

A Step-By-Step Case Study

by Wade Pilling, Louisville '05

Cosmetic dentistry has helped take the golden age of dentistry into a platinum age of dentistry. Today people are willing to go to great lengths to improve their image and particularly their smiles. As future deliverers of cosmetic dentistry, we must find a way to satisfy our patients' needs and wants. A balance between what the patient is willing to do and what we are willing to deliver must be reached. For doctors wishing to provide this type of dentistry, there are many organizations that teach cosmetic procedures on live patients that you provide. I have had the chance to attend some of these courses produced by Pac-Live and The Hornbrook Group, which teach sound principles to achieving success in the arena of cosmetic dentistry. I recommend that you attend a course like this before you tackle some of these smile design cases.

Before you treatment plan and deliver a smile design, you must first have a lengthy conversation with the patient to find out what his or her goals, expectations and restrictions are. You cannot begin the procedure until you know what the final outcome will be. This should not be a prep-and-let-the-lab-make-it-right job. After you know what the patient's goals are, you can develop a treatment plan that can range from bleaching and minor recontouring, to surgery, ortho and porcelain restorations. At this point a patient's goals or expectations can be adjusted according to what procedures they are willing to endure. Patients are often willing to go to extremes to achieve an improved smile. Currently I have a patient who is enduring every discipline of dentistry to achieve an ideal smile. We have done extractions, socket preservations, endodontics, restorative, orthodontics, perio-surgery, multiple implants, and 22 all-ceramic restorations done by a well respected lab (Arrowhead Dental Lab) in

order to achieve amazing results.

After the initial consultation is done, the next step is a comprehensive exam, including a thorough evaluation of the TMJ and occlusion, as well as their periodontal status, including tissue levels for possible augmentation. You will need to get very accurate models and a good mounting. You must also decide if you are restoring this case in CR or CO and how and if you are changing the patient's



occlusion. When you send the case to the lab, provide specific, detailed instructions as to smile design, including alterations in gingival margins, tooth proportions, any opening of the bite and so forth. From this wax-up you can diagnose whether the results can be reached by placing ceramic restorations or if other options are required. This wax-up can help you decide on a definitive treatment plan and materials to be used.

If the results can be obtained with crown/veneer restorations, then the next step is to do a mock-up in the patient's mouth using a stent made from the wax-up and an acrylic such as Integrity or Luxatemp. Evaluate the mock-up in the mouth, testing speech, function and esthetics, similar to how you would test dentures. Adjustments can be made until the patient is satisfied. If any adjustments

are made, then simply take an impression of the patient's mock-up to send to the lab so they can see any changes. This impression is also used to make the final temporaries. The teeth can be prepped right through the mock-up so that you only have to prep into enamel as little as needed to reach the correct thickness for porcelain. The thickness of the porcelain will vary depending on what type of material you are using. Materials should be selected on the basis of what works best in the patient's mouth (stress, habits, occlusion), while also considering esthetics and degree of alteration of existing dentition. Communicate with your lab on the properties of the different porcelain systems to find the best fit for your patient.

After preparations are completed, temporaries can be made from your post-mock-up impression. Impressions can also be taken at this time or at a later date after you have had the patient try the temporaries out for awhile and have worked out their envelope of function. Make sure your lab is well trained and that you have properly communicated with them using photos. A detailed lab prescription should be written using color mapping and explicit details about what is to be done.

The seating of the restorations is probably the most stressful step. Most of these restorations will be bonded in place, which requires a much more strict protocol. Make sure you follow all the manufacturer's instructions to ensure long lasting restorations.

Although there are many different philosophies or techniques that can be applied to smile makeover cases, it is important to follow one that is proven and founded in sound principles. ☺