

The TRIAD ARTICULATOR Winter 2024

Connecting the Dots: Tips for Communicating with Your Dental Lab

BY JEFFREY BONK ON SEPTEMBER 12, 2023 | SPEAR ARTICLE

“Treatment planning is a key requirement in implementing restorative procedures. At Spear Education, our philosophy of care and treatment begins with “Facially Generated Treatment Planning (FGTP).” Seminars and workshops emphasize and teach the process of integrating airway, esthetics, function, structure, and biology into case workups. This complete overview provides a structured outline so that all considerations and circumstances related to a patient’s presentation are evaluated and integrated into the final treatment plan. FGTP is the foundation of all Spear teaching. This treatment plan and outcome is dependent upon the best communication with your dental lab.”

Our “vision for outcome” must be forwarded to the dental lab technician so they can incorporate our planned restorative changes into the diagnostic wax-up. Whether we are “analog” or “digital” in our approach and technique, the restoration designer must be provided with the guidelines and direction to create the expected outcome. To be effective, we must “connect the dots” from design to implementation.

Facially Generated Treatment Planning

A	E	F	S	B
Airway	Esthetics	Function	Structure	Biology
Relationship of jaw growth/tooth position and breathing	Appearance and position of the front teeth	How teeth function and relate to one another	Inherent strength and support of the teeth	The health of the gum, bone and supporting structures

3 Steps for Communicating with Your Dental Lab Technician

To “bring the plan to life” in three dimensions, a diagnostic wax-up is necessary. The wax-up becomes the blueprint or “scale model” from which the entire restorative process is constructed and based. Too often, “the hand-off” from the planning dentist to the dental technician comes down to “fabricate a wax-up”! How sad it is to invest so much time and energy into planning and design, only to “drop the ball” with the dental technician by not providing direction or insight for this important and integral component.

1 Most importantly, the restorative dentist needs to guide the technician directly in developing the diagnostic wax-up. As much as a template or digital planning can provide vision and direction, it can be challenging for the dental lab technician to create a wax-up that directly relates to the patient’s presenting condition. After all, the laboratory technician is not usually chairside with a patient, so they cannot experience the patient presenting conditions.

2 The dentist should forward the FGTP templates and outlines proposed. Having this information, the dental technician can better visualize the direction the dentist and patient are heading and the thought processes behind it.

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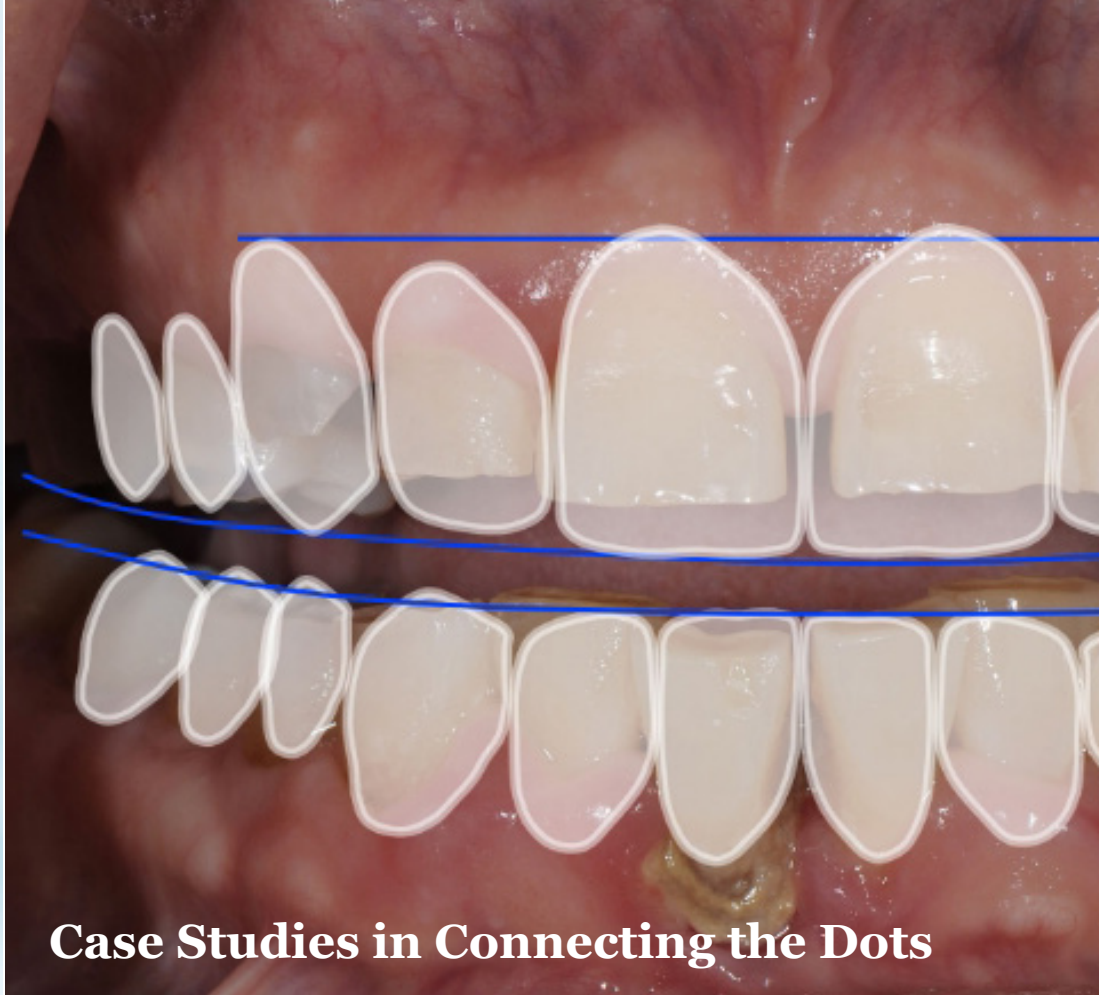
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Case Studies in Connecting the Dots



