contribution to service development**

Support and facilitate changes in practice in light of best practice statements and guidance.

---

## Risk Assessment

<table>
<thead>
<tr>
<th>Risk</th>
<th>Impact/Consequence</th>
<th>Likelihood</th>
<th>Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft lip and palate patients are at risk of suboptimal care and clinical outcomes due to the lack of specialist paediatric input to their care.</td>
<td>Major – unsatisfactory patient experience/outcomes; lack of trained staff</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
<tr>
<td>There is no Consultant in Paediatric Dentistry input into the treatment planning of children with hypodontia. With the appointment of a restorative consultant, there is now an opportunity to develop joint treatment planning for these children to include the orthodontic, paedodontic, oral surgery and restorative specialities.</td>
<td>Major – unsatisfactory patient experience/outcomes</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
<tr>
<td>Patients with complex needs and treatment requirements (e.g. trauma) are at risk of sub optimal care and poorer outcomes due to the lack of specialist training of our clinical teams.</td>
<td>Major – unsatisfactory patient experience/outcomes; lack of trained staff</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
<tr>
<td>Effective engagement with other secondary care specialists is limited due to lack of peer level leadership which would be addressed through the appointment of a Consultant in Paediatric Dentistry.</td>
<td>Major – ongoing lack of trained staff leading to unsatisfactory service/outcomes</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
<tr>
<td>Pathways into specialist referral services for children with cardiac, haematology, endocrine and renal diseases are poorly developed.</td>
<td>Major – unsatisfactory patient experience; adverse effect on clinical outcomes</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
<tr>
<td>The pathway of care for children under the care of oncology teams needs further development. Whilst there is engagement with specialist paediatric dental services at the tertiary site (Yorkhill), this falls down in Highland and follow up arrangements for these children poorly developed. Ad hoc assessment</td>
<td>Major – Unsatisfactory patient experience; adverse effect on clinical outcomes; lack of trained staff</td>
<td>Almost certain</td>
<td>Very High</td>
</tr>
</tbody>
</table>
and treatment is provided by the primary care team with no support or input from a specialist or consultant in paediatric dentistry. These young people can have a range of dental difficulties including anxiety and iatrogenic damage to developing teeth due to their therapy as well as on going medical difficulties which need to be considered and managed.


Contrary to published standards of care, children referred for treatment under general anaesthetic are not routinely assessed by a specialist in paediatric dentistry and there is no consultant in overall charge of the service. The dentists providing this service have an element of experience but have not been through any formal training programme.


<table>
<thead>
<tr>
<th>Major – Uncertain delivery of service due to lack of appropriately trained staff</th>
<th>Almost certain</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor – Unsatisfactory patient experience</td>
<td>Almost certain</td>
<td>High</td>
</tr>
<tr>
<td>Impact on future training of trainees</td>
<td>Major – lack of appropriately trained staff</td>
<td>Almost certain</td>
</tr>
<tr>
<td>No access to Restorative lists or minor Oral Surgery, which needs to be supervised by a Consultant. SAC look critically where GA is not available.</td>
<td>Major – lack of appropriately trained staff</td>
<td>Likely</td>
</tr>
<tr>
<td>Potential retirals within NHS Highland</td>
<td>Major – lack of appropriately trained staff</td>
<td>Likely</td>
</tr>
<tr>
<td>Currently two staff on specialist register, both of whom will retire within the next three years.</td>
<td>Major – lack of appropriately trained staff</td>
<td>Likely</td>
</tr>
<tr>
<td>Perception of service</td>
<td>Major – lack of appropriately trained staff</td>
<td>Likely</td>
</tr>
</tbody>
</table>

Within NHS Highland, there are a number of dentists with experience, however none are trained. There is not enough training/experience to know what to do with complex cases, though many dentists may have the skills to carry out the treatment.
## Options

Possible options to mitigate identified risks

<table>
<thead>
<tr>
<th>Options</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Community based primary care Consultant                                | • Enhanced primary care service  
• Sessions to support hospital work e.g. joint working with Orthopaedics/Restorative                                               | •                                                                                                                      |
| Secondary Care Consultant service                                       | • Appropriately trained staff providing service                                                                             | • Single handed practitioner  
• Lack of CPD and peer review  
• Lack of funding available                                                                 |
| Modified primary care posts                                             | • Funding identified from posts as they become vacant                                                                       | • SGHD strict regarding what is covered by salaried services  
• Impact of cash limited salaried services from 1st April 2013?                                                          |
| Joint post 50/50 NHS Grampian and NHS Highland                          | • NES supportive if contribution to training of BSc students and training of post qualification dentists  
• NHS Grampian possibly contribute 2 sessions from CDS for Elgin/Inverness interface                                    | • Single handed practitioner  
• Funding to be identified from disinvestment elsewhere                                                                     |
| NHS Tayside support NHS Highland                                        | • Current 12 month pilot with visits approximately every six weeks                                                           | • Not sustainable                                                                                                      |
| North of Scotland network approach                                      | • Consultant Leadership  
• Trained sub network of specialists within primary care who are able to accept referrals of, and provide care for, many of the children general dentists are unable to treat.  
• Service meets local needs  
• Embrace new technology to overcome geography  
• Better access for patients  
• No issue with professional isolation  
• Raise standard of care provided across region  
• Reduce need for procedures under GA                                           | • Affordability and delivery  
• Specialists don’t exist  
• Recruitment and retention of specialist posts  
• geography  
• Need to link to RACH review                                                                                                 |
| Pan Scotland network                                                    | •                                                                                                                            | • Geography and travel                                                                                                 |
**Consequence** – For example, extreme means death or debilitating permanent injury and minor means requiring first aid.

**Likelihood** – This must be estimated over a stated period or related to a given activity.

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Rare</th>
<th>Unlikely</th>
<th>Possible</th>
<th>Likely</th>
<th>Almost certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>Can’t believe this event would happen – will only happen in exceptional circumstances.</td>
<td>Not expected to happen, but definite potential exists – unlikely to occur.</td>
<td>May occur occasionally, has happened before on occasions – reasonable chance of occurring.</td>
<td>Strong possibility that this could occur – likely to occur.</td>
<td>This is expected to occur frequently / in most circumstances – more likely to occur than not.</td>
</tr>
</tbody>
</table>

**Risk Matrix**

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Consequences / Impact</th>
<th>Negligible</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost certain</td>
<td></td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
<td>Very High</td>
</tr>
<tr>
<td>Likely</td>
<td></td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
</tr>
<tr>
<td>Possible</td>
<td></td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Unlikely</td>
<td></td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Rare</td>
<td></td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
</tr>
</tbody>
</table>