

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

**National Assembly for Wales  
Health and Social Care Committee Inquiry**

**Orthodontic Services in Wales**

**Evidence on behalf of Welsh Consultant Orthodontic Group**

**Author: Dr Pamela Stephenson, Chairman**

For Role of the Welsh Consultant Orthodontic Group please see Appendix 1.

**Response to inquiry into the provision of appropriate orthodontic care in Wales:**

1. Access for patients to appropriate orthodontic treatment, covering both primary and secondary care orthodontic services, and whether there is regional variation in access to orthodontic services across Wales.

Access to orthodontic services can be considered in terms of availability of services locally and the waiting times for treatment.

There are nine district hospitals in Wales, including the University Dental Hospital, where secondary orthodontic services are located and they relate to the greatest population density. Treatment within the secondary care service is usually restricted to the very complex and multidisciplinary cases, utilising the extensive training and experience of Consultant Orthodontists. In addition, more routine cases may be taken on for training purposes.

The waiting times to see new patients in secondary care are within the Referral to Treatment Times and so new patients are usually seen within 36 weeks. However the time to start the treatment is not within RTT and a recent survey of waiting times reported an average of 24 to 40 months in 6 out of 9 District Hospitals. The longer waiting times refer to both rural areas (South Powys) and more heavily populated areas (Gwent). Treatment waiting lists are usually not recorded on any centrally held administration system such as Myrddin and, as a result, the waiting times have largely been disregarded by Local Health Boards.

There are also long waiting times in primary care (up to 2.5 years in Newport). Patients suitable for orthodontic treatment in primary care will start their treatment immediately after assessment. However the long waiting times in the primary care sector may delay the transfer of appropriate patients to secondary care.

Access in some rural areas is poor both in terms of local accessibility and the waiting times to start treatment. The number of patients requiring orthodontic treatment in rural areas is low and most areas would not support a specialist practice because of the business considerations in managing such a practice. Salaried specialists working, for

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

example, in Community Dental Service settings, would provide local access to care without the need for a suitable business model.

A course of orthodontic treatment takes on average 2 years to complete with appointment intervals of 6 – 8 weeks during that time. There is therefore no quick solution to treatment waiting times and a commitment to proper funding and recruitment within Orthodontics is essential.

2. The effectiveness of working relationships between orthodontic practices and Local Health Boards in the management of local orthodontic provision, and the role of Managed Clinical Networks in helping to deliver more effective orthodontic services in Wales (e.g. effective planning and management, improvement in the appropriateness of referrals and performance management, workforce arrangements).

Managed Clinical Networks have been established in North Wales, South West Wales and South East Wales. There are also professional advisory bodies - Local Orthodontic Committees (LOCs) in South West and South East Wales that provide a forum for all providers to advise on standards of care, policies and protocols. The MCNs each contribute to the Oral Health Advisory Group/Dental Services Planning Group in their area and also report to the Strategic Advisory Forum on Orthodontic Services in Wales. With the establishment of the MCNs and LOCs there are now more communications channels open to both Local Health Boards and Orthodontic providers that is beneficial to their working relationship.

The MCNs in South East and South West Wales have robust referral management systems in place including referral guidelines and protocols and referral forms. The North West Wales MCN is in the process of producing a common referral form to be utilised across the network.

The new referral forms and protocols have been developed to allow GDPs to consider the appropriateness of the referral and to help them refer to the most appropriate provider in either primary or secondary care. Most referrals, particularly in primary care, are from GDPs which gives the best opportunity for the patients to be referred at the most appropriate time and with the appropriate level of dental health.

The new referral forms and protocols are working well with a perceived reduction in inappropriate referrals and with the patients being directed to the most suitable provider more quickly.

3. Whether the current level of funding for orthodontic services is sustainable with spending pressures facing the NHS, including whether the current provision of orthodontic care is adequate, affordable and provides value for money.

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

The lengthy waiting times for orthodontic treatment, both in primary and secondary care has resulted partially from a chronic under-funding of orthodontic care.

