



# Using Transition Acetal Resin Crowns & Bridges<sup>®</sup> as an Interim Option to Permanent PFMs

Following are step-by-step instructions for using Transition Crowns & Bridges<sup>®</sup> in a variety of clinical situations where permanent, more costly restorations are not a viable option. They are made from either your prepared crown & bridge impressions and cemented at the second appointment or on preoperative models prepared in the lab, relined chairside and cemented in one appointment.

## ■ OPERATIVE Requirements

- Preparation of abutment teeth - Standard PFM or all-ceramic preparation guidelines are used depending on the final restorative outcome.
- Impressions/Models - vinyl polysiloxane (VPS) or polyether impressions using full-arch or custom trays are recommended.
- Bite Registration - A centric occlusion bite should be taken with VPS Bite Registration material and sent with the case.
- Opposing model - To minimize occlusal adjustments, pour opposing models using the stone manufacturer's suggested water/powder ratio.

## ■ INTERIM Esthetics

The patient presented with an extremely discolored upper right central and an opacious PFM on the upper left central (*Fig. 1*). The patient wanted whiter and straighter teeth that closed all the spaces in the anterior section. At the time the patient could not afford orthodontics or permanent restorations. Permanent PFMs were planned. Transition crowns were offered as an interim option. The patient began treatment immediately with Transition crowns.

Preoperative impressions and bite registration are taken and sent to the laboratory. The lab carefully prepares the selected abutments on the model using a standard preparation of 1 mm. The crowns are completed to the prescribed shade and returned for final preparation and cementation.

1. At the preparation appointment, prepare the teeth using 1.7 mm reduction on all surfaces with a standard chamfer margin (*Fig. 2*).
2. To verify adequate reduction of the teeth for future PFM restorations, use a transparent preparation stent helps to verify the amount of reduction.



**Figure 1:** Discolored upper right central and extremely opacious upper left PFM.



**Figure 2:** Standard PFM preparation with chamfer-margin design.



**Figure 3:** A transparent preparation stent helps to verify the amount of reduction.



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3. Try-in the splinted Transition crowns to evaluate the fit (Figs. 4, 5).
4. Use a carbide bur to adjust any areas if necessary.
5. After try-in, rinse the restorations with water and dry.
6. Use an ethyl methacrylate (Lang Splintline™ or Parkell SNAP™) to optimize the internal fit and margins (Fig. 6).
7. Trim the excess and finish the restoration using basic composite polishing techniques (Fig. 7).
8. Seat the restorations using TempBond™ (Kerr Co.) for easy removal when the final PFM restorations are to be prescribed. Figure 8 shows the postoperative case.

## LONG-TERM Provisionals

The patient, a recent immigrant from Russia, presented with pain and less-than-adequate restorations (Fig. 9). New PFMs would be a financial hardship. He would have likely elected for extractions. Transition crowns were planned to help eliminate decay and replace missing teeth to make some dramatic esthetic and functional changes. Preoperative impressions and bite registration were sent to the lab.

The teeth were prepared at the preparation appointment and the Transition crowns were relined with ethyl methacrylate and cemented with PANAVIA 21™ (Kuraray). The restorations (Fig. 10) enhanced pre-existing oral conditions. His situation will be re-assessed within the next two to five years.

## PERIODONTAL Patients

Transition crowns & bridges can also be prescribed for patients undergoing periodontal therapy. A patient previously underwent some bone grafting and needed several restorations to correct the occlusal relationship and stabilize mobile teeth. Figure 11 shows an upper right first bicuspid restored with a Transition crown; adjacent teeth are PFMs. Figure 12 shows a restored left upper cuspid, first bicuspid and opposing first lower bicuspid.

## CONSERVATIVE Full-Mouth Reconstruction

Transition crowns & bridges are appropriate for full-mouth reconstructions when traditional rehabilitation would be a financial hardship. Figure 13 shows full-arch maxillary and mandibular restorations. Transition crowns can be replaced using the original models when necessary. They do not wear the opposing dentition or cause excessive shock to the bone.

For technical assistance, call 800-777-0695.



Figure 4: Crowns are tried in to evaluate fit.



Figure 5: Adjustments are made with a carbide bur.



Figure 6: The margins are optimized if necessary.



Figure 7: Trim the excess material and finish the restoration.



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**Figure 8:** The completed Transition restoration.



**Figure 12:** Transition crowns on tooth #11, #12 & #21.



**Figure 9:** Pre-existing dentition before Transitions.



**Figure 13:** A full-arch maxillary and mandibular Transition case.



**Figure 10:** Postoperative esthetic results.



**Figure 11:** Transition crown on upper right bicuspid.



Thermo-pressed polyoxymethylene resin fabricated into "transitional" restorations.

### Indications

These restorations are indicated for full crowns and bridges of any length with pontic spans of up to four teeth or 33 mm. Transitions can be made from preoperative or prepared model work. Transition crowns and bridges are designed in CAD then milled from an acetal resin disc.

**800-777-0695**  
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