Pediatric Restorative Dentistry
Full Coverage Restorations

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Guideline on Pediatric Restorative Dentistry

Originating Committee
Clinical Affairs Committee – Restorative Dentistry Subcommittee

Review Council
Council on Clinical Affairs

Adopted
1991

Revised

http://www.aapd.org/media/policies.asp
Basic Restorative Tenets for Primary Teeth

- Restorations in younger patients have shorter life spans.
- At all ages, 1\textsuperscript{st} restoration in a tooth lasts longer than 2\textsuperscript{nd}.
- All restorations in 1\textsuperscript{st} primary molars have shorter survival than in 2\textsuperscript{nd} primary molars.
- Longevity of Cl. II < Cl. I in primary molars.
Indications for Anterior Crowns

- Multiple decayed surfaces
- Extensive decalcifications
- Incisal edge involvement
- Hypoplasia
- In cases of poor moisture &/or hemorrhage control
Contraindications
Full Coverage Restorations for Primary Front Teeth

- Stainless steel crown with resin window (open-faced)
- Resin-veneered crowns
- Strip crowns
- Stainless steel crowns
- Polycarboxylate crowns
## Comparison: Primary Incisor Crowns

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<th>Time required</th>
<th>Technical difficulty</th>
<th>Longevity durability</th>
<th>Esthetics</th>
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<td><strong>Open-faced SSC</strong></td>
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<td><strong>Veneered</strong></td>
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<td><strong>Strip crown</strong></td>
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Open-face(d) SSC

- Cement SSC
- Cut out window
- Fill with resin-based composite
Strip Crowns

- Shell is filled with resin-based composite and slipped over prepared tooth
- Require sufficient tooth structure
- Technique sensitive
- Underutilized
Strip Crown Technique

1. Prep tooth
2. Prepare shell
3. Etch & bond
4. Fill and fit shell
5. Cure
6. Remove shell
7. Adapt margins
Case: Strip Crowns
Pre-veneered SSC

- Inflexible, brittle resin veneer
- No crimping of lingual surface or forcing crowns on tooth
- Significant removal of tooth structure to allow passive fit
- Bulky size
- Expensive ($18/crown)
Clinical Outcomes for Primary Anterior Teeth Treated with Preveneered SSCs

- Evaluation of 226 crowns in 46 patients
- Mean age 4y 2m
- Mean observation time 12.9 months
- 91% placed under general anesthesia

Clinical Outcomes for Primary Anterior Teeth Treated with Pre-veneered SSCs

Results

- **Shade:** 4% matching - 95% were lighter than natural teeth
- **Size:** 86% natural - 14% bulky
- **Fracture resistance:** 88% resisted fracture for < 6 months
- **Wear resistance:** 71% resisted wear for < 6 months; more attrition with increased time and bulky crowns
- **Appearance:** 37% excellent - 50% good - 9% poor

Case: Veneered Crowns
Case: Polycarboxylate Crowns
Wear and Tear
Stainless Steel Crown

- Introduced to pediatric dentistry in 1950 by Humphrey
- Parallel walls
- Pre-trimmed and pre-contoured
Indications

- Restoration of primary & permanent teeth
- Extensive caries, large, or multiple surface lesions
- Cervical decalcification
- Developmental defects
- When other materials would fail or failed
- Following pulpotomy/pulpectomy
- In patients who require treatment under general anesthesia
Properties

- Extremely durable, relatively inexpensive
- Minimal technique sensitivity during placement
- Superior to amalgam in high-caries risk patients with decreased ability to cooperate (longevity, cost, patient convenience)
SSC Preparation Technique

Wrong!

Too much taper  Ledge
Preparation Technique ctd.
Clinical Examples
Questions?