Provision of orthodontic treatment in Wales is based on objective need (as determined by the Index of Treatment Need) not on demand. In South West Wales and some other areas the need still exceeds the capacity, despite measures to improve efficiency by development of the referral management process and other means.

In September 2010, the Task and Finish Orthodontic Sub-group reported that they believed that with effective commissioning, the sum of money spent on orthodontics in 2008 to 2009 (£12.7 million), would be capable of meeting the orthodontic needs of Welsh patients; however they stated that a small proportion of funding (7.5%) would need to be reinvested to facilitate modernisation, detailed management and support. One of the Recommendations from the Report on Orthodontic services in Wales February 2011 was that the Welsh Government fund a one- off waiting list initiative to clear the backlog of patients waiting for orthodontic treatment. If this were implemented the waiting times would be reduced to more acceptable levels and would greatly improve the current provision of orthodontic care.

Following this, in order to ensure that those patients with the highest treatment needs were not disadvantaged, consideration could be given to reducing the IOTN level at which treatment was available on the National Health Service.

The Index of Orthodontic Treatment need (IOTN) was developed in the late 1980s and this scale orders the severity of the malocclusion (deviation from normal “bite”) into 5 grades (Grade 5 having the highest severity) depending on the long-term threat it imposes to the longevity of the dentition and surrounding structures.

<http://www.bos.org.uk/public-patients-home/orthodontics-for-children-and-teens/orthodontics-and-the-nhs/what-is-the-iotn>

The threshold for treatment could be increased to IOTN 4 and 5 only, therefore removing those with a moderate need for treatment (IOTN 3) that had a high (poor) aesthetic score and so concentrating funding for those with the highest treatment need.

The benefits of orthodontic treatment include an improvement in dental health, function, appearance and self-esteem (see Appendix II).

In addition to the immediate benefits of correcting a malocclusion - for example reducing the risk of trauma to teeth that protrude; treatment of impacted teeth that may become cystic or resorb (dissolve) the roots of adjacent teeth - there are other, well documented long-term health benefits. These include functional benefits, creating space for replacement of teeth that are congenitally absent, improving the ability to clean areas where food packing increases risk of caries and improved long-term dental health with improvement in oral hygiene following orthodontic intervention.

Orthodontic treatment at an appropriate age decreases the burden of dental treatment for those patients who would otherwise have a great commitment to care throughout

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

life. Much of this care would be the responsibility of the NHS and orthodontic intervention at an appropriate age therefore provides good value for money.

4. Whether orthodontic services is given sufficient priority within the Welsh Government's broader national oral health plan, including arrangements for monitoring standards of delivery and outcomes of care within the NHS and the independent sector.

There is a significant genetic component to the aetiology of malocclusions requiring orthodontic treatment independent of the patient's life-style and choices (unlike dental caries which is preventable). Orthodontic treatment is supported by evidence-based interventions that deliver a quantifiable health gain and should be maintained as a priority with the Welsh Government's oral health plan.

Appropriate contract monitoring is required for quality assurance and protection of the public. Orthodontics as a profession has robust measures in place to monitor outcomes of care using the Peer Assessment Rating Index:

<http://www.bos.org.uk/professionals-members-home/research-audit/quality-assurance-in-orthodontics/index>

This Index is used by providers in primary and secondary care to assess the quality of care for their patients. The MCNs have a role in facilitating close monitoring of treatment outcomes through PAR and are establishing a system where PAR score reductions are monitored independently on an annual basis for all providers. This provides evidence for quality of care. With the advent of relatively new orthodontic providers such as DwESs (dentists with enhanced skills) and Orthodontic Therapists it is particularly important to monitor the quality of treatment. DwESs are practitioners without specialist qualifications but who have been accredited to provide orthodontic treatments and hold orthodontic contracts.

In primary care, the practitioners use the PAR Index to score the outcomes for their patients both for the Business Service Authority (BSA) and for the Local Health Boards. The BSA also monitors standards of care in the GDS/PDS using a traffic light system on selected cases and aspects including record keeping and clinical outcomes are investigated and scored. These systems of monitoring are robust and work well.

