Orthodontic Treatment in Patients with Malocclusion: Clinical Effectiveness and Guidelines
Authors: Michelle Clark, Caitlyn Ford


Acknowledgments:

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.
**Research Questions**

1. What is the clinical effectiveness of orthodontic treatment in adult patients with malocclusion?

2. What are the evidence-based guidelines regarding the use of orthodontic treatment in adult patients with malocclusion?

**Key Findings**

Two randomized controlled trials and three non-randomized studies were identified regarding the clinical effectiveness of orthodontic treatment in adult patients with malocclusion.

**Methods**

A limited literature search, with main concepts appearing in title or major subject heading, was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies and guidelines. Retrieval was limited to the human population where possible, and English-language documents published between January 1, 2012 and June 7, 2017. Internet links were provided, where available.

**Selection Criteria**

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<table>
<thead>
<tr>
<th>Population</th>
<th>Adults with malocclusion (misalignment)</th>
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<tr>
<td>Intervention</td>
<td>Orthodontic treatment (e.g., appliances and braces - limited, interceptive, and comprehensive) with or without orthognathic (facial) surgery</td>
</tr>
<tr>
<td>Comparator</td>
<td>Q1: No treatment; treatment in children with malocclusion Q2: No comparator</td>
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Outcomes

Q1: Clinical effectiveness (e.g., differences in outcomes between ages, patient satisfaction, esthetics, self-esteem or confidence, pain, temporomandibular joint disorder, headaches, periodontal health, etc.), safety (e.g., harms associated with treatment, etc.)

Q2: Guidelines

Study Designs

Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two randomized controlled trials and three non-randomized studies were identified regarding the clinical effectiveness of orthodontic treatment in adult patients with malocclusion. No relevant health technology assessments, systematic reviews, meta-analyses, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials


Non-Randomized Studies


Guidelines and Recommendations

No literature identified.
Appendix — Further Information

Systematic Reviews – Age Not Specified


Qualitative Studies

Adolescent and Adult Patients


Age of Patients Not Specified in the Abstract


Review Articles