

Balancing Efficiency and Esthetics – Maximizing Today’s Modern Materials

By Dr. Cory Glenn, DDS, USA

As many dentists in busy practices may know, being efficient during each procedure is a key to success on a day-to-day basis. I continually strive to hone my skills to make procedures faster and better, and a large part of my ability to do this is my product mix. And although efficiency is extremely important to me, I won't choose a set of products, even if they offer great efficiency, if the end result becomes compromised.

A large part of my practice is performing direct posterior restorations, which can often become time consuming for me because of the need for multiple steps and multiple composite layers. Over the years I've been incrementally placing composites with great results, but I wanted something easier for my posterior restorations. To make restorations simpler, I began researching new products marketing themselves as efficient and esthetic. I'm not the type to simply switch everything over to one new product without ample research and science backing up the product, so I began testing a select group of products I thought would work well.

I began experimenting with a new adhesive, a new composite material, a new curing light, and a new finishing and polishing system. After the first few restorations I began achieving great results quickly and easily.

Characteristics of Adhesive

Universal adhesives have been available for several years and their goal is to be exactly what they say: universal. In most cases, there's no need for multiple bottles for different indications and most can be used in self-, selective-, and total-etch mode. After some initial research and talking with colleagues I began trying Single Bond Universal Adhesive. In order to lessen the risk of using a new product, I began using it for a few procedures at first to gauge its performance and kept my old adhesive material on standby.

Finding the Right Bulk Fill

I've been intrigued with the advent of bulk fill composite in the last few years and their ability to be placed in one increment. But my experiences with these materials had been less than impressive in the past. Even though they were extremely efficient, I wasn't comfortable using them.

When I tested Filtek™ Bulk Fill Posterior Restorative, I saw many characteristics and results that I liked. A large concern I had with these composites was the amount of polymerization stress that acts on the tooth, but research shows that Filtek Bulk Fill Posterior offers stress relief compared to many incremental fillings, which is great for my peace of mind. The esthetics of this material has also been pleasantly surprising to me.

With Filtek Bulk Fill Posterior I can improve productivity and save valuable chair time. It has excellent handling like the traditional Filtek materials I use and is easy to shape. I now have several minutes left after a restoration where I can quickly look over case notes or take a short mental break before the next patient. It's great not rushing from one restoration to another, and it really seems to create space in my day.

The Importance of Proper Curing

Not all curing lights are created equal. New LED models can produce higher light output and can cure materials more efficiently than previous types of lights while also making user operation easier. I've been experimenting with the Elipar™ DeepCure-S LED Curing Light and have found great success with it. It increases my confidence of a full cure at the bottom of the proximal box and has an ergonomic shape which makes operation easier by me or my assistants. With old and inefficient curing lights, I would sometimes worry about achieving a reliable result and that's not the case with this new curing light.

Simple Finishing and Polishing

Finishing and polishing a restoration can mean the difference between a lifelike shine and a dull looking restoration. Switching between the traditional points, cups and discs, polishing can be tedious and time-consuming for me. I've been utilizing the Sof-Lex™ Spiral Finishing and Polishing Wheels* and have seen great esthetic results. With this two wheel system, I simply run each wheel over the restoration to polish restorations quickly. I find it to be extremely quick, which in the end saves me time.

Case Study

The below case was completed with the products that I discussed above. When these products are used to-

gether, they can create a truly efficient procedure for posterior restorations.

The patient, a female in her mid-50's, presented with two leaking amalgam restorations on teeth #30 and #31. The patient desired a more esthetically pleasing composite restoration and after examination, a bulk fill composite technique was deemed an appropriate treatment option.

Step 1

The existing amalgam restorations (Fig. 1) are removed and caries dye is applied. When no additional caries are detected, the cavity preparation (Fig. 2) is sandblasted with aluminum oxide to ensure the preparation is free of all contaminants.