Secondary care providers are also actively engaged in local, all Wales and national outcome based audit, and clinical audit has increasingly become a contractual requirement for Consultants.

However delivery of orthodontic care in the independent sector is not so rigorously monitored. Practitioners without specialist qualifications or local accreditation and who do not hold orthodontic NHS contracts can offer treatment on a private basis – often because the marketing by orthodontic companies is very persuasive. There is no

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

obligation for these providers to assess the quality of their care for patients, with the use of the PAR Index, for either the BSA or Local Health Boards.

5. The impact of the dental contract on the provision of orthodontic care.

Use of the IOTN scale was introduced with the 2006 dental contract and this has directed care to patients with the highest need. However the contract fixes the volume of activity for each practice with no room for increased activity. With improvements in dental health and awareness, there may be more of a demand from those with a proven need for treatment, but no accompanying increase in the contracts over the same period resulting in an inability to treat that need within a reasonable time-scale. The current contract system assumes a practice offering NHS care is in a steady state and there is limited flexibility for new start-ups or a decrease in activity.

One recommendation from the 1<sup>st</sup> enquiry (February 2011) was that the Local Health Boards should review contracts identified as delivering mainly assessments only and very few treatments. The implementation of this recommendation has resulted in a limit to the payments for assessments and reviews and this has ensured that more resources are directed towards treatment and thereby improving efficiency.

Orthodontic contracts are fixed term which limits the opportunities for investment and development due to the uncertainty at the end of each contract period. Contracts renewals should be a minimum of 5 years, or preferably rolling contracts for well-performing practices, to ensure continuity of good care.

At the start and end of treatment there are different BSA forms to complete for patient demographic data. As each form is different, the data for each patient have not always been correlated and this is considered to be the main reason for the apparent high rate of non-completion of treatment. The BSA forms should be uniform to allow accurate data to be collected before assessing the numbers of patients not completing treatment. The tendering process for contracts in primary care has on some occasions favoured corporate bodies and the award of multiple contracts in the same Health Board and or neighbouring Health Boards to the same provider risk a monopoly on orthodontic provision.

There are no contracts for orthodontic treatment for over 18 year olds in primary care in Wales. This disenfranchises some patients who may not have had the parental support to seek treatment earlier and who are now taking responsibility for their own dental health. Also clarity is required for the management of those patients referred in their 18<sup>th</sup> year as to whether the date of referral or the date of assessment determines eligibility (assuming a demonstrable orthodontic need) for NHS treatment in primary care.

## [Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

### **Summary and Recommendations**

- There are long waiting lists for orthodontic treatment in primary and secondary care in some areas of Wales (up to 40 months). Local access is limited in rural areas.
  - Consideration needs to be given to funding a one-off waiting list initiative to clear the backlog of patients waiting for orthodontic treatment and to fund salaried specialists on a part-time basis in rural areas.
- MCNs have been established throughout Wales improving communication and working relationships between orthodontic providers in primary and secondary care with the LHBs.
  - MCNs and LOCs should continue to advise on policies, protocols and standards of care.
- Orthodontic treatment has proven short and long-term dental health benefits and provides value for money within the NHS financial framework both in primary and secondary care.
  - Restrict treatments to IOTN 4 and 5 thereby concentrating funding on those with the highest need.
- Standard of care monitoring is quite robust within primary and secondary NHS services.
  - Standards of care monitoring need to be improved in the independent sector.
- Fixed volume and short-term contracts do not allow for any flexibility and limit the investment in primary care.
  - Consideration needs to be given to rolling contracts in well-performing practices.

