Lowe recently wrote, “A quality provisional restoration is essential for consistent excellence in esthetic and cosmetic restorative dentistry.”

When restoring a patient’s anterior teeth, the importance of the provisional restoration cannot be overstated. Not only does the temporary restoration help provide interim function, phonetics, and esthetics to the patient, but the patient’s confidence in the dentist’s skill is often based on satisfaction with the temporary restoration.

Many different techniques have been used to achieve a successful temporary restoration. A number of dentists are using laboratory wax-ups to help design esthetic anterior restorations. These techniques have been very successful and provide excellent esthetic results. The only significant drawbacks are the time that is required to complete the wax-up and the additional expense to the case.

It is often possible to use the patient’s existing dentition—with a few modifications completed chairside—to create an esthetic anterior provisional restoration without incurring the time and cost of involving a laboratory technician.

The following case is a type seen in many general practices. Using in-office techniques and a high-strength esthetic temporary material, it is possible to create a provisional restoration that meets the functional and esthetic demands of both the patient and the dentist.

**Case Study**

A 32-year-old woman presented with cosmetic concerns regarding her maxillary incisors. Diastemas were present distal to teeth Nos. 7 and 10, but the patient was most concerned with the appearance of a 10-year-old porcelain-fused-to-metal (PFM) crown on tooth No. 9. She also was unhappy with the overall color of her teeth.

To achieve the patient’s esthetic goals, the teeth were first whitened with a home-bleaching system (10% Zaris™). After completion of the whitening treatment, teeth Nos. 7, 8, and 10 were restored with porcelain veneers and tooth No. 9 was restored with an all-ceramic crown (IPS d.SIGN®). At the restoration appointment, all preoperative photographs were taken. Figure 1 shows the patient’s preoperative condition...
after nightguard bleaching. To facilitate the fabrication of temporaries that would simulate the final restorations, flowable composite was added directly to the distal aspects of teeth Nos. 7 and 10 to close the existing diastemas (Figure 2).

When restoring a patient’s anterior teeth, the importance of the provisional restoration cannot be overstated. A preoperative impression was then made with a fast-setting vinyl polysiloxane (VPS) impression material (Position™ Penta™ Quick®) to record the existing condition of the maxillary incisors (Figure 3). This preoperative model would serve as the matrix for the patient’s temporary restorations. Using a VPS impression material for the preoperative impression serves a number of purposes. First, it creates an accurate, detailed impression of the preoperative condition. In addition, this impression material has long-term stability. This stability allows the dentist to store the preoperative impression in the event that the patient needs to have a new temporary made.

The preoperative impression was set aside as the case was prepared. Figure 4 shows the final preparations. After the final impression (with Impregum™ Penta™) and the bite registration (using Ramitec™) were made, the temporary restoration was fabricated. A high-strength, esthetic, auto-mix bis-acryl temporary material (Protemp™ 3 Garant™) was loaded directly into the preoperative impression (Figure 5). The impression was then placed directly into the patient’s mouth. The temporary material set in approximately 1.5 minutes. Note that the impression must be removed before 2.5 minutes to prevent “lock on.” After the impression set, it was removed from the mouth (Figure 6).

The temporary was removed in one piece from the impression and placed back on the teeth (Figure 7) so it could be evaluated for fit, voids, and thin areas. A companion material, Protemp™ 3 Add-On Material®, was used to fill in any voids or thin areas. Figure 8 shows the addition of the companion material to a thin area on the temporary restoration. The companion material was then light-cured for 20 seconds.

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After this cure, the temporary was removed from the mouth. Initial trimming was accomplished with crown-and-bridge scissors (Figure 9). Figure 10 shows the initial trimming of the provisional restoration before it was taken to
In the laboratory, the temporary restoration was finished to the margins using a serrated diamond disc (#946c) (Figure 11) and a series of rubber wheels (Acrylic Temporization kitc) (Figure 12). Figure 13 shows the four-unit temporary restoration ready for provisional cementation.

Conventional temporary cements, such as RelyXTM,a, TempoCem®d, or Temp-Bond®e,f, are excellent for posterior restorations, but in the anterior, these cements can be too opaque and can lead to an unesthetic result. A clear temporary cement is available (Temp-Bond Clear®,e) that is designed for the cementation of provisional anterior crowns and veneers. Figure 14 shows the temporary restoration cemented into place using a clear, temporary cement. This temporary cement is a dual-cure material.

After the gross excess of cement is removed, the cement is light-cured (using the EliparTM curing lightg) for 60 seconds from the facial and lingual.

At this point the restoration can be adjusted using sandpaper discs and carbide burs to create the form and contour necessary to meet esthetic, phonetic, and functional requirements. To create an optimal—and more realistic—esthetic result, light-cured resin stains can be applied. In this case, using a small-tip artist’s brush, a thin layer of light-cured resin stain (SinfonyTM Magic stain #15h) was applied to the appropriate areas to create the illusion of natural tooth structure (Figure 15).

Finally, the temporary material was polished to optimize the esthetic results. Because the temporary material was partially composite resin, composite polishing systems (Sof-LexTM,a, Jiffy® Polishing Systemi, PoGo™, Fini™) could be used to create a high gloss on the restoration. Figure 16 shows the restoration being polished with a composite polishing disc. In Figure 17, note the high luster that can be obtained using a composite finishing brush (Sof-Lex™). Figure 18 shows the final temporary restoration at the end of the preparation appointment.

**Conclusion**

The proper fabrication of an esthetic temporary restoration offers protection to the prepared teeth, allows for the proper healing and health of the soft tissue, ensures nor-
mal speech and function during the fabrication of the final restorations, and, most importantly, provides the patient with natural-looking teeth.

Using the technique and materials described in this article, dentists can quickly provide patients with a strong, esthetic provisional restoration. This will better enable the dentist to create a final restoration that meets the patient’s expectations and builds the patient’s confidence in the dentist’s esthetic abilities.

**Disclosure**

The author has worked as a paid consultant to numerous manufacturers, including 3M ESPE. 3M ESPE did not compensate the author for this article.

**References**