Figure 1



Figure 2

Step 2

The preparations are selectively etched (Figs. 3) with Scotchbond™ Universal Etchant Gel and Single Bond Universal Adhesive is rubbed into the surface for 20 seconds (Fig. 4). The adhesive is then gently air dried for 5 seconds (until the adhesive doesn't move) to evaporate the solvents, and it's light cured for 10 seconds (Fig. 5).



Figure 3



Figure 4



Figure 5

Step 3

As the preparation is less than 4mm deep, Filtek Bulk Fill Posterior Restorative is placed in one step (Fig. 6). A more detailed shaping and contouring of the composite is then done with a metal instrument (Fig. 7). The composite is then light cured for 20 seconds (Fig. 8).



Figure 6



Figure 7



Figure 8

Step 4

After adjustment using a finishing bur, the final polishing is completed with the Sof-Lex Spiral Finishing and Polishing Wheels. The beige finishing wheel (Fig. 9) is used first to remove

surface scratches and the white polishing wheel (Fig. 10) is used to create a high shine. The composite restorations are complete (Fig. 11).



Figure 9



Figure 10



Figure 11

Final Thoughts

The newfound efficiency I've discovered for my posterior restorations has provided me several benefits. For instance, my restorations are quicker, they require fewer products, and there are fewer steps needed. This all adds up to less stress for me during each procedure and in my day-to-day practice.

For more information on the Efficient Restoration Procedure, visit 3M.com/EfficientRestorations 



Dr. Cory Glenn
Dr. Glenn graduated from University of Tennessee Health Science Center College of Dentistry. Following graduation, he went on to complete the Lutheran Medical Center's advanced education in general dentistry residency at the UT Memphis branch. He is a graduate of the Georgia Maxi Course in Implant Dentistry, and is an Associate Fellow in the American Academy of Implant Dentistry. Dr. Glenn operates a private practice in Winchester, TN where he performs all disciplines of dentistry with a particular focus on utilizing technology and innovative techniques.

*Replaced with the new Sof-Lex™ Diamond Polishing system consisting of two new wheels - pre-polishing spiral (beige) and diamond-impregnated polishing spiral (pink) in 2016.

3M Oral Care Solutions at AEEDC, 2017

By 3M

On 7-9 February 2017 3M Oral Care took part in AEEDC, one of the largest regional trade shows for oral care professionals in the MEA Region. During the 3 days of AEEDC exhibition 3M Booth was attended by visitors from various countries across the Region and get familiar with vast procedure solutions for greater clinical, professional and personal success.

In the Direct Restorative Procedure area dentists could learn more about Esthetic Procedure Solution with Filtek™ Z350XT Universal restorative, Single Bond Universal adhesive, new Elipar™ DeepCure curing light and

Sof-Lex™ Diamond Polishing system allowing to create beautiful, natural-looking restorations having diamond paste-like gloss. Or to try Efficient Procedure Solution with Filtek™ Bulk Fill Posterior restorative designed to improve productivity by enabling fast and easy posterior restorations. The Indirect Procedure area was dedicated to the sub-procedure solutions, such as impressioning with Impregum™ and Express™ Penta™ materials, cementation with RelyX™ U200 composite cement and temporization with Protemp™ 4 material which all together enable less complicated process, fewer missteps, and therefore more productive and prof-

itable procedure.

In the Orthodontic Procedure area doctors had an opportunity to learn more about the Esthetic Procedure with Clarity™ Advanced ceramic brackets and Efficient Procedure with Metal brackets complemented with APC™ Flash-Free adhesive coated appliance system which allow growing orthodontic practice with esthetics and efficiency.

The Education area of the booth equipped for short lectures and demo-sessions attracted a lot of doctors who could to learn about such procedures as esthetic composite restorations using Style Italiano technique, posterior restorations with Filtek™



3M booth at AEEDC 2017

Bulk Fill Posterior restorative, precision impressions and reliable cementation techniques.

To learn more about 3M Oral Care products please visit: www.3mgulf.com/espe 