Isle of Man Government
Reiltys Ellan Vannin

DEPARTMENT OF HEALTH AND SOCIAL CARE (DHSC)

Orthodontic Treatments in Children aged under 18 years

Orthodontic treatments in children <u>WILL ONLY BE</u> funded where the patient has disruption to their dentition or problems with bite or jaw development sufficient to be classified as Grade 4 or Grade 5 on the orthodontic Index of Treatment Need (IOTN).

Within the IOTN, dentition meeting the criteria for Grade 4 or 5 is defined as requiring treatment for health reasons.
Full details of the IOTN Grade 4 and 5 criteria are set out in the HSE Orthodontic Eligibility Guidelines 2007, available online at:
http://www.hse.ie/eng/services/list/1/schemes/cbd/HSE%20ORTHODONTIC%20ELIGIBILITY%20GUIDELINES.pdf

	Clinical Effectiveness	Cost Effectiveness
Strength of evidence	Inadequate	Inadequate
Comments	There is a lack of good quality evidence for impact of abnormal dentition on health outcomes and the clinical and cost effectiveness of orthodontic treatment. There is a lack of high quality evidence to causally link abnormalities in the dentition to functional (ability to speak or eat) quality of life indicators. There is some evidence from observational studies that anterior malocclusions (i.e. those in what is known as the 'aesthetic zone' of the mouth) are associated with reduced scores on emotional and social wellbeing within oral health related quality of life scores. However, the studies demonstrating this were largely undertaken in Brazil and similar studies on British Isles or European populations are lacking. The paper reviewing these studies (Dimberg et al) did not attempt to quantify the level of impact or whether this was reflected in activities of daily life. The paper did not provide any correlation of quality of life impact with degree of malocclusion (IOTN). We found no evidence to indicate that the aesthetic impact of malocclusions causes significantly greater or different negative impact on quality of life indicators than any other aesthetic issue (e.g. bat ears, prominent nose) for which DHSC funded intervention would also not be offered.	

	Clinical Effectiveness	Cost Effectiveness
	We were unable to find high quality evidence indicating that correction of orthodontic defects was causally linked to significant improvements in functional or other significant health related quality of life outcomes. A recent systematic review of studies in this area concluded: *Orthodontic treatment during childhood or adolescence leads to moderate improvements in the emotional and social well-being dimensions of OHRQoL, although the evidence is of low and moderate quality. More high quality, longitudinal, prospective studies are needed.* (Javidi et al). The significance of these possible moderate improvements in terms of ability to function in daily life is not known. There is, however, professional consensus that dentition falling within IOTN grades 4 and 5 is sufficiently disrupted to justify orthodontic treatment on health grounds. Interventions intended to improve cosmetic appearance cannot be a priority for DHSC funding. We did not find any evidence to indicate that children have significantly different outcomes from treatments designed to improve appearance to justify a different policy for orthodontics in children compared to adults. This policy seeks to limit funding for orthodontic treatments to patients who are likely achieve significant functional benefit as a result of treatment. The evidence base for the effectiveness of many orthodontic techniques in achieving long term improvement in dentition is weak [see, for example, Papadopoulos and Gkiaouris, A critical evaluation of meta-analyses in orthodontics, American Journal of Orthodontic and Dentofacial Orthopaedics, 2007, 131(5), 589-599] We found a number of papers exploring methods for comparing costs and outcomes from orthodontic services. These studies found variations in costs depending on model of provision [see, for example, Richmond et al, Measuring the cost, effectiveness and cost-effectiveness of orthodontic care, World Journal of Orthodontics, 2005 6(2), 161-170]. We found no robust cost effectiveness studies. Public health systems set different thresholds for accessing publicly funded treatment. HSE Ireland funds orthodontic treatment in children whose dentition falls within grades 4 or 5 of the Index of Treatment Need. No additional allowance is made for the aesthetic component of the IOTN. NHS England funds orthodontic treatment for children provided they meet a minimum threshold of grade 3 on the functional component and 6 on the aesthetic component of the IOTN.	

Summary of evidence

British Orthodontic Society, Index of Orthodontic Treatment Need
http://www.bos.org.uk/Public-Patients/Orthodontics-for-children-teens/Fact-File-FAQ/What-Is-The-IOTN

Ireland, HSE Orthodontic Eligibility Guidelines, 2007
http://www.hse.ie/eng/services/list/1/schemes/cbd/HSE%20ORTHODONTIC%20ELIGIBILITY%20GUIDELINES.pdf

Liu et al, The impact of malocclusion/orthodontic treatment need on the quality of life: a systematic review, The Angle Orthodontist, 2009
https://www.ncbi.nlm.nih.gov/pubmed/19413386

Zhou et al, The impact of orthodontic treatment on quality of life: a systematic review, BMC Oral Health, 2014
https://bmcoralhealth.biomedcentral.com/articles/10.1186/1472-6831-14-66

Dimberg et al, The impact of malocclusion on the quality of life among children and adolescents: a systematic review of qualitative studies, European Journal of Orthodontics, Volume 37, Issue 3, 1 June 2015, Pages 238–247
https://doi.org/10.1093/ejo/cju046

Javidi et al, Does orthodontic treatment before the age of 18 years improve oral health related quality of life? A systematic review and meta-analysis, American Journal of Orthodontics and Dentofacial Orthopedics, 2017, 151 (4); 644-655
http://www.ajodo.org/article/S0889-5406(16)30892-7/fulltext

Papadopoulos and Gkiaouris, A critical evaluation of meta-analyses in orthodontics, American Journal of Orthodontic and Dentofacial Orthopaedics, 2007, 131(5), 589-599
https://www.ncbi.nlm.nih.gov/pubmed/17482077

Richmond et al, Measuring the cost, effectiveness and cost-effectiveness of orthodontic care, World Journal of Orthodontics, 2005 6(2), 161-170
https://www.ncbi.nlm.nih.gov/pubmed/15952553

Borzabadi-Farahani A, A review of the evidence supporting the aesthetic orthodontic treatment need indices, Progressive Orthodontics, 2012, 13(3), 304-313
https://www.ncbi.nlm.nih.gov/pubmed/23260542

Reason for requesting policy review:

Reviewed as part of the Effective Use of Resources Project. Replaces Clinical Recommendations Committee, Low Priorities Policies: Orthodontic Thresholds (unnumbered policy, 2008).

Where a patient is considered to have exceptional need for and capacity to benefit from a treatment that is not routinely funded, a request for individual funding may be made to the Individual Funding Requests Panel. The patient must be made aware that the Panel may not support the request and must not be given any expectation that they will be able to have the treatment until a decision to fund has been received in writing from the Panel.

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