

Using **Photography** to Enhance Lab Communication and **Achieve Superior Results**

Achieving superior functional and esthetic results in restorative dentistry is predicated on many factors. Among them is the level of communication that exists between the dentist and the laboratory. A clear, detailed, and precise exchange of information relating to the patient's existing condition and also their expectations allows the laboratory to produce predictable results.

Much time is spent with our patients discussing the potential treatment outcomes, and listening to their desires for their aesthetic smile makeover. There are discussions about tooth shade, shape, length, and texture, among other variables. It is imperative that this information be relayed to the ceramist, who will turn the patient-dentist treatment plan into reality.

The key connection between the treatment plan and final outcome is the information that is translated and transferred to the ceramist. Therefore, dentists must communicate effectively with their laboratory technician to obtain the superior results they want for their patients.

The best way to convey information is visually,

using proper clinical photography to illustrate key details that will help the ceramist by eliminating guesswork. The more information at hand for the ceramist, the more likely he/she will be to turn a treatment plan into an artistic result that will satisfy both the patient and the dentist. The clinically relevant information serves to remove doubts and enhances the overall result, increasing confidence and predictability for the final outcome.

Planning to Communicate with Photographs

The following photographic information should be sent to the laboratory for all aesthetic and reconstructive cases.

Pre-operative photographs. The preoperative photographs of the patient should include frontal and lateral views, such as full face, full smile, and retracted views, in 1:2 and 1:1 magnification. This variety provides sufficient detail for the laboratory to understand where the patient is starting from so they can work toward their esthetic goals (Figures 1 through 6).

Additionally, quality and detailed photographs



Figures 1-6 Examples of pre-op views (1:2 smile, 1:2 retracted and 1:1 retracted)
These views also provide an opportunity to evaluate the lips and tissues and their relationship to the teeth.



Figures 7-9 Photographs of prepared teeth and examples of views to show occlusion

can communicate the tremendous potential of smile makeovers when educating patients in order to garner case acceptance, or explain the differences among various treatment options when demonstrating your work to prospective patients.

Photographs of preparations. Likewise, photographs of the tooth preparations should include retracted frontal and lateral views. Also the preparations should be photographed with the patient in occlusion. These images can be used by the ceramist when mounting the case for comparison, should there be any questions about the occlusal scheme (Figures 7 through 9).

Photographs with preparation shade. Photographically documenting the shade selection process for preparation and final shades is essential. These photographs help ensure that the ceramist can fabricate—or otherwise build—superior restorations according to the same criteria on which the shade selections were based.

Preparation shade tab selection photographs should be taken while the teeth are moist, closeup, and at different angles. The photographs should include, at a minimum, two shade tabs (e.g., body and cervical shades). Additional close up views that convey

information about characterization detail are also helpful. It's best to err on selecting shade tabs that are on the darker side if the shades aren't an exact match. Remember, the more information that's provided to the laboratory, the better.

When photographing the shade tabs and preparations, it's important to keep the shade tabs on the same plane as the teeth. Additionally, ensure that the shade on the tabs are visible in the photographs. This can be facilitated by using the proper exposure and magnification. Quality close-up photographs for shade variation, characterization and detail can be achieved by closing the aperture one to two f-stops (f-36 or f-40) as needed (Figures 10 through 12).

Photographs of models or impressions. If photographs of models or impressions are needed to help in communication (e.g., preparation, waxups), they should be taken on black fabric to avoid a distracting background (Figures 13 through 15).

Photographs to show details of shade, texture, translucency volume and intensity. It's good to take and send to the laboratory several different photographs, including different angles, especially for challenging cases such as single units. Another important



Figures 10-12 Photos showing body and cervical prepped shades with shade tabs in proper plane

photograph to send is with the symmetry bite in place. It is understood that from the laboratory's perspective, the more information provided, the more comfortable they will be in providing the dentist and patient with the excellent restorations they expect (Figures 16 through 20).

Caveats of Taking Clinical Photographs

When taking clinical photographs, it is important to use proper composition, exposure, magnification, and focus to be effective. When taking photographs of single or multiple units prior to cementation—either for education or communication with colleagues, avoid distracting backgrounds and photograph on an occlusal mirror at an angle to produce a black background and reflection (Figures 21–23).

Other Communication Uses for Photography

In addition to enabling detailed communication with laboratories, photographs also facilitate information sharing with other clinicians that are part of the dental team. Clinical photography also can serve several other valuable communication objectives that dentists may have. Or, clinical photography can enable greater understanding of treatment concepts and protocol while lecturing, at study clubs, or during other teaching assignments.

Internal and external marketing materials—such as newsletter, brochures, in-office patient centered magazines, advertisements, and more—all can benefit from quality before and after clinical photographs highlighting your esthetic dental treatments. These photographs also can be placed on your website, or used in PowerPoint presentations in your office, on a large screen, or on your iPad.

Finally, clinical dental photography provides documentation for many purposes, such as legal, record keeping, and insurance claims. Or, you can take photographs for publishing your cases. Ensure that you capture the proper background, composition, resolution, and exposure for a professional look.

Conclusion

Detailed and precise information about a patient's condition, expectations, and treatment allows laboratory ceramists to produce superior



Figures 13–15
A black background is non distracting when photographing models or waxups



Figures 16-17 When photographing to show details such as characterization, texture, translucency etc, especially when matching a single unit, it is helpful to take the pictures at different angles.



Figures 18-19 With proper photography techniques and communication it is possible for your ceramist to provide you with superior results as shown in this single unit veneer case

predictable results. Therefore dentists must communicate specifics such as shade, preparations, occlusal schemes, and shape requirements to laboratories. The best way to share this information is visually, and proper clinical photography eliminates guesswork and facilitates fabrication of the anticipated restorations.

A basic understanding of photography is essential. However, with practice, a dentist or team member can become very proficient at clinical dental photography. If dentists are uncomfortable with their photography skills, there are many courses available to help improve their techniques.

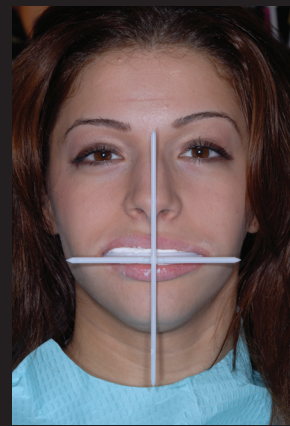


Figure 20
A photograph of the symmetry bite in place is important for the lab to verify mounting and occlusal plane



Figures 21-23
When photographing ceramics for for a lecture or publication, a good technique is to use an occlusal mirror and take photo at an angle. This highlights what you are showing with a dark background and a reflection.