

Restorative Dentistry in Children: Foundational Articles and Consensus Recommendations

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Background

Contemporary management of dental caries includes identification of an individual's risk for caries progression, understanding of the disease process for that individual, and management with appropriate preventive services, supplemented by restorative therapy where indicated. The benefits of restorative therapy include: maintaining tooth vitality, removing cavitation or defects to eliminate areas that are susceptible to caries, restoring the integrity of tooth

structure, preventing the spread of infection into the dental pulp, and preventing the shifting of teeth due to loss of tooth structure. The risks of restorative therapy include reducing the longevity of teeth by making them more susceptible to fracture, recurrent lesions, pulp exposure during caries excavation, future pulpal complications, and iatrogenic damage to adjacent teeth.

IAPD Recommendations

1. High viscosity glass ionomer cements may be used in atraumatic restorative treatment (ART) or interim therapeutic restorations (ITR), as an option for conventional treatment in primary teeth. ART/ITR may be used for controlling caries in children that are not cooperative for definitive treatment or treating multiple open carious lesions before rendering definitive restoration.

Consensus-based statement › Global agreement 100%

2. Glass ionomer and resin-modified glass ionomer restorative materials may be used as restorative materials for single surface restorations in primary and permanent posterior teeth.

Consensus-based recommendation › Global agreement 87%

3. Where local regulations permit and without any other contraindications to the use of amalgam providers may use dental amalgam for restoration based on clinical judgement and shared decision making.

Consensus-based statement › Global agreement 70%

4. Because of the greater longevity of preformed metal crowns, their use may be recommended on high-risk children having multi-surface or large cavitated lesions on primary molars, especially when children undergo full mouth rehabilitation under general anaesthesia.

Consensus-based statement › Global agreement 95%

5. In cases of permanent teeth with large carious lesions or severe enamel defects, preformed metal crowns may be used as semi-permanent restorations.

Consensus-based statement › Global agreement 95%

6. Zirconia crowns are an aesthetic alternative to preformed metal crowns and may be used for teeth with similar indications.

Consensus-based statement › Global agreement 79%