### **Crynodeb ac Argymhellion**

- Mae rhestrau aros hir ar gyfer triniaeth orthodontig mewn gofal sylfaenol ac eilaidd mewn rhai ardaloedd yng Nghymru (hyd at 40 mis). Mae darpariaeth y gwasanaeth yn gyfyngedig mewn ardaloedd gwledig.
  - Mae angen ystyried y posibilrwydd o ariannu menter unigryw er mwyn clirio'r ol-groniad o gleifion sy'n aros am driniaeth orthodontig ac i ariannu arbenigwyr cyflogedig ar sail ran-amser yn yr ardaloedd gwledig.
- Mae Rhwydweithiau Clinigol wedi cael eu sefydlu ledled Cymru, ac mae'r rhain wedi gwella cyfathrebu a pherthnasau gwaith rhwng darparwyr orthodontig mewn gofal sylfaenol ac eilaidd â'r Byrddau Iechyd Lleol.
  - Dylai'r Rhwydweithiau Clinigol a'r Pwyllgorau Lleol Orthodontig barhau i roi cynngor ar bolisiau, protocolau a safonau gofal.

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

- Mae tystiolaeth ar gael i brofi fod triniaeth Orthodontig â manteision iechyd deintyddol yn y tymor byr a'r tymor hir, ac yn ddarpariaeth gwerth ei arian o fewn fframwaith ariannol y GIG mewn gofal sylfaenol ac eilaidd.
  - Bydd cyfyngu triniaethau i MATO 4 a 5 yn canolbwyntio'r cyllid ar y rhai sydd â'r angen mwyaf.
- Mae safon monitro gofal yn y sectorau sylfaenol ac eilradd yn eithaf cadarn o fewn gwasanaethau'r GIG.
  - Mae angen gwella safonnau monitro yn y sector annibynnol.
- Mae contractau cyfaint-sefydlog a thymor byr yn cyfyngu ar hyblygrwydd a buddsoddiad mewn gofal sylfaenol.
  - Mae angen ystyried rhoi contractau treiglol i bractisiau sy'n perfformio'n dda.



[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

## **Appendix I**

### **Role of Welsh Consultant Orthodontic Group**

The Welsh Orthodontic Consultants Group is a sub-Group of the Consultant Orthodontic Group and is a constituent group of the British Orthodontic Society. The Welsh Consultant Orthodontic Group's objective is to promote the development and efficiency of Orthodontic Services in Wales. Full membership is open to all persons holding a substantive or honorary contract as a Consultant Orthodontist, issued by a recognised NHS Health Board in Wales and Associate Membership is open to those holding a Post CCST Appointment within Wales. There are currently 17 members of the Group based in nine district general hospitals throughout Wales and in the University Dental Hospital.

### **Background**

#### **Role of Hospital Orthodontic Service**

The Hospital Orthodontic Service is a Consultant-led service with Consultants having undergone a 3-year Specialist training programme with an additional 2 or 3 years further training. Other members of the orthodontic team include Specialty Trainees undergoing the 3-year Specialist Training programme (StRs) or the additional 2-year training (post CCST); Specialist orthodontic practitioners (Hospital practitioner or Staff Grade); dentists with enhanced skills in Orthodontics (DwESs) and Orthodontic Therapists.

Consultants within the Hospital service fulfil a unique role that includes:

- Treatments of patients with the highest need involving the greatest technical treatment complexity and those requiring an interdisciplinary team approach.
- Education and clinical training for StRs, post CCST trainees, DwESs, Orthodontic Therapists, other junior staff and trainee academics. All Hospital orthodontic departments within Wales have clinical training posts and are involved in training.
- Advisory role to hospital colleagues, Specialist Practitioners, GDPs, community dental officers and GMPs.
- Public health role and management advice by working with Consultants in Dental Public Health to determine the needs and demands of the local population with respect to orthodontic care.



