DPBRN 8: Longitudinal Study of Dental Restorations Placed in Previously Un-restored Surfaces

Date Prepared: February 24, 2012
1. Is the dentist who is filling out this form today the same one who placed this restoration on the original treatment date (xx/xx/20xx)?

a  Yes
b  No

**Question 1: Same dentist who placed original restoration**

- 84% of restorations at the one-year follow-up visit, and 80% at the two-year follow-up visit, were treated by the same dentist who originally placed the restoration; higher (over 95%) for AL/MS and FL/GA regions than the other regions.
2. Restoration Status: Since the last time you evaluated this restoration, this tooth has been:

a. [ ] extracted
b. [ ] treated with a root canal that altered this restoration
c. [ ] treated for a problem with this restoration
d. [ ] None of the above

Question 2: Restoration status

- Less than 2% of restorations had been extracted, had root canal or any treatment due to a problem with the restoration at year one and at year two.
3. Is this visit due to a problem with this restoration?
   a [ ] Yes
   b [ ] No

**Question 3: Problem with restoration**

- At both year one and two, the follow-up visit was due to a problem with the restoration for 2% – 3% of restorations overall.
4. Restoration Rating: Rate the condition of this restoration (“acceptable” or “repair or replace”)
   a □ Acceptable – No further clinical action is needed, please indicate if you adjusted the restoration.
   Did you adjust or polish to improve the restoration today?
      1 □ Yes
      2 □ No
   b □ Repair or Replace – Clinical action is needed.

**Question 4a(1): Restoration acceptable**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL/MS</td>
<td>96.9</td>
<td>97.3</td>
</tr>
<tr>
<td>FL/GA</td>
<td>97.3</td>
<td>96.0</td>
</tr>
<tr>
<td>MN</td>
<td>97.1</td>
<td>96.3</td>
</tr>
<tr>
<td>PDA</td>
<td>95.8</td>
<td>95.2</td>
</tr>
<tr>
<td>SK</td>
<td>95.1</td>
<td>96.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>96.4</td>
<td>96.3</td>
</tr>
</tbody>
</table>

- The restoration was acceptable for 96% of patients overall at both year-one and year-two follow-ups.
Question 4a(2): Restoration adjusted or polished

- Among acceptable restorations between 1% – 2% were adjusted or polished in each follow-up year.
The restoration was considered “failed” at the visit if either of the following statements were true:
If in question #2, a, b, or c, tooth was extracted, had root canal therapy or other treatment
If in question #4, restoration is not acceptable

Overall, about 5% of restorations failed at year one and at year two, with MN having the highest rate and AL/MS having the lowest rate for both follow-up periods.
5. What is your treatment plan for this restoration?  (Mark all that apply)

- a  Repair a defective part of the restoration
- b  Replace the entire restoration
- c  Tooth requires endodontics
- d  Tooth will be extracted
- e  Other treatment (explain)

**Question 5: Treatment plan for restoration**

- At both follow-up, the most common treatment plan for the restoration was to replace it; about 50% in year one and 56% in year two.
6. Please indicate the main reason for repair or replacement of the restoration (Choose only one).

- a. Secondary/recurrent caries
- b. Entire restoration is discolored
- c. Restoration margins are discolored
- d. Restoration margins are degraded or ditched
- e. Bulk fracture of restoration
- f. Restoration is missing
- g. Tooth is fractured
- h. Pain or sensitivity
- i. Patient request (specify)
- j. Other reason (specify)

**Question 6(a): Main reason for repair/restoration – Year 1**

- For year one, the category with the most responses for the main reason to do repair or replacement was “other reason” at 25% overall.
  - Of specific reasons chosen, the most common was the “restoration is missing” at 17%. Overall, 11% of unacceptable restorations were due to secondary or recurrent caries.
The main reason for repair or replacing the restoration in year two was secondary or recurrent caries at approximately 31% overall, with AL/MS being considerably higher at 58%.
7. What technique or observation led you to the diagnosis of secondary caries?  
(Mark all that apply)

a. Probing with a dental explorer  
b. Radiographs  
c. Intuition or clinical experience based on clinical appearance  
d. Discolored margin of the restoration  
e. Frank or definite caries cavitation  
f. Presence of soft, discolored dentin or enamel  
g. An exploratory preparation to inspect the lesion

Question 7: Technique used to diagnose secondary caries – Year 1

- For year one, the technique used most often to diagnose a secondary caries was radiographs at 55% overall, ranging from 33% (FL/GA) to 100% (PDA).
Question 7: Technique used to diagnose secondary caries – Year 2

- Probing with the dental explorer was the most common procedure used for year two at 58% overall, ranging from 0% (PDA) to about 88% (FL/GA).
8. Where was the clinically diagnosed secondary caries relative to the existing restoration?

- a) Gingival to the restoration with carious margin in the enamel
- b) Gingival to the restoration with the carious margin in dentin or cementum
- c) Other location

**Question 8: Location of secondary caries**

- Considering the location of the secondary caries related to the existing restoration, gingival to the restoration with the carious margin being in the dentin or cementum was the most common location for both year one and year two.