TITLE: Composite Resin Filling Materials for Deciduous Teeth: Safety, Cost-Effectiveness and Guidelines

DATE: 15 September 2015

RESEARCH QUESTIONS

1. What is the clinical evidence regarding the safety of composite resin when used as filling material on deciduous teeth?

2. What is the cost-effectiveness of composite resin when used as filling material on deciduous teeth?

3. What are the evidence-based guidelines regarding indications for the use of composite resin as filling material on deciduous teeth?

KEY FINDINGS

Three non-randomized studies were identified regarding the safety of composite resin when used as filling material on deciduous teeth. No relevant economic evaluations or evidence-based guidelines were identified.

METHODS

A limited literature search was conducted on key resources including Medline, 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. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and September 4, 2015. Internet links were provided where available.
SELECTION CRITERIA

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

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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| **Comparator** | Q1 and 2: Amalgam or glass ionomer cement filling materials  
Q3: No comparator required |
| **Outcomes** | Q1: Safety outcomes (e.g., post-placement pain, tooth sensitivity, risk of failure, secondary caries, restoration fracture, neurobehavioral function, renal outcomes, psychosocial function, physical development)  
Q2: Cost-effectiveness outcomes  
Q3: Evidence-based guidelines regarding patient indications for composite resin fillings |
| **Study Designs** | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, 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, economic evaluations, and evidence-based guidelines.

Three non-randomized studies were identified regarding the safety of composite resin when used as filling material on deciduous teeth. No relevant systematic reviews, meta-analyses, or randomized controlled trials were identified. In addition, no relevant economic evaluations regarding the cost-effectiveness of composite resin, or evidence-based guidelines regarding indications for the use of composite resin as filling materials on deciduous teeth 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**
No literature identified.

**Non-Randomized Studies**


Economic Evaluations
No literature identified.

Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Randomized Controlled Trials – Permanent Teeth in Children


Non-Randomized Studies – No Comparator Group


Review Articles


Additional References