[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

**Appendix II**  
**Health Benefits of Orthodontic Treatment**  
(In brief – only limited references cited)

**1. Prevention of trauma**

- **Risk of trauma in children increases to 45% when there is a significant increase in overjet.**

*Children's dental health in the United Kingdom. London: Todd J and Dodd T. Office of Population Census and Surveys 1985.*

*Harrison JE, O'Brien KD, Worthington HV. Orthodontic treatment for prominent upper front teeth in children. Cochrane Database of Systematic Reviews, 2007; Issue3*

*A systematic review of the relationship between OJ size and traumatic dental injuries. Nguyen QV et al. Europ. J. Orthod. 1999; 21: 503-515*

*Traumatic injuries to upper permanent incisors related to age and upper incisal overjet.*

*Jarvinen S 1979: Acta Odontologica Scandinavica 37: 355-338*

- **Reduction in overbite – to prevent dental and mucosal trauma**

- **Association between prominent incisors and pathological migration in adulthood.**

*Thilander B 1984. A textbook of clinical periodontology. Munksgaard, Copenhagen*

**2. Dental health**

- **Alignment and splinting teeth following trauma**

- **Space maintenance following tooth loss**

- **Caries – improved ability to clean areas decreasing risk of caries**

*Shaw W C 1988. The association between tooth irregularity and plaque accumulation, gingivitis and caries in 11-12 year old children. European Journal of Orthodontics 10: 76-83*

- **Oral hygiene – improved long-term dental health following orthodontic intervention**

*Who needs orthodontics? Roberts-Harry D, Sandy J. BDJ 2003 195: 433-437*

*The effect of orthodontic treatment on plaque and gingivitis. Davies T, Shaw W, Worthing H et al. Am J Orthod Dentofacial Orthop. 1988; 93:423-428*

- **Periodontal health – removal of crossbites and interferences; moving teeth back into bony support**

*Relationship of crowding and spacing to periodontal destruction and gingival inflammation. Geiger A, Wasserman B, Turgeon L. J Periodontol. 1974; 45: 43 – 49.*

- **Following treatment patients display improved oral health attitudes to their hygiene.**

*Perception of Occlusion, Psychological Impact of Dental Esthetics, History of Orthodontic Treatment and Their Relation to Oral Health in Naval Recruits. Klages U et al. The Angle Orthod. 2007; 77; 4: 675-680.*

## [Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

- **Impacted teeth - ectopic teeth can result in resorption of adjacent teeth and may reduce their long term prognosis, or may become cystic.**

*Root resorption of the maxillary lateral incisor caused by impacted canine: a literature review. Algerban A, Jacobs R, Lambrechts P, Loozen G, Willems G. Clin Oral Investig. 2009 Sep;13(3):247-55.*

*Resorption of incisors after ectopic eruption of maxillary canines: a CT study. Ericson S, Kuroi PJ. Angle Orthod. 2000 Dec;70(6):415-23*

*Incisor root resorption due to ectopic maxillary canines: a long-term radiographic follow-up. Falahat B, Ericson S, Mak D'Amico R, et al. Angle Orthod. 2008 Sep;78(5):778-85.*

*Resorption of maxillary lateral incisors caused by ectopic eruption of the canines. A clinical and radiographic analysis of predisposing factors. Ericson S, Kuroi J. Am J Orthod Dentofacial Orthop. 1988 Dec;94(6):503-13.*

### 3. Restorative requirements

- **Creating space for replacement of missing teeth, restoration of worn teeth or redistribution of spaces.**

*Orthodontic/restorative interface: the multidisciplinary management of a severely compromised adult dentition. A case report . O'Shea, Mc Namara TG. J Ir Dent Assoc. 2002;48(1):6, 8-12, 14-6.*

- **Aligning ectopic teeth to prevent the need for long term restorative replacements.**
- **Aligning remaining teeth to camouflage for missing teeth.**
- **Alignment of worn teeth.**

*Orthodontic-restorative treatment of chipped or worn incisors. Goracci C, Gheewalla R, Kugel G, Ferrari M. Am J Dent. 2001 Feb;14(1):50-5.*

*The interface between orthodontics and restorative dentistry in the management of anterior tooth surface loss. Beckett HA, Evans RD. Br J Orthod. 1994 Aug;21(3):231-7.*

*Orthodontic/restorative interface. Lewis DH, Eldridge DJ. Dent Update. 1992 Jun;19(5):195-6, 198-9.*

*The orthodontic/restorative interface. Restorative procedures to aid orthodontic treatment. Harrison JE, Bowden DE. Br J Orthod. 1992 May;19(2):143-52. Review.*