Figure 1



Figure 2

Now that we have established the process and examined the thinking behind effective lab communication, let's look at a couple of real-life examples — examples of how direct changes to a patient's teeth and model will serve as a guide for the laboratory wax-up and ultimate finalization of the case that produces the desired outcome. In the first example, Sarah presented to my office with a complaint that her "front teeth" (central incisors) were too long, and the "next teeth" (lateral incisors) were too short. (Figure 1)

A simple technique that allows for immediate feedback is to perform a "trial smile" or an intra-oral mock-up directly on the patient's teeth. In Sarah's case, some flowable

composite was added to the incisal edges of the laterals. A "Sharpie" marking pen was used to "shorten" (visibly) the central incisors. Sarah was pleased with the resultant changes. Intra-oral photographs and an alginate impression were taken to send to the dental laboratory to use as a reference for the diagnostic wax-up. The treatment plan was to use ceramic veneers to lengthen the lateral incisors and shorten the central incisors with enameloplasty. (Figure 2)

The dental laboratory incorporated the changes from Sarah's "trial smile" to create the diagnostic wax-up. The tooth form and incisal edges of the laterals were altered. The central incisal edges were shortened to create the contours she wanted. The

In our next example, Lee Ann is a patient who also wants to improve her smile and function. Her presenting condition is very complex and will require comprehensive planning and a diagnostic wax-up in order to guide the restorative process.



Figure 3.2



Figure 3

diagnostic wax-up was used as the reference for provisionalization following the indirect veneer preparations of the lateral incisors.

Sarah was very pleased with the outcome of her new smile. Reducing the length of the central incisors through enameloplasty allowed for a conservative solution to her “long” teeth. By furnishing the laboratory with a composite mock-up as a guide, the diagnostic wax-up directly assisted the technician in creating an ideal form and contour that incorporated Sarah’s vision into the final outcome. (Figure 3)



This image indicates the degree of complexity involved in Lee Ann’s case. Tooth wear, disproportionate teeth, misplaced teeth, and variations in incisal and occlusal planes are a few of the presenting dilemmas that need solutions. Sending models in this case would not be enough. It would be virtually impossible for a laboratory technician to fabricate a diagnostic wax-up without guidance and direction from the dentist, as the “roller-coaster” incisal planes create a significant challenge for establishing a reference as to where to begin the wax-up process. (Figure 2.2)

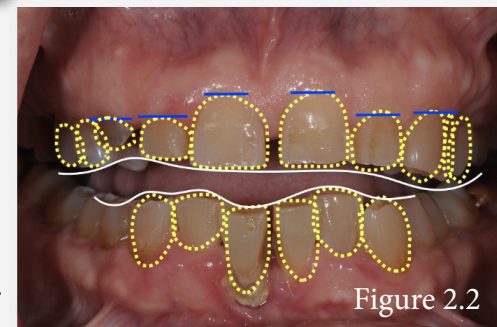


Figure 2.2

Proposed templates aid in directing and guiding the technician toward the patient’s objectives. Incisal and gingival alterations provide a more symmetrical and uniform incisal plane and improve tooth proportions. Provided with these images, the technician has a “fighting chance” to create a wax-up that can work. (Figure 3.2)

As much as photographs, verbal communication, and FGTP templates are important for the technician to fabricate a wax-up, a “dentist-altered” model in a complex case is the best guide for achieving a patient-specific diagnostic wax-up. Changing the diagnostic models directly provides specific information that directly relates to the patient’s function and esthetics.

The starting point for all treatment planning is the position and arrangement of the front teeth. Through the integration of FGTP planning, it was determined that increasing the length of the central incisors for Lee Ann would improve both esthetics and function. To guide the technician for the complete diagnostic wax-up, composite was added to the incisal edge of one of the central incisors. This minor inclusion by the dentist creates a major reference point for the dental technician. With the incisal edge position and tooth proportion established, the technician can now “fill in the blanks” with the wax. (Figure 4.2)

Communication from the dentist for the diagnostic wax-up is critical for the technician to create a wax-up that is usable and applicable for patient treatment. But the communication needs to go both ways. As much as the dentist must provide insights from the planning stages, the technician must also return input for the dentist to integrate the wax-up directly into the patient’s treatment process. Changes to tooth structure made by the technician must be documented so the dentist can alter the natural teeth accordingly during restorative treatment... For the rest of this treatment plan please read the Article at www.speareducation.com

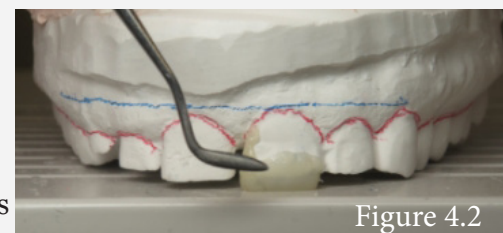


Figure 4.2



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