- **Alignment of previously traumatised teeth for restorative treatment.**

*Orthodontic extrusion of an extensively broken down anterior tooth: a clinical report.*

*Smidt A, Lachish-Tandlich M, Venezia E. Quintessence Int. 2005 Feb;36(2):89-95.*

*Orthodontic treatment for oral rehabilitation after multiple maxillofacial bone fractures.*

*Nakamura Y, Ogino TK, Hirashita A. Am J Orthod Dentofacial Orthop. 2008 Sep;134(3):447-55.*

### 4. Function

- **Severe Class II, III or anterior openbite cases may have difficulty with speech and eating due to the inability to form a lip seal or incise food.**
- **Correction of crossbites associated with mandibular displacement, recession or mobility of teeth.**

## [Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

*Unilateral posterior crossbite with mandibular shift: a review. Kennedy DB, Osepchook M J Can Dent Assoc. 2005 Sep;71(8):569-73.*

*Justification for orthodontic treatment – BOS 2009*

- **Early interceptive treatment prevents mandibular displacement from persisting in the adult dentition.**

*Orthodontic treatment for posterior crossbites. Harrison JE, Ashby D, Cochrane Database of Systemic Reviews, 2001; Issue 1*

### 5. Habit breakers

- **Digit sucking can result in a number of dental changes and prevent alignment of teeth.**
- **Patients unable to stop digit sucking can wear appliances to help break the habit.**

*Finger habits: their effects and their treatments--part 2. Bishara SE, Larsson E. Dent Assist. 2007;76(2):16-8, 20, 22 passim.*

*The comparative effectiveness of two digit-sucking deterrent methods. Bourne CO. West Indian Med J. 2005 Sep;54(4):257-60.*

### 6. Emotional and social well-being

- **Poorly positioned teeth can make children targets for bullying and harassment.**
- **Children are teased more about their teeth than anything else.**

*Nicknames, teasing, harassment and the salience of dental features among school children. Shaw WC, Meek SC, Jones, DS. Brit. J. Ortho. 1980; 7: 75-80*

- **Groups of children who need orthodontic treatment exhibit significantly higher impacts on their emotional and social well being.**

*The relationship between normative orthodontic treatment need and oral health-related quality of life. De Oliveira CM, Sheiham A. Comm. Dent. Oral Epidemiol. 2003; 31: 426-436*

- **Significant malocclusions are associated with negative impact on oral health related Quality of Life, compared to minimal malocclusion groups, based on IOTN.**

*Evaluation of a quality of life measure for children with malocclusion. O'Brien C, Benson PE. Marchman Z. J. Orthod. 2007; 34: 185-193*

- **Increased overjet >6mm and spacing of front teeth associated with more significant social and emotional issues and negative QOL in parents and family.**

*The impact of two different malocclusion traits on quality of life. Johal, A, Cheung, MYH, Marcenes W. Brit. Dent. J. 2007; 202: E6*

*The impact of malocclusion and the impact on quality of life: a literature review. Zhang M et al. Int. J. Paed. Dent. 2006; 16: 381-387*

- **Orthodontics in childhood associated with better tooth alignment, self esteem and satisfaction with life.**

[Inquiry into Orthodontic Services in Wales](#)

Evidence on behalf of Welsh Consultant Orthodontic Group – OS 12

*A 20-year cohort study of health gain from orthodontic treatment: Psychological outcome. Shaw WC, Richmond S, Kenealy PM, Kingdon A, Worthington H. Am J Orthod Dentofacial Orthop. 2007; 132: 146-157*

- **Facial aesthetics have been shown to be a significant determinant of self-perception.**

Tung and Kiyak Psychological influences on the timing of orthodontic treatment. 1998: AJODO 113: 29-39

- **Oral disorders have psychosocial consequences as serious as other disorders.**  
Finbarr Allen P, Assessment of oral health quality of life 2003: Health Quality of Life Outcomes. 2003; 1: